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*APPENDIX A: Background Information Document (BID) and  
Feedback Comment Form*

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## Purpose

The purpose of the Background Information Document (BID) is to provide information about the proposed Aker Energy (Ghana) Deep Water Tano Cape Three Points (DWT CTP) Development and to introduce the scoping study that is being conducted as part of the Environmental and Social Impact Assessment (ESIA).

## Background

Aker Energy Ghana (formerly known as Hess Ghana Exploration Ltd (HGEL), Lukoil Overseas Ghana Tano Limited (*Lukoil*), Ghana National Petroleum Corporation (GNPC) and Fueltrade Limited (*Fueltrade*), own participating interests in the Deep Water Tano Cape Three Points (DWT CTP) Contract Area (*Contract Area*), with Aker Energy holding 50%, Lukoil 38%, GNPC 10% and Fueltrade 2%. The owners are considering developing the DWT/CTP *Contract Area* with a Floating Production, Storage and Offloading (FPSO) (hereafter the "*Project*").

The *Contract Area* is located off the Western Region of Ghana, about 70 km from the coast at the nearest point (The *Contract Area* is about 60 km across covering about 200,000 ha. Water depths across the *Contract Area* range from 1,600 m to 2,500 m.

## Overview of Proposed Development

The proposed development is an offshore oil and gas production system consisting of:

- Installation of 40 - 45 oil and gas production and injection wells;
- Installation of a ship-shaped FPSO and mooring system; and
- Installation of subsea infrastructure.
- Subsea connections from the wells to the FPSO.

All of the above will be in very deep water where there is no trawling activity.

Construction of the development will involve drilling, completion and connection of the wells; installing and testing of the subsea facilities and pipeline; and anchoring of the FPSO unit.

Once the system is operational, well fluids comprising oil, gas and water will be received and treated on the FPSO. Treated crude oil will be stored on the FPSO and periodically offloaded to a shuttle tanker and sold to international markets. Natural gas will be treated on the FPSO and transported to shore used in Ghana.

Start of production is planned for 2021. Production is projected to last until 2036 or longer.

At the end of production, the FPSO and associated infrastructure will be decommissioned i.e. removed. This will involve the removal of the subsea infrastructure, the connecting lines, the FPSO mooring lines and the FPSO itself. All hazardous wastes will be disposed of according to international good practice.

## Scoping Study

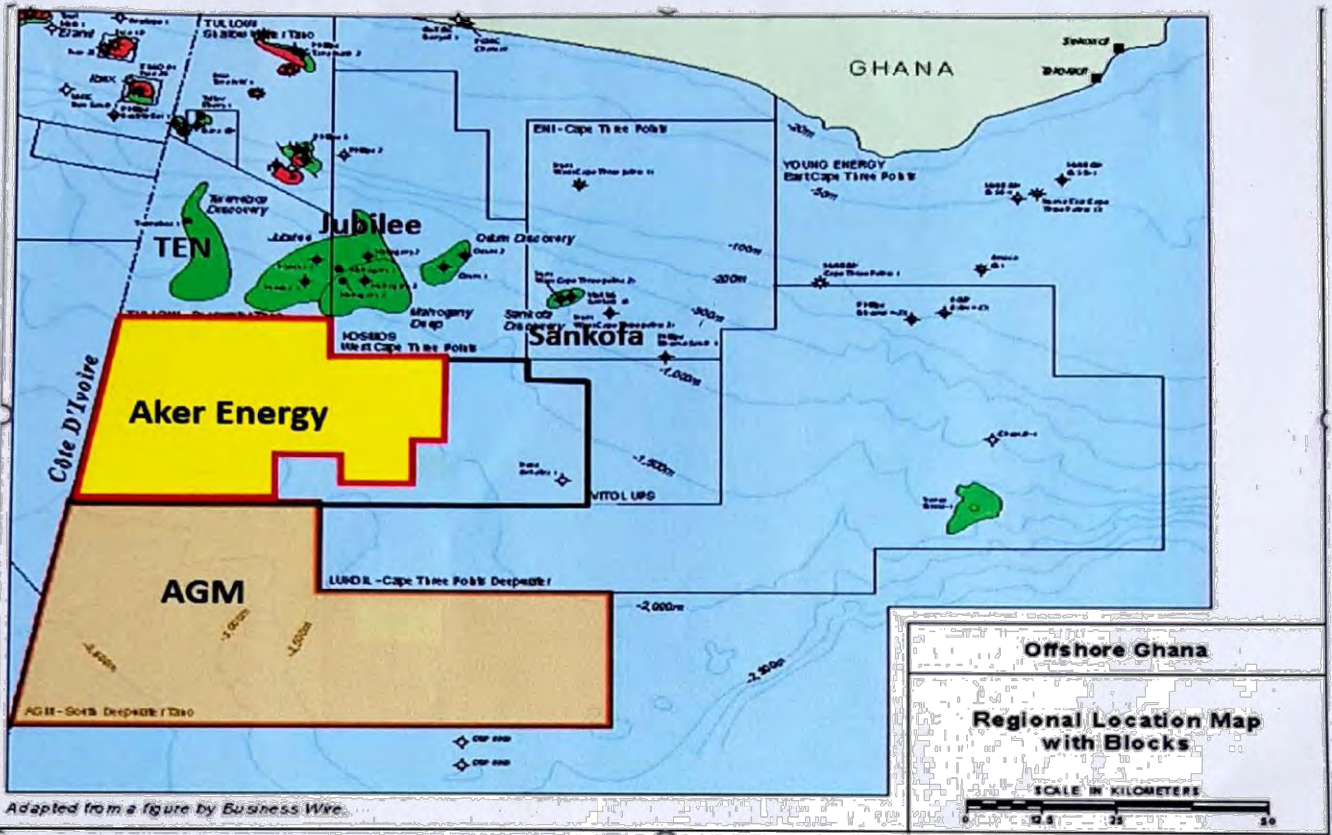
In conformity with the Ghana Environmental Assessment Regulations of 1999 (LI 16:52), the proposed activities require an Environmental and Social Impact Assessment (ESIA) and an environmental licence from the Ghana Environmental Protection Agency (EPA).

Aker Energy has appointed ESL Consulting (ESL) to undertake the ESIA scoping study.

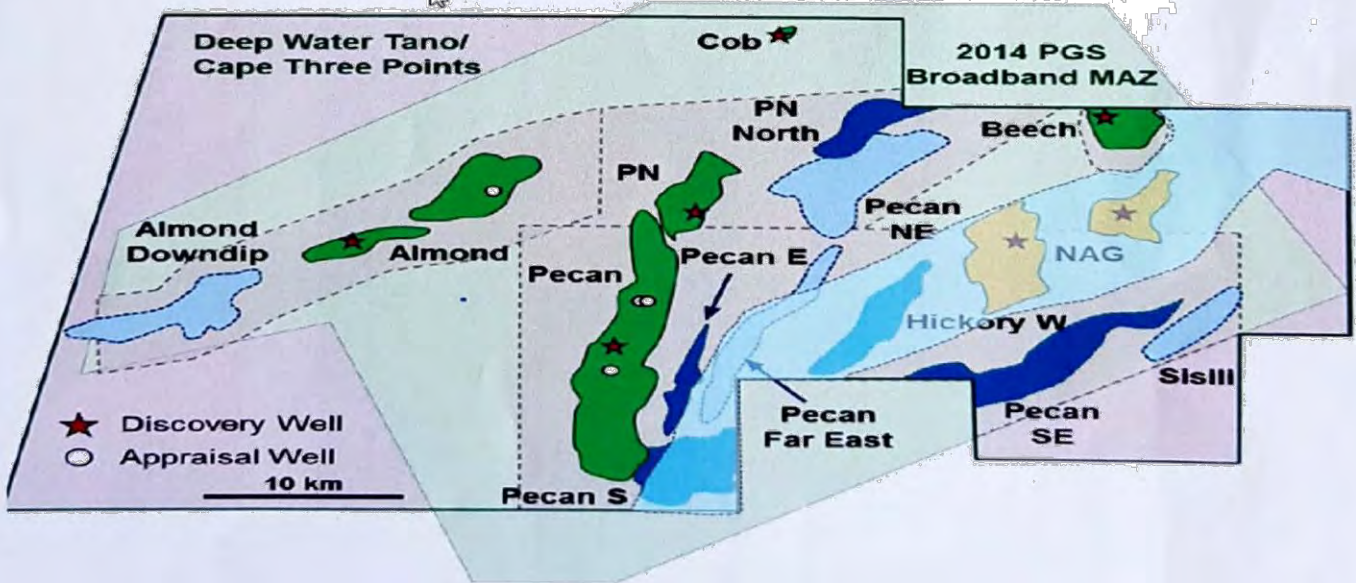
The scoping study will identify the likely potential positive and negative environmental, social, and health impacts of the project and further provide the terms of reference for the full ESIA studies. A Scoping Report will be prepared which will describe the plans to be put in place to mitigate and manage impacts. The scoping study will include engagement with the government, community and civil society stakeholders to obtain their views. The Scoping Report, along with stakeholder comments will be submitted to the Ghana EPA for approval and made available for public comment.



Figure 1: Project Locality Map



Adapted from a figure by Business Wire



- Turonian Oil Discovery
- Cenomanian NAG Discovery
- Existing Discovery Areas
- Cenomanian Discovery Area (new)

Source Aker Energy 2018

Figure 2. Example of subsea structures array



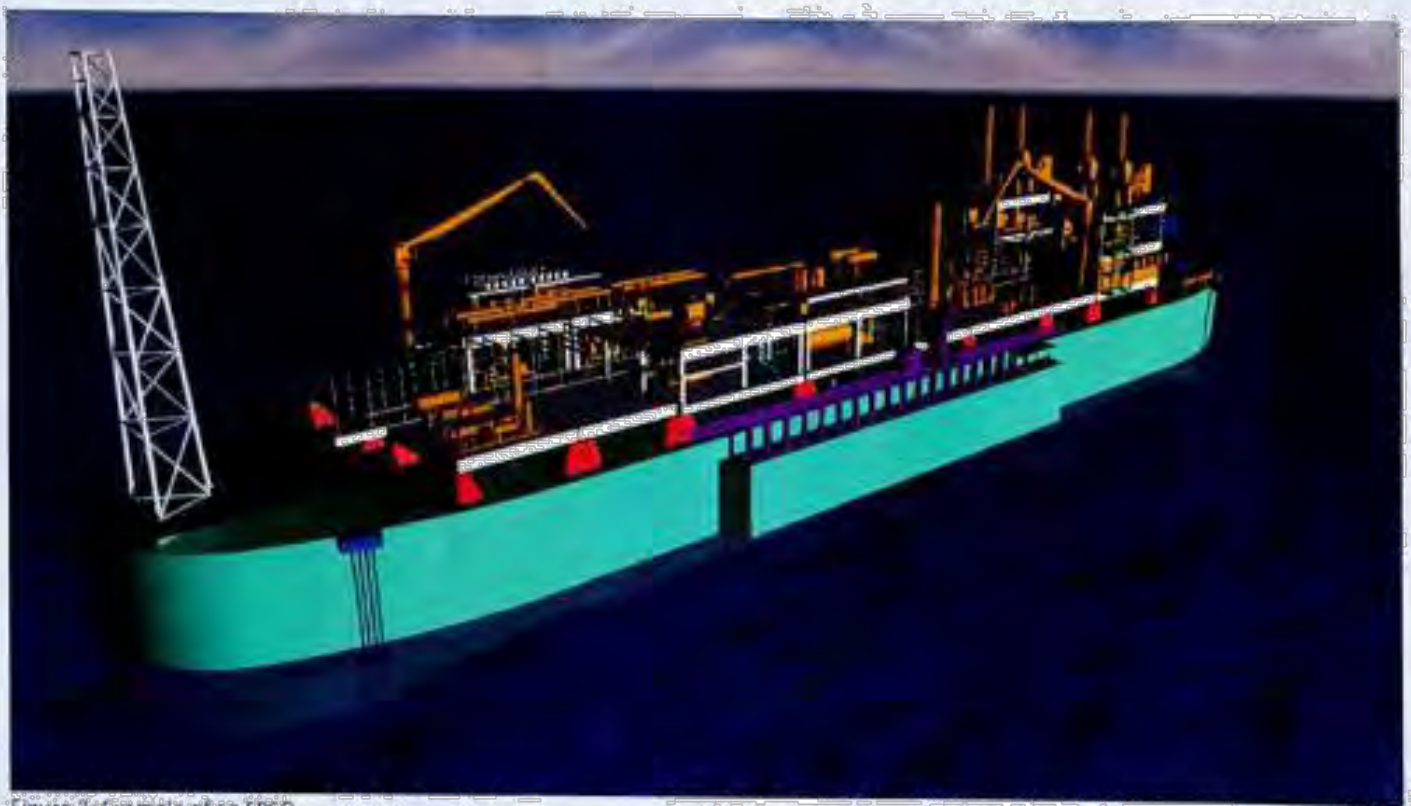


Figure 3: Example of an FPSO

## AKER ENERGY

### Deep Water Tano-Cape Three Points (DWT-CTP) Development ESIA Scoping Study

Background Information Document  
June 2018

#### Potential Impacts & Mitigating Measures

The development will be located in deep water approximately 70 km off the coast of the Western Region of Ghana. The activities

planned for construction, operations and decommissioning have the potential for impacts to the environment. Based on a preliminary assessment of the proposed activities, potential impacts and risks include the following:



## Physical and Biological

- Emissions to air from power generation, flaring and venting on the drilling rig and FPSO have the potential to effect air quality and contribute to global climate change. The FPSO design and operation will have focus on energy efficiency to reduce the CO2 emission. The design will allow flaring and venting to be at minimum.
- Discharges to sea of produced water and chemicals have potential to impact the marine environment. The produced water and other oily spill water will be treated to meet or be below required discharge limits. Best Available Technique (BAT) principles will be applied for the treatment technology. The drilling and production process will use as environmental friendly chemicals as possible. Risk assessments will be conducted to estimate potential impact and to find best chemical option.
- Noise generated by the drilling rig, FPSO, and other operations could result in localised disturbance to marine mammals.
- Drilling activities and the placement of subsea infrastructure and FPSO moorings have the potential to impact biological communities that live on or in the seabed sediments. The drilling ship will not be moored to reduce anchoring impact.

## Social

- Direct and indirect employment and procurement related to the development has the potential for positive economic impacts on the country and local communities.
- The movement of vessels during construction, production and decommissioning has the potential to interrupt fishing activities.
- The safety exclusion zone around the FPSO has the potential to impact fishing activities and marine traffic.

## Cumulative

- Other oil and gas activities are already occurring in the offshore area near where the development will be located. Takoradi, where supply and maintenance activities will occur, is already experiencing social and economic impacts from the multiple oil and gas developments.

## Accidents

- There are risks associated with oil and gas operations. Accidents and unplanned events can occur, like vessel collisions, pipeline leaks or well blowouts. Such events and accidents are very unlikely and best industry practices will be applied to lower the likelihood for an event. The events could lead to accidental oil spill that potentially have a significant impact on the biophysical and social environment, on a local and regional scale. Oil spill response plans and equipment will be in place to mitigate such and oil spill.

There will be collection and containment systems offshore as well as at the shore, and oil dispersion systems offshore.

All potential impacts and mitigating measures will be identified and assessed through the course of the ESIA Study.



# Invitation to Comment

You are invited to participate in the scoping process and to share issues and concerns you may have about the proposed development. Your comments are important to informing the scoping process and it is important that your support or concerns are noted so that they can be assessed in the ESIA.

To be kept informed through the scoping and ESIA process, please provide your contact details.

Name: \_\_\_\_\_

Organisation: \_\_\_\_\_

Position: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Mobile: \_\_\_\_\_

Email: \_\_\_\_\_

To register your comments, please use the form attached or send an email to the following:

## ESL Consulting Limited

~~ESL~~

~~Ghana~~

~~Exploration~~

~~ESL~~

Contact: Mr. AK Armah

Tel: +233-302-683206

Email: [akarmah@esl-ghana.com](mailto:akarmah@esl-ghana.com)//[akarmah@yahoo.com](mailto:akarmah@yahoo.com)

Address: ESL Consulting Ltd, PO Box LG 239 Legon, Ghana

## Aker Energy Ghana Limited

Contact: Emmanuel Appiah

Tel: + 233-544338699

Email: [aemmanuel@aker.com](mailto:aemmanuel@aker.com)

Address: 7<sup>th</sup> Floor Marina Mall, Airport City, Accra.



# Deep Water Tano Cape Three Points (DWT CTP) Development ESIA Scoping Study

Background Information Document  
June 2018

## Stakeholder Comments

Please answer the questions below. Feel free to provide any comments you would like to raise. Please use additional sheets if required.

1. What are the primary concerns and or benefits faced by you/your community/your organization with regards to this development?

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2. In your opinion, what are the positive and negative aspects of the proposed Project?

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3. Do you have information regarding the environment, community or health status which you think is relevant? (If so, please include here)

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***Thank you for your participation!***



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*APPENDIX B: Aker Energy Scoping Formal Presentation (Company Profile and Scoping Process)*

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PRIVATE & CONFIDENTIAL



**AKER ENERGY**

**COMPANY PRESENTATION**

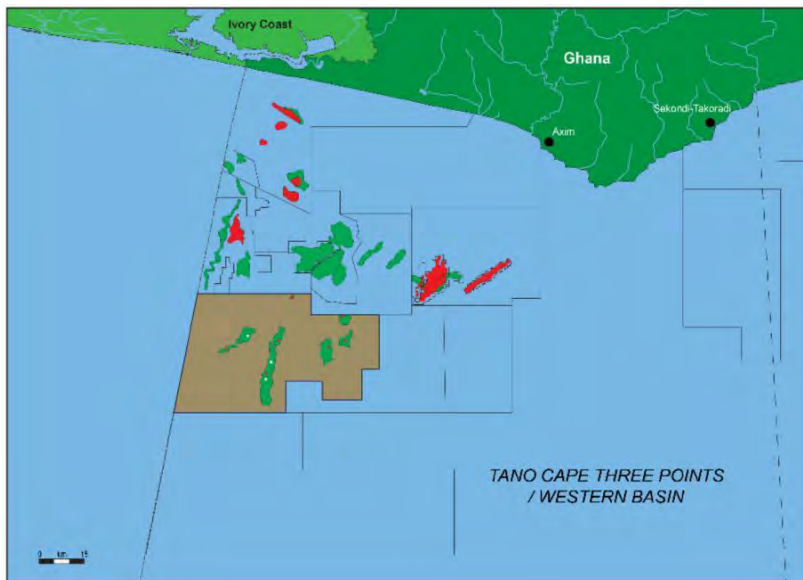


# Aker Energy: Brief introduction

International Oil & Gas Company with head office in Norway, operations in Ghana

Acquired Hess Ghana Ltd including the Deepwater Tano Cape Three Points Block

Pecan Field development with FPSO – First oil December 2021





## **Ambition: Become the oil and gas operator of choice**

**maturing resources to producing reserves in an efficient, safe and reliable manner**

**act responsibly towards all stakeholders in our operations**

**have focus on safety, environment, risk management**



## **Ambition: Become the oil and gas operator of choice**

**sharing knowledge and experiences through secondments and transfer of learnings**

**have a long-term ambition to ensure direct and indirect jobs and development of local services**


**contribute to sustainable growth, create jobs and invest in people.**



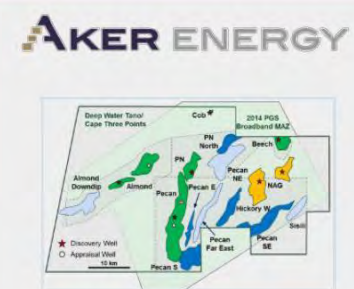
# Aker: Significant oil and gas holdings and experience

## EXPLORATION & PRODUCTION

## OILFIELD SERVICES



- Fully integrated E&P company
- Operate 5 production hubs
- Largest independent producer on NCS
- 1.2bn resource base – 97 licenses
- Production on current portfolio to increase >300k boepd after 2020
- Significant growth ambitions: organic & M&A



- E&P company with the aim of replicating the Aker BP success in Ghana
- Secured access to attractive acreage in Ghana - SPA signed with Hess on the DWT-CTP block
- Contribute to building local Ghanaian industry



Two key businesses:

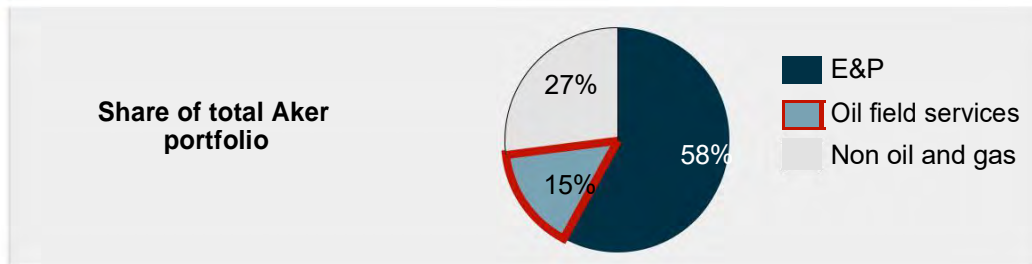
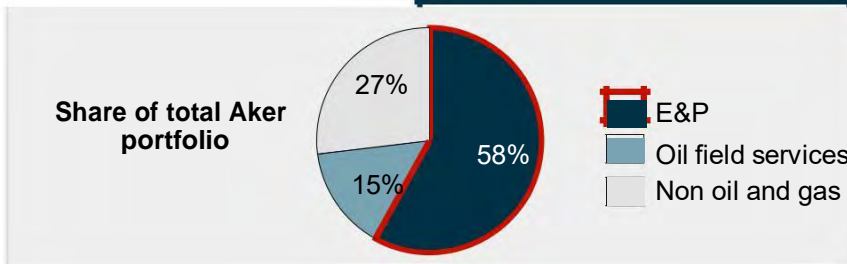
- Subsea
- Field Design



- Rig equipment (MHWirth)
- Subsea construction / well intervention vessels



- EPC specialist
- NCS focus





# Aker Energy: Executive Management

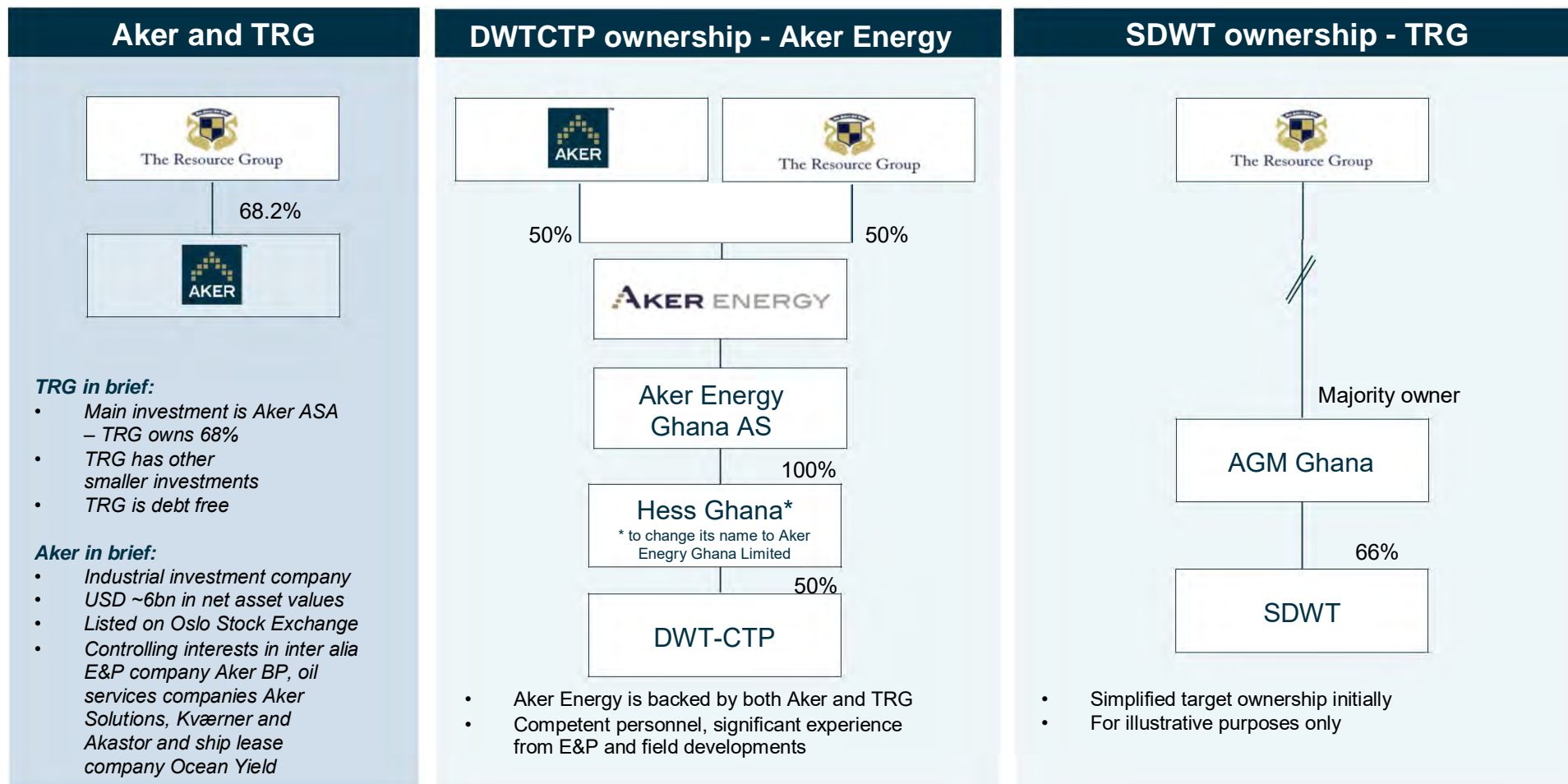
**Chief Executive Officer  
Jan Arve Haugan**



**Country Manager Ghana  
Jan Helge Skogen**

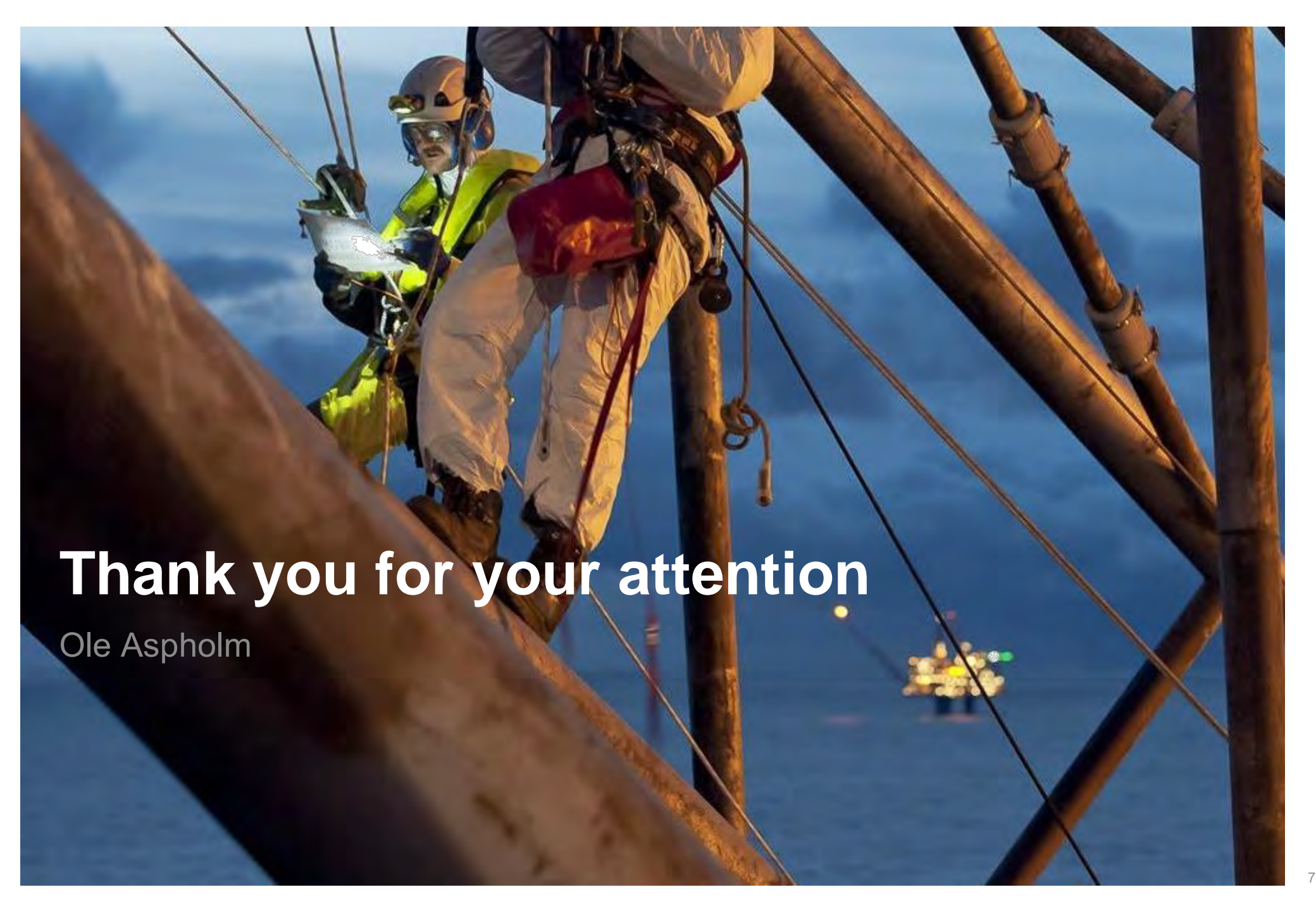


# Ownership: Extensive industry experience



**Aker Energy envisages significant synergies between the DWT-CTP and SDWT blocks and will target a regional development**



A photograph of a worker in a white protective suit and helmet, likely performing maintenance or repair on a large steel structure, possibly an offshore oil rig. The worker is wearing a high-visibility yellow vest and is holding a white container. The background shows a blue sky and a body of water with a distant offshore platform illuminated by lights.

**Thank you for your attention**

Ole Aspholm

# AKER ENERGY

DEEP WATER TANO CAPE THREE POINTS (DWT/CTP)

(DWT/CTP) DEVELOPMENT

ESIA SCOPING STUDY



# BACKGROUND INFORMATION

## PURPOSE

- To provide information about the proposed AKER Energy (Ghana) (Ghana) DWT CTP Development.
- To introduce, as part of the ESIA, the on-going scoping study.

# Background to the DWT CTP project.

## Participating Entities:

- Aker Energy (formerly Hess Ghana Exploration Ltd – HGEL): - 50%
- Lukoil Overseas Ghana Tano Ltd (*Lukoil*): - 38%
- Ghana National Petroleum Corporation (*GNPC*): - 10%
- Fueltrade Limited (*Fueltrade*): - 2%

Contract Area to be developed:

70 km from the coast at the nearest point and 60 km across;

across; Coverage = 200,000 ha

Water depth range = 1600 to 2500 m



# PROPOSED DEVELOPMENT OVERVIEW

- It is an Offshore Oil and Gas Production System consisting:
  - ✓ Installation of 40-45 oil and gas production and injection wells
  - ✓ Installation of a ship-shaped FPSO and mooring system
  - ✓ Installation of subsea infrastructure
  - ✓ Subsea connections from the wells to the FPSO
- Construction activities of the development will involve:
  - ✓ Drilling, completion and connection of the wells
  - ✓ Installation and testing of the subsea facilities and pipelines
  - ✓ Anchoring of the FPSO unit.



# Proposed development overview – cont'd

- Operation of the system will involve:
  - ✓ Well fluids (oil, gas and water) to be received and treated on the FPSO
  - ✓ Treated crude oil to be stored on the FPSO and periodically offloaded to shuttle tanker and sold to international markets
  - ✓ Natural gas to be treated on the FPSO and transported to shore and used in Ghana.

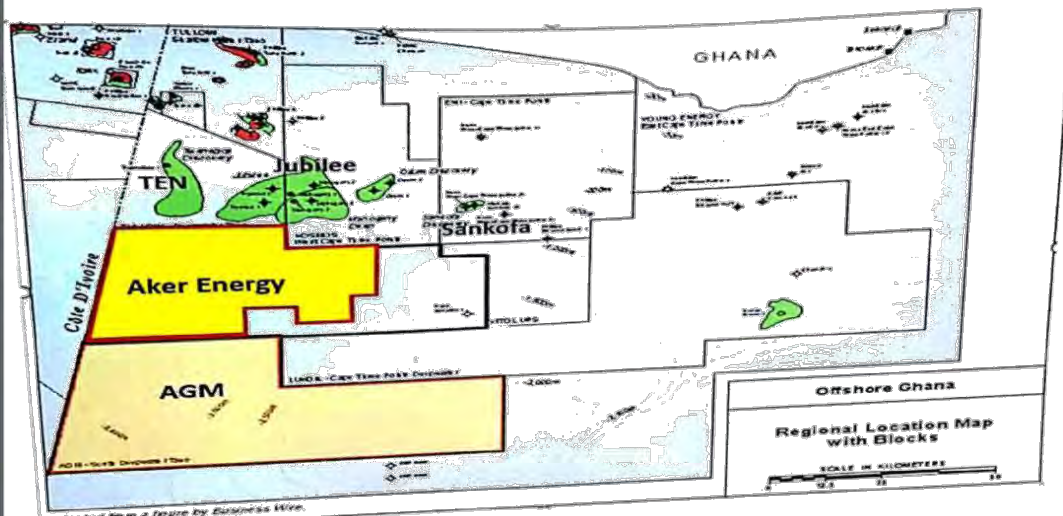
Note: Production planned for **2021** and projected to last until **2036** or longer.

- Decommissioning (removal of FPSO and allied infrastructure) at end of production will involve the removal of:
  - ✓ The subsea infrastructure, the connecting lines, the FPSO mooring lines and the FPSO itself.
  - ✓ All hazardous waters, and will be disposed of according to international good practice.

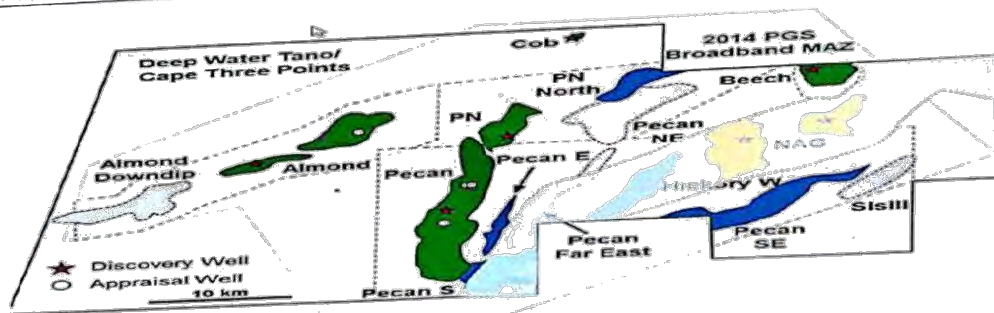


# Proposed development overview – cont'd

Figure 1: Project Locality Map.



Adapted from a figure by Business Wire.



- Turonian Oil Discovery
- Cenomanian NAG Discovery
- Existing Discovery Areas
- Cenomanian Discovery Area (new)

Source Aker Energy 2018

Figure 2. Example of subsea structures array

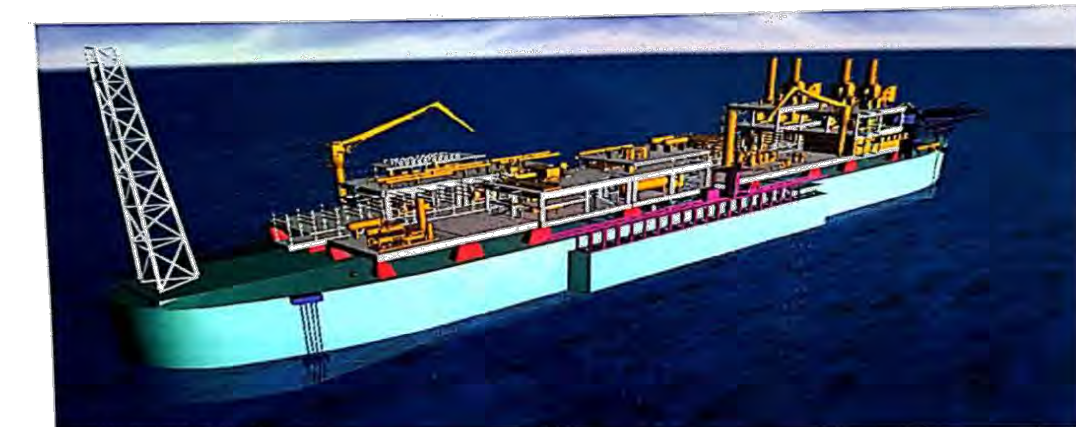
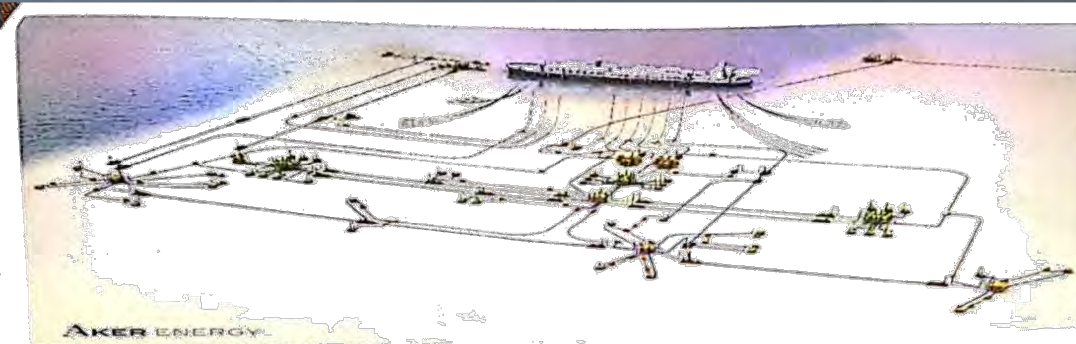


Figure 3: Example of an FPSO

**AKER ENERGY**

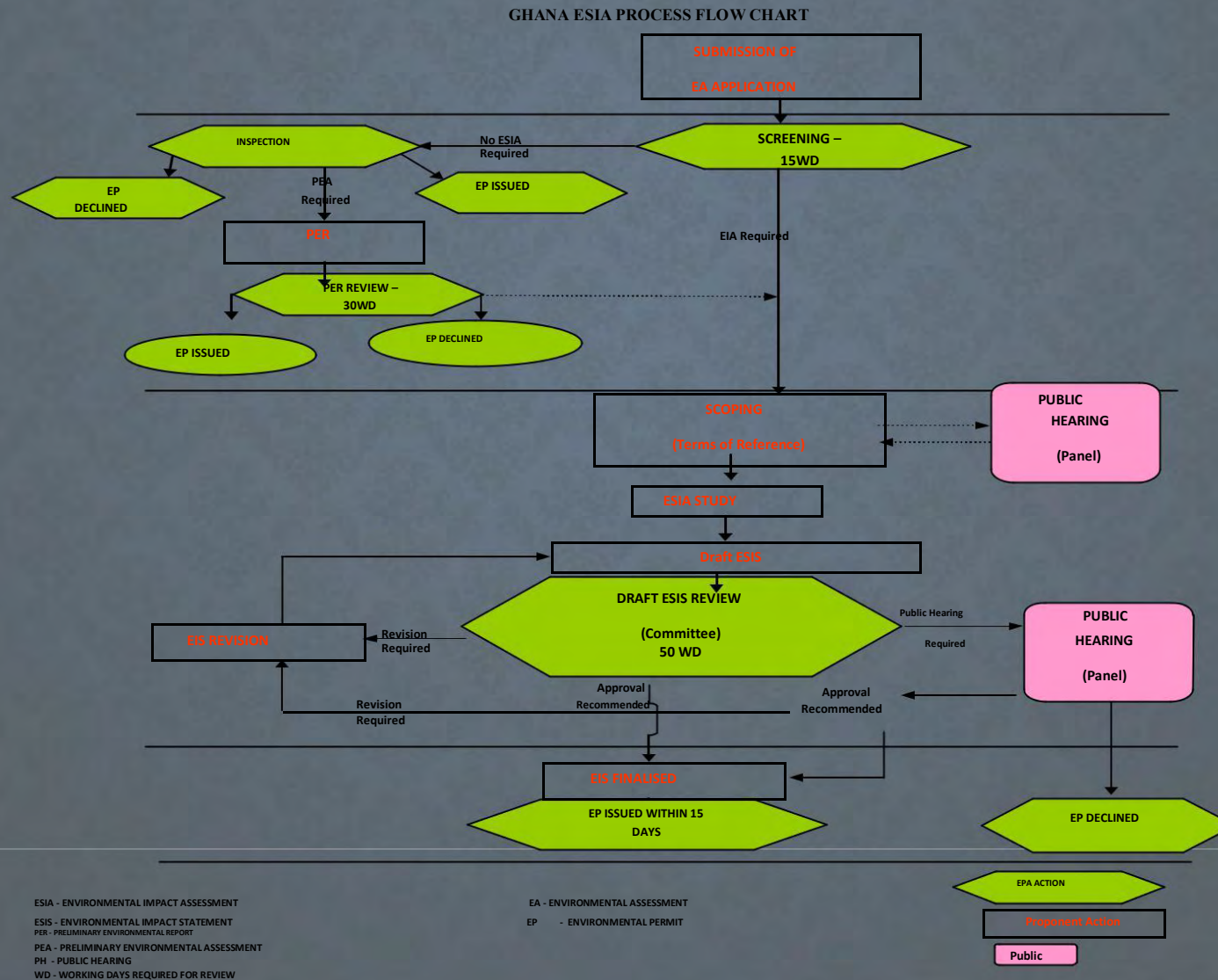
Deep Water Tano Cape Three Points (DWT CTP) Development  
ESIA Scoping Study

Background Information Document  
June 2018

Potential Impacts & Mitigating Measures

The development will be located in deep water approximately 70 km off the coast of the Western Region of Ghana. The activities

planned for construction, operations and decommissioning have the potential for impacts to the environment. Based on a preliminary assessment of the proposed activities, potential impacts and risks include the following:





# SCOPING STUDY

- Scoping is a critical step in the preparation of an ESIA.

## OBJECTIVES

- Inform the public.
- Identify the main stakeholders, their concerns and values.
- Identify issues of most importance for the ESIA and eliminate those of little concern.
- Establish the Terms of Reference for the ESIA study.



# SCOPING STUDY

## Why Scoping Study

- Ghana Environmental Assessment Regulations of 1999 (LI 1652) determined the proposed activity as requiring an ESIA and an environmental license from the Ghana EPA.
- The scoping study will identify:
  - ✓ the likely potential positive and negative impacts – environmental, social, health.
  - ✓ provide the terms of reference for the full ESIA studies.

## Outcome of Scoping Study

- Report will describe plans to mitigate and manage impacts.
- Study will include engagement with the government, community and civil society stakeholders to obtain their views.
- Scoping report with stakeholder comments will be submitted to the Ghana EPA for approval, and made available for public comment.



# POTENTIAL IMPACTS & MITIGATING MEASURES

## Based on preliminary assessment

### ➤ Physical and Biological

- ✓ Emissions to air from power generation, flaring and venting on the drilling rig and FPSO.

(FPSO design and operation will focus on energy efficiency to reduce CO<sub>2</sub> and will allow for flaring and venting to be at minimum)

- ✓ Produce water and chemicals discharges to sea.

(The produce water and other oily spill water will be treated to meet or be below required discharge limits using BAT principles; drilling and production process will use environmental friendly chemicals; risk assessments will be conducted to estimate potential impacts and to find best chemical option)

- ✓ Disturbance to marine mammals from noise generated by the drilling rig, FPSO and other operations.

- ✓ Drilling activities, placement of subsea infrastructure and FPSO mooring could impact biological communities living on or in the seabed sediments.

(The drilling ship will not be moored to reduce anchoring impact)



# POTENTIAL IMPACTS & MITIGATING MEASURES Based on Preliminary Assessment

## ➤ Social

- ✓ Positive economic impacts on country and local communities from direct and indirect employment and procurement related to the development.
- ✓ Interruption of fishing activities from the movement of vessels during project life cycle.
- ✓ The safety exclusion zone around the FPSO could impact fishing activities and marine traffic.

## ➤ Cumulative

- ✓ Collective social and economic impacts from other adjacent oil and gas activities already occurring in the offshore area. Takoradi, where supply and maintenance activities will occur, is already experiencing social and economic impacts from multiple oil and gas developments.

**Note: All potential impacts and mitigating measures will be identified and assessed during the course of the ESIA study.**



# POTENTIAL IMPACTS & MITIGATING MEASURES

## Based on preliminary assessment

### ➤ Accidents

- ✓ Unplanned events can occur: vessel collision, pipeline leaks, well blowouts and accidental oil spill. (these are very unlikely, and the application best industry practice will reduce likelihood for event. Oil spill response plans and equipment, collection and containment systems offshore and shore, oil dispersion systems offshore, will be available to mitigate oil spill.

**Note: All potential impacts and mitigating measures will be identified and assessed during the course of the ESIA study.**

# INVITATION TO COMMENT

- ❖ Issues and concerns you may have about the proposed development
- ❖ Your comments are important to informing the scoping process
- ❖ Your support or concerns will be noted so they can be assessed in the ESIA.

**THANK YOU !!!**



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*APPENDIX C: Minutes of Consultation Meetings*

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## **(TAKORADI MEETINGS)**

### **1. AKER ENERGY STAKEHOLDERS' ENGAGEMENT MEETING WITH THE FISHERMEN ASSOCIATION**

#### **MINUTES OF MEETING**

**DATE: MONDAY, 18<sup>TH</sup> JUNE 2018      TIME: 9: 32AM      VENUE: CONFERENCE ROOM,  
FRIENDS OF THE NATIONS, SEKONDI**

**ATTENDANCE: 29**

#### **OPENING**

The meeting started at 9:32am with a prayer by Mrs. Annan (Fishmonger).

#### **DISCUSSIONS**

##### **Introduction**

Mr Emmanuel Appiah (CSR Manager, Aker Energy) led discussions and asked attendees to introduce themselves, he started by introducing himself and others followed suit.

##### **Presentations**

The Environmental Manager for Aker Energy, Ole did a presentation on Aker Energy. He Started by giving a brief background in his experience as an Environmental Manager for 25years. He mentioned that Aker is headquartered in Norway and that they have recently acquired Hess Ghana Exploration Limited. According to him, Aker is an oil and gas company that desires to long its experience in the industry to Ghana. It has a team of 150 skilled employees.

Ole pointed out that, Aker Energy aims at being one of the best oil and gas operators in Ghana, by working in the common interest of society and the country at large. He posited that Aker plans to produce oil in compliance with the country's regulations and laws. He further added that Aker B.P is one of its partners and they aim at having efficient operations in Ghana.

Ole explained that an FPSO (Floating Production Storage and offloading Vessel will be built in the sea and 45 wells will be created. They will produce gas too. Aker will take over HESS' wells and produce oil by 2021. His company promises to engage its stakeholders.

Nana Kondua explained the presentation in fante to the attendees (the fishermen) and convinced them that Aker has their interest at heart. He also requested that Aker should engage them and work closely with them. He explained that they already have a good relationship with Mr Appiah so Aker can count on them for their support. Nana assured Aker that they would carry the message



to the grassroots. He assured Aker that they are the opinion leaders in the association so in case of any conflict, they are the right people to consult to resolve the issues. He indicated that certain issues can be resolved with them rather than going to the court. At the end of the day, if there is an accident, they will also be affected.

Mr Appiah assured the attendees that Aker is more than ready to work with them and to also consider their requests and grievances.

A.K Armah also did a presentation on the scoping study. He emphasized that at this stage, they intend to know the things that are very important in the Environmental Social and Impact Assessment, and that after the meeting they would be consulted again for a proper impact assessment. A copy of the scoping study report will be given to the attendees and to the Environmental Protection Agency (EPA). The fishermen will make inputs which will be used to revise it and then a revised copy will be submitted to the EPA before a license will be issued.

Prof Armah pointed out that Aker now has three (3) main partners; namely Lukoil, GNPC and Fueltrade limited and that the oilfield is about 70km away from the coast but will be very deep into the sea.(deep water drilling) thus a robust technology which is uncommon will be used.

A.K Armah gave an overview of the development which involves injection of water and gas into the land and a building of an FPSO and structures under the sea. He explained that all the structures will be tested and the FPSO will be anchored and the natural gas will be transported to the shore. The gas pipeline will be joined with that of ENI( an oil and gas producing company in Ghana). He mentioned that the lifespan of the oil is 25years (from 2021 to 2036) and that oil producing countries look up to Norway because they are a good example of an oil producing country which has managed their oil revenue properly to benefit their country thus Aker will safely drill oil with less damage.

Prof. Armah added that Aker will use deep sea oil exploration technology since their block is deeper into the sea and their field is different from the jubilee field .He explained what an FPSO is (a ship like factory on the sea without an engine of its own).

Mr Armah mentioned that EPA requires them to do a marine impact assessment and that Aker is committed to doing so.

After scoping, he explained, a report is put together and shared in the newspapers and a copy is sent to stakeholders (fishermen) for their input and approval. A.K Armah added that Aker will put measures in place to mitigate the impact of the oil production. He mentioned some mitigation measures as follows:

#### 1.Physical and Biological;

Air-Generators, machines, flaring, etc could pollute the air. A filter will be used to take out the harmful chemicals

Water-Oil comes with water and gas so they are separated. The water will be treated before it is discharged into the sea.

Sub soil-Marine mammals will be disturbed because of movement of machines

2. Social Impact; Employment, both direct and indirect will be created. Another stream of revenue will be coming into the economy of Ghana. This revenue would influence the country's policies (eg. Free SHS Policy)

Fishing activities will be interrupted because of the movement of vessels.

Cumulative Impact-There will be more NO-GO AREAS on the ocean.

Accidents such as oil spills, vessel collision and pipeline leaks are bound to happen.

A.K Armah quickly added that there are many benefits of oil exploration but it comes at a cost and those who are mostly affected are the fishermen

A.K opened the floor for issues that bothered on scoping so that important issues could be identified.

Sheets were distributed to the fishermen and fishmongers, they were asked to put down their inputs and suggestions regarding the scoping. Their contact information were taken and they were given ample time (up to Friday) to complete and submit the forms.

Mr Appiah said that the fishermen will be consulted from time to time (every 6 months)

## **SUGGESTIONS**

1. There was a suggestion that health screening should be arranged for the communities regularly as some suffer from diseases from time to time (Mrs Abaka Adu)
2. Caution letters should not be given to the children often as it makes them apprehensive.
3. Focus should be shifted from SHS to vocational and technical training .Mr Appiah added that the children are unwilling to attend vocational and technical schools

## **Deliberations (Questions and answers)**

Mr Abeka Adu asked about how the shores will be protected and what compensation the affected fishermen will receive. Ole responded that they would address it after their environmental impact assessment.



Emeila Abaka Edu enquired if Aker would continue with the programs and activities of HESS such as the scholars' program. Mr Appiah responded that they will continue with the program and even make it better.

Mr Abeka Adu asked about how Aker would protect the marine environment. Ole replied that they will follow the guidelines to protect it. A.K added that they would even conduct a marine assessment as it is now a requirement of the EPA.

The leader of the canoe council asked how Aker would manage the effect of constructing an FPSO, as it will affect fishing. Mr Appiah replied that the FPSO will be constructed onshore and transported to the sea so it would not have much impact.

The leader again asked how the company will manage the effect or vessel traffic. Mr Armah answered that the vessel traffic is normal on the sea but this will not be a problem on the Aker Block. Ole added that Aker will look into it and will see how best they can reduce its effect.

Mr Appiah added that Norway has best practices when it comes to oil production so they will produce oil in an environmental friendly manner.

Mr Appiah emphasized that they should put down their ideas and suggestions regarding the scoping.

Mr Abaka Adu asked how the drilling water will be treated and where it will be discharged?

Ole answered that the water is properly treated on the vessel and it is discharged into the sea. He added that their waste will be managed and properly discharged and that they would use environmentally friendly products to produce the oil.

Nana Kojo Konduah enquired about how the local community will benefit from the employment that the industry will create. Mr Appiah replied that the industry creates spin offs. For example Tullow engaged local contractors from the Half Assini area when it was building an assembly hall in Half Assini senior high school.

Emelia Abaka Adu asked about how the sea weeds will be managed in Ghana even as it is used as medicine and for other purposes in other countries such as Tanzania. Mr Armah replied that there is no market for sea weeds in Ghana so little can be done with it.

## **CLOSING**

The meeting ended at 12pm with a closing prayer from Mrs Annan.

Mr Appiah thanked all the attendees.

## **2. CONSULTATIONS**

### **Minutes of meeting with Ghana Ports and Harbours Authority (GPHA) - Takoradi**

Venue: GHPA Conference Room, Takoradi

Date: 18<sup>th</sup> June 2018

Attendance: 13 people attended the meeting.

Distribution: To attendees via email

### **Opening**

The meeting started at 3.05 p.m. with an opening prayer by David Halm (Estate & Environment Manager).

### **DISCUSSIONS**

#### **Introduction**

Captain Ebenezer Afedzi (Director of Port) opened the meeting by welcoming the scoping study team jointly made up of AKER Energy and ESL Consulting teams, and then briefly introduced himself and his team. In response, Mr. Emmanuel Appiah (AKER Energy CSR) introduced himself, followed by self-introduction of the other scoping study team members, after which he hinted on the purpose of the visit. Mr. Ole Aspholm (AKER Energy Environment Manager) and Mr. A.K. Armah ( Director of ESL Consulting Ltd and Lead consultant) took turns to make presentations on AKER Energy Company and its proposed Deep Water Tano Cape Three Point (DWT/CTP) oil and gas project in Ghana, and the DWT/CTP Development ESIA Scoping Study respectively.

#### **Presentation**

Presentation on AKER Energy company profile, outlining its ambitions, aims and objectives, and introducing the proposed project was done by Mr. Ole Aspholm.

Presentation on the DWT/CTP Development ESIA Scoping study was done by Mr. A.K. Armah.

#### **Deliberations**

On the issue of logistics base, Mr. David Halm of GPHA wanted to know if AKER Energy had plans of using the Port or port facility during their operation, and which agency was going to be used as middle-man. Mr. Emmanuel Appiah responded by indicating that AKER Energy took over from HESS, which had been using facility from the port, and hence AKER would definitely continue in HESS stead and make use of the port facilities. He added that AKER Energy had



inherited an established scholarship programme from HESS, which it was going to continue to administer as part of its corporate social responsibility (CSR).

Captain James R. Quayson of GPHA drew attention to the need to notify Petroleum Commission to direct GPHA to conduct an inspection of the FPSO before start of activities. He also indicated that GPHA had the means of mitigating minor oil spills at tier 1 level. The spill kits/equipment are kept at the port. Any spill incidence above tier 1 would be handled by ZOIL Company.

Captain Ebenezer Afedzi emphatically mentioned New Takoradi as the community that ought to be prioritised among the list of communities that were going to benefit from their CSR programmes. Mrs Agnes Devis-Moses also recommended that, as part of AKER Energy's corporate social responsibilities, tagging or labelling such CSR projects in communities as a way of raising public awareness/education towards the need for such responsibility is important, and cited an instance where a dilapidated community school could be identified and renovated and AKER Energy logo embossed on it.

Captain James Quayson, further advised the use of local expertise/skills rather than importing skills from outside the project region/district of influence. This was to avoid disadvantaging the local people who might equally have the skills, and stated as a case in point, that the local skilled divers could be used on the vessels after being given a little training. The Director of Port, Captain Ebenezer Afedzi, in turn re-emphasized Captain James' concern.

## **Closing**

Captain Afedzi promised readiness to offer help and cooperate at any time GPHA would be called upon or a need might arise. Mr. Emmanuel Appiah then gave the vote of thanks.

The meeting ended at 3.50 p.m.

### **3. AKER ENERGY STAKEHOLDERS' ENGAGEMENT MEETING WITH THE FISHERIES COMMISSION, TAKORADI**

#### **MINUTES OF MEETING**

**DATE: TUESDAY, 19<sup>TH</sup> JUNE 2018 TIME: 9: 32AM VENUE: REGIONAL DIRECTOR'S OFFICE**

#### **ATTENDEES**

1. Josephine Laryea (Fisheries Commission)
2. Theodore Kwadjosse (Fisheries Commission)
3. Alex Y. Sabah (Fisheries Commission)
4. Kenneth Y Assi (Fisheries Commission)
5. Ole Aspholm (Aker Energy)
  
6. Mr Emmanuel Appiah (Aker Energy)
7. Desmond Asiedu (Aker Energy)
8. Prof. A.K Armah (ESL consulting)
9. Fergus Agyeman (ESL consulting)

#### **DISCUSSIONS**

The meeting began at 10:10am. Mr Sabah, the Regional director of Fisheries commission welcomed the Aker Energy and the ESL teams. Mr Appiah introduced the team members and made known the purpose of the meeting. Attendees introduced themselves and then Mr Appiah led the discussions. He mentioned that HESS Exploration Ghana Limited has been taken over by Aker Energy. He then introduced the company and gave Ole Aspholm the opportunity to do a presentation on the company after which A.K Armah spoke on the scoping study.

Mr. Ole Aspholm's presentation touched on the company's profile, its goals and objectives and its proposed project in Ghana. He emphasized that his company aims at being the leading oil and gas operator in Ghana and also want to be responsible for the social development of Ghana. According to Ole, Aker would be focused on sharing their knowledge in the industry.

He assured the attendees that Aker Energy is committed to exploring oil and gas in an environmentally friendly manner even as it considers the interests of its stakeholders.

Presentation on the DWT/CTP Development ESIA Scoping study was done by Mr. A.K. Armah. He emphasized that the aim of the meeting was to capture important issues for the scoping study. After his presentation, forms were distributed and attendees were asked to put down their ideas and suggestions for the study. Arrangements for collection and pick-up were also made.



## **SUGGESTION**

The director requested that Aker should involve the fisheries commission in their Community sensitization activities.

One challenge that has been identified is that leaders who attend meetings do not inform their members about the decisions made at the meetings. He advised that both leaders and members should be invited to meetings and that publicity and community involvement would enhance the image of the company. Also, in community sensitizations, fishermen in the western region should not be the main focus. Fishermen in the Volta and Greater Accra regions should be included. He indicated that most fishermen arrested in 2014 and 2016 were from the Central thus Central and Greater Accra regions would be greatly involved in the sensitization. The director mentioned that there are many regulations but the challenge is its compliance.

Again, Fisheries communicators have been instituted (a group of trained fishermen) so they could be involved in the engagement since they are the voice of the fishermen

## **CONCERNS**

Mr Sabbah (the Regional Director of the commission) expressed his concern regarding issues of cumulative impact. He indicated that fishes are mostly drawn towards the exclusive zones where fishing is prohibited. He wanted to know how Aker would mitigate this impact. He is hoping that the company would tackle this issue.

Ole responded that his company would use processes that would not attract fishes to the exclusive zones. He explained that, for instance, the lighting system would be positioned such that it would not attract the fishes to the vessel.

The director indicated that Fishermen pose a great risk to the oil and gas industry and so he hopes that Aker would work closely with the fishermen.

Ole enquired about the fishing gears used by the fishermen. Mr Kwadjosse answered that the fishermen use Drift Gill nets (DGN) and the hook and lines are normally used. He added that the DGN are not stationary and are quite huge. They are about Twenty (20) meters in depth. The DGNs are not visible to vessels even though they have filters. This poses a lot of danger to a lot of fishermen who come around and could damage the nets.

A drilling impact assessment had been done prior to Aker's drilling operations and the main challenge that was identified was with the fishermen and the net. The net can easily destroy the trister in place.

Mr Kwadjosse asked about how fishermen could identify the exclusive zone. Ole responded that floating buoys would be provided for the FPSO and not for the drilling ships as they are mobile during drilling.

Josephine Laryea made the team aware that they have a data fishermen and canoes which will be provided to Aker upon request. Ole mentioned that canoes will be equipped with radars and locators. Mr Appiah added that acoustic sound device were given to fishermen to alert them when they came close to drilling vessels but unfortunately the fishermen damaged them so locators and radars, locators and reflectors will be appropriate.

Desmond Asideu asked if they could be given canoe registration and Mrs Laryea explained that canoe registration and embossment have been done but their challenge was that fishermen scrap off the registration numbers during canoe maintenance. A plastic plate with embossed numbers would be a better alternative. She added that canoe registration will be compulsory and every canoe must have its registration number embossed on it.

Mr Laryea indicated that the chief fishermen and some technical men are assisting with these issues at landing beaches.

Mr Appiah asked that if fishermen still engage in pair trawling and Josephine Laryea responded that fishermen do not engage in that activity anymore since accidents can easily occur on the coast. He added that it would be prudent to install AIS in fishing boats. Ole stated that Aker is committed to working with fishermen rather than against them.

## **CLOSING**

Meeting ended at 11:30 pm with a closing prayer from Mr Appiah. He thanked all their attendees



#### **4. STAKEHOLDER ENGAGEMENT MEETING WITH THE WESTRN REGIONAL COORDINATING COUNCIL**

**DATE: MONDAY: 20<sup>TH</sup> JUNE 2018**

**TIME: 10: 03AM**

**VENUE: REGIONAL OFFICE, RESIDENCY CONFERENCE ROOM, SEKONDI**

**ATTENDANCE: 51**

**DISTRIBUTION: To attendees via email**

#### **OPENING:**

The meeting started with a prayer by Prince N.A Awere, the PRO of the Regional Coordinating council, after which Claude, the Protocol Officer gave a safety briefing.

Mr Appiah then welcomed attendees and stated the purpose for the meeting. The Deputy Regional Minister, Honourable Mrs Gifty Kusi, followed with a short address, and called for self-introduction of attendees.

#### **PRESENTATIONS:**

Environmental Manager for Aker Energy, Ole, did a Company presentation of Aker Energy, outlining its goal to develop the pecan oilfield in Ghana and start production in 2021. He reiterated Aker Energy's intent to bring to Ghana its experience and competence in oil and gas production.

A.K Armah followed with a presentation on the Deep Water Tano Cape Three Point (DWT/CTP) project scoping study. He explained that the purpose was to develop the Terms of Reference (TOR) for the full ESIA study, and that their views, concerns and suggestions were of paramount importance.

#### **DISCUSSIONS:**

1. Mr Joe Appiah, the Metro Youth Director (National Youth Authority), on the issue of Corporate Social Responsibility, indicated that the project has the potential of affecting the activities and incomes of the fisher-folks within the project area of influence leading to local unrest; and the use of the FPSO would lead to setting exclusion safety zones that limit their fishing area. He wanted to know if Aker Energy would compensate or provide some sort of alternative livelihood for the fisher-folks.

**In Response,** Mr Emmanuel Appiah, the CSR Manager of Aker Energy, explained that Aker Energy took over from Hess Exploration and had inherited a scholarship scheme established for the fishermen's children as part of their corporate social responsibility. Aker Energy would continue with the scheme and even expand and improve upon it. Improving the programme, Aker Energy would, however, adopt the bottom-up approach where the concerns of the affected people would be considered first in rolling out the programme, and not to impose anything on them.

Mr A.K Amarh said that the distance from the shore is 70km and that fishermen will not be destructed when fishing. It is only when they come close to the FPSO to fish where the light attract the fishes, but Aker Energy will plead that the fishermen should obey the rules giving them.

- 2 Mr Baba Nyina of the Trade and Industries, in response to the scholarship programme, wanted to know if Aker Energy had plans for the young ones that would not be in school and so not benefit from the scholarship programme. He suggested Aker Energy consider in their corporate social investments, providing opportunities for various standard vocational trainings for such young ones and cited such vocation as catering as a case in point, so they could be engaged to also provide various standard services in the oil and gas industry, by which both Aker Energy and these non-school going young ones would symbiotically benefit. Further, he pointed out that cumulatively, the exclusive zones that had been set by Tullow, Tein, Sankofa etc., and would be set by Aker Energy were going to increase, and would potentially reduce the fisher-folk's effective area of fishing activity thereby limiting the fish stock. What alternative livelihood plans, he wanted to know, would Aker Energy have for the fisher-folks?

**In response,** Ole Aspholm, Aker Energy Environmental Advisor, on the issue of safety exclusion zone, explained that the exclusion zone would be only 500m radius round one FPSO vessel that would be inaccessible for fishing, and that was infinitesimally small compared to the entire block. The rest of the area would still be accessible for fishing activities. He further explained, touching on the issue of depleting fish stock caused by the oil and gas industry that Environmental Impact Assessments, especially in the oil and gas industry, were largely based on scientific evidence, and that learning had improved over the years hence a lot of scientific data was available currently to rely on. However, perceived impacts or public perceptions that centered largely on the concerns of society could not be overlooked in the assessment of environmental impacts. Nevertheless, they could not solve problems that would be outside of the impacts of the oil and gas industry, for instance, the depletion of fish stock. To this effect, he explained that in Norway there was a similar perception in the 80s held by the fish industry that the oil and gas industry was causing the depletion of the fish stocks. Scientific proofs on the other hand demonstrated that there was a mismatch between fish breeds and the activities of the oil and gas industry, and that Norway currently had both the biggest fish stock and the highest oil and gas activities ever. He concluded, nonetheless, with the promise that Aker Energy would always consider primarily the concerns of the people and would ensure application of international best practice to minimise impacts.

3. Rexford Arthur (Sekondi Takoradi Metropolitan Assembly) said the Assembly has a 4-year development plan. He lamented that the Assembly over the years had been left out, not involved or consulted by the oil companies to see what they had in their plans to be implemented when they undertook such projects as school building construction and the like as part of their Corporate Social Responsibility (CSR); the Assembly was only invited to commission or witness commissioning of such projects. However, in the event of any such accidents as the collapse of the structure, the Assembly would then be called upon. He advised Aker Energy to involve and collaborate with the Assembly for technical supervision of such infrastructural development projects from the outset.

**In response,** Mr Emmanuel Appiah remarked that Aker Energy had taken note, and that the Assembly was one of their major stakeholders and so promised they would be involve for technical supervisions.

4. Ebenezer Sam, Ghana Fire Service mentioned some FPSO fire incidents that had occurred in other countries due to failure of safety systems. He tasked Aker Energy to do well to involve the Fire Service right from the inauguration of their FPSO so that they could also give the necessary training with regards to safety systems so that the likelihood of fire incidents occurring on their (Aker Energy) FPSO would be reduced.
5. Joyce Obiri Yeboah, Head Department of Development reiterated the help to be giving to fishermen since Aker Energy's activities will distort their fishing activities and these fisherfolks won't be able to make a living. Does Aker have any alternative economic activities for the fishermen?
6. Nelson Setogbor, Research Officer, Western Regional House of Chiefs said that the Scholarship Program that most oil companies have in place for indigenes should be managed properly in that he realised these oil companies that give the scholarship do not want to employ the scholars after school and most of these ones become unemployed at the end. He also suggested that a school (university to be precise) should be built in the locality, this will make up for a sustainable development.
7. Micheal Tabiri, National Sports Commission raised a concern that because oil production activities goes on in the region, its capital Takoradi has been branded oil city creating the impression that the oil activities are being done in Takoradi, and this is making the cost of living in Takoradi expensive and this is affecting other people who are not in the oil industry, what will Aker Energy do to address this issue.
8. Owusu Ameyaw from Forestry raised the issue of unemployment in the region, he appeals that Aker Energy should do their best to address this c=issue and especially pay attention to youth without any school certificate. He added that such ones can be giving menial jobs that doesn't require and qualification so that they can also make a living.
9. Angelina Awah from Lands Commission said that oil companies should make it a point to put up infrastructures embossed with their company name on it to depict that the company is in operation.



10. Henrietta Ampah from immigration, mentioned that Expats who work for oil companies should be housed in Takoradi instead of being in Accra to increase the activities in the region.
11. Prince, Police appealed that the Deputy Regional Minister should push for the regulators of the oil and gas industry to be headquartered in Takoradi to show that oil production activities are done in the region.
12. Lawrence Agdu Of Minerals Commission asked about how ballast water will be managed.
13. Amanda Dudimah, from Lands Commission asked about how greenhouse gases and other gas flaring be managed.

**ANSWER;** The Environmental Manager of Aker Energy said oil comes with gas and water and that Aker Energy will separate and send to shore. The pipeline will be joined to the Sankofa pipeline. Gas flaring will be controlled.

**14.** Isaac Kofi Amakye, BNI asked about the security measures that Aker Energy will put in place during their operations, and what mitigation measures will be there for air pollution

**ANSWER;** Regarding air pollution from the FPSO, it gets diluted in the air and it does not affect those living on land

**15.** David Annor Kesse from Department of Small Scale Industries asked about the plans that Aker Energy has for the oil by-products if possibly it can be diversified to generate income for the people in the communities

**ANSWER;** A.K Armah pleaded that the attendees are in the communities and they know the real issues so they should let Aker Energy know their suggestions that are doable and sustainable to help the unemployed indigenes.

**16.** LT CDR Lucas Ocloo, Ghana Navy asked about security measures that will be in place especially of the FPSO

**ANSWER;** Mr Appiah assured the house that the security issues will be looked at and addressed.

## **CONCLUSION**

The Deputy Minister thanked the Aker Energy team for their presentation and urged all attendees to put down their suggestion on paper.

She added that in 2012, they ensured that while they were dealing with the mining companies, a percentage of their profit was given to the committee to be managed by them for CSR Projects.

She asked that Aker should establish a foundation and invest in it so that when they are done drilling the oil and leave the country the locals will benefit.

She also added that Employment for Aker Energy should be done in Takoradi so that indigenes will benefit.

Mr Appiah mentioned that for Aker most of it employment will be done in Takoradi

### **TASKS**

All stakeholders should fill out a form given to them. They should put down their suggestions and ideas regarding the scope study.

### **CLOSING**

The meeting was ended with a closing prayer by Freda Owusu Ansah at 11:40am.

## **5. AKER ENERGY STAKEHOLDERS' ENGAGEMENT MEETING THE GHANA MARITIME AUTHORITY**

### **MINUTES OF MEETING**

**DATE: WEDNESDAY, 20<sup>TH</sup> JUNE 2018 TIME:1:40 PM VENUE: MARITIME AUTHORITY CONFERENCE ROOM, TAKORADI**

#### **ATTENDEES**

1. George Anti Kwakye (Maritime Authority)
2. Divine Kofi Gli (Maritime Authority)
3. Captain Kwabena Adu (Maritime Authority)
4. Nana Otoo (Maritime Authority)
5. Emmanuel Appiah (Aker Energy)
6. Desmond Asiedu (Aker Energy)
7. Ole Aspholm (Aker Energy)
8. Ayaa K. Armah (ESL Consulting)
9. Fergus Dumenyo Agyeman (ESL Consulting)
10. Kenneth Y Agbi (ESL Consulting)

#### **OPENING**

The meeting started at 1:40 pm. Mr. Emmanuel Appiah (AKER Energy Corporate Social Responsibility Manager) then introduced himself, followed by self-introduction of the other scoping study team members. The scoping study team was made up of the AKER Energy and ESL Consulting teams. He made known the purpose of the meeting. Mr. Ole Aspholm (AKER Energy Environment Manager) and Mr. A.K. Armah ( Director of ESL Consulting Ltd and Lead consultant) took turns to make presentations on AKER Energy Company and its proposed Deep Water Tano Cape Three Point (DWT/CTP) oil and gas project in Ghana, and the DWT/CTP Development ESIA Scoping Study respectively.

#### **DISCUSSIONS**

##### **Presentations**

Mr. Ole Aspholm's presentation touched on the company's profile, its goals and objectives and its proposed project in Ghana. He assured the attendees that Aker Energy is committed to exploring oil and gas in an environmentally friendly manner even as it considers the interests of its stakeholders.



Presentation on the DWT/CTP Development ESIA Scoping study was done by Mr. A.K. Armah. He emphasized that the aim of the meeting was to capture important issues for the scoping study. After his presentation, forms were distributed and attendees were asked to put down their ideas and suggestions for the study. Arrangements for collection and pick-up were also made.

## **CONCERNS**

Captain Adu mentioned that HESS (now Aker Energy) has gained a good reputation in the communities and asked for information on how the company gained such popularity in the communities. Mr Appiah responded that it is because of their Corporate Social responsibility (CSR) project in the communities. He added that the HESS-GNPC scholars' program was an initiative of the company and it gained so much popularity. The program provides full tuition and boarding fees and other items that would be needed by a student to go through their Senior High School (SHS) education. The scholars receive counselling and mentoring services and they are also given university admission forms.

Mr Appiah discussed their previous encounter with fishermen and their canoes. He added that some fishermen come too close to the vessel and even go to the extent of anchoring their canoes to the vessels. This poses a lot of danger to the fishermen.

Mr George Anti Kwakye indicated that blue prints already exist and that since Aker has taken over from HESS, they would do an even better job.

He added that sea traffic and accidents are likely to happen.

Ole mentioned that training of fishermen will be one of Aker's goals and that AIS should be installed in canoes.

Captain Adu explained that fishermen were given metallic reflectors to be put on their boats but refused to use it.

Ole asked if Maritime Authority could provide his company with vessel traffic data.

Mr Appiah asked that in terms of security and piracy, what can maritime suggest to Aker.

Mr George Anti Kwakye responded that since the rate of piracy has increased since the discovery of oil and he believes that both the marine police and the navy are working closely to eradicate this menace.

Mr Appiah enquired if the Maritime Authority has an oil spill contingency plan and what their role is.

## **TASKS**

The Background Information Document (BID) s would be picked up on Friday.

## **CLOSING**

The meeting ended at 2:40pm with a vote of thanks from Mr. Emmanuel Appiah.

**6. AKER ENERGY**  
**STAKEHOLDER ENGAGEMENT MEETING**  
**MINUTES OF MEETING**

**Venue:** Conference room, Friends of the Nation (FON), Takoradi

**Date:** 21<sup>ST</sup> JUNE 2018

**ATTENDANCE:** 27 people attended the program

Desire Aggor (AGRIDEF, CED)

Richmond Agbanyaklu (AGRIDEF, Program Director)

William Awotwe-Mprah (CEMAG)

Martin James Dadjo (New Crusading Guide)

Alfred K. Gyimah (CF/Administrator)

Mark Arthur (CEMAC)

Theo K. A. Abrempong (Citi TV)

David Acquah

Eric Mawuko Atsiatome

Theophilus Boachie-Yiadom

Will C Mu

I

**Opening** The meeting started at 9:37 am with a prayer by Mark Aurthur (Communitie, Environmental and Advocacy Group-CEMAG)

**DISCUSSIONS**

**Introduction**

Dr Chris Mevutor (the Executive Director of Friends of the nation) gave a welcome address and mentioned the purpose of the meeting. He urged the attendees to cooperate with the Aker and ESL teams and give them the information that they need. He asked attendees to introduce themselves after which he handed over to Mr Appiah and his team.

Mr Appiah explained the HESS –Aker take over and then introduced Aker Energy. He explained that Mr. Ole Aspholm (AKER Energy Environment Manager) will do a short presentation on Aker Energy and then Mr. A.K. Armah ( Director of ESL Consulting Ltd and Lead consultant) will talk on the company's

proposed Deep Water Tano Cape Three Point (DWT/CTP) oil and gas project in Ghana, and the DWT/CTP Development ESIA Scoping Study. He pleaded with attendees to go through the Background Information Document (BID) in front of them.

## **Presentations**

Mr. Aspholm introduced himself and then gave a brief background on Aker Energy, its aims and objectives as well as its mission in Ghana. He explained that his company aims at developing the Pecan oil field and produce oil by 2021. He quickly added that his company aims at becoming the preferred oil and gas operator in Ghana even as they do so in compliance with the national and international regulations. His company will also consider the interests of its stakeholders. He indicated that safety and Corporate Social Responsibility (CSR) will be their top most priority. He added that his company has a lot experience and skills in oil and gas industry and that they will to share it with the Ghanaian industry.

The presentation on the DWT/CTP Development Environmental and Social Impact Assessment (ESIA) Scoping study was done by Mr. A.K. Armah. He highlighted the importance and the process of the ESIA and what is expected of attendees. A.K mentioned the areas under consideration for the scoping and their mitigation measures. He pointed out that the ideas and suggestions of the attendees were very important at this stage and so invited their comments and suggestions.

## **Deliberations**

Mark Aurther (CEMAG) enquired if Aker has thought of alternative source of livelihood for the fishermen as nothing has been done for them so far. He also asked why Aker decided to come to Ghana to drill oil. Mr. Appiah responded that business people always look for productive places to do business and Ghana is a fertile ground for drilling oil. Ole also asked why Ghana should not be considered by Aker Energy for drilling oil.

William Awotwe Prah (CEMAG) enquired about how fishermen who encounter accidents with oil companies' the FPSO and their vessels could alert the companies to be compensated. Mr Appiah replied that they have an existing relationship with fishermen and some of them know their community liaison officers and their vessel numbers so in case of such incidents, they report it to them. He added that Aker will establish a good relationship with the fishermen and will let them know the numbers of their vessels before they start operating on the sea. A.K emphasized that such incidents are not intentional so the fishermen should contact the companies for a positive action to be taken by them.

Richmond Agbanyaklu asked what one thing will Aker would do differently as an oil company and that the layman may not directly feel the positive impact of an oil company despite its positive influence in the community. A.K replied that he should suggest things that Aker could do differently even as that is the purpose of the meeting.



Dr Chris Mevicta explained that Aker inherited both assets and liabilities from HESS Exploration but he could already see an improvement in the way they are operating for example, even in their stakeholder engagement, they have provided documents ahead of the meeting. He admitted that Aker is being challenged to demonstrate the best practices they are known for in the oil and gas industry. He enquired about the precautions Aker would take to protect the marine mammals since there have been the washing at shore of whales since the beginning of oil drilling in Ghana.

William (FON) asked about the provisions Aker will make to ensure a zero impact on the environment even as there is an existing blue print. Ole replied that Aker would do a thorough risk assessment and environmentally safe products will be used. He added that his company would look for zero levels of harmful discharge.

Armah Yeboah suggested that Aker should go to all the communities in the coastal districts and take their inputs for the scoping study.

Marvin James (Crusading guide) pointed out that the 'no fishing' zone areas are not properly marked so the fishermen end up in those zones accidentally and are caught and fined. He asked what Aker would do to address this matter. Ole responded that Aker would find the best solution to this problem and would do a fisheries impact assessment to produce safety measures. He added that his company would gather more information regarding this issue.

Dr Mevita added that this issue has come up several times and Aker is committed to using best practices.

Emmanuel Donkor (CEMAG) explained that the coastal belt is experiencing sea erosion because of the oil exploration and asked what Aker would do to address this problem. A.K explained that the oil field will be 70 km away from the shoreline so their activities is not likely to cause sea erosion. He added that operators are not responsible for what happens on the shores. Mr Appiah added that the erosion at Ketan begun long before Ghana started drilling oil so oil exploration does not affect the coastal lines in any way.

Dr Mevita quickly added that the issue is not the erosion but the perception that the erosion is caused by the oil exploration as it could cause tension between the operators and the fishermen. He asked how Aker will tackle this matter.

James Dadgo (CEMAG) enquired about the measures that Aker would put in place to mitigate any future oil spill into the borders of Ivory Coast as Aker's field will be close to their borders. Ole responded that Ghana already has measures in place to deal with such spill in the future. He added that Aker would bring in their own equipment to tackle with that issue.

Eric Mawuko (FON) asked for clarification on the space that would be left around the FPSO. Whether it would be one logical mile or 500 meters as presented. He also asked if an environmental assessment would be done before decommissioning of the FPSO and if there would be coral reefs to help the environment quickly recover after decommissioning. Eric added that Aker should consider having a refinery plan on shore in order to create more jobs for the communities both directly and indirectly.

Yaw Ampofo (Citi Fm) asked if Aker could possibly produce oil using existing structures instead of creating new FPSOs which will push fishermen further away from the sea. This situation tends to create tension between operators and the fishermen. Ole added that for gas, Aker will join their pipeline to the already existing pipeline of Sankofa. He also commented that 500 meters around the FPSO has a 'no fishing' zone is quite small so the cannot be blamed for low fish harvest of the fishermen. A.K emphasized this point. Yaw Ampofo suggested that Aker should engage their best practices as promised. To this Ole replied that they would use their best practices.

Chris argued that fishermen will always be drawn to places where they can find fish so Aker should let the fishermen know the zones and the precautions they need to take.

He added that a refinery is preferred to an FPSO and asked what FPSO Aker would use.

Ole described the kind of FPSO that his company will use. He added that the FPSO will not use lights that will attract fishes to a large extent. Eric suggested that Sola lights should be used as they don't attract fish. A.K added that they will look into the use of the Sola lights on the FPSO.

William Awotwe Prah asked about how fishermen will lodge their complaints or grievances since there is the likelihood of moving vessels causing accidents

Emmanuel Donkor asked about what will be done to minimise coastal erosion?

Richmond suggested that Aker should be head quartered in the western region so that it will create jobs for the indigeons. This suggestion was reiterated by Theophilus . Mr Appiah replied that employees would be taken from Takoradi if only they qualify for the positions.

Theo asked if the paths of mammals will not be disturbed by the operators and A.K replied that mammals do not have defined paths so movement of vessels will not affect them in any way.

Chris wanted to know Aker's position on the preservation of whales as in some time past, Norway did not support the preservation of whales. William argued that whales breed in the Ghanaian shores but they feed elsewhere so they are endangered in the midst of the operators. He suggested that Aker should establish a defined path and speed for oil vessels.

Will suggested that Aker should invest in the studies of megafauna and benthic communities since little is known about these things and knowledge in these areas would benefit the industry. He added that Aker could look into real oil contemporary plans.

Theo suggested that Aker should do a fisheries impact assessment in addition to the ESIA as it is requested by the EPA.

Theophilus Ampofo (Citi TV) suggested that Aker should look into the washing ashore of sea weeds as a result of the exploration.

Hosea Agu suggested that Aker should extend its CSR activities to those in the hinterlands and the forest belt in the western region instead of focusing on just the coastal communities.

Chris asked if Aker could help develop a marine special planning to deal with the health of the ocean.

Ole thanked the attendees for their inputs and pointed out that the company cannot meet all the needs of its stakeholders but it will try and do what they can do in their means such as creation of jobs and sharing of knowledge and skills with the Ghanaian industry.

## **Closing**

The meeting ended at 11: 36 am with a prayer by Mark Aurthur. Mr. Emmanuel Appiah then gave the vote of thanks.

## 7. CONSULTATIONS

### Minutes/Concerns of meeting of Environmental Protection Agency - Sekondi

Venue: EPA Conference Room, Takoradi

Date: 22<sup>nd</sup> June 2018

Attendance: 18 people attended the meeting.

**Opening** The meeting started at 9:30am with an opening prayer by Hamza (Environmental Protection Agency).

### DISCUSSIONS

#### Introduction

Mr Yaw Sarfo-Afriyie (Regional Director of EPA) opened the meeting by welcoming the AKER Energy and ESL Consulting teams There was a brief introduction. In response, Mr. Emmanuel Appiah (AKER Energy CSR) gave the purpose of the visit. Mr. Ole Aspholm (AKER Energy Environment Manager) and Mr. A.K. Armah ( Director of ESL Consulting Ltd and Lead consultant) took turns to make presentations on AKER Energy Company and its proposed Deep Water Tano Cape Three Point (DWT/CTP) oil and gas project in Ghana, and the DWT/CTP Development ESIA Scoping Study respectively.

#### Presentation

Presentation on AKER Energy company profile, detailing its ambitions, aims and objectives, and introducing the proposed project was done by Mr. Ole Aspholm.

Presentation on the DWT/CTP Development ESIA Scoping study was done by Mr. A.K. Armah.

#### Deliberations

On the issue of CSR, Mr. Shine of EPA wanted to know if AKER Energy consults the district assembly to know the medium-term plans that they have for the various communities before Aker Energy rolls out its projects? Mr. Emmanuel Appiah responded that a needs assessment is done and that informs Aker Energy what exactly the communities need before the projects are embarked on.

Kwodwo Opoku Mensah of EPA asked about how produce water will be managed, and if Aker Energy has any considerations for it apart from it been discharged.

Ing. George Diawouh, asked about how the Bottom hole pressure (BHP) will be sustained. He also asked if it will be possible to dilute the produce water and treat it to the standard required for reinjection.



He wanted to know more about the production Aker Energy has anticipated since the longevity of the project has been determined. He complained that most fishermen claim that most companies do not have markings for their exclusive zones, and that if it is possible for Aker Energy to anchor a buoy so to make the area visible.

He also suggested that since Aker Energy is a well acclaimed oil and gas company, they should come up with some of their best practices with regards to CSR. He also suggested that A.K Armah will liaise with Dr. Aggrey Fynn of University of Cape Coast to get a report on the stock of Dolphins so that they can be preserved.

Mr. Yaw Fosu Afriyie wanted to know what will be the alternative plan for the gas line if discussions with ENI do not go well.

Mr Shine asked about Aker Energy's plan for tier one (1) oil spill and what oil response plan they have.

Mr. Yaw Fosu Afriyie suggested that if it's possible to bring the waste from the FPSO onshore.

Kwodwo Opoku Mensah hinted that A.K Armah mentioned marine spacial planning and that what considerations Aker Energy is bringing on board. He again asked about how Aker Energy will compensate the fishermen during their seismic activities in future.

Mr Diawouh asked if Aker Energy has considerations for health impact assessment. A.K Armah said that this will be noted and meetings will be held with the district health office to have their inputs and that will be part of Aker Energy's terms of reference in the scoping.

Mr Diawouh again came up with a complaint that it is a rumour that those who manage the exclusive zones also fish in the area and since this will agitate the fishermen and so Aker Energy should come up with a policy on "NO FISHING IN THE EXCLUSIVE ZONES".

## **Closing**

Mr Emmanuel Appiah promised to bring an letter to officially invite EPA for the upcoming scholarship launch in September. Mr. Emmanuel Appiah then gave the vote of thanks.

The meeting ended at 11:40am

**8. AKER ENERGY**  
**STAKEHOLDER ENGAGEMENT MEETING**  
**MINUTES OF MEETING**

**VENUE: Conference Hall, Western Regional House of Chiefs, Sekondi**

**DATE: 25<sup>th</sup> JUNE 2018**

**A. ATTENDANCE:**

Thirty-Five (35) people attended the meeting

**B. OPENING**

The meeting started at 11:10 am with an introduction of all the attendees by the Assistant Registrar and an opening prayer by the president of the Regional House of Chiefs.

**C. DISCUSSIONS**

**I. INTRODUCTION**

The president chaired the meeting and gave an opening remark. The Aker Energy and the ESL teams introduced themselves and were welcomed by Nananom. The chairman made known to Nananom the purpose of the meeting and apologized for the late notice given to them. He encouraged them to assist the teams with the information that they need for the scoping study even as HESS Exploration Ghana Limited has been acquired by Aker Energy. He handed over to the teams to lead the discussions.

**II. PRESENTATIONS**

Mr. Aspholm (AKER Energy Environment Manager) introduced himself and then gave a brief background on Aker Energy, its aims and objectives as well as its mission in Ghana and how they intend to achieve it. He emphasised that his company aims at becoming the preferred oil and gas operator in Ghana even as they do so in compliance with the national and international regulations. He indicated that safety and Corporate Social Responsibility (CSR) will be their top most priority. Ole pointed out t that his company has a lot experience and skills in the oil and gas industry and that they intend to share it with the Ghanaian industry.

Prof A.K Armarh (Director of ESL Consulting Ltd and Lead consultant) did a presentation on the Deep Water Tano Cape Three Point (DWT/CTP) Development and the Environmental and Social Impact Assessment (ESIA). He highlighted the importance and the process of the ESIA and

explained the scoping study and what was needed from Nananom in that regards. He then invited comments, suggestions and questions from the chiefs and queen mothers.

### **III. DELIBERATIONS**

The team handed over to the president to lead the open forum. He encouraged Nananom to come out with their questions, suggestions and concerns. Below are the issues that came up.

Okogyeman Kweku Gyamprah (Chrano) enquired about the employment opportunities Aker has for people of various qualifications (SHS, Degree, Maters and PHD) and pointed out his difficulty in giving the required advice to Aker. Mr. Armah replied that Aker would conduct a survey of skills in the region to identify the available skills and those skills that need to be upgraded. The information will be put in the scoping report.

Awulae Attibrukusu III (Lower Axim) asked about the block that is close to the border between Ghana and Cote d'Ivoire and enquired about its ownership. Mr. Armah replied that the block belongs to Aker now since the company has acquired the concession for it.

Ole (Aker Energy) added that all the issues raised will be noted and worked on. He pointed out that with regards to jobs, particular skills will be needed in the company so Ghanaians in western Region with the required skills will be considered. Drivers, caterers and others will be employed from the Western region and that Aker intends to have intense operations in the region though they are currently headquartered in Accra.

Awulae Attibrukusu III (Lower Axim) enquired about how Aker intends to train people for jobs in the company and how Aker would protect the fishing industry

The Queen mother of Essikado expressed her disappointment in the fact that Aker is currently headquartered in Accra. She suggested that it should be headquartered in the Western Region if they intend to employ the people of the region. She also asked if Aker would hand over the block back to the Ghana government after 2036 even if the block still has oil.

Ole replied that the decision to have Aker head quartered in the Western region lies with the company's management. With regards to the block, he explained that Aker would consider continuing operations if after 20136 the block still has oil. He added that the company will maintain its installations.

Awulae Agyefi Kwame (Nsein) pointed out that most companies consult Nananom before beginning operations but as soon as they succeed, they forget about them so what will Aker do differently in this regard.

The president of the House of chiefs sought for further clarification regarding the owners of Aker's block and indicated that he had little advice to give with regards to the environmental and risk management issues Aker needs guidance on. He recommended that Aker should assess the environment every five years. The president observed that Aker would be the only operator on that block, leaving the local operators with no block for oil exploration. He enquired about the areas within the company that indigenes could be trained and employed in. He suggested that the chiefs could provide people for interview so that Aker would select some of them for training and for future employment in the company in the next three years. He also asked about the plans Aker has for the nananom in the region.



Mr Appiah thanked them for their input and reminded them that Aker was there to hear their comments and suggestions as they are a fairly new company. He assured them that Aker would create an alternative livelihood for the fishermen and would also engage the chiefs more often than not.

The President of the House of Chiefs made the following recommendations:

- Aker should have an operational office in the Western Region
- The company should train at least fifty (50) people who can work on the rig
- Aker should select three (3) communities in the region and provide them with state of the Art schools (both Basic and Senior High) and one state of the art hospital.
- Aker should establish an estate for their workers
- The company should not airlift their workers from Accra to Takoradi as it has environmental and financial implications to the government and the people of Ghana.
- The company should train the local farmers in the production of vegetables so that they can supply the rig with high quality vegetables. This would prevent the importation of vegetables from Cote d'ivoire by oil companies.
- Aker should engage caterers from the western region and not from Accra.

Awulae Annor Adjaye III (Benyin) asked why oil companies do not add value to the crude oil on-shore but rather take it abroad for refining. He suggested that Aker should build an on-shore refinery so that more jobs will be created in the region. He argued that environmental pollution that is brought about by the oil production has killed people so what will Aker do to address this issue. He also added that meeting with fishermen and fishmongers is no news so what will Aker do differently. He added quickly suggested that Aker should set up a foundation for the fishermen and fishmongers and put some funds into it so that they can get the support that they need, as and when necessary.

Ole responded that, with regards to refining oil, the country generates more revenue in the exportation of crude oil and that there is more value in the crude oil than its refinement. He also added that his company will look into refining some of it on-shore. Mr. Appiah contended that Nana's suggestion on the on-shore refinery has policy implications. The government of Ghana would have to ensure that oil companies build refineries on-shore.

In response to the president's question on the ownership of Aker's block, Ole explained that the ownership portions were still being discussed. He added that his company's operations will be environmentally friendly thus that flaring will be reduced so that the environment would be preserved for future generations.

Tretrete Okuamoah Seyim II (Wassa Amenfi) sought for clarification on the ownership of Aker's block and Desmond Asiedu (Corporate Social Responsibility, Aker Energy) explained that the operator of the block is Aker Energy but other companies have shares in its profit.

Nana for Upper Discove asked if Ghanaian workers with HESS have been laid off because of Aker's take over and if Aker would continue with HESS' scholarship scheme. He added that the livelihood of fishermen should not be created but that it should be enhanced. Nana also asked what Aker would do to enhance the standard of living of the people of the western region.

Mr Appiah explained that with regards to the laying off of Ghanaian employees, HESS had already laid off most of its workers off even before Aker acquired it. With regards to fishermen, Mr Appiah was of the view that enhanced livelihood of fishermen will be considered. Regarding HESS's scholarship program, Mr Appiah pointed out that Aker would continue with it and even enhance

and expand it. The program will be expanded to schools in Tarkwa and Mpoho. He went on to give details of the scholarship package.

Awulae Agyefi Kwame (Nsein) asked about the Ghana National Petroleum Corporation (GNPC) scholarship and the courses it considers as part of its requirements (Science and Maths). Mr Appiah replied that Aker will partner with GNPC so that their scholars will be enrolled on the program despite their course. He added that currently, HESS scholars are enrolled in the nursing school (NMTC) and that the company is considering training some scholars in French as Ghana is surrounded by French speaking countries.

The Queen mother of Shama enquired about how fishermen and fishmongers are involved in the scholarship and how they are selected. She also asked about the possibility of an oil spill at the shore even though Aker's block is located far from the shore. She asked if Aker would double up its Corporate Social Responsibility (CSR) activities. Mr Appiah replied that AGM (an oil company) will partner with Aker to carry out its CSR activities. He also added that fishermen have a representative on the scholarship program and that they are even selected by the fishermen themselves.

The Chief for Lower Discove thanked the teams for their presentation and commended them for its content. He enquired about emissions and how it will be managed. He added that most oil companies do not consult Nananom after their first consultation meeting and thus suggested that Aker should consult them regularly without any hesitation. He added that Aker should not be burdened with the improvement of the livelihood of fishermen as the fishermen themselves contribute less to the oil industry. He rather suggested that fishermen can be trained to set up their own businesses and that a few of them could be identified for support.

Prof. Armah thanked the House of Chiefs for their contributions and suggestions and commended the suggestions made about the livelihood of the fishermen as the fish do not increase to meet the market. A.K observed that Ghanaians are not arguing for an increased share of the government in the oil companies as GNPC has only ten (10) per cent shares in the companies. He argued that government should increase its shares to about fifteen (15) or twenty (20) per cent and that Ghanaians must ensure that the government does more for us.

The president of the National House of chiefs gave a closing remark and thanked the Aker and ESL teams. He encouraged the chiefs to set up Foundations and engage consultants so that they would have more contributions at the next meeting. He suggested that summer courses should be organized for the mathematics and science teachers in their basic schools. He also suggested that training sessions should be organized for the National House of Chiefs and their staff. He added that their children should receive training in Information and Communication Technology (ICT) and that Aker should engage Nanaom to select, train and equip students in the region with the skills that would be required to be employed on the rig.

Nana Kwobina Nketsia V (Essikado) made some observations about the ESL team. He noticed that most of the suggestions made at the meeting had to be directed to the Ministry of Energy even as some of their laws are not host friendly. He argued that the indigenous companies that have shares in Aker's block should be investigated.

"Nana Kwobena Nketsia V commended the team for its presentation. He noticed that though the team was made up of Aker Energy and ESL Consulting, the members of the ESL team seemed to be silent throughout the meeting. He wondered whether Mr Armah represented the government or ESL consulting because of his earlier response to some of the suggestions made at the meeting. Mr Armah observed that Ghanaians are not arguing for an increased share of the

government in the oil companies as GNPC has only ten (10) per cent shares in the oil companies. Mr Armah argued that government should increase its shares to about fifteen (15) or twenty (20) per cent and that Ghanaians must ensure that the government does more for them.

Nana Kwobena Nketsia V was of a strong opinion that many of the suggestions made at the meeting should be directed to the Ministry of Energy (MOE) even as many of their policies do not favour Ghanaians. He also commented on the shareholders the Aker Energy block. Nana pointed out that most of the shareholders are owned by Ghanaians so their owners need to be identified through further investigations.”

#### **D. CLOSING**

The meeting ended at 1: 30pm with a prayer by Nana Hema of Shama. Nana Kwabena Nketia gave the vote of thanks.



## **(ACCRA MEETINGS)**

### **3A. CONSULTATIONS**

#### **Minutes of meeting with Ghana Environmental Protection Agency (EPA) - Accra**

Venue: EPA Director for Petroleum Sector's Office, Accra

Date: 11<sup>th</sup> July 2018

Attendance: 7 people attended the meeting.

Distribution: To attendees via email

Opening: The meeting started at 10:00am with Mr Efunam, Director of EPA Petroleum Sector, welcoming the delegates and self-introductions took place.

### **DISCUSSIONS**

#### **Introduction**

Mr Kodzo Efunam (*Director of Petroleum Sector, EPA*) opened the meeting by welcoming the scoping study team jointly made up of AKER Energy and ESL Consulting teams, and then briefly introduced himself. In response, Mr Emmanuel Appiah (AKER Energy CSR) introduced himself, followed by self-introduction of the other scoping study team members, after which he hinted on the purpose of the visit. Mr Ole Aspholm (AKER Energy Environment Manager) and Mr A.K. Armah (Director of ESL Consulting Ltd and Lead consultant) took turns to make presentations on AKER Energy Company and its proposed Deep Water Tano Cape Three Point (DWT/CTP) oil and gas project in Ghana, and the DWT/CTP Development ESIA Scoping Study respectively.

#### **Concerns**

EPA acknowledged receipt of the takeover letter from Hess ownership to Aker Energy, and thus there is no need to fill any new forms since Aker is not changing significantly in its operation. A letter however, should be written stating these changes and added to the PO1 for record purposes to support the transition from Hess operations to Aker Energy.

Mr. Ole asked how much EPA would want to be involved in this process, of which Mr. Efunam responded that EPA gets involved on case-by-case basis. Usually, EPA gets involved because some of the questions posed are aimed at EPA itself and thus the operating company would have to be escorted in by EPA delegates. In this case, since there have been numerous operations in the Western region, there would be no need to send an EPA officer. Should the need arise, EPA offices in either Takoradi or Ellembelle District of the Western Region would be called upon for assistance.

Mr. Efunam added that since Aker was still at its scoping stage, all they needed to work on was their Terms of Reference, which should include identifying all the issues at the baseline side, major risks, proposed mitigation tactics within the EIA. In case some items are lacking after EPA

reviews the document, then they additional information can just be attached to the document due to time constraints.

Furthermore, he pointed out that the environmental aspect of the report is an issue granted ecology may be different. In some cases, residents can stress on certain concerns that may seem minor but it is important to take care of these issues to get them on one's side.

To this, Ole mentioned that issues raised may not even be related to the oil industry, to which he was advised to take down these issues, add them to his report so that the relevant body would take it up, be it on the private sector side, or a government body.

Another question asked was with regards to publishing the ESIA, if EPA could do it on their behalf. EPA can do it on their behalf but Aker would have to take on the cost involved.

He also had a regulation question: Does EPA approve the Oil-Spill Contingency Plan, or is it just for their informational purposes? Mr. Efunam responded saying EPA approves it but it does not have to come on its own; it can be added to the EIA. He added that the Oil Spill Contingency Plan can be a separate document, outlining the Operation, Risks, Mitigation of those risks.

### **Conclusion**

Mr Appiah moved the meeting to a close expressing his gratitude, and that of Aker, for the support granted them.

## **3B. CONSULTATIONS**

### **Minutes of meeting with Ghana Environmental Protection Agency (EPA) - Accra**

Venue: EPA Conference Room, Accra

Date: 28<sup>th</sup> June 2018

Attendance: 9 people attended the meeting.

Distribution: To attendees via email

Opening: The meeting started at 9:45am with Mr , Director welcoming the delegates and self-introductions took place.

### **DISCUSSIONS**

#### **Introduction**

Mr (*Director of EPA*) opened the meeting by welcoming the scoping study team jointly made up of AKER Energy and ESL Consulting teams, and then briefly introduced himself and his team. In response, Mr Emmanuel Appiah (AKER Energy CSR) introduced himself, followed by self-introduction of the other scoping study team members, after which he hinted on the purpose of the visit. Mr Ole Aspholm (AKER Energy Environment Manager) and Mr A.K. Armah (Director of ESL Consulting Ltd and Lead consultant) took turns to make presentations on AKER Energy Company and its proposed Deep Water Tano Cape Three Point (DWT/CTP) oil and gas project in Ghana, and the DWT/CTP Development ESIA Scoping Study respectively.

#### **Presentation**

Presentation on AKER Energy company profile, outlining its ambitions, aims and objectives, and introducing the proposed project was done by Mr. Ole Aspholm.

Presentation on the DWT/CTP Development ESIA Scoping study was done by Mr A.K. Armah.

#### **Concerns**

EPA found issues with the takeover process from Hess by Aker Energy. This is because the EPA had been dealing with Hess and still did not legally recognize Aker. It had to come from the Ministry of Energy or GNPC. Also, the contact person/representative had to be made clear before EPA could issue the permit. However, the EPA Director has been in communication with Aker consultant which then kick starts the drilling process.

#### **Recommendations**

It was recommended to download the EPA scoping form for field development. The EPA POD (Field Development Plan) has to be approved before the Environmental Impact Assessment (EIA). If there are no significant changes to the POD, then the EIA would be fine, but the reverse means having to repeat the EIA process.

Additionally, a baseline survey has to be conducted in order to insulate contractor from any negative impacts during and after the drilling process. Because the deep sea environment does not change much the same way shallower environments do, the negative impacts should not be expected.

### **Conclusion**

Mr moved the meeting to a close stating that a follow-up meeting be held in the week starting on 9<sup>th</sup> July, 2018.



## 4. CONSULTATIONS

### Minutes of meeting with Ministry of Energy (MoEn) - Accra

Venue: MoEn Conference Room, Accra

Date: 28<sup>th</sup> June 2018

Attendance: 9 people attended the meeting.

Distribution: To attendees via email

Opening: The meeting started at 1:30pm with Mr Fitzgerald Kitty, Director welcoming the delegates and self-introductions took place.

### DISCUSSIONS

#### Introduction

Mr Fitzgerald Kitty (*Director at MoEn*) opened the meeting by welcoming the scoping study team jointly made up of AKER Energy and ESL Consulting teams, and then briefly introduced himself and his team. In response, Mr Emmanuel Appiah (AKER Energy CSR) introduced himself, followed by self-introduction of the other scoping study team members, after which he hinted on the purpose of the visit. Mr Ole Aspholm (AKER Energy Environment Manager) and Mr A.K. Armah (Director of ESL Consulting Ltd and Lead consultant) took turns to make presentations on AKER Energy Company and its proposed Deep Water Tano Cape Three Point (DWT/CTP) oil and gas project in Ghana, and the DWT/CTP Development ESIA Scoping Study respectively.

#### Presentation

Presentation on AKER Energy company profile, outlining its ambitions, aims and objectives, and introducing the proposed project was done by Mr. Ole Aspholm.

Presentation on the DWT/CTP Development ESIA Scoping study was done by Mr A.K. Armah.

#### Concerns

There were a number of concerns raised by the MoEn representatives and they included:

- Corrosion of metal bars used in the water injection process (Mr Ole Aspholm spoke to concerns of using toxic chemicals like sulphur to mitigate corrosion and that they would have to revisit that).
- Limited number of consulted communities in the catchment area (to which Mr AK Armah hinted that there were plans to expand this from the six Western Region coastal communities to all the way in Winneba in the Central Region.)

- On the social impact side, unemployment faced by youth after graduating, challenges faced with students refusing to go to technical schools.
- What are the alternative livelihoods for the fisher folk? (Mr Appiah responded by adding the need to enhance livelihoods rather than offering alternatives. He added that there would be skills availability assessments to merge skills available so as to have sustainable livelihoods.)
- With the FPSO fabrication, is there any local content already?
- There was a caution to avoid Modec due to bad previous dealings and that the ministry would appreciate variety
- The issue of lighting with FPSOs that could attract fish and thereby fishermen, what is the remedy to this? Industrial terminologies like Safety Zone were misleading to fisher folk and so it was recommended using “Danger Zone” which sends out a clear message of keeping off the FPSO zone. Also, tracking devices for fish movement during the bumper season so they are rerouted away from the FPSOs.
- The issue of safety and security. (Marine police would be brought on board and this would greatly aid the industry.
- 5<sup>th</sup> generation Blow-Out Preventers (BOPs)
- Aren't 4 FPSOs and 40-45 water injections too many?

## **Conclusion**

Mr Fitzgerald Kitty moved the meeting to a close stating that more feedback would ensue once the Executive Director and other major stakeholders were briefed on the meeting by the next day.

## **5. CONSULTATIONS**

### **Minutes of meeting with Fisheries Commission (FC) - Accra**

Venue: MoEn Conference Room, Accra

Date: 29<sup>th</sup> June 2018

Attendance: 14 people attended the meeting.

Distribution: To attendees via email

Opening: The meeting started at 9:10am with Mr Michael Arthur-Dadzie, Director of Fisheries Commission welcoming the delegates and self-introductions took place.

### **DISCUSSIONS**

#### **Introduction**

Mr Michael Arthur-Dadzie (FC Director) opened the meeting by welcoming the scoping study team jointly made up of AKER Energy and ESL Consulting teams, and then briefly introduced himself and his team. In response, Mr Emmanuel Appiah (AKER Energy CSR) introduced himself, followed by self-introduction of the other scoping study team members, after which he hinted on the purpose of the visit. Mr Ole Aspholm (AKER Energy Environment Manager) and Mr A.K. Armah (Director of ESL Consulting Ltd and Lead consultant) took turns to make presentations on AKER Energy Company and its proposed Deep Water Tano Cape Three Point (DWT/CTP) oil and gas project in Ghana, and the DWT/CTP Development ESIA Scoping Study respectively.

#### **Presentation**

Presentation on AKER Energy company profile, outlining its ambitions, aims and objectives, and introducing the proposed project was done by Mr. Ole Aspholm.

Presentation on the DWT/CTP Development ESIA Scoping study was done by Mr A.K. Armah.

#### **Concerns**

There were a number of concerns raised by the Fisheries Commission stakeholders and they included:

- A deeper look into security issues like piracy and bunkering.
- Bunkering – hijacking and selling oil and gas on international waters, hard to curb and also loses foreign revenue that Ghana would have benefitted.
- Light attracts fish, what will be done to curb the dangers this poses?
- Basic necessities: What are the alternative livelihoods for fisher folk and to educate them that there are these dangers?

- With regards to CSR projects, is it for certain that this what the fishermen really need?
- Why is Dubai moving from oil and going into property investment? It can be a necessary evil that Ghana will need to realize it may not be a great blessing after all.
- Creating jobs and investing in people: What has been the ratio of expats to local people employed in the project? It was recommended that decisions made in that line would bless rather than curse Ghana.
- What is being put in place to ensure sustainable development for locals first?
- The Director of Public Policy, Monitoring & Evaluation gave an analogy of Obuasi and how the locals 50 years later wished they had not been blessed with gold since it brought more harm than good.
- Mr Appiah spoke about a skills availability assessment to ensure sustainable livelihoods. He added that the Scholarship Scheme adopted by Hess, now Aker, and how it was going a long way to promote a diversity of skills needed in the catchment areas.
- Mr Ole added that competence will be looked into as a Ghana-first approach and thus increasing skills for Ghanaians to work in the industry.
- Is there a way qualified Ghanaians can be certified to work on these rigs since they require specialized skills?

### **Conclusion**

Mr Arthur-Dadzie moved the meeting to a close stating that more feedback would ensue once the Minister and other stakeholders were brought on board. The Deputy Director for Administration would be tasked with collating these and distributing the feedback to Aker by the following week.



## **6. CONSULTATIONS**

### **Minutes of meeting with Ghana Maritime Authority (GMA) - Accra**

Venue: GMA Deputy Director's Office

Date: 5<sup>th</sup> July 2018

Attendance: 4 people attended the meeting.

Distribution: To attendees via email

Opening: The meeting started at 2:05pm with Captain Inusah Abdul-Nasir, Deputy Director, Environment & Safety Standards, welcoming the delegates and self-introductions took place.

### **DISCUSSIONS**

#### **Introduction**

Capt. Inusah opened the meeting by welcoming the scoping study team made up of ESL Consulting team, in place of AKER Energy, that had an engagement in the Western Region. In response, Mr AK Armah (ESL Consulting Ghana) introduced himself and his team, after which he hinted on the purpose of the visit. Mr Armah (Director of ESL Consulting Ltd and Lead consultant) then made a presentation on AKER Energy Company and its proposed Deep Water Tano Cape Three Point (DWT/CTP) oil and gas project in Ghana, and the DWT/CTP Development ESIA Scoping Study.

#### **Concerns**

Capt. Inusah was pleased with the proposed location of the FPSO, which was tagged to the centre of the Pecan block. This is to maximize the drilling process, and avoid infringing on any concessional boundary.

#### **Conclusion**

Capt. Abdul-Nasir moved the meeting to a close stating that Mr. Armah to send a soft copy of his presentation, and a follow-up meeting be held in the following week.

## **7. CONSULTATIONS**

### **Minutes of meeting with Ghana Navy - Accra**

Venue: Ghana Navy Headquarters – Burma Camp, Accra

Date: 18<sup>th</sup> July 2018

Attendance: 15 people attended the meeting.

Distribution: To attendees via email

Opening: The meeting started at 9:30am with Commodore Issa Yakubu, Ag. Chief-of-Staff, Ghana Navy, welcoming the delegates and self-introductions took place.

### **DISCUSSIONS**

#### **Introduction**

Commodore Issa Yakubu opened the meeting by welcoming the scoping study team jointly made up of AKER Energy and ESL Consulting teams, and then briefly introduced himself. In response, Mr Emmanuel Appiah (AKER Energy CSR) introduced himself, followed by self-introduction of the other scoping study team members, after which he hinted on the purpose of the visit. Ms Unn (AKER Energy) and Mr A.K. Armah (Director of ESL Consulting Ltd and Lead consultant) took turns to make presentations on AKER Energy Company and its proposed Deep Water Tano Cape Three Point (DWT/CTP) oil and gas project in Ghana, and the DWT/CTP Development ESIA Scoping Study respectively.

#### **Concerns**

Commander Ako Aryee (Maritime Lawyer) had a concern with regards to CSR. She stated that she had done extensive research in this area and discovered that most companies took more than they gave back to the communities, and that they didn't put into consideration health impacts, safety concerns and social vices that their activities brought to the native communities within their area of operation. She was wondering if Aker could open more in CSR and look beyond just educational scholarship and rather enhance livelihoods as well as providing alternative livelihoods by engaging deeper with communities to ascertain their needs. She advised that Aker Energy take their CSR up a notch, by engaging more to get other things done.

Mr. Appiah then answered by saying they involved women in their stakeholder engagements to know what unique needs they would bring to Aker so it finds ways to tackle them.

Commodore Yakubu added that extractive industries usually depleted resources and sometimes halted livelihoods present and thus alternatives must be considered, to impact local economies positively.

He added that he was not aware of the safety and security measures in place to protect rigs and ensure. He also mentioned that the Ghana Navy is interested in Aker's Tier 1.

He went ahead to ask what would be done, should oil be discovered on the International maritime border with Cote d'Ivoire, to which Mr Armah mentioned that since there is peace now between Ghana and its neighbour Cote d'Ivoire, there would be a joint development approach to this. In this instance, Cote d'Ivoire would have to be in the know once this discovery is 10 miles within its boundary.

Commander Arhen raised issues surrounding flaring of natural gas, and that since flaring would be allowed to a minimum level, there is a need to operationally define minimum in terms of percentages. He added that Ghana has a Zero Flaring policy, but since flaring must be permitted to reduce pressure, there is a need to reconcile the desired minimum levels specifically to maintain them.

Furthermore, he asked if Aker had engaged with Ghana Maritime Authority to know who will be in charge for the rescue and search response.

Mr Appiah also had a question that pertained to pirating and what the Navy was doing about it. Commodore Yakubu mentioned that pirates usually do not target oil rigs but rather tankers and processed oil. He stated that there is a need to have a plan, and that in the past they have had the "Closed Protection" Plan, where there are on-service personnel on the vessel to provide security. The Navy wants to move from that plan so that they are not stationed on civilian vessels and thus another plan where the Ministry of Environment is to lease vessels to security companies that would cater for security, tendering and logistics support. Most of these companies have the Navy providing security. An example of this is with Gulf Frontiers, which provides local content for Petroleum Commission to help with security, and Navy vessels are on board to provide training for security purposes.

### **Conclusion**

Mr Appiah moved the meeting to a close expressing his gratitude, and that of Aker, for the support granted them.

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*APPENDIX D: Attendance Record Sheet*

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DAY 1, 18 TH JUNE, 2018

FISHERMEN/FISH MONGERS (STAKEHOLDER ENGAGEMENT)

No.	NAME	DESIGNATION	TELEPHONE	AMOUNT (GHC)	SIGNATURE	DATE
1	Nana Kofi Adandah	Chair. GNCFRC Abura	0243681060			
2	Ablo-Blankson	Sec. - L	0274903439			
3	Evans A. Tackie	HOOK AND LINE SPRINKLER	0243861912			
4	NANA KOFI ANNAH	CHIEF FISH	0208225201			
5	NANA KOJO POGU	✓	0241045399			
6	Nana Kofi Bentil	✓	0243634081			
7	Nana Emm. Adjuie	Chairman	0245065869			
8	Nana Effirima	Welfare Off.	0248449155			
9	Cecilia S Anaan	Fish Monger	0208134949			
10	Emelia Abaka-Edu	Fish Monger	0208823370			
11	Mike Abaka-Edu	Reg. Sec - GNCFRC	0244880174			
12	Nana Papa Yalley	Chairman (Hortuwal)	0547469514			
13	Kyru Salifu	Chairman	0249784378			
14	Susana Bissie	Fish Monger	0541196678			
15	Nana J. F. Sandley	Fisherman	0249995819			
16	Antoinette Adu	Fish Monger	078219092			
17	Gifty Cobbirah	Fish Monger	0200195475			
18	Nana Kofu Dechie	Chairman	0572058416			
19	Nana Fru Bessaw	Steno (Chief Fisherman)	0246824379			
20	Theresa Freeman	Fish Monger (Part-time)	0246603371			
21	John D. Fishu	Reg. PRO - GNCFRC	0240749611			
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DAY 1, 18 TH JUNE, 2018, PART II  
GHANA PORTS AND HARBOURS AUTHORITY (STAKEHOLDER ENGAGEMENT)

No.	NAME	DESIGNATION	TELEPHONE	SIGNATURE	DATE
1	AGNES DENNIS-Moses	MKT/PUB. AFFAIRS MGR.	05002013764		18-06-18
2	EDUARD UGUM	COMM. & ENY. MGR.	057301033		18-6-18
3	KENNETH B. SANDO	CHIEF PILOT	0577518120		18-06-18
4	FRANCIS KORDIEH	SA	0573078184		18/06/18
5	MR JAMES R. QUAYSON	HUMAN RESO	0572233740 0208843326		18/06/18
6	JAMES HYDE-GUNPER	POM	0573518194		18/6
7	CAPT EBENEZER AFEDZI	Director of Port	0208181428		18/06/18
8	EBENEZER NKETSICH	MCM	0209050510		18/06/18
9	RELI ANNU-DELAH	DP-MPA-M	057-351-8246		18/6/18
10	Ole Aspholm	Environmental Mgr	472 90911042		18/6/18
11	Desmond Ariedu	0209986439	CSR		18-6-18
12	Emmanuel Appiah	0544338699	CSR		18-6-18
13	Kenneth Agsi	0246146600	Env. Consultant		18/06/18
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DAY 2, 19 TH JUNE, 2018

ESIA

FISHERIES COMMISSION (STAKEHOLDER ENGAGEMENT)

No.	NAME	DESIGNATION	TELEPHONE	SIGNATURE	DATE	Small
1	Josephine Langea	Zonal Director	0242629263		19/06/2018	Josephine.Langea@gmail.com
2	Theodore Kwadjo	Dir. M&S	0244926211		19-06-2018	theodore.kwadjo@gmail.com
3	Alex Y. Sabah	Regl. Dir	0244574498		19/06/18.	alex.y.sabah@gmail.com
4	Kenneth M. Achi	EPL Consultant	0246146600		19/06/18	
5	Alex K. Achi	ESL Director	0244771707		19/06/18	
6	Emmanuel Appiah	Aker Energy	0544338699		19-6-18	
7	Dennis Anebu	Aker Energy	0209996439		19-6-18	
8	Ole Aspholm	Aker Energy	+47 90911092		19/6-18	
9	Fergut Duroto Ojeyemi	ECL Consulting	0244110415		✓	
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DAY 3, 20 TH JUNE, 2018

ESIA

REGIONAL COORDINATING COUNCIL -RCC (STAKEHOLDER ENGAGEMENT)

No.	NAME	DESIGNATION	TELEPHONE	EMAIL	SIGNATURE	DATE
1	Michael Mensah Tabiri	Head IT/ICT/HR/IS	0208573914	sol_mic14@gmail.com		20/06/18
2	Nelson Setiyah	Research Officer	0242844188	nelson.setiyah@ejb.com		20/06/18
3	LT COL LUCAS OLOO	GHANA NAVY	0243310674	lxocloo@gmail.com		20/06/18
4	ASP/MA ISAAC MENSAH APENTENG	MARINE POLICE	0242661620	mensahapenteng@ghana.gov.gh		20/06/18
5	Francis Kwasi Esorede	Environmental A.C.U	0547661201	Francis.esorede@gmail.com		20/06/18
6	Gilbert Q. Etey	REGIONAL AGER BOAT W.R.C.C	0244563123	zgilyle@gmail.com		20/06/18
7	HON GIFTY EUGINES KUSI	DEPT. OF FISHERIES FOR WESTERN REGION	0554016688			20/06/18
8	ROBERT HACKMAN ANINI	SURVEY/MAPPING DIVISION OF LL	0241039019	robbyhacky@yahoo.com		20/06/18
9	Nana Kusi Nsiah	Physical Pls Dept S.T.M.A	0247108985	kusi.nna@gmail.com		20/06/18
10	Ronald Adjei	Dept Planning STMA	024386291	ronald.adei@stma.gov.gh		20/06/18
11	Supt Harrietta Amporbeng	OIC Eng. GIS F.S.D	0244367389	nanagyei@gmail.com		20/06/2018
12	Omasu Ameyaw	ASST. Manager Ghana	0043647166	Ameyaw197@gmail.com		20/06/18
13	Samuel Appiah	ASSO Shippers	0554447718	Samuel.appiah@shippers.org.gh		20/06/18
14	Otiyo ACHEAMPONG R.	Accountant	0556606765	Otiyo.acheampong@shippers.org.gh		20/06/18
15	Prince A.P. Aweke	P.R.O	0244570236	awekene1@gmail.com		20/06/18



DAY 3, 20 TH JUNE, 2018

ESIA

REGIONAL COORDINATING COUNCIL - RCC (STAKEHOLDER ENGAGEMENT)

No.	NAME	DESIGNATION	TELEPHONE	EMAIL	SIGNATURE	DATE
16	Jonathan Djan Gyau	Social Welfare	0243187745	dschwager@phoia.com	[Signature]	20/06/18
17	Issac Rofi Amayye	BNI - Writter	0558658795	amayye@bni.com	[Signature]	20/06/18
18	Koloso George Akemich-boateng	Eastern Prisons Sec	0244664784	r.vuambate@phoia.com	[Signature]	20/06/18
19	ADOT Ebenezer Sam	G.N.F.S	0208619365	ndebonsam@gmail.com	[Signature]	20/06/18
20	Amanda Dudimachi	LVD (Lands C/Sec)	0234338952	ndudimachi@gmail.com	[Signature]	20/06/18
21	Priscilla Ankomah-Adkman	PPD	0502690661	ankomah@ppd.com	[Signature]	20/06/18
22	Baba Aine Akafili	Ministry of Trade & Industry	0248170777	akafili@mti.gov.gh	[Signature]	20/06/18
23	Joyce Obim-Teboch	Dept of Comm. Devt	0244265608	teboch@joh.com	[Signature]	20/06/18
24	Cyrt Daniel Quarfo	GPAA - OGM/HEAD	056691970	dannangquarfo@gmail.com	[Signature]	20/06/18
25	Lamrence Aguchi	Minerals Commission	0240460114	lengaguchi@mti.gov.gh	[Signature]	20/06/18
26	Amos Melle	NMIA	0244021275	amelmelle@nmia.gov.gh	[Signature]	20/06/18
27	Angelina Ainos	Lands C/Sec	0244547979	ainos@lvd.gov.gh	[Signature]	20/06/18
28	Asuna Ofori	ICO/IMMIGRATION	0243127532	—	[Signature]	20/06/18
29	Henry Asant	Rural Housing	0244519217	ahenry@rhc.gov.gh	[Signature]	20/06/18
30	Abbas Melle	Abasi Sub-Station	0244602115	abasmelle@esr.com	[Signature]	20/06/18

DAY 3, 20 TH JUNE, 2018

ESIA

REGIONAL COORDINATING COUNCIL -RCC (STAKEHOLDER ENGAGEMENT)

No.	NAME	DESIGNATION	TELEPHONE	EMAIL	SIGNATURE	DATE
31	Mervyn Audo	ICCES	0277576888	icces@explorac.com		20/6/18
32	Ben Yaw Frimpong	Regional Director	0277241518	benfrimpong2000@yahoo.com		20/6/18
33	Elizabeth Agyemang	RLO - Labour	0240163008	labour@explorac.com		20/6/18
34	William K. Dartie	Dept of Coops	0243336881	williamdartie@explorac.com		20/6/18
35	Raphael Borezi	NBS	024725046	boreraphael@gmail.com		20/06/18
36	Joseph K. Appiah	Metro Yam Dir. (NYM)	0279762015	joapp509@gmail.com		20/06/18
37	Julian Nana Aweku	(SPECIAL ASSISTANT ATTORNEY) RAK TACOPAS 1	0249298942			20/06/18
38	Theresa M. Mensah	Dep Regional Director, NADDA	024721475	theresa-mensah@explorac.com		20/6/18
39	Freda O. Anoch	Dep Regional Director, NPC	02488577	freda@npc.gov.gh		20/6/18
40	Charles F. Anayaw	P. FO	024467188	charlesanayaw@gmail.com		20/6/18
41	Joseph R. Aducci	Dep. Dir. RCC NBSSI	026510810			20/6/18
42	DAVID ANDOH-KESSON	Reg Manager	0502858476	davidkesson@explorac.com		20/6/18
43	Azeez M O Ajadi	Plant Manager	0540171675	azeez@explorac.com		20/6/18
44	Andreas Bawo	Administrator	0202000268	andreas@explorac.com		20/6/18
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DAY 3, 20 TH JUNE, 2018 PART II  
ESIA

GHANA MARITIME AUTHORITY (STAKEHOLDER ENGAGEMENT)

No.	NAME	DESIGNATION	TELEPHONE	EMAIL	SIGNATURE	DATE
1	Demand Fred	CSR	0209986439	dem.fred@energy.com		20-06-18
2	Emmanuel Appiah	Management Information Officer	0544338699	✓		
3	Joseph AUSTI Kwame		0249985500	George K. Osei @gmail.com		20-06-18
4	Divine Kofi Oti	Site Planning Officer	0244776698	kef@divineenergy.com		20-06-18
5	Capit Kwame Adu	Site Manager	026986057	Kwame Adu, 201 Gmail		20-06-18
6	Fergus Dimeya Agyemang	ESL Consultant	024411915	fergusa@energy.com		20-06-18
7	Ayaa K. Aducci	ESL Consultant	0244771707	ayaa@energy.com		20/06/18
8	Ola Agyekum	After Energy	0229041072	ola@energy.com		20/06/18
9	Kenneth F. Agye	ESL Consultant	0244146600	kenneth@energy.com		20/06/18
10	Mama Osei	Site Manager	0244667700	mama@energy.com		20-06-18
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DAY 4, 21 ST JUNE, 2018

ESIA

NGO,S (STAKEHOLDER ENGAGEMENT)

No.	NAME	DESIGNATION	TELEPHONE	EMAIL	SIGNATURE	DATE
16	AGTEMAN FERGIUS DUMENYU	ESL	0244110915	fergiusduman @gmail.com		21-06-2018
17	Dominic Mervels	Friends of the Nation	0244520886	info@fondam.org		✓
18	Desmed Asiedu	CSR/Aker Energy	0209986439	desmond.asiedu@akerenergy.com		21-6-18
19	Emmanuel Appiah		0544338699	✓		21-6-18
20	Obrempong Yaw Ampofo	CitiFM	0244835335	walkerjazz223@gmail		21-06-18
21	don Joseph Isaac Mensah	ccdea-stmt	0246511263	paatwamina19@gmail.com		21-06-18
22	Daniel Kwame Ntiakoh Anah	CENAGI	0246374214	dantiaakoh@ydu.com		21-06-18
23	Emmanuel Bankor	CENAGI	0248884138	edcho2013@gmail.com		21-06-18
24	James Fobah Boguloh	CENASS	0244165447	boguloh2017@gmail.com		21-06-18
25	Augustina Kwakye	CENASS	0244249500			21-06-18
26	Osei-Akoto Nyantakyi	COLANDEF	0203023631	osei-akoto@colandef.org		21-06-18
27	Deborah Ackbe	ESL	0200587860	deborah.nimmes@yahoo.com		21/06/18
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**ENVIRONMENTAL PROTECTION AGENCY - SEKONDI**  
**SCOPING PHASE STAKEHOLDER ENGAGEMENT BY AKER ENERGY GHANA LIMITED**  
**HELD ON FRIDAY, JUNE 22, 2018 AT THE AGENCY'S CONFERENCE ROOM**

**ATTENDANCE SHEET**

NO.	NAME	ORGANISATION	CONTACT NO.	EMAIL	SIGNATURE
1.	Yaa Sark-Affia	EPA	0501301391	y.sark@epa.gov.gh	
2.	Shine Fagome	EPA	0501301697	shine.fagome@epa.gov.gh	
3.	Ernest Amoh-Affah	EPA	0501301695	ernest.amoh@epa.gov.gh	
4.	Ing. George Diawuah	EPA	0501301699	gkldiawuah@gmail.com	
5.	Lawrence Akot	EPA	0501301657	lawrence.akot@epa.gov.gh	
6.	Ole Asphah	Aker Energy	5790411042	ole.asphah@akerenergy.com	
7.	Aki Asmah	ESL	024477707	akimah@esl-ghana.com	
8.	Emmanuel Appiah	Aker Energy	0544338699	emmanuel.appiah@akerenergy.com	
9.	Emmanuel Appiah	✓	0209986439	emmanuel.appiah@akerenergy.com	
10.	Kenneth Y. Asibi	ESL	0246146600	kenneth.asibi@esl-gh.com	
11.	Fergus Nuneh	EL	0244110218	fergus.nuneh@gmail.com	
12.	Hambal Adams	EPA	0501301698	hambal.adams@epa.gov.gh	
13.	Kwadwo Opare-Nensah	S.P.A	0501301692	kwadwo.opare-nensah@epa.gov.gh	
14.	Richard A. Odame	EPA	0501301680	richard.odame@epa.gov.gh	

15.	Amada Asce-Bappur	ESL	0206014057		
16.	Dadys Appiel	EPA	0540727127		
17.	Hassina Abdel-Rashed	EPA	0547362846	rashedhassina13@gmail.com	
18.	Bence Janet	EPA	0501301658	jennyjane7@gmail.com	
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WESTERN REGIONAL HOUSE OF CHIEFS

DATE: 25th JUNE, 2018

No	NAME OF CHIEF	NORTHERN BELT	LOCATION	TELEPHONE	EMAIL	SIGNATURE
1	Ogyeahoho Yaw Gyebi II (President)		Setfi Anhwaso	0244027883	gyebi@westernhouseofchiefs.com	
2	Okogyeman Kwaku Gyampah III		Setfi Orano	0244452278	okogyeman@westernhouseofchiefs.com	
3	Odenohe Brentum IV		Suaman Daafeso			
4	Nana Kwesi Ampim Ababio II		Setfi Wiaso	0244278008	nana.kwesi@westernhouseofchiefs.com	
5	Nana Kojo Twum II		Setfi Bekwai	0244373571		
6	Nana Kojo Sikantia II		Aowin	0553153425		
No		MIDDLE BELT	LOCATION	TELEPHONE	EMAIL	SIGNATURE
7	Tretrete Okuamoh Seyim II		Wassa Amenfi	0266505790	tretrete@westernhouseofchiefs.com	
8	Nana Kwadu Kyerefo III		Wassa Fiasa	0244208893		
9	Awulae Agyefi Kwame II		Insein	0244497270		
10	Awulae Kweku Akyrisuo III		Apatam	02440916786		
11	Awulae Annor Adjaye III		Benyim	0244759769		
12	Awulae Amithere Kpanyim II (Vice President)		Akuabo			
13	Awulae Angama Tu-Gyan II		Bantankor			









No.	SOUTHERN BELT	LOCATION	TELEPHONE	EMAIL	SIGNATURE
14	Nana Kwesi Agyeman XV	Lower Dixcove			
15	Obrempong Hima Dakyi XIV	Upper Dixcove	05493539	obremponghima@dakyi.com	
16	Awdiaa Atibrakusu III	Lower Axim			
17	Nana Kwaw Tendele II	Upper Axim	05494644		
18	Otumfuo Baldoe Bonsore XV	Busua			
19	Osaberima Kwaw Entsie II	Mpohor	024620430	osaberimakwaw@entzie.com	
20	Nana Kwobina Nketsia V	Essikado	024620430	nananonketsia@nana.com	
21	Nana Kwame Wianu II	Shama			
22	Nana Kwesi Bedu II	Sekondi	0249759785		



WESTERN REGIONAL HOUSE OF CHIEFS  
 NAME OF QUEEN MOTHER

DATE: 25<sup>th</sup> JUNE, 2018

No	NAME OF QUEEN MOTHER	LOCATION	TELEPHONE	EMAIL	SIGNATURE
1	Nana Nda Bozoma II (President)	Benjin	0244573696		
2	Nana Abeba Konadjoa II (Vice President)	Wassa Fiasé	0244455791		
3	Nana Nda Egi II	Upper Drome	0226189483		
4	Nana Akosua Gyamfi Agye II	Shimoga	02107003186		
5	Nana Efua Afrima II	Schawji	02444534539		
6	Nana Ekuu Kodu I	Esirada	02444978662		

7. Nana Adokkyi II Nssein 0857106455 mfasese4@gmail.com



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*APPENDIX E: Tabulated Extracts of Written Comments*

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APPENDIX 6-E: Tabulated Extracts of Written Comments.

Name/Entity No:	Concerns and Benefits No:	Project Impacts No:	Information on Environment, Community and Health Status. No:
<b>NGOs</b>			
Alfred K. Gyimah (Conservation Foundation – Administrator)	Social responsibility in the coastal communities	Proper mitigation measures	X
Marlvin-James Dadzie (New Crusading Guide – Senior Reporter)	How the zone will be marked to prevent the incursion of fisher folk	<b>(+)</b> Generate revenue for Ghana <b>(-)</b> Impact on fishing activities	X
Hon. Joseph Isaiah Mensah (Centre for Community Development Initiatives and Advocacy – Executive Director)	Stakeholder engagements in the communities to assess impacts Incorporate concerns of the communities in terms of health, environmental and social impacts	<b>(+)</b> Create employment for citizens <b>(+)</b> Strengthen/Better the livelihood of citizens <b>(-)</b> Could affect the livelihood of fisher folk	Proper mitigation measures to take care of the environment of coastal communities Support the communities with developmental facilities (Health, Educational etc.)
William Awortwe-Mprah (Community Environmental Monitoring and Advocacy Group – Member)	How fisher folk affected by the activities of the FPSO can make their concerns known	<b>(+)</b> Increase resource base of the nation <b>(-)</b> Limit the area of fishing for fishing folk	Proper and constant education of coastal communities to erode their perception that oil and gas exploitation causes sea erosion etc.
Richmond Agbanyaklu (Evangor Foundation – Executive Director)	How different will the social responsibilities of the firm from that of existing firms?	<b>(+)</b> Boost economic activity and consequently the economy of the nation <b>(-)</b> impact on fishing activities. The more the number of FPSO's the less the area for fishing.	X
Desire Aggor (AGRIDEF – Director)	Will non-coastal communities (hinterlands) benefit from AKER's CSR?	<b>(+)</b> Job creation for citizens to aid development <b>(-)</b> Impact on the livelihood of fisher folk	X
James Fobah Bogoloh (CEMAGS – Organizer)	Unemployment and social vices	<b>(+)</b> Job creation and development	X

Name/Entity No:	Concerns and Benefits No:	Project Impacts No:	Information on Environment, Community and Health Status. No:
Emmanuel Donkor (CEMAGS – Member)	Inadequate community participation. What measures will be put in place to erode public perception about the activities of offshore companies?	<b>(+)</b> Direct and indirect employment for the locals.	X
Daniel N.K. Andoh (CEMAGS)	Engage both opinion leaders and the community as a whole in issues of development.	<b>(+)</b> Helps the government <b>(-)</b> Sea erosions	No proper health facilities in the coastal areas. Spread of headache in the district; cause is yet to be known.
Mark Arthur (CEMAGS – Assembly Member)	Fear that fisher folk will be thrown out of business since the area of operation will be restricted as done by existing firms.	<b>(+)</b> Government would have enough resources for development. <b>(-)</b> Some fisher folk will be thrown out of business	Developing the forest communities as part of CSR instead of only coastal communities.



Name/Entity No:	Concerns and Benefits No:	Project Impacts No:	Information on Environment, Community and Health Status. No:
<b>GPHA</b>			
Agnes D-Moses (GPHA – Marketing Manager)	Proper laying of pipelines An added business in community and port	<b>(+)</b> Offer employment in the community <b>(-)</b> Improve the nation’s economy <b>(+)</b> Enhance oil delivery services	There should be a policy to guide oil spill incidence Livelihood enhancement programs for the fisher folk
Jacob Hyde-Cooper (GPHA – Port Operations Manager)	How will oil production and fishing activities be balanced to avoid agitation of fisher folk whose livelihoods will be affected?	<b>(+)</b> Direct employment, auxiliary services, investment in the economy. <b>(-)</b> Disturbance to the sea environment, seismic waves and associated sound effects to sea organisms <b>(-)</b> Oil spillage	X
Capt. James Quayson (GPHA – Harbor Master)	Capacity Building, Technology transfer, Job opportunity for young Ghanaians in the offshore maritime sector	Track records of AKER indicate a good partnership in their operations.	Developing the local manpower base for young Ghanaians to benefit from oil and gas activities Community engagement and transfer of technology
Ebenezer Nketsiah (GPHA – Port Monitoring and Control Manager)	Structural pollution caused by the presence of the FPSO and the activities carried out in it. Service boats for the development that will use the Takoradi Port as their base.	<b>(+)</b> Social and Economic benefit/impact.	X
David Halm GPHA – Estate and Environmental Manager)	The use of Takoradi Port with the expected increase in revenue generation	<b>(+)</b> Employment opportunities, Increased revenue from Port activity, Transfer of technology <b>(-)</b> Possible spillage, Congestion in Port, Increased land values	There is the need to engage the fishing communities Investing

Name/Entity No:	Concerns and Benefits NO: 23	Project Impacts NO: = 23	Information on Environment, Community and Health Status. NO: 18
<b>Western Regional House of Chiefs (WRHC)</b>			
Owusu Brempong. Asst. National Registrar. House of Chiefs – Sekondi.	Include locals in job allocations and training.	(+) Improvement of socio-economic & infrastructural development.  (-) Activities of fisher-folks might be hampered.	X
Nana Alelaekyi II Western Region House of Chiefs – Paramount Queen Mother.	Job for the jobless including qualified personnel of the community. Training programs to equip Community members with requisite skills and knowledge for a better future.	(+) Creation of job opportunities and training of community members made easier.  (-) Disease, pollution of sea and destruction of the natural habitat of aquatic animals.	X
Nana Abena Konadjoa. Wassa Fiase Traditional Council – Paramount Queen Mother	Recruitment of staff from the Region.	(-) Oil spills in the sea will have adverse effect on the fishes and the fisher folk.	Proper health facilities and improved road networks.
Nana Benuah III Western Region House of Chiefs – Awulae Tufuhene.	Aker Energy company should meet Awulae and sub-chiefs at their traditional areas.	(-) Aker operations should be extended to other areas in the community not only at the shores.	Air pollution should be tackled with all seriousness
Awulae Attibrukusu III Western Region House of Chiefs – Paramount Chief.	Train community members to get jobs. Develop the manpower and infrastructure of the community and to hear them out when there is a problem.	(+) The State will get money for development.  (-) Previous same project dumped into the mud contrary to their expectations. Proposed project will affect the livelihood of our fishermen and fishmongers.	Air pollution – flaring of gas e.g. residents of Atuabo Gas plant complain of cough. Mitigation measures should be put in place.

Name/Entity No:	Concerns and Benefits NO: 23	Project Impacts NO: = 23	Information on Environment, Community and Health Status. NO: 18
<b>Western Regional House of Chiefs (WRHC)</b>			
Nana Kwesi Agyeman II Western Region House of Chiefs - Member	What can be done to help the fishing industry/fisher folk? Protect communities from air pollution hazards. Provide residential accommodation for its workers in the Western Region. Provide employment quota for W/R.	<p>(+) Provision of employment support CSR projects/community initiated projects.</p> <p>(-) Will disturb the fishing industry, the social and economic life of fisher folks and local people. Does little to improve the local economy.</p>	Baseline study as benchmark for future monitoring to see changes.
Otumfuor Baidoo Bonsoe XV. Western Region House of Chiefs - Paramount Chief Ahanta.	Requisite qualification training. Support fisher folk to improve their trade. Aker Energy should site their offices in the Western Region. Support provide developmental projects for communities.	<p>(+) Helps national economy and provides jobs. Youth will be trained in skills.</p> <p>(-) Will affect local communities including bad social practices. Does little to improve local economy. Influx of people with varied characters.</p>	Help with baseline study to determine any future changes in health status of the communities.
Nana Kwasi Atobrah II Traditional Ruler, Chief of Esuaso Division.	Sustainable livelihood for fishermen/fishmongers in the local communities of the enclave.	<p>(+) Improves the economy of the country.</p> <p>(-) Greater percentage of the oil money goes out. Local shareholding very small. Oil not refined fully in the country so all by-products lost to the country.</p>	Inhabitants shall suffer health hazards from pollution. Need for a baseline study to serve as benchmark for health status checks in the future.
Nana Kwadwo Twum II Western Region House of Chief – Acting President.	Build a school to train the youth in technical skills for the future.	(-) Air pollution will bring diseases to the community.	Build emergency hospital at the coast for the whole area.

Name/Entity No:	Concerns and Benefits NO: 23	Project Impacts NO: = 23	Information on Environment, Community and Health Status. NO: 18
<b>Western Regional House of Chiefs (WRHC)</b>			
Awulae Annor Adjaye III. Western Regional House of Chiefs – Paramount Chief, West Nzema.	Littering of coastal beaches with debris/weeds from the sea and preventing/obstructing drag net fishing. Lack of sponsored development projects in Beyin and other coastal towns.	<p>(+) Increase in Ghana’s Oil and Gas revenue especially with the establishment of oil refineries.</p> <p>(-) Increased fishing industry challenges. Establish Fisherman’s Foundation Fund to mitigate.</p>	Use best international practices to address environmental and air pollution problems that affects the climate, atmospheric conditions and the air that we breathe.
Nana Kwaw Tendele II. Upper Axim Traditional Council. Acting President.	Upgrade Axim Government Hospital to a Teaching hospital status. Clear sea weeds properly by Zoil or appointed agents.	(+) Encourage farmers in the area to grow foodstuff and vegetables needed by company’s staff. Grant children of fishermen scholarship up to university level through each Traditional Council.	Company should abide by all the laws and regulations since it is a government approved project and go by my earlier submissions. Supply sufficient anti-malaria drugs, conduct mosquito spraying exercises to eliminate malaria.
Awulae Agyefi Kwame II. Western Region House of Chiefs. Omanhene of Nsein Traditional Area.	Creation of jobs. Scholarships for Community fisher folks’ children. Health facility e.g. Clinic.	(+) Enhance living standards and enjoy good livelihood.	x
Ogyeahoho Yaw Gyebi II. Western Region House of Chiefs – President.	Provision of educational facilities, skills training and economic empowerment to the people.	(+) Establishment of Oil Exploration Fund Foundation for the local people. Estate development for the workers.	Organize environmental, health and safety surveys before and during oil exploration activities.



Name/Entity No:	Concerns and Benefits NO: 23	Project Impacts NO: = 23	Information on Environment, Community and Health Status. NO: 18
<b>Western Regional House of Chiefs (WRHC)</b>			
Nana Kwaw Anyim Ababio. Western Region House of Chiefs. – Divisional Chief S/W	Extend company’s programs to the remote parts of the region. E. g. Sefwi Wiawso Traditional Area. Engage Nananom periodically.	(+ ) Build Oil Refineries in Ghana.	Think about the environment and find solutions. E. g. global warming. Educate fishermen well and engage them in company’s operations.
Nana Nda Esi III. Western Region House of Chiefs – Paramount Queen Mother.	Training of community and town dwellers.	(+ ) Aker Energy to do something better for the town.	Environment and community should be healthy and fine all the time.
Nana Efua Ahima II. Western Region House of Chiefs- Paramount Queen Mother.	Aker should help other companies to build their headquarters in the Western Region. Employ office staff from the Region.	(+ ) Employment and revenue generation for development.	Care should be taken to prevent water and air pollution through oil/gas spillage.
Nana Kobina Nketia. Western Region House of Chiefs – Paramount Chief.			
Nana Ekua Kodu II. Western Region House of Chiefs – Queen Mother (Essikado)	GNPC’s 10% should be increased. Increase educational facilities.	(+ ) Queen Mothers should be involved in the supply chain.	Use local content as a guide for employment. Improve health facilities.

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<b>Western Regional House of Chiefs (WRHC)</b>			
Obrempong Hima Dekyi XIV. Western Region House of Chiefs – Paramount Chief.	Involve the locals by providing them with jobs. Provide key social amenities in Education, Health and Sanitation.	(+) Provision of revenue for National Development.  (-) High cost of living due to influx of people.	Lack of dumping sites and refuse collecting materials led to plastic waste pollution of the sea. Defecation at the shores. Bad fishing practices.
Tetrefe Okuamoah Sekyira II. Western Region House of Chiefs – Paramount Chief. Member.	Infrastructural developments will spring up – roads, buildings etc.	(+) Raise standard of living.  (-) Environmental impact on the immediate vicinity	No comments
Nana Akosua Gyanfiaba II. Western Region House of Chiefs – Queen Mother.	Restore bad drainage system. Rehabilitate our bad roads. Our beaches are very filthy.	(+) Aker Energy will bring a difference to the industry because of Norway's experience.	No comments
Okogyeman Kwaku Gyamponsah III. Western Region House of Chiefs – Omanhene.	Training and providing youth with jobs.	(+) Job creation.  (-) Part – pollution of the environment.	Pollution of the air. Company should meet Nananom regularly.
Awulae Nda Bozoma II. Western Region House of Chiefs – Queen Mother.	GNPC'S 10% is too small. Should be increased.	(+) Involve Queen Mothers in day to day activities to be of value to the company projects.	Employ the Indigenes to benefit the community. Needs a modern Hospital.
Nana Kwamina Wienu II. Shama Traditional Council – Acting President.	Oil companies in the Region led to influx of people into our communities with its attendant accommodation and unemployment problems. Employ some of our people.	(+) Provides employment and revenue for national economic growth and development.	Avoid oil and gas spillage which causes health and environmental problems.

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<b>Western Regional Coordinating Council</b>			
Francis Kwasi Osorede (Environmental Health Dept. – Env. Officer)	Will Aker Energy be sampling and screening community members along operational areas?	(+) Job creation. (-) Aquatic lives in danger. Air and water pollution.	Lives of all living organisms to be considered. Hospitals to be built around operational areas.
Ebenezer Sam (Ghana National Fire Service (GNFS) – Staff Officer)	The GNFS to be helped to develop offshore fire-fighting and rescue operation capacity. To be involved in fire-watching activities and planned maintenance events.	(+) Development of the Western Region through CSR.	x
Joseph Kwesi Achim (Civil Servant – Deputy Director)	Regional Development	(+) Employment. (-) Disruption of fishing activities.	Help to facelift the regional hospital.
Supt. Henrietta N. Amparbeng (Ghana Immigrations Service – O.I.C Enforcement Unit)	Aker Energy Headquarters to be in Takoradi, not in Accra, to enable processing of permits for expatriates to be done in the region of operation.	(+) Income generation for the nation. (-) Adverse environmental impacts.	X
Anita Offei (Immigration – Intel Unit)	Immigration related issues to be handled in the region.	(+) Increase in national revenue. (-) can create poverty in communities around the shore.	X
Freda Q-Ansah (National Pop. Council – Regional Population Officer)	Alternative livelihood, Scholarships and educational benefits to be provided. Infrastructural development necessary. Teaching improved forms of fishing.	(+) Jobs creation. (-) Absence of alternative livelihood can breed miscreants.	X
David Andoh – Kesson (National Board for Small-scale	Aker Energy to make available oil bye-products to help affected	x	x

Entity/Name No:	Concerns and Benefits NO:	Project Impacts NO:	Information on Environment, Community and Health Status. NO:
<b>Western Regional Coordinating Council</b>			
Industries – Regional Manager)	communities to establish medium to small scale industries to reduce economic impacts.		
Owusu Ameyao (Forest Services Division – Managerial)	Measures to be taken to minimize greenhouse gas emissions. Measures to be taken to ensure local content in job allocation.	(+) Employment creation. (-) Environmental pollution resulting from poor management of project.	Aker Energy to assist in reforestation as part of their CSR.
Becky Williams (Ghana Standards Authority – Ag. Regional Officer)	Ghana Standards Authority to be consulted for all the set standards for Ghana and what is to be produced.	x	x
Henry Asirifi (Dept. of Rural Housing – Regional Director)	Aker Energy to help improve housing in terms of the use of local materials.	(+) Communities may benefit.	X
Nana Kusi Nsiah (Physical Planning Dept. – Town Planning Officer)	Urbanization. Public transportation. Alternative livelihood. Waste management. Security. Public Housing.	(+) Job creation. Infrastructure and amenities development. (-) Disruption of fishermen activities. Fishstock depletion. Urban traffic problem. Housing problem.	Of noteworthy is the fact that fishing is the main occupation of the coastal residents.  Global warming should be considered.
Robert Hackman Antwi (Geomatic Engineering – Head of WR Survey/Mapping Division)	Local Content application regarding employment. Constant and regular consultation with local people to consider their needs.	(+) Beneficial to the nation. (-) Local agitation if they are sidelined in terms of what they deserve.	X
Angelina Awa (Lands Commission – Head	Lack of infrastructural development in the area of	(+) Employment creation. Human resource improvement.	x



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<b>Western Regional Coordinating Council</b>			
PUCMD)	operation. Lack of coordination between oil companies and the lands commission. The delinking of the region and national headquarters of the company/operators.	(-) Environmental pollution. Poor service condition for Ghanaian workers, compared to the expatriate counterparts.	
Rexford Arthur (Sekondi-Takoradi Metro Assembly – Asst. Development Planning Officer)	Increase in cost of accommodation. Unemployment among the fisher folks. Climate change due to gas emissions.	(+) Job creation. Infrastructural development. Competence and vocational skill development. (-) Climate change. Unemployment due to adverse impact on livelihood of fisher folks.	Flaring of gas can potentially contribute to climate change.  Help in afforestation.
Elizabeth Acquah (Labour Dept. – RLO)	Arker Energy to establish contacts with development partners to ensure employment generation.	(+) Promote schooling  (-) Adverse impact on people's livelihood. Spillage.	Capacity building in employable skills and agro-based occupation.
Capt. Daniel Quartey (GPHA – Oil & Gas/HSE+Q Manager)	Aker Energy to source for their oil and gas equipment/requirements from the Ports Authority. Adequate consultation required.	Various impacts, both positive and negative.	X
Isaac K. Mensah (PWD – Architect)	The lives of the people should be improved, hence local content on employment to be followed.	(+) Employment creation. (-) Adverse impacts will be avoided if international good practice is followed.	x
Amanda Dudimah (Land Valuation Division – Land	Measures to minimize greenhouse gas.	(+) Employment creation. Contribution to national GDP.	x

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<b>Western Regional Coordinating Council</b>			
Administration Officer)	Alternatives to be considered.	(-) Loss of employment for the fisher folks.	
Joe Appiah (National Yout Authority – Metro Youth Director)	Aker Energy to consider negative impacts on the communities with respect to ecological imbalance, health, fishing activities and oil spillage. Creation of employment avenues for the youth. Speeding up of development in the communities.	(+) Creation of Employment. Enhanced/Improved educational standards. (-) Pollution increases and respiratory diseases.	Accumulation of plastic wastes (bags) at the beaches.
Nelson Setugah (Western Regional House of Chiefs – Research Officer)	Aker Energy to help provide educational and health infrastructure for the communities.	(+) Employment. Revenue generation. Skill transfers. (-) Fisher folks deprived of their livelihoods. Pollution (in case of accident).	x
Baba Ayine Akafili (Ministry of Trade and Industry – Industrial Promotion Officer)	Aker Energy to consider engaging the locals, especially the women to provide services and goods local to the region.	(+) Job creation. Skill training for the youth.	Aker Energy to help facelift the regional hospital to a world-class standard, as well as health posts in the communities.
James Mettle (NHIA – Regional Operations Manager)	To collaborate with the health directorate to handle associated project induced health issues.	(+) Job creation and development. (-) Environmental impacts and associated health issues.	X
Isaac Mensah Apenteng (Marine Police – Asst. Superintendent (ASP))	The Marine Police needs additional boats to patrol the sea to prevent the incursion of fishermen into the safety exclusion zone.	(+) The project will make Ghana a better place to live.	x
Prince Gabriel Waabu	The Police Service’s response to	(+) Development to the	x

Entity/Name No:	Concerns and Benefits NO:	Project Impacts NO:	Information on Environment, Community and Health Status. NO:
<b>Western Regional Coordinating Council</b>			
(Police – C/Supt.)	the potential/likelihood of demonstration against Aker Energy by the fishermen.	communities. (-) Decrease in fish stock.	
Priscilla Ankomah-Hackman (Physical Planning Dept. – Intern Secretary)	Safety and security in and around the metropolis from criminals bred by project induced unemployment.	(+) Creation of direct and indirect employment. (-) High standard of living translating into higher rents and land costs.	Need for infrastructure for socio-economic development in the region.
Jonathan Djan-Gyau (Dept. of Social Welfare – Regional Director)	CSR to be directed towards alleviating the hardship faced by the vulnerable, marginalized, excluded and the disabled persons in the project affected communities.	(+) Job creation. Alternative livelihood considerations. CSR performance. (-) Pollution from oil and gas. Denying the fisher folks their daily subsistence.	Educations, Health and Job creation to be considered.
Raphael Dordzi (National Service Scheme – Representing Regional Director)	Loss of jobs. Long term CSR benefits.	(-) Destruction of fish due to pollution. Reduction in fish stocks.	Skill training to make community inhabitants employable.
Michael Mensah Tabiri (National Sports Authority – Head IT/AG. HR.)	The National Sports Authority needs help in repairing the structural deterioration of the only stadium in the region.	(+) Job creation (-) End products can affect the fitness of the people.	To support the various sporting disciplines to engage the unemployed youth.
Theresa M. Mensah (NADMO – Dep. Reg. Director)	Location of Aker Energy’s Office in the W/R. Aker Energy to employ people from the region. Aker Energy to provide alternative livelihood for the fishing folks and their siblings.	(+) Revenue from the oil and gas will be used to support the free SHS.	Engage the communities when administering Aker Energy’s CSR - no imposition of any form. Establish some form of scheme that will continue to operate even after project’s life span.
Mercy Addo	Sponsorship to cover both	x	Communities should be provided

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(ICCES – Secretary)	literates and illiterates in the communities. Training of youths and employing them.		with clinics, schools.
Gilbert Q. Etsey (Dept. of Food and Agriculture – Regional Agric Engineer)	Standardization training in food crop production to local farmers to feed workers on the FPSO – high value crops and vegetables.	(+) Income generation. Improved livelihood. Employment opportunities along the value chain.	X
William K. Darlie	Reduction in effective areas for fishing. Air pollution and oil spill incidence.	(+) Additional oil revenue for development. (-) Increasing exclusion zones. Flaring of gas. Oil spills.	X
Julian Nana Pireku (Ghana Highway Authority – Road Area Manager)	The road from the Sankore Junction to the Cape Three Point road needs upgrading.	(+) Employment for the indigenous community members with improved living standards.	x
Lt CDR Lucas Ocloo (Ghana Navy – Commanding Officer, GN Ship Chemle)	Security plan for responding to security threats to workers and facilities. Efforts to be made to address social needs of the host city.	(+) National development.	x
Lawrence Agudu (Minerals Commission – Snr. Inspector of Mines)	Ensure proper management of project to make way for mutual benefits. Management of ballast water should be a priority.	x	x
Samuel Kwame Appiah (Ghana Shippers Authority – Asst. Shippers Service Officer)	Measures to be put in place to mitigate adverse impact of oil production on fishing and fisher folks within the oil enclave.	x	x



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<b>Western Regional Coordinating Council</b>			
Otuo Acheampong Richard (Ghana Shippers Authority – Accountant)	Air pollution from operations. Security matters in respect of operations. Effect on the fishing folks.	(+) CSR for the communities.	x
Joyce Obiri-Yeboah (Dept. of Comm. Dev't – Regional Director)	Ensure women are given alternative economic ventures (by way of skill development to ensure women continue to be economically viable.	(+) Improved economic development of the region and country. Aker Energy's Corporate Social Responsibility to assist locals along the coast. (-) Likely decline of country's fish supply.	Disturbance to the economic activities of the communities. Training in alternative economic ventures for sustainable economic development to be ensured.
Rev (CSP) George Akuamoah- Boateng (Ghana Prisons Chaplain)	Establishment of alternative job opportunities for the local communities. Establishment of fishponds in the localities in close proximity to project site. Education of fishermen on scientific ways of fishing, allowing for spawning of fish. Establishing a quota for employment for the Western Region. Sekondi-Takoradi to be considered when it comes to purchasing of spares for maintenance purposes.	x	x
Isaac Kofi Amakye (BNI – Field Officer)	Security measures to be put in place. Mitigating measures to be put in	x	x

Entity/Name No:	Concerns and Benefits NO:	Project Impacts NO:	Information on Environment, Community and Health Status. NO:
<b>Western Regional Coordinating Council</b>			
	place for air pollution and associated health problems.		

Name/Entity No:	Concerns and Benefits No:	Project Impacts No:	Information on Environment, Community and Health Status. No:
<b>Ministry of Fisheries (&amp; Aquaculture Development) - Accra</b>			
William Agbenu (Fisheries Commission – Head of Procurement)	Displacement of fish from their biological niches. Distribution of fish movement and resting places. Attracting fish to the rigs and other equipment as well as fishers, which is dangerous to life and equipment.	(+) Discovering of new species and biological niches. Opportunity to study the economic and biological aspect of new discoveries. (-) Polluting the environment through introduction of chemicals and machinery.	x
Anonymous	Impact to fishing.	(+) The maintenance of exclusion zones / marine protected areas, increasing fish populations. (-) Loss of fishing grounds, leading to agitations by the fishermen.	x
Nemonius N. Pengyir (Fisheries Commission – Deputy Director)	More sea area (fishing grounds) will be lost to the fishermen; there will be the need to initiate social interventions that will compensate for this, i.e. for the local content in workforce, offer specialized training to children of the fishers in accredited oil and gas training institutes abroad to	(+) Income and other resources to the country. Development and training for local people with opportunity to take up jobs according to the local content component in the oil and gas industry policy (foreign training). (-) Restriction of fishing grounds	The accumulation of plastic wastes in the ocean.

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<b>Ministry of Fisheries (&amp; Aquaculture Development) - Accra</b>			
	take up job opportunities in the oil and gas industry.	of the fishers. Adverse effects on the marine mammals and other aquatic animals.	
Eric Agyeman (WARFP – IT Specialist)	Oil spillage. Effect of the development on the fishing industry.	(+) Financial gains in terms of royalties. Job creation. (-) Oil spillage and its long term devastation on the fishing industry.	x

Name/Entity No:	Concerns and Benefits No:	Project Impacts No:	Information on Environment, Community and Health Status. No:
<b>Forestry Commission</b>			
Charles C. Amankwah (Wildlife Division of the Forestry Commission – General Service Manager/ Wetlands Coordinator)	Impacts of development on migratory animals – sea turtle, whales and dolphins. Impact / Destruction of coastal beaches for breeding of marine turtles.	x	x

Name/Entity No:	Concerns and Benefits No:	Project Impacts No:	Information on Environment, Community and Health Status. No:
<b>The Ghana Navy</b>			
CDR N.A. Akwei-Aryee (Ghana Navy – Legal Advisor)	Failure of oil companies to carry out their corporate social responsibilities. Lack of adequate and well-rehearsed oil spill contingency plans. Effect on sources of livelihood of locals and increasing cost of living.	(+) Provision of jobs and other infrastructure. (-) Loss of jobs for the fisher folks. Oil pollution.	X
Maxwell Arhen (Naval Captain) (Ghana Navy – Director, Naval Operations)	Security and safety within and around the contract area. Collaboration with the Ghana Navy in terms of their role in the event of any such incident as oil spill and fire.	(+) Employment creation. Revenue generation for the nation/country. Enhanced social and community development. (-) Interruption of fishing activities. Oil and environmental pollution.	x

Name/Entity No:	Concerns and Benefits No:	Project Impacts No:	Information on Environment, Community and Health Status. No:
<b>Petroleum Commission</b>			
Charles Kweku James (Petroleum Commission – HSE Manager)	That: As the regulator of the upstream industry, petroleum operations are conducted in a safe and prudent manner in line with HSE regulations (LI 2058), and best industry practices.	(+) Employment creation. Energy security for the state. (-) Unmet expectations due to inadequate sensitization.	The Commission should be involved in community engagement exercises to ensure adequate information is provided to the communities. Safety zones management.

	Maximum local participation in oil and gas operations is ensured.		
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Name/Entity  No:	Concerns and Benefits  NO: 23	Project Impacts  NO: = 23	Information on Environment, Community and Health Status.  NO: 18
<b>Western Regional House of Chiefs (WRHC)</b>			
Owusu Brempong. Asst. National Registrar. House of Chiefs – Sekondi.	Include locals in job allocations and training.	(+) Improvement of socio-economic & infrastructural development.  (-) Activities of fisher-folks might be hampered.	X
Nana Alelaekyi II  Western Region House of Chiefs – Paramount Queen Mother.	Job for the jobless including qualified personnel of the community. Training programs to equip Community members with requisite skills and knowledge for a better future.	(+) Creation of job opportunities and training of community members made easier.  (-) Disease, pollution of sea and destruction of the natural habitat of aquatic animals.	X
Nana Abena Konadjoa.  Wassa Fiase Traditional Council – Paramount Queen	Recruitment of staff from the Region.	(-) Oil spills in the sea will have adverse effect on the fishes and the fisher folk.	Proper health facilities and improved road networks.



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<b>Western Regional House of Chiefs (WRHC)</b>			
Mother			
Nana Benuah III  Western Region House of Chiefs –Awulae Tufuhene.	Aker Energy company should meet Awulae and sub-chiefs at their traditional areas.	(-) Aker operations should be extended to other areas in the community not only at the shores.	Air pollution should be tackled with all seriousness
Awulae Attibrukusu III  Western Region House of Chiefs – Paramount Chief.	Train community members to get jobs. Develop the manpower and infrastructure of the community and to hear them out when there is a problem.	(+ ) The State will get money for development.  (-) Previous same project dumped into the mud contrary to their expectations. Proposed project will affect the livelihood of our fishermen and fishmongers.	Air pollution – flaring of gas e.g. residents of Atuabo Gas plant complain of cough. Mitigation measures should be put in place.
Nana Kwesi Agyeman II  Western Region House of Chiefs - Member	What can be done to help the fishing industry/fisher folk. Protect communities from air pollution hazards. Provide residential accommodation for its workers in the Western Region. Provide employment quota for W/R.	(+ ) Provision of employment support CSR projects/community initiated projects.  (-) Will disturb the fishing industry, the social and economic life of fisher folks and local people. Does little to improve the local economy.	Baseline study as benchmark for future monitoring to see changes.

Name/Entity  No:	Concerns and Benefits  NO: 23	Project Impacts  NO: = 23	Information on Environment, Community and Health Status.  NO: 18
<b>Western Regional House of Chiefs (WRHC)</b>			
Otumfuor Baidoo Bonsoe XV. Western Region House of Chiefs - Paramount Chief Ahanta.	Requisite qualification training. Support fisher folk to improve their trade. Aker Energy should site their offices in the Western Region. Support provide developmental projects for communities.	<p>(+) Helps national economy and provides jobs. Youth will be trained in skills.</p> <p>(-) Will affect local communities including bad social practices. Does little to improve local economy. Influx of people with varied characters.</p>	Help with baseline study to determine any future changes in health status of the communities.
Nana Kwasi Atobrah II Traditional Ruler, Chief of Esuaso Division.	Sustainable livelihood for fishermen/fishmongers in the local communities of the enclave.	<p>(+) Improves the economy of the country.</p> <p>(-) Greater percentage of the oil money goes out. Local shareholding very small. Oil not refined fully in the country so all by-products lost to the country.</p>	Inhabitants shall suffer health hazards from pollution. Need for a baseline study to serve as benchmark for health status checks in the future.
Nana Kwadwo Twum II Western Region House of Chief – Acting President.	Build a school to train the youth in technical skills for the future.	(-) Air pollution will bring diseases to the community.	Build emergency hospital at the coast for the whole area.

Name/Entity  No:	Concerns and Benefits  NO: 23	Project Impacts  NO: = 23	Information on Environment, Community and Health Status.  NO: 18
<b>Western Regional House of Chiefs (WRHC)</b>			
Awulae Annor Adjaye III. Western Regional House of Chiefs – Paramount Chief, West Nzema.	Littering of coastal beaches with debris/weeds from the sea and preventing/obstructing drag net fishing. Lack of sponsored development projects in Beyin and other coastal towns.	<p>(+) Increase in Ghana’s Oil and Gas revenue especially with the establishment of oil refineries.</p> <p>(-) Increased fishing industry challenges. Establish Fisherman’s Foundation Fund to mitigate.</p>	Use best international practices to address environmental and air pollution problems that affects the climate, atmospheric conditions and the air that we breathe.
Nana Kwaw Tendele II. Upper Axim Traditional Council. Acting President.	Upgrade Axim Government Hospital to a Teaching hospital status. Clear sea weeds properly by Zoil or appointed agents.	(+) Encourage farmers in the area to grow foodstuff and vegetables needed by company’s staff. Grant children of fishermen scholarship up to university level through each Traditional Council.	Company should abide by all the laws and regulations since it is a government approved project and go by my earlier submissions. Supply sufficient anti-malaria drugs, conduct mosquito spraying exercises to eliminate malaria.

Name/Entity  No:	Concerns and Benefits  NO: 23	Project Impacts  NO: = 23	Information on Environment, Community and Health Status.  NO: 18
<b>Western Regional House of Chiefs (WRHC)</b>			
Awulae Agyefi Kwame II. Western Region House of Chiefs. Omanhene of Nsein Traditional Area.	Creation of jobs. Scholarships for Community fisher folks' children. Health facility e.g. Clinic.	(+ ) Enhance living standards and enjoy good livelihood.	x
Ogyeahoho Yaw Gyebi II. Western Region House of Chiefs – President.	Provision of educational facilities, skills training and economic empowerment to the people.	(+ ) Establishment of Oil Exploration Fund Foundation for the local people. Estate development for the workers.	Organize environmental, health and safety surveys before and during oil exploration activities.
Nana Kwaw Anysim Ababio. Western Region House of Chiefs. – Divisional Chief S/W	Extend company's programs to the remote parts of the region. E. g. Sefwi Wiawso Traditional Area. Engage Nananom periodically.	(+ ) Build Oil Refineries in Ghana.	Think about the environment and find solutions. E. g. global warming. Educate fishermen well and engage them in company's operations.
Nana Nda Esi III. Western Region House of Chiefs – Paramount Queen Mother.	Training of community and town dwellers.	(+ ) Aker Energy to do something better for the town.	Environment and community should be healthy and fine all the time.

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<b>Western Regional House of Chiefs (WRHC)</b>			
Nana Efua Ahima II. Western Region House of Chiefs- Paramount Queen Mother.	Aker should help other companies to build their headquarters in the Western Region. Employ office staff from the Region.	(+ ) Employment and revenue generation for development.	Care should be taken to prevent water and air pollution through oil/gas spillage.
Nana Kobina Nketia. Western Region House of Chiefs – Paramount Chief.			
Nana Ekua Kodu II.  Western Region House of Chiefs – Queen Mother (Essikado)	GNPC’s 10% should be increased. Increase educational facilities.	(+ ) Queen Mothers should be involved in the supply chain.	Use local content as a guide for employment. Improve health facilities.
Obrempong Hima Dekyi XIV. Western Region House of Chiefs – Paramount Chief.	Involve the locals by providing them jobs. Provide key social amenities in Education, Health and Sanitation.	(+ ) Provision of revenue for National Development.  (-) High cost of living due to influx of people.	Lack of dumping sites and refuse collecting materials led to plastic waste pollution of the sea. Defecation at the shores. Bad fishing practices.



Name/Entity  No:	Concerns and Benefits  NO: 23	Project Impacts  NO: = 23	Information on Environment, Community and Health Status.  NO: 18
<b>Western Regional House of Chiefs (WRHC)</b>			
Tetrefe Okuamoah Sekyira II. Western Region House of Chiefs – Paramount Chief. Member.	Infrastructural developments will spring up – roads, buildings etc.	(+) Raise standard of living.  (-) Environmental impact on the immediate vicinity	No comments
Nana Akosua Gyanfiaba II. Western Region House of Chiefs – Queen Mother.	Restore bad drainage system. Rehabilitate our bad roads. Our beaches are very filthy.	(+ ) Aker Energy will bring a difference to the industry because of Norway’s experience.	No comments
Okogyeman Kwaku Gyamponsah III. Western Region House of Chiefs – Omanhene.	Training and providing youth with jobs.	(+) Job creation.  (-) Part – pollution of the environment.	Pollution of the air. Company should meet Nananom regularly.
Awulae Nda Bozoma II. Western Region House of Chiefs – Queen Mother.	GNPC’S 10% is too small. Should be increased.	(+ ) Involve Queen Mothers in day to day activities to be of value to the company projects.	Employ the Indigenes to benefit the community. Needs a modern Hospital.

Name/Entity No:	Concerns and Benefits NO: 23	Project Impacts NO: = 23	Information on Environment, Community and Health Status. NO: 18
<b>Western Regional House of Chiefs (WRHC)</b>			
Nana Kwamina Wienu II. Shama Traditional Council – Acting President.	Oil companies in the Region led to influx of people into our communities with its attendant accommodation and unemployment problems. Employ some of our people.	(+) Provides employment and revenue for national economic growth and development.	Avoid oil and gas spillage which causes health and environmental problems.

Name/Entity No:	Concerns and Benefits No:	Project Impacts No:	Information on Environment, Community and Health Status. No:
<b>The Fishermen Association</b>			
Cecilia S. Annan (Fishermen Association)	Job training and employment for the people.	(+) Job creation. (-) Reduction in fish stock, hence livelihood worsening.	Cholera, typhoid, pulmonary, tuberculosis, chicken pox, tetanox, yellow fever, measles, infectious hepatitis, pneumonia, malaria
Mike Abaka-Edu	Continue, intensify and expand the SHS scholarship programme to include vocational education.	(+) Commended Arker Energys restore to handle waste (well fluids, hazardous waste and drill cuttings in a professionally accepted manner.	Gas flaring, Ballast water and oil spills. Bi-annual health screening.

Name/Entity No:	Concerns and Benefits No:	Project Impacts No:	Information on Environment, Community and Health Status. No:
<b>The Fishermen Association</b>			
		(-)The safety exclusion zone and lack of Fishery Impact Assessment. (-)Stakeholder engagement with fishermen.	
Chief fisherman (Nana Kofi Bentil) Chief fisherman,axim	Extend scholarship programme to include university education and vocational training. Assist communities with sanitation along the shore.	(+)Local content necessary to factor good communication and understanding with fishermen. (-)Local content on employment such as security crew on the FPSO.	Health screening for the fishing community on yearly basis.
Emelia Abaka-Edu National Fish Processors and Traders Association (National Vice president)	Alternative livelihood for both fishermen and fishmongers is required to offset loss and livelihood as a result of the project.	(+)Employment creation. (-)Dying of sea mammals and sea accident. Safety exclusion zones are increasing.	Publicity for the scholarship is less hence most prospective student miss out on information on interview for scholarship. Health screening on yearly basis.
Philomina Aidoo NAFPTA	Loss of livelihood of the men. Potential adverse impact on biological environment.	(+)Job creation	Health screening once a year
Susana Bissue NAFPTA	Loss of livelihood of the Fishermen Need fishermen fund support	Job creation Operational risk	Proliferation of sea weeds to be considered and tackled. Suggesting health insurance as part of Arker Energy CSR.

Name/Entity No:	Concerns and Benefits No:	Project Impacts No:	Information on Environment, Community and Health Status. No:
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**FISHERIES COMMISSION**

J.F.Esumbey (Fisheries)	Coastal communities needs facilities like laterine and livelihood ventures as part of their social intervention.	Disruption of fishing activities during construction period. Suggesting a kind of compensation in a form of a token to the fishermen.	Communities around the catchment area experience severe heat and other health hazards.Need for health screening for coastal communities.
Theodore Kwadjosse	Increased Livelihood of accident at sea with fishermen. Depth of communities engagement to disseminate information regarding the development.	(+)Employment creation for its locals (-)Development could affect livelihood due to increasing number of exclusion zones,high rent.	Among the fishing communities those engaged in the line hook and drift –gillnet users are likely to be affected. Shama,Discove,Sekondi should well be engaged.
Alex .Y.Sabah (Regional Director)	Accident,damage to fishing net and craft due to increased vessel traffic. Several/multiple safety exclusion zones taking up more fishing space. Effect of waste water dischargeto sea on flora and fauna.	(+)Social and economic development. (-)Immigration,increase in social vices,land grabbing.	*
Josephine Laryea (Zonal coordinator)	Reduction of sea access by multiple safety exclusion zones. Possible accidents and destruction of gears of fishermen. Collaboration between the FC and Aker Energy for alternative livelihood or enhanced ventures for fishermen.	(+) Income generation for Ghana (+) Local content caoacity development. (+) Mutual coexistence between the oil and gas and fisheries sectors using best practices. (-) Marine mammals facing adverse impacts(other fish species)	Special attention for drift gill net (DGN) fishers-they go further offshore.(Shama,Dixcove,Axim) Hook and Line fishers are also to be considered(Sekondi mostly,and Axim)

Name/Entity No:	Concerns and Benefits No:	Project Impacts No:	Information on Environment, Community and Health Status. No:
<b>Ghana Maritime Authority - Accra</b>			
Captain Inusah Abdul-Nasir (Ghana Navy - Deputy Director, Environment & Safety Standards)	Key comment (See Appendix 86-F))		
<b>Friends of the Nation</b>			
Friends of the Nation (FON)	Key comment (See Appendix 68-F))		



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*APPENDIX F: Key Comments - Friends of the Nation (FoN), Takoradi  
and Ghana Maritime Authority (GMA), Accra.*

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**Comments**  
**on the Scoping Exercise of Activities by Aker Energy in Deep**  
**Water Tano/Cape Three Points block**

**July, 2018**

## 1.0 Introduction

The following comments are submitted by Friends of the Nation (FoN) to serve as inputs for a scoping study being carried out by Aker Energy Ghana as part of the Environmental and Social Impact Assessment (ESIA) for the proposed offshore oil and gas production in the Deep Water Tano/Cape Three Points block.

The proposed project will consist of:

- Installation of 40-45 oil and gas production and injection wells
- Installation of a ship-shaped FPSO and mooring systems; and
- Installation of sub-sea infrastructure
- Subsea connections from wells to the FPSO

## 2.0 Comments

### 2.1 Consider cumulative impact of exploration activities in Deep Water Tano/Cape Three Points (DWT/CTP) block

The scoping exercise concerns the activities of Aker Energy in the DWT/CTP block. However, it has to be emphasized that other operators are already active in adjacent blocks whereas others will follow, the most recent being AGM. Therefore, the cumulative impact of these activities should be prominently addressed in any future ESIA given the environmental footprint of existing installations which is already measurable (distribution in 2009 as compared to 2012 of Barium in sediments (as a marker for the discharges of drill cuttings), collected by the RV Fridtjof Nansen and analyzed by the Norwegian Institute for Marine Research (IMR; Serigstad 2017). *Therefore, addressing the contribution of Aker Energy as a stand-alone activity will be insufficient in any ESIA to be prepared in relation to the activities of Aker Energy in the DWT/CTP block.* The present comments relate to the scoping exercise. However, as far as issues addressed by FoN in the comments on the PER for drilling activities have not been repeated in the current document, they are considered to be an integral part of it. These comments can be found in Appendix 1.

### 2.2 Zero discharge policy must be adopted

Based on (A) the environmental footprint already present, (B) the cumulative impact of multiple operators over a large geographic area and (C) the precautionary principle because of the largely unknown biodiversity of the Ghanaian EEZ, a **zero discharge policy** should be adopted and applied, which would include reinjection of both drill cuttings/mud and produced water. If there is compelling evidence that such an approach cannot be applied, which should be motivated in verifiable detail, then Aker Energy needs to adopt a **zero risk discharge policy**, with a risk based assessment by the combined use of DREAM/EIF (Dose related Risk and Effects Assessment Model/Environmental Impact Factor; the water volume where the ms-PAF (multi-stress or multi-substance Potentially Affected Fraction of species, calculated from an SSD) is greater than or equal to 5%) (SINTEF/University of Wageningen) and of a well defined monitoring programme of micro-contaminants, both chemical and biological markers, over a sufficiently large geographical area, pre and post block development to verify the outcomes of the modelling study. To reduce hydrocarbon content

in drill cuttings and other materials to be discharged to below measurable concentrations, the latest state-of-the-art (BAT/BEP) technology such as **thermal desorption treatment** should be applied on board or **bioremediation** in cuttings shipped to landfill sites. If these alternative treatments are not planned, the environmental justification should be motivated *in extenso*. Modelling of the impact of the discharge of drill cuttings should be done by state of the art modelling software. In all cases, modelling predictions should be verified *in situ* by active monitoring and subsequent technology adaptations if desired results cannot be achieved. *In NO case payment of fines to the EPA should be used as an alternative for application of BAT/BEP.*

### **2.3 Double-hulled FPSO needed**

If not automatically considered by Aker Energy, the FPSO should be double-hulled, and responding to the most recent and most stringent safety requirements.

### **2.4 Blow Out Preventers must be constructed according to latest BAT/BEP**

Sufficient and convincing information needs to be provided to prove that the Blow Out Preventers (BOP) are constructed according to the latest BAT/BEP. The Deepwater Horizon is the example to show how it can go wrong.

### **2.5 Quantitative Spatial Information on sensitive benthic communities and bottom morphology**

There is a pressing need to have quantitative spatial information on the presence of sensitive benthic communities (such as cold water coral reefs) and bottom morphology and composition (carbonate mounds, canyons, mudslides, cold seeps, etc.) of the entire DWT/CTP block collected by side scan sonar or other appropriate technology and verified by inspection by ROV and sampling. Collaboration with specialized marine scientific institutions should be developed. *Lophelia pertusa* coral reefs on the continental shelf at a depth of c. 550m, which have been recently described in the scientific literature (Buhl-Mortensen *et al.* 2016) to occur North of the DWT/CTP block, bear a large resemblance with cold water coral reefs off Mauritania and Norway. On these reefs many undescribed species are to be expected and four new Tanaidacea (crustaceans) were already found on the coral mound in Ghana and recently described (Jakiel *et al.* 2015). The discovery of the largest chain of cold water coral reefs of the Eastern Atlantic was done by the Australian oil company Woodside off Mauritania. By making their discoveries available to the scientific community Woodside contributed significantly to their studies which has now culminated in their proposed protection. Aker Energy could positively distinguish itself from other companies active offshore Ghana by actively seeking collaboration with the scientific community and making their non-commercial data freely available.

The reefs and associated fauna are expected to be sensitive to very low concentrations of micro-contaminants such as those found in typical discharges from offshore oil and gas installations if these are not re-injected or brought to shore. The coral reefs of Mauritania have been extensively studied and could serve as a model for those present in Ghana. Modelling results as well as measured contaminant levels should be provided pre- and post-

operation to show that the reproduction of these *Lophelia pertusa* reefs and associated fauna will not be impaired.

## **2.6 Spatial and temporal information on the occurrence of megafauna needed**

There is an equally pressing need to obtain spatial AND temporal information on the occurrence of megafauna, in particular cetaceans, birds and turtles. We are not aware of any earlier quantitative studies of seabirds and other top predators off Ghana, other than some fragmentary and largely unpublished, essentially qualitative data that MMO's have gathered, mainly during previous seismic surveys or from platforms of opportunity such as the Dr Fridtjof Nansen. These data need to be collected, not only in the DWT/CTP block, but along the entire Ghana coast across the shelf break by way of standardized transects and executed by renowned experts using internationally accepted standardized methodology. Standardized and systematic observations of seabirds and cetaceans from the bridge of (research) vessels provide quantitative information on their presence, numbers, habitat requirements, inter- and intraspecific interactions, on the presence of marine hotspots and on fisheries interactions. These are ecological studies, rather than warning systems (such as with MMO's on board seismic vessels), and the results are also essential to provide vulnerability maps for sea areas with respect to for example hydrocarbon pollution (spills). These data need to be available at least for each quarter, but preferably for each month of the year. These data are a minimum requirement for the development of a Wildlife Response Planning as part of an Oil Spill Contingency Plan, see next paragraphs. It is suggested that all oil companies actually executing either exploration or exploitation together provide sufficient funds to execute such inventories as a part of their corporate responsibilities towards the host country. Needless to say that any studies undertaken should be executed by independent scientists. In Mauritania, financial contributions from the oil and gas industry allowed researchers to monitor marine megafauna across the shelf break during critical periods of the year, largely contributing to a better knowledge of their distributions throughout the year to be used for Wildlife Response Planning (see also under 10 hereafter).

## **2.7 Full Oil Spill Contingency Plan needs to be developed**

In the documentation of the PER for drilling it was stated that Aker Energy will prepare an Oil Spill Contingency Plan (OSCP) prior to drilling. It needs to be stated that the National OSCP of Ghana is a very general, rudimentary guideline, and actually more a plan for industry and agencies **TO DEVELOP OSCP's IN THE FUTURE**, not an actual spill prevention and response plan itself. The OSCP does not meet in itself most of the nine "Aims and Objectives of the Plan". This leaves us actually with a vacuum and starting drilling without having a fully operational OSCP is asking for trouble in case of a spill. Furthermore, as stated in a previous paragraph, there is no wildlife response plan, no marine sensitivity map and the existing dispersant use policy is entirely based on the use of Corexit 9527 or 9500. **Corexit 9500 and 9527** was massively used after the Deepwater Horizon spill. The research that followed the spill has shown major impacts on:

- Human health
- Benthic communities
- Fish



- Penetration of Poly-Aromatic Hydrocarbons (PAHs) in the sediment
- Enhanced toxicity of hydrocarbons
- Reduced degradation of hydrocarbons

**A large part was due to dispersants.** The OSCP should identify mechanical recovery of spilled oil as the priority, rather than chemical dispersants (or burning).

There is also an urgent **need for a pre-spill Natural Resource Damage Assessment and Restoration (NRDA&R) protocol**, with arrangements between government agencies and oil companies, pre-spill baseline environmental assessments, an NRDA plan, etc... Such a protocol **also details the aftermath of a spill** and the necessary actions to be taken for monitoring. This can take years.... See therefore hereafter 9. Oil spill liability. The view of FoN on the OSCP can be found in the Power Point Presentation, Appendix 2.

## **2.8 Coverage of oil spill liability needs to be specified**

There is no international convention to date that covers liability from spills from offshore drilling/production facilities, so this important issue needs to be fully taken care of in a detailed and satisfactory way.

## **2.9 Address inadequate quantitative data on onshore environmental sensitivities**

Onshore environmental sensitivities are incompletely known as only based on an outdated EPA assessment from 2004 (<http://www.ghanaein.net/wp/projects/coastal-sensitivity-atlas/2004-version/>). This assessment is furthermore qualitative and not quantitative and entirely misses the point that exposed coarse sand coastal beaches, which they considered as low in biodiversity, in fact harbor specific faunal elements and according to RAMSAR criteria an internationally significant percentage of the East Atlantic Flyway population of Sanderlings *Calidris alba* (maximum count *c.* 8000 on a population of 123,000 or 6.5%) (Ntiamoa-Baidu *et al.* 2014, Van Roomen *et al.* 2015). Sanderlings showed a clear preference for the *c.* 13 km stretch of sandy beach between the Ankobra and Amansuri Rivers near the village of Esiana in the Western Region. The situation of the Esiana beach between two estuaries makes it potentially one of the most productive beaches in the country, especially with respect to young and small individuals of the bivalve *Donax pulchellus* which occur in enormous densities of 5700–14,300 individuals/m<sup>2</sup>. Sanderlings feed almost exclusively on this species (Ntiamoa-Baidu *et al.* 2014, Grond *et al.* 2015).

Sensitivities of offshore biodiversity (benthic communities, megafauna, ichthyofauna, ..) in Ghana have never been assessed. What is particularly needed is a grid based mapping of sensitivities of seabirds to oil pollution preferably covering the entire EEZ (200 nautical miles zone) of Ghana (hence the need for standardized transect data as mentioned in the previous paragraph, but at least covering the relevant oil blocks offshore and areas likely to be impacted by a major oil spill, to be used in a wildlife response planning. According to Oil Spill Response Ltd. (Southampton), a response without a pre-spill agreed wildlife plan in place will have a **large potential for delays and inefficiency**. Therefore the best guarantee for a fast and effective wildlife response mobilisation is provided by a **pre-spill developed wildlife response plan**, implemented through **training and exercises**

<https://www.oilspillresponse.com/services/member-response-services/oiled-wildlife-response-services/>).

## **2.10 Exclusive Fisheries Impact Assessment needed**

One most important socio-economic impact is on artisanal fisheries which essentially thrives on a healthy clean and undisturbed ecosystem. Therefore, a thorough understanding of the likely impacts on fisheries with its cascading impacts on local economy and how the burden of these impacts will be distributed will be required. Ghanaian law (Section 93 of the Fisheries Act, 2002, Act 625) now requires a **Fisheries Impact Assessment** be executed in parallel with an ESIA and not only as a short paragraph in the latter.

([http://laws.ghanalegal.com/acts/id/131/section/93/Fisheries\\_Impact\\_Assessments](http://laws.ghanalegal.com/acts/id/131/section/93/Fisheries_Impact_Assessments))

## **2.11 Extensive Stakeholder consultations on the Mitigation and management measures**

Mitigation and management measures, including emergency response plan, oil spill contingency plan, waste management plan, safe practices and procedures and physical controls need to be in place and discussed with all stakeholders as part of the ESIA process and well before an environmental permit is granted, in order to prevent any major negative environmental or social impacts from the project..

All activities which will eventually be allowed in the environmental permit and which are potentially harmful to the marine environment should be adequately monitored and results of such monitoring activities should be made publicly available. Feedback mechanisms to stakeholders are important to show that their inputs have been taken serious, which will help the oil industry to regain confidence within stakeholder groups.

## **2.12 Presence of Marine Mammal Observers and Automatic Identification System**

Marine Mammal observers should be present during critical phases of executing noise generating activities and also on board of project related vessels. The information gathered should be made publicly available as it has no commercial value for Aker Energy and will add to the little knowledge thus far available. Vessels of 65 feet or greater should be subjected to a maximum speed of 10 knots on fixed trajectories to avoid whale-vessel collisions. These trajectories should also be communicated to the fishing communities to help preventing interactions with fishing gear and fishing vessels. All service vessels should have Automatic Identification System (AIS) installed to avoid collisions and it is highly recommended that a communication system be put in place to communicate with artisanal vessels such as canoes.

By applying the precautionary principle, because scientific information on the periodicity of whale presence and behaviour is incomplete (but available data show that the at least Humpback Whales breed in the Ghanaian EEZ), these restrictions should not be time limited. Conn & Silber (2013) showed the effectiveness of such regulation in a modelling study. Such mandatory vessel speed restrictions are in effect since 2008 along the U.S. eastern seaboard. Underwater noise has been shown to be a function of vessel speed and thus by limiting speed the potential impact of sound on marine fauna will be reduced as well. All sightings of, and

physical encounters with, marine mammals and turtles should be noticed/recorded in a logbook with date, time, vessel speed and geographical coordinates and be available for consultation.

#### **2.14 Prohibition of Seismic surveys during migration period of whales**

Seismic surveys should NOT be carried out during the main period when whales are present in Ghanaian waters. Although detailed information is not available, strandings of whales –as a proxy for their occurrence– have mainly been recorded between July and November, with less frequent strandings recorded until February (Ofori–Danson 2014, FoN archives). Contribute to high-quality scientific research on the chronic effects of seismic surveys and other sources of underwater noise (of all frequencies) on fish and invertebrates (acute effects are better-known). According to Hawkins & Popper (2016), most of the concerns by regulators and others have focused upon effects on marine mammals and other protected species. However, examining the impacts upon the overall ecology of affected habitats is also important as it may be dominated by effects upon the far larger biomasses of fishes and invertebrates, which do not have the same degree of legal protection. Many of these assessments of the impact of noise on fishes and invertebrates have overlooked important issues, including the sensitivity of a substantial proportion of these species to particle motion rather than sound pressure.

#### **2.15 Code of practice for communication needs to be developed**

To avoid an unconstructive climate of distrust in fishing communities, a code of best practice for corporate communication needs to be developed, implemented and monitored.

### **3.0 Contacts**

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- Solomon Kusi Ampofo, Programme Coordinator, Friends of the Nation (Email: s.ampofo@fonghana.org)
- Theophilus Boachie–Yiadom, Programme Coordinator, Friends of the Nation (Email: t.boachieyiadom@fonghana.org)

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## APPENDIX 1 - comments FoN on PER drilling AGM and Hess (Aker Energy)

A stakeholder consultation meeting was held with representatives of the Centre for Environment & Health, Research & Training (CEHRT) on April 25th 2018 regarding Preliminary Environmental Assessments for

- (1) Hess/Aker Drilling Project - Deepwater Cape Three Points Block, and
- (2) AGM Exploratory Well Drilling Project - South Deepwater Tano Block

During this meeting a document was provided entitled: "*Deepwater Tano Cape Three Points Block Drilling Preliminary Environmental Assessment. Rev. 0.1 2. Project Description*" on behalf of Aker Energy. However, no information was provided on behalf of AGM. Therefore, our comments will be based only on the Hess/Aker document, but as both projects have elements in common, it equally applies to similar sections of the PEA of AGM.

The provided documentation only covers the summarized project description which, however, is insufficient for a thorough analysis as it lacks essential information as will be outlined below. The bottom line is that the existing environmental footprint of previous drilling activities by oil companies active in the various offshore blocks, as can be visualized by the concentrations of barium in sediments (as a marker of the offshore disposal of drill cuttings and drilling mud), vastly exceeds their concession areas and as such any new discharges will further add to this footprint. By applying the precautionary principle and in the absence of detailed analysis of benthic communities in a wide area surrounding the proposed wells and further recognizing that coral reefs and adjacent sponge grounds are hotspots of carbon processing in the food-limited deep ocean, and that these deep-sea ecosystems play a more prominent role in marine biogeochemical cycles than previously recognized, FoN has the opinion that any drill cuttings and drilling muds produced should be re-injected using the latest technology available.

FoN further formally objects the followed procedure in which stakeholders were not given access to all documentation necessary to provide inputs to improve either the process or the proposed solutions/mitigations for activities that are potentially environmentally or socially unacceptable.

Page	PEA statement	Comments Friends of the Nation (FoN)
4	The physical, biological and socio-economic environment surrounding the block and the area of influence of the project are described in Chapter 3.	Chapter 3 is not provided. It is therefore impossible to draw detailed comments. In particular the lack of quantitative spatial information on presence of sensitive benthic communities (coral reefs, carbonate mounds,...) in a large area around the proposed wells is missing. In general, no information on other marine biodiversity such as megafauna has been provided for stakeholder consultation. The lack of such information is becoming critical as the cumulative impact of the proposed activities together with the environmental footprint of existing installations
4	However, the results of spill modelling currently being performed will be incorporated into response planning to mitigate any potential spill and protect the environment and artisanal	One most important socio-economic impact is on artisanal fisheries which essentially thrives on a healthy clean and undisturbed ecosystem. Even though the operator recognises this fact, a greater understanding of the likely impacts on fisheries with its cascading impacts on local economy and how the burden of these impacts will be distributed was not considered.

	fishing activities.	
4	The project is a significant distance (approximately 70 km) from coastal and onshore environmental and social sensitivities	Onshore environmental sensitivities are incompletely known as only based on an outdated EPA assessment from 2004. This assessment is furthermore qualitative and not quantitative. Not a single word was found on the sensitivities of offshore biodiversity (benthic communities, megafauna, ichthyofauna,...). What is needed is a grid based mapping of sensitivities of seabirds to oil pollution preferably covering the entire 200 miles zone off Ghana, but at least covering the relevant oil blocks offshore, to be used in a wildlife response planning. According to Oil Spill Response Ltd. (Southampton), a response without a pre-spill agreed wildlife plan in place will have a <b>large potential for delays and inefficiency</b> . Therefore the best guarantee for a fast and effective wildlife response mobilisation is provided by a <b>pre-spill developed wildlife response plan</b> , implemented through <b>training and exercises</b> .
4	Mitigation and management measures described later in this PER; including emergency response plan, oil spill contingency plan, waste management plan, safe practices and procedures and physical controls; will prevent any major negative environmental or social impacts from the project	No such appendices have been found in the provided information making it impossible to provide detailed comments.
11	Side-tracking involves drilling new hole, starting from some way down the vertical original hole, stepping off to <i>one</i> side in a preferred direction, then continuing vertically approximately 50m from the original well.	side-tracking has additional risks and hazards. How have these been accounted for? We have not found any detailed information in the provided document.
12	The existing upper plugs will be drilled out using WBM and the NABF drilling mud left in the hole will be removed and disposed of ashore.	It is unclear which criteria are used to decide why (a) this will be disposed of ashore and (b) NABF drilling fluids recovered and remaining mud from other drilling activities discharged at sea. For any disposal ashore there needs to be a detailed disposal plan of how and where this will be treated and which rest products will remain and how soil and groundwater/surface water contamination will be prevented and monitored. As stated earlier, reinjection is a first choice of FoN, disposal ashore a second.
13	Some Materials used in Drilling	We should like to know (a) which yellow or green categories chemicals can be replaced by PLONOR chemicals and why this has not been done and (b) detailed information based on modelling or real world data that the concentrations of the Red and Yellow classified chemicals are lower than their respective NOECs at the limit of 500 m around each well at any time. But in any case FoN opts for reinjection, among others to apply the precautionary principle.
15	When drilling out the cement plugs in the three existing wells, Aker Energy plans to use an environmentally low toxicity water-based drilling fluid	No information found which water-based drilling fluid will be used. Not all WBDFs have a low aquatic toxicity.
15	When drilling out the cement	How does the company intend to dispose of this waste?

	plugs in the three existing wells, Aker Energy plans to use an environmentally low toxicity water-based drilling fluid	If disposal into the sea is foreseen, the results of relevant ecotoxicity tests should be provided and if these are not compliant with internationally accepted standards other solutions should be provided. See also comments above re. materials used in drilling.
15	Prior to release, cuttings will be passed through the solids control equipment to remove the <b>majority</b> of drilling fluids prior to being discharged to the sea.	majority: 51% or 99%...both are majority. Specify please. We don't see mention of any monitoring programme.
15	Aker Energy will endeavour to meet the discharge standard established by Ghana EPA to reduce oil on cuttings to 2 percent (dry weight) prior to discharge.	How would the operator achieve this, as evidence shows that the other partners have never been able to meet the 2 percent oil on cuttings established by Ghana EPA before discharge (They pay a fine to be in compliance). State of the art technology and commitment to meet this requirement is needed, but as stated above: FoN wants reinjection of cuttings as avoiding investment in available state of the art technology (and rather pay the too low fines...) by industry is considered as unacceptable and a potential threat to the marine environment.
17	For all of the drilling campaign, cuttings generated during the jetting of the 36" pipe and drilling of 26" hole sections will be discharged to the seabed. During drilling of the 17-1/2" and 12-1/4" holes, which will be drilled with NABF, the cuttings will be removed and mud reconditioned and re-circulated. Drill cuttings and fluids will pass through solids control equipment to remove most (estimated up to 98%) of the drilling fluids from the cuttings.	See point of view of Friends of the Nation regarding discharges: We opt for reinjection
17	Larger solids are retained on the screen, passed through the cuttings dryer and discharged.	The cutting dryer which is proposed has been developed in the early 1990s and is not state of the art. It is not able to remove oil on rock to 2 percent as required by Ghana EPA. (cutting dryer efficiency is less than or equal to 5%, typically 5-15% oil remaining). It is overly simplistic to assume that only oil will be in the discharge. There are lots of micro-contaminants dissolved in the oil fraction. The graphical representation of the distribution of barium in sediments in 2012 as compared to 2009 shows that the geographical area where impacts of drilling discharges potentially might occur is much larger than the description in previous environmental and social impact statements. This is one of the reasons why FoN asks for reinjection of drill cuttings from now on.
19	The Ghana EPA limit is up to 3°C above ambient sea temperature within 100m of the discharge point.	We haven't found any indication how this and other activities which are potentially harmful to the marine environment will be monitored and how results of such monitoring activities will be made publicly available. Feedback mechanisms to stakeholders are important to show that their inputs have been taken serious, which will help the oil industry to regain confidence within stakeholder groups.
20	Flaring may take place for	There is no information on control mechanisms and on feedback to

	circa 10 days.	stakeholders on actual flaring activities
21	<p>The most significant potential environmental impacts from offshore drilling operations are typically those associated with an oil spill, particularly a large spill from a loss of well control or blowout. Well control is primarily maintained by the column of heavy mud in the wellbore. Blowouts are rare and are usually associated with abnormally pressured intervals penetrated while drilling. For uncontrolled flow from the wellbore to occur, formation pressures must (1) overcome the hydrostatic pressure from the mud column and (2) the subsea well control equipment has to suffer multiple mechanical failures.</p>	<p>It is surprising that the "most significant potential environmental impacts from offshore drilling operations" according to the provided information, are not accompanied with more detailed and solid information than: "<i>Aker Energy will prepare an Oil Spill Contingency Plan (OSCP) prior to drilling</i>".</p> <p>The National OSCP is a very general, rudimentary guideline, and actually more a plan for industry and agencies <b>TO DEVELOP OSCPs IN THE FUTURE</b>, not an actual spill prevention and response plan itself. The OSCP does not meet in itself most of the nine "Aims and Objectives of the Plan". This leaves us actually with a vacuum and starting drilling without having a fully operational OSCP is asking for trouble in case of a spill. Furthermore there is No wildlife response plan, no marine sensitivity map and a dispersant use policy which is entirely based on the use of Corexit 9527 or 9500. <b>Corexit 9500 and 9527</b> was massively used after the Deepwater Horizon spill. The research that followed the spill has shown major impacts on:</p> <ul style="list-style-type: none"> <li>• Human health</li> <li>• Benthic communities</li> <li>• Fish</li> <li>• Penetration of PAHs in the sediment</li> <li>• Enhanced toxicity of hydrocarbons</li> <li>• Reduced degradation of hydrocarbons</li> </ul> <p><b>A large part was due to dispersants.</b> The OSCP should identify mechanical recovery of spilled oil as the priority, rather than chemical dispersants (or burning).</p> <p>There is also an urgent <b>need for a pre-spill Natural Resource Damage Assessment and Restoration (NRDA&amp;R) protocol</b>, with arrangements between government agencies and oil companies, pre-spill baseline environmental assessments, an NRDA plan, etc... Such a protocol <b>also details the aftermath of a spill</b> and the necessary actions to be taken for monitoring. This can take years....</p> <p><b>Oil spill liability:</b> There is no international convention to date that covers liability from spills from offshore drilling/production facilities, so what will be proposed by the two companies remains an open question and this should be clearly covered in the final document.</p>
22	<p>Oil spill trajectory modelling has been performed for other drilling programs in the vicinity of (closer to shore than) the DWTCTP Block. Results are summarized in the Impacts chapter of this PER and will be used in developing an appropriate OSCP</p>	<p>No such information has been found in the provided documentation</p>
22	<p>A minimum 1 nautical mile (1.857 km) Safety Zone will be established around the drillship to minimize the risk of danger to other mariners from coming in contact with the drilling operations</p>	<p>This is not consistent with international as well as Ghana's regulations. The mandatory safety zone around such installations is 500m.</p>
26	<p>As previously noted, given the water depth (&gt;500m) the use of anchors to maintain</p>	<p>How safe is a DP Vessel at sea under adverse weather conditions?? We would need detailed information as this appears to be an element for a detailed risk assessment.</p>

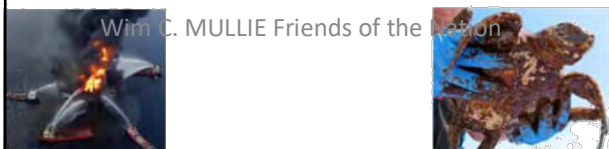
	position over a well-site is not viable, so a DP vessel is required	We haven't seen any form of formal risk assessment for any of the operations carried out or materials and chemical used.
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## Plan or Planned?

or: What did the EPA learn from MC252?

Some thoughts about the NOSCP,  
version 5, 2015



## Acknowledgements

My sincere thanks to the following colleagues for sharing their insights, information and time

- **Sandra Kloff** MSc – GIZ/GOPA Mauriania Programme Biodiversity, Oil and Gas, Spain
- Prof. Dr **Rick Steiner** – Oasis Earth and University of Alaska, Anchorage, Alaska
- Prof. Dr **Tinka Murk** - Marine Animal Ecology and Triple-P at Sea, Wageningen University and Research, The Netherlands
- **Hugo Nijkamp** MSc – General Manager Sea Alarm, Brussels, Belgium

## Are we prepared?



On January 17, 2018, media reported an oil spill at two neighbouring towns in the Ada East District. It appeared to be due to a Togolese tanker which caught fire off the coast of Prampram.

Few of the coastal inhabitants had ever heard of an OSCP, let alone whom to contact or what to do...

Responding to the issue, Public Affairs Director at the EPA in the Greater Accra region, Irene Opoku, told that investigations are ongoing and **an official report would be published subsequently.**

## The Bottom Line

The OSCP is a very general, rudimentary guideline, and actually more a plan for industry and agencies **TO DEVELOP OSCPs IN THE FUTURE**, not an actual spill prevention and response plan itself.

The OSCP does not meet in itself most of the nine "Aims and Objectives of the Plan," as given in Section 1.3 (page 12/13)

**It is a plan to develop plans, not an actual plan itself**

## Independent Expert Reviews needed

The OSCP says that companies, vessels, and sites **"Shall develop OSCPs"** for Tier 1 spills, and the government for Tier 2/3 spills.

To really know how prepared the companies and government are to respond, we would need to have **independent expert review** of all such detailed plans.

We also need **independent expert review all Combat Agencies' OSCPs**, as required by National OSCP (2.2.3)

## Too much remains to be developed

The OSCP says it **"Shall develop"** guidelines for oiled wildlife response, places of refuge, training and exercises, waste management, etc.

**Thus, it is clear that we cannot judge the adequacy of the plan until we have reviewed all of this, which has yet to be developed.**

## Wildlife Response Planning



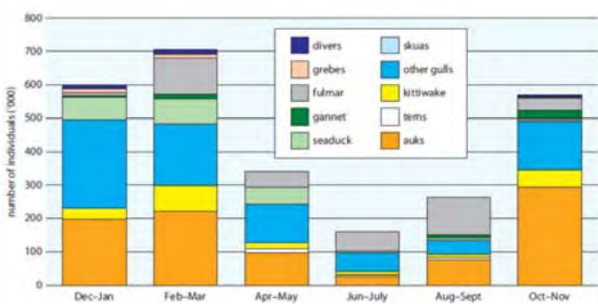
## Wildlife Response Planning

According to the [LTD website](#), a response without a pre-spill agreed wildlife plan in place will have a **large potential for delays and inefficiency**. Therefore the best guarantee for a fast and effective wildlife response mobilisation is provided by a **pre-spill developed wildlife response plan**, implemented through **training and exercises**.

**MAJOR PROBLEM:** There is virtually **NO SYSTEMATICALLY COLLECTED INFORMATION** on marine wildlife (in particular of seabirds) in the EEZ of Ghana

## Wildlife Response Planning

Seabirds – which numbers of which species occur when and where?



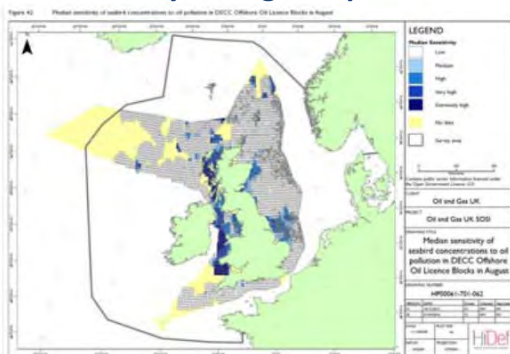
Bi-monthly fluctuations in seabird abundance in the Southern North Sea

## Wildlife Response Planning

The use of sensitivity indices

Species	Williams et al. (1994)	F1	F2	F3	F4 (Winter)	F4 (Summer)	F5	F6	F7	F8	SOSS (winter)	SOSS (summer)
Glaucous gull	17	0.4	0.4	0.2	0.2	0.2	0.8	0.6	0.8	0.6	0.2	0.2
Great Black-backed gull	21	0.8	0.4	0.4	0.6	0.6	0.8	0.6	0.8	1		
Large gull sp.	18.5	0.8	0.4	0.2	0.6	0.6	0.8	0.6	0.8	0.8		
Black-backed gull	20	0.6	0.4	0.2	0.6	0.6	0.8	0.6	0.8	1		
Kittiwake	17	0.8	0.4	0.4	0.2	0.6	1	0.6	0.8	0.8		
Collared Plover	17	0.8	0.4	0.4	0.2	0.6	1	0.6	0.8	0.8	0.2	0.2
Common Gull	30	0.4	0.2	0.2	0.2	0.6	0.8	0.8	0.8	0.8	0.2	0.2
Lesser gull	18.5	0.8	0.4	0.2	0.6	0.6	0.8	0.6	0.8	0.8	0.2	0.2
Common Noddy	30	0.6	0.2	0.2	0.2	0.4	0.8	0.8	0.8	0.8	0.2	0.2
Puffin	16	0.8	0.2	0.2	0.2	0.4	0.8	0.8	0.8	0.8	0.2	0.2
Common Noddy	30	0.4	0.2	0.2	0.2	0.4	0.8	0.8	0.8	0.8	0.2	0.2
Little Tern	19	0.6	0.2	0.2	0.2	0.4	0.8	0.8	0.8	0.8	0.2	0.2
Black Tern	18	0.4	0.2	0.2	0.2	0.4	0.8	0.8	0.8	0.8	0.2	0.2
Storm Petrel	17.5	0.2	0.2	0.2	0.2	0.2	0.8	0.8	0.8	0.8	0.2	0.2
Skua	20	0.4	0.2	0.2	0.2	0.4	0.8	0.8	0.8	0.8	0.2	0.2
Common Noddy	30	0.6	0.2	0.2	0.2	0.4	0.8	0.8	0.8	0.8	0.2	0.2
Skua	20	0.4	0.2	0.2	0.2	0.4	0.8	0.8	0.8	0.8	0.2	0.2
Black-headed Gull	20	0.4	0.2	0.2	0.2	0.4	0.8	0.8	0.8	0.8	0.2	0.2
Little Tern	19	0.6	0.2	0.2	0.2	0.4	0.8	0.8	0.8	0.8	0.2	0.2
Puffin	16	0.8	0.2	0.2	0.2	0.4	0.8	0.8	0.8	0.8	0.2	0.2
Collared Plover	17	0.8	0.2	0.2	0.2	0.4	0.8	0.8	0.8	0.8	0.2	0.2

## Sensitivity mapping helps to predict what you might expect



## Wildlife Response Planning

With respect to pre-planning and preparedness regarding possible wildlife casualties during an oil spill, the three main issues are:

- (1) Which are the most sensitive sea areas under Ghana jurisdiction (know your area) and which species occur
- (2) Who are the trained experts that should be involved in the response (know your experts)
- (3) What facilities / material can be made available (prepare or select facilities beforehand).

## Wildlife Response Planning

### Two essential publications

**Wildlife response preparedness**  
Good practice guidelines for wildlife management and emergency response (second ed.)  
IPIECA IGP

**HANDBOOK ON OIL IMPACT ASSESSMENT**  
Oil Industry Crisis Response Group  
www.oilspillresponse.org

editors  
Kees (D) Grootjans  
Roberto Diaz  
Hugo Alvarado

## Dispersant use policy

The OSCP should identify mechanical recovery of spilled oil as the priority, rather than chemical dispersants or burning.  
The plan refers to the Ghana Dispersant Use Policy, which we would need to review as well.

### DISPERSANT USE POLICY

### Oil Spill Dispersants Guidelines

These guidelines are applicable to the National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances

## Dispersant use policy

Policy **dates from 2008/2009** and has not been updated.  
This was **BEFORE the Deepwater Horizon spill in 2010**

Annex A: Special Consideration Areas For Dispersant Pre-authorization Policy Summary:

Area/Situation:	Additional Condition:	Submitted by:
Dispersant types other than Corexit 9527 or 9500 (US).	Not pre-authorized (Other stockpiled dispersants must receive specific approval from the EPA before they may be pre-authorized).	Oil Spill Response Limited
All pre-approval areas:	Implementation of the 6-point Dispersant Monitoring Protocol, Baseline protocol, and physicochemical data collection (temp, salinity, conductivity, pH) at each sampling location, etc.	
Areas where whales are present and feeding	Suspend dispersant application	
Known fishing grounds	Consultation with Fisheries Commission and EPA	

## Dispersant use policy

**Corexit 9500 and 9527** was massively used after the Deepwater Horizon spill. The research that followed the spill has shown major impacts on:

- Human health
- Benthic communities
- Fish
- Penetration of PAHs in the sediment
- Enhanced toxicity of hydrocarbons
- Reduced degradation of hydrocarbons

**A large part was due to dispersants**

## A few citations

.....the **addition of dispersants** permits crude oil components to penetrate faster and deeper into permeable saturated sands, where anaerobic conditions may slow degradation of these compounds, **thus extending the persistence of potentially harmful PAHs in the marine environment.**

[PLOS One](https://doi.org/10.1371/journal.pone.0050549), 2012;7(11):e50549. doi: 10.1371/journal.pone.0050549. Epub 2012 Nov 27. Dispersants as used in response to the MC252-spill lead to higher mobility of polycyclic aromatic hydrocarbons in oil-contaminated Gulf of Mexico sand.  
[Zuidgeest A<sup>1</sup>](#), [Huettel M.](#)

## A few citations

..... biomass of large reef fish decreased by 25% to 50% in areas most affected by the spill, and **biomass of large demersal fish decreased** even more, **by 40% to 70%**.  
.....Impacts on the food web translated effects of the spill far away from the oiled area..... **Recovery of high-turnover populations generally is predicted to occur within 10 years, but some slower-growing populations may take 30+ years to fully recover.**

[PLOS One](https://doi.org/10.1371/journal.pone.0190840), 2018 Jan 25;13(1):e0190840. doi: 10.1371/journal.pone.0190840. eCollection 2018. Impacts of the Deepwater Horizon oil spill evaluated using an end-to-end ecosystem model. [Ainsworth CH<sup>1</sup>](#), [Paris CB<sup>2</sup>](#), [Perlin N<sup>2</sup>](#), [Dornberger LN<sup>1</sup>](#), [Patterson WF 3rd<sup>3</sup>](#), [Chancellor E<sup>1</sup>](#), [Murawski S<sup>1</sup>](#), [Hollander D<sup>1</sup>](#), [Daly K<sup>1</sup>](#), [Romero IC<sup>1</sup>](#), [Coleman F<sup>4</sup>](#), [Perryman H<sup>2</sup>](#).

## A few citations

The presence of excreted Extracellular Polymeric Substances (EPS or "marine snow") in water with a high sediment load (e.g. sand or clay) and (dispersed) oil droplets, facilitates formation of negatively buoyant aggregates and subsequent sedimentation: MOSSFA (Marine Oil Snow Sedimentation & Flocculent Accumulation). In the aggregates, additional oil droplets and planktonic organisms (phytoplankton, zooplankton, eggs, larvae, etc.) can be caught and brought down to the sediment.

**CONCLUSION: In situations of an algal bloom, the application of dispersants should be reconsidered**

J van Eenennaam, M Zeinstra, E Foekema, T Murk. 2017. Marine algae and particles can greatly influence the fate and persistence of chemically dispersed oil. Poster Gomri Annual Conference. M  
Murk & Foekema. 2017. Dispersants and algae: a deadly cocktail. WUR/GOMRI/C-Image

## Risk Assessment

A Risk Assessment **"shall be carried out every 10 years"**...but has it? This is extremely important, and must be competently done, and technically and independently reviewed.

It should include a systematic analysis of ship (tanker and freighter) traffic patterns and types of vessels and cargoes, and identify traffic convergences and navigational characteristics that may increase the risk of large spill events. In addition, all petroleum facilities – terminals, offshore platforms, floating production, storage, offloading FPSOs, on-shore and offshore pipelines, etc. – should be thoroughly analysed in the assessment.

## Crossing Borders

An MOU for cross-border spill arrangements is essential, but **has yet to be developed**.

## Inter-Agency Agreement (IAA)


The Inter-Agency Agreement (IAA) should be **independently reviewed**.

Under the IAA there are five working groups, but their tasks and performance **under real conditions** are unclear.

## Oil Spill Response equipment

The OSCP should specify what OSR equipment is in Ghana, and response times to cascade into the country additional equipment from OSRL base in Southampton UK. OSRL has also one of their bases in Ghana.

According to a country profile issued in 2010 by the International Tanker Owners Pollution Federation Limited (ITOPF), there is **very little dedicated oil spill response equipment available in Ghana**

This has perhaps improved, but a request for information to  OSCP Ltd remained unanswered.....

## Oil Spill Response equipment

OSCP states that EPA **"shall arrange** Tier 2/3 equipment", but this plan does not do such. This should include equipment for night time response, fire, etc..

## Who is in charge?

The relationship between the head of EPA, head of the Petroleum Department, and Ghana Navy in a spill response is unclear → who is in charge?

## Natural Resource Damage Assessment

There is **need for a pre-spill Natural Resource Damage Assessment (NRDA) protocol**, with arrangements between agencies, pre-spill baseline environmental assessments, an NRDA plan, etc...the OSCP does not mention this.

Such a protocol **also details the aftermath of a spill** and the necessary actions to be taken for monitoring. This can take years....

Only for that Australia and New-Zealand have a joint **Maritime Oil Spill Monitoring Handbook**.

## Oil Spill Natural Resource Damage Assessment & Restoration (NRDA&R)

September 2004



Richard Steiner, Professor  
University of Alaska  
[richard.g.steiner@gmail.com](mailto:richard.g.steiner@gmail.com)

Written under contract to United Nations Environment Program Agreement HRMS/02/HM/ENW, August 2004; as original *Manual on the Assessment and Restoration of Oil Spilling Marine Oil Spills*, 2009.

## Environmental Sensitivity Atlas

There should be a holistic **Environmental Sensitivity Atlas** available to public, not just EPA. Currently there is **ONLY** an outdated (2004) **Coastal** Environmental Sensitivity Atlas which is in need of updating.

The OSCP states that this atlas will be updated if necessary, but no such updates have been found despite ongoing and severe coastal erosion.

**PROBLEM** – There is an almost total lack of systematically collected data on environmentally sensitive areas at sea.  
**OBTAINING SUCH DATA IS URGENTLY NEEDED**

## Oil Spill Liability

Ghana's **oil spill liability** regime should be thoroughly reviewed and updated. Ghana is a member of some of the IOPC Funds (but not the largest Supplementary Fund) for tanker spills, but it is **not a member** of the Bunkers Convention (to cover spills of bunker fuel oil from all ships), or the HNS (Hazardous and Noxious Substances) Convention for chemical, natural gas, condensate etc. spills.

## Oil Spill Liability

There is no international convention to date that covers liability from spills from offshore drilling/production facilities, so **what does Ghana law provides for such cases?**

It is highly recommended that Ghana establishes its own liability regime, providing no liability limitation for gross negligence, and a per barrel environmental damage (NRDA) fine (similar to the Oil Pollution Act of 1990 in the US.), outside of the IMO regimes (*which do not adequately cover environmental damage*).



## Citizens Advisory Council

The OSCP **does not provide for establishment of a Citizens Advisory Council (CAC)** to provide stakeholder engagement and oversight of the offshore industry sector, in particular the development, review, and implementation of the Risk Assessments and OSCPs.

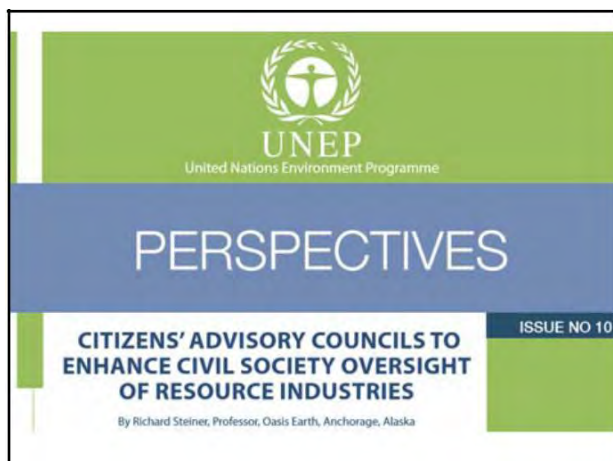
(see: [http://www.oasis-earth.com/Resources/ENVIRONMENT\\_PAPERS\\_DISCUSSION\\_10.pdf](http://www.oasis-earth.com/Resources/ENVIRONMENT_PAPERS_DISCUSSION_10.pdf))

## Role of citizens in general

Fisherermen are on the sea most of their time and cover the entire EEZ. They could play an important role in reporting spills/suspect activities of any nature

CEMAGs, Community Environmental Monitoring and Assessment Groups, trained by Friends of the Nation are present in the six coastal districts of the Western Region

Civil Society Organizations could be involved as well



**Thanks for your attention**

## Aker Energy ESIA COMMENT FROM GMA-Accra (Capt. Inusah)

1. *What are the primary concerns and or benefits faced by you/your community/your organization/with regards to the development of the DWT CTP*

Ghana's marine sector is reflected by its diversity of uses and the large population whose livelihoods depend on it. Therefore proper management of resources in this sector is highly important.

Fishing remains the dominant use of the coastal and marine space which include the proposed project development area. The fishing communities seem disappointed about the expectations of the offshore oil and gas sector's ability to address socio-economic challenges. There should be a better understanding among the fishing communities regarding oil and gas activity and environmental / resource management.

- The Maritime Administration

The new development will certainly have some implications with respect to the events listed in the BID.

The concern of the Ghana Maritime Authority is in the area of safety and security of vessels including (offshore installations) and the prevention of ship source pollution.

- Increase in maritime traffic

The E&P activities are often associated with influx of vessels and the use of heavy and complex equipment. Vessel traffic from the ports to the development area has to be effectively managed to ensure safety of navigation.

- Safety and Advisory Zones

We expect the mooring of an FPSO during exploitation. A 500m Safety Zone surrounding the FPSO facility and other installations will be generated. The Ghana Maritime Authority (GMA) will initiate processes to obtain approval from the International Maritime Organization (IMO) for the adoption of an advisory zone known as an Area to Be Avoided to protect the development area.

- Pollution prevention and Control

The increase in the volume of vessels for the activities will lead to increase in demand of ships bunkers, release of pollutants from ships engine combustions, discharge of ships engine cooling waters, discharge of sewage, garbage from ship generated waste etc

- Port Reception Facilities to receive and treat waste

Another issue of concern is the adequacy of reception facilities. Considering that large quantities of waste will be produced as a result of the E & P activities, GMA shall under the provisions of MARPOL Annex I Chapter 6, ensure the provision of adequate reception facilities in ports to handle discharges of waste and oily residues as a measure to prevent pollution of the marine environment.

- Ballast Water

VLCC calling at the fields from foreign countries will have the tendency of Importing and distributing or transferring of harmful aquatic organisms and pathogens through ballast water and sediments. The implication of this is a risk to the environment and human health and causing harm to property and resources

- Maritime Security

Considering that the FPSO JAK upon mooring assumes the status of a Port Facility in Ghana's Maritime Jurisdiction. The Ghana Maritime Authority, acting in accordance with the Maritime Security Act of 2004 (Act 675), shall carry out a Port Facility Security Assessment of the FPSO for the onward development of a Port Facility Security Plan. The plan will contain measures to address the various kinds of threats are identified during the assessment.

***Regulatory requirements for FPSOs and associated activities of the project are set out by the Coastal and Flag States having regard to international maritime instruments. The International Maritime Instruments and Conventions that Ghana has ratified are relevant to the project.***

The Ghana Maritime Authority will ensure the enforcement and compliance of the various Regulations /Legislative Instruments. These include:

- The United Nations Convention on the Law of the Sea (UNCLOS), 1982;
- Maritime Zones (Delimitation) Law;
- Ghana Shipping Act, (as amended)
- Ghana Shipping (Protection of Offshore Operations and Assets) Regulations, 2012 (LI 2010); and
- The Maritime Pollution Act of 2016 (Act 932)
- The Ghana Maritime Security Act, Act 675

*2. In your opinion, what are the positive and negative aspects of the proposed Project?*

The project will bring a lot of economic benefits to Ghana. Secured offshore energy production is fundamental to sustainable economic growth, prosperity and employment.

However, if not well managed the project can lead to social vices such as growing angry militants of perceived claimants as beneficiaries, pirate attacks on the vessels calling at the project sites.

Uncontrolled exploitation and unsustainable development activities in the project area could result in environmental degradation and depletion of living resources - ecological scarcities.

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*APPENDIX G: Picture Gallery (Photographs taken during and after the meetings)*

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**APPENDIX 6-G: Picture Gallery (Photographs taken during and after the meetings)**

**1. Meeting with the Fishermen Association, Takoradi.**



Figure 1: Aker Energy Company Presentation



Figure 2: Aker Energy Scoping Study Presentation









Figure 3: Photographs taken during the time of Discussions.





Figure 4: Photographs taken during and after the meeting with the Fishermen Association, Takoradi.



2. Ghana Ports and Harbours Authority (GPHA), Takoradi.









Figure 5: Picture taken during and after the meeting with the GPHA, Takoradi.



**3. Fisheries Commission, Takoradi.**







Figure 6: Photographs taken during and after the meeting with the Fisheries Commission, Takoradi.



4. Western Regional Coordinating Council (WRCC), Takoradi.



Figure 7: Western Regional Deputy Minister addressing the house.





Figure 8: Aker Energy Environment Manager making the Company presentation.



Figure 9: Presentation on the BID and the scoping process by the Director of ESL.





Figure 10: Some members of the house making contributions.



Figure 11: Aker Energy CSR Manager explaining a point.





Figure 12: Photographs taken during and after the meeting.



5. The Ghana Maritime Authority, Takoradi.



Figure 13: Photograph taken during and after the meeting.

6. Meeting with the Non-Governmental Organizations (NGOs), Takoradi.



Figure 14: Presentations on Aker Energy Company and the Scoping Process.



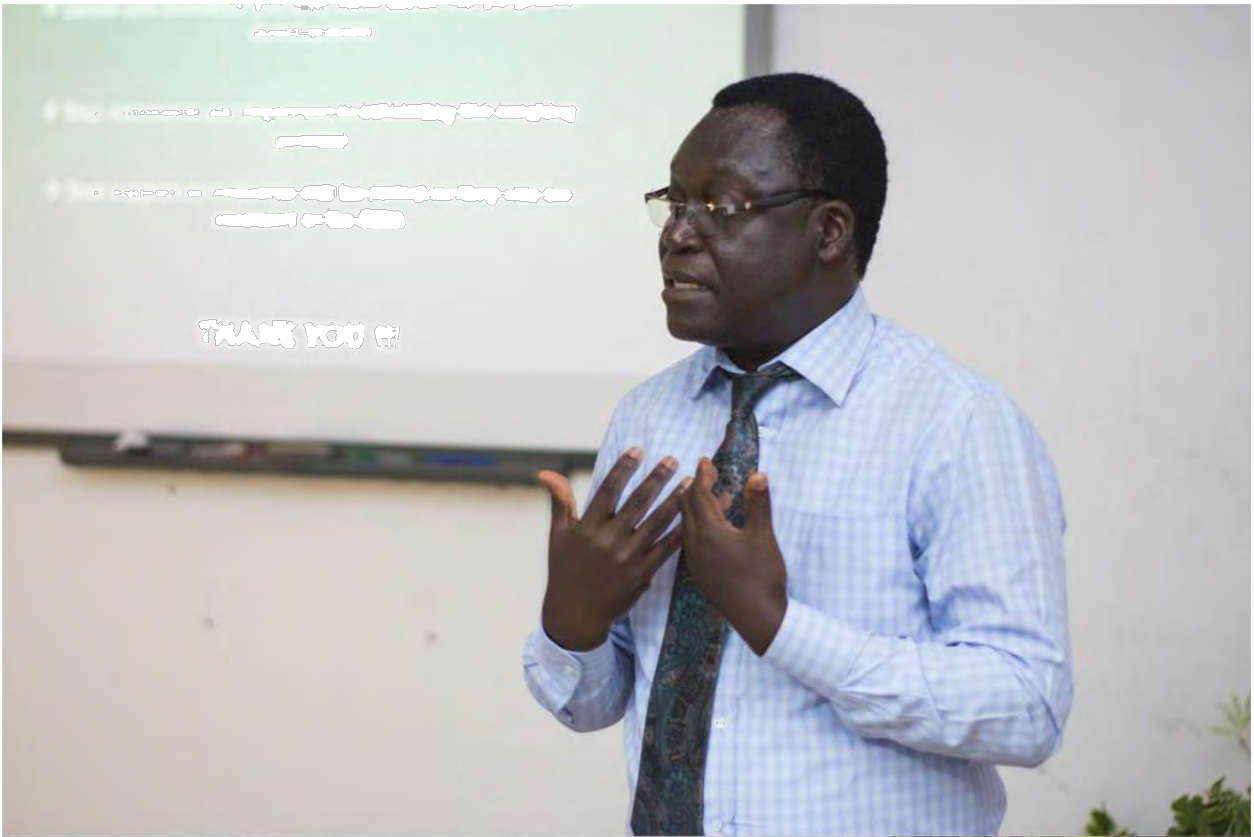


Figure 15: Points being explained during discussion time.



Figure 16: Photographs taken during and after the meeting.



7. Environmental Protection Agency (EPA), Takoradi.



Figure 17: Presentation Time.





Figure 18: Point being explained during deliberations.





Figure 19: Photographs taken during and after meeting.

**8. Western Regional House of Chiefs (WRHC), Takoradi.**



Figure 20: Time of presentations





Figure 21: Time of deliberations





Figure 22: Points being explained.





Figure 23: Photographs taken during and after the meeting.



**1. Forestry Commission, Accra.**



Figure 24: Photograph taken after the meeting.

**2. Ministry of Energy, Accra.**



Figure 25: Photograph taken after the meeting.

**3. Fisheries Commission, Accra.**



Figure 26: Photograph taken after the meeting.



4. Ghana Maritime Authority, Accra.



Figure 27: Photograph taken during the meeting.



5. The Ghana Navy, Accra.



Figure 28: Photograph taken during time of Presentation.



Figure 29: Photograph taken during time of Discussion.





Figure 30: Photograph taken during time of Discussion.





Figure 31: Photograph taken after the meeting.

