

SUMMARY OF PROPOSED INVESTMENT (SPI)

Description of the Project:

In July 2008, Tullow Ghana, Ltd. (“**Tullow Ghana**”), the operator of the Jubilee Field, awarded MODEC Inc. (the “**Sponsor**”) the contract to provide and operate a Floating Production Storage and Offloading (“**FPSO**”) facility for the Phase I development of the Jubilee Field in Ghana. The FPSO, named Kwame Nkrumah, is currently being constructed in the Jurong shipyard in Singapore. After completion, the FPSO will have a contractual production and processing capacity of 120,000 barrels of oil per day and 160 mmcf of gas per day and a storage capacity of 1.6 million barrels of oil. Construction of the FPSO is primarily on time and on budget and is scheduled to leave the shipyard in May 2010 for Ghana, with first oil expected during 4Q 2010. The economic life of the FPSO is 20 years, during which no dry-docking is expected to be required. The FPSO will be leased if Tullow Ghana and MODEC agree on the terms and conditions of Charter Agreement under negotiation, with a fixed 10 year lease period and 10 x 1 year extension options to Tullow Ghana. The FPSO will be operated by MODEC Management Services Pte Ltd., a wholly owned subsidiary of MODEC.

Project Sponsor and Major Shareholders of Project Company:

Sponsors

MODEC is a Japanese company specialized in engineering, procurement, construction and installation of floating production systems. Its operations are carried out through two divisions: (i) FPSO construction and engineering and (ii) lease, charter & operations of FPSOs. To date, MODEC has built a total of 17 FPSOs, 10 Floating Storage and Offloading vessels and 5 Tension Leg Platforms and is the second largest contractor in the industry with a 15% market share. MODEC is a publicly listed company on the Tokyo Stock Exchange with a market capitalization of US\$666 million as of February 26th 2010. Its shareholders include: Mitsui Engineering & Shipbuilding Co. (50%), Mitsui & Co. Ltd (7%) and Neuberger Berman (5%).

The Company

The FPSO will be owned by Jubilee Ghana MV21 B.V. (the “**Company**”), a special purpose company incorporated in the Netherlands. The Company’s shareholding structure is currently being finalized but is expected to include the following investors: MODEC, Marubeni, IFC, Société Générale, Jubilee Partners (Tullow Oil, Kosmos Energy and Anadarko Petroleum) and some other potential investors.

Total Project Cost and Amount and Nature of IFC’s Investment:

The total project cost is approximately US\$875 million, to be financed by a limited recourse long-term debt facility and shareholders’ equity.

The proposed IFC investment involves: (i) an A Loan of around US\$50 million for IFC’s own account, (ii) a syndicated B Loan in an amount of up to US\$519 million for B Loan Participants’ accounts; and (iii) equity/quasi-equity investments for IFC’s account of up to US\$60 million.

Location of Project and Description of Site:

The FPSO will be the first one in Ghana and will be located on the Jubilee field, 60 kilometers offshore Western Ghana.

Expected Development Impact of the Project:

The FPSO is one of the essential, central elements of the Phase I development of the Jubilee Field. The construction, installation, and operation of the FPSO will be critical to achieve successful and timely implementation of the Jubilee project in accordance with the Jubilee Field's Plan of Development, which was approved by the Government of Ghana (the "GOG") in July 2009. As such, the Project will support the development of Ghana's nascent oil and gas sector and help to secure the significant economic and developmental benefits to the country of Ghana. These benefits come primarily in the form of notable government revenues from the Jubilee field, including royalties and taxes of approximately US\$900 million per year at peak production (based on (i) Phase I production profile from proved reserves, and (ii) other assumptions such as the prevailing oil price), providing the GOG with the fiscal space to finance other much needed development programs.

In addition, development of the Jubilee Field also provides for development opportunities along the energy sector value chain, such as construction of onshore gas processing facility that will process the associated gas produced by the FPSO, development of gas distribution infrastructure, development of gas-to-power projects, etc. Once onshore gas infrastructure is in place, the FPSO will become an integral part of the gas supply chain as envisaged by the GOG. In addition, direct development impacts of the Project also include local employment and training of Ghanaian nationals for the oil and gas industry. According to the Sponsor's plan, over 80% of their staff will be Ghanaian nationals in five years. Key indicators that will be tracked during the investment period include: (i) taxes and other payments to government; (ii) direct local employments of which 88% are to be Ghanaian nationals, and (iii) production of hydrocarbons; and (iv) the uptime of the FPSO operations.

IFC's Assessment of the Governance Risks to Development Impacts:

This project will provide, production, storage and offloading services to Tullow Ghana and therefore support the generation of benefits associated with the Jubilee Field Development, including substantial revenues to government and the development of the energy sector and downstream industries. The Company's payments to the Government of Ghana consist mainly of withholding taxes from lease revenues only. The FPSO is a facility associated with IFC's prior investments in Tullow and Kosmos for the development of the Jubilee Field, for which an assessment of governance risks was undertaken. IFC has come to the conclusion, upon review of several governance and corruption metrics, including the World Bank Institute's Governance Indicators and Transparency International's Corruption Perceptions Index, that risks to project benefits are limited. Ghana has demonstrated commitment to promoting transparency in the extractives sector, with EITI validation expected shortly for its mining sector, and with the announcement of extending it to the hydrocarbon sector last year.

IFC's Expected Additionality:

- Provision and Mobilization of financing: The Project has experienced significant difficulties in securing long-term debt and equity financing, mainly due to the

reduced liquidity in the financial market as a result of the 2008 financial crisis. IFC has been requested by MODEC, the Jubilee Partners, and the GOG to support the financing of the Jubilee FPSO project. IFC's proposed equity investment and A Loan financing will help bridge the financing gap and complete the financing plan of the Project, which has become critical in achieving first oil as envisaged by the Plan of Development. In addition, IFC will also help to mobilize commercial bank debt through the IFC B Loan.

- Country Risk Mitigation: There are risks associated with the fact that the upstream oil and gas industry in Ghana is in a nascent stage. The commercial banks and MODEC have sought IFC's involvement to provide country risk mitigation by mobilizing the bank funding through an IFC B Loan syndication.
- E&S Expertise: As a result of IFC's prior investments in Tullow and Kosmos, the Jubilee project will apply IFC's Performance Standards, as well as IFC Offshore Oil & Gas Guidelines. Through this proposed financing, IFC will work directly with MODEC as the FPSO operator, and assist the latter in operationalizing a best-practice Environment, Health and Safety and Social Management System, which will in turn implement the already established oil spill and emergency response plans.

Environmental and Social Issues B – Limited:

This is a Category B project according to IFC's Environmental and Social Review Procedures, because a limited number of specific environmental and social impacts may result that can be avoided or mitigated by adhering to generally recognized performance standards, guidelines, or design criteria. The key issues identified during appraisal of the project, and described in detail in the Environmental and Social Review Summary, were:

- Implementation of the sponsor's integrated health, safety and environment (HSE) management system at project level during construction and operation of the FPSO, and integration with the management system of the Jubilee Field Unit Operator;
- Implementation of the FPSO hull integrity and safety measures, including operations, maintenance and inspection;
- Management of production water, bilge water, deck drainage water, ballast water, and hydrostatic testing water;
- Implementation of the emergency response plan, including oil spill preparedness and response measures;
- Compliance with IFC and the International Convention for the Prevention of Pollution from Ships ("MARPOL") requirements for the management of air emissions (particularly related to minimization of flaring and venting, and greenhouse gas emissions), produced water, other wastewater and contaminated waters, and hazardous materials and wastes;
- Occupational health and safety management during operation of the FPSO, including job hazard analyses, fire and explosion prevention and control, personnel transfer and vessels, workplace air quality, and housekeeping; and
- Labor and working conditions for MODEC's Ghana operations.

For inquiries and comments about the project contact:

Mr. Hideo Miyashita
Deputy Director
General Manager, Asset Management Dept.
MODEC Inc.
Kasumigaseki Common Gate West Tower
25th Floor, 2-1, Kasumigaseki 3-chome
Chiyoda-ku, Tokyo 100-0013
Japan
Telephone: +81 3 6203 0270

Local access of project documentation:

Mr Craig Duthie
Region Manager West Africa and Country Manager Ghana
MODEC Ghana Ltd.
No 22 Angola Road
Casa Maria Osu Kuku Hill
Accra, Ghana
Telephone: +223 2178 3616

For inquiries and comments about IFC

General IFC Inquiries
IFC Corporate Relations
2121 Pennsylvania Avenue, NW
Washington DC 20433
Telephone: 202-473-3800
Fax: 202-974-4384

ENVIRONMENTAL AND SOCIAL REVIEW SUMMARY

Overview of IFC's scope of review:

IFC's review of this project consisted of appraising technical, environmental and social information submitted by the project sponsor (MODEC Inc. or "MODEC"), including a review of the:

- Corporate Health, Safety, Environmental ("HSE") Policy, HSE Standards and HSE Management System,
- Contractor HSE Performance Requirements,
- Project HSE Plan and implementation procedures, developed for the construction phase of the floating, production, storage, and offloading system (the "FPSO") for the Jubilee Field,
- Development of the Worksite Management System for the FPSO operations phase,
- Technical specifications and other information relevant to the design of the FPSO, with specific focus on the pollution prevention and control measures, the environmental risk reduction and mitigation measures and the occupational health and safety protection measures, and
- Corporate and project human resources management policies and procedures.

In addition, IFC has held discussions with MODEC's corporate HSE management in Houston, and MODEC's Jubilee FPSO Project team and Jubilee FPSO Operations team in Tokyo and Singapore, and visited the FPSO, which is currently under construction at the Jurong Shipyard in Singapore.

MODEC is a general contractor specializing in engineering, procurement, construction, installation and operation of floating production systems including FPSO vessels, floating storage and offloading ("FSO") vessels, and tension leg platforms. MODEC constructed 23 FPSO/FSO units currently in operations worldwide, out of which 13 units are also operated by MODEC. In addition to the Jubilee FPSO, there are currently four other projects under construction by the contractor.

Beginning in October 2008, IFC extensively reviewed the environmental, health, safety and social assessments, and the policies, procedures and management plans, prepared by Tullow Oil plc ("Tullow"), the Jubilee Field Unit Operator, and Kosmos Energy Ghana HC ("Kosmos"), its partner, for the Jubilee Field in Ghana. IFC's due diligence for this project, therefore, has benefited from relevant information on the Ghana Jubilee Field Phase 1 Development project that was obtained during the appraisal and subsequent supervision of IFC's investments in these two companies (Project # 27918 and Project # 27550). IFC Environmental and Social Review Summaries ("ESRS") for the investments in Kosmos ("Kosmos ESRS") and Tullow ("Tullow ESRS") and supporting documentation were publicly disclosed on December 22, 2008 and January 16, 2009, respectively and are available at:

<http://www.ifc.org/ifcext/spiwebsite1.nsf/2bc34f011b50ff6e85256a550073ff1c/ca79f006df948f97852576ba000e2e0b?opendocument>

<http://www.ifc.org/ifcext/spiwebsite1.nsf/2bc34f011b50ff6e85256a550073ff1c/b1503fd9ab4d7012852576ba000e2dd9?opendocument>

A link to the final Environmental Impact Statement (“EIS”) for the Phase 1 Development of the Jubilee Field is provided under the Tullow ESRS.

*** This ESRS is for IFC's financing purposes with respect to MODEC's involvement in the project, and does not replace/encompass Ghana's Environmental Protection Agency (“EPA”) local processes. A separate EIS has been prepared under Ghana EPA and, as noted above, has been disclosed by Tullow for the Phase 1 Development project. ***

Project Description:

The project is to finance, build, operate, and lease the FPSO for the Phase 1 Development of the Jubilee Field in Ghana. The FPSO is currently being converted by MODEC at the Jurong shipyard in Singapore. Once completed, the FPSO will be leased if Tullow Ghana (the Unit Operator of the Jubilee Field) and MODEC agree on the terms and conditions of the Charter Agreement under negotiation. Tullow Ghana will have the right to purchase the FPSO or terminate the Charter Agreement, subject to payment of an early termination fee. Performance of the FPSO under the Charter Agreement is guaranteed by MODEC. A separate operations and maintenance (“O&M”) contract will be put in place with MODEC's 100% subsidiary MODEC Ghana Ltd (the FPSO Operator), which will mirror the O&M obligations under the Charter Agreement.

The Jubilee FPSO is a converted, external turret-moored FPSO, which will be connected to clustered subsea production wells. The FPSO is based on a conversion of an existing single-hulled, 330 m long and 60 m wide Very Large Crude Carrier (VLCC) “Ohdoh” (ex “Tohdoh”), which was built in 1991 at the Mitsui Shipbuilding Chiba yard in Chiba, Japan and was bought by MODEC in 2008. After conversion, the FPSO will have a contractual processing capacity of up to 160,000 barrels of total fluid per day (i.e., 120,000 barrels of oil and up to a maximum of 80,000 barrels of produced water) and 160 million cubic feet of gas per day, a water injection capacity of 232,000 barrels of water (desulphonated seawater) per day and a storage capacity of 1,600,000 barrels of oil. The economic life after conversion of the FPSO will be at least 20 years, during which no dry-docking will be required. The vessel has been renamed FPSO Kwame Nkrumah MV21.

Identified applicable performance standards:

While all Performance Standards (“PS”) are applicable to this investment, IFC's environmental and social due diligence indicates that the investment will have impacts that must be managed in a manner consistent with the following Performance Standards:

- PS 1: Social and Environmental Assessment and Management Systems;
- PS 2: Labor and Working Conditions;
- PS 3: Pollution Prevention and Abatement; and
- PS 4: Community Health, Safety and Security.

Onshore facilities of MODEC Ghana will be limited to an office space and a logistical support base in an existing area of Takoradi harbor. No additional land will be acquired, and, therefore, PS 5: Land Acquisition and Involuntary Resettlement does not apply. Aspects of PS 6: Biodiversity Conservation and Sustainable Natural Resource Management are relevant to and need to be managed by the Jubilee Phase 1 Development Project and they are discussed under the Tullow and Kosmos ESRS's. As defined by PS 7: Indigenous

People, there are no indigenous people living near the Project. PS 8: Cultural Heritage does not apply because of the already-noted limited shore-based impact.

E&S Categorization Rationale:

Consistent with the categorization assigned to both Tullow and Kosmos projects for the Phase 1 Development of the Jubilee Field, the FPSO project, which is a component of the same field development, is a Category B project according to IFC's Environmental and Social Review Procedures, because a limited number of specific environmental and social impacts may result that can be avoided or mitigated by adhering to generally recognized performance standards, guidelines, or design criteria. The key issues identified during appraisal of the project, and described in detail in this Environmental and Social Review Summary, were:

- Implementation of the sponsor's integrated HSE management system at project level during construction and operation of the FPSO, and integration with the Unit Operator management system;
- Implementation of the FPSO hull integrity and safety measures, including operations, maintenance and inspection;
- Management of production water, bilge water, deck drainage water, ballast water, and hydrostatic testing water;
- Implementation of the emergency response plan, including oil spill preparedness and response measures;
- Compliance with IFC and the International Convention for the Prevention of Pollution from Ships ("MARPOL") requirements for the management of air emissions (particularly related to minimization of flaring and venting, and greenhouse gas emissions), produced water, other wastewater and contaminated waters, and hazardous materials and wastes;
- Occupational health and safety management during operation of the FPSO, including job hazard analyses, fire and explosion prevention and control, personnel transfer and vessels, workplace air quality, and housekeeping; and
- Labor and working conditions for MODEC's Ghana operations.

The FPSO will be located at the northern edge of the Jubilee field in approximately 1,100m of water, approximately 60 km from the nearest point on the coast with Ghana. The location of the FPSO will mean that impacts from production waste will be limited, and any health and safety issues can be readily handled using well-known procedures and engineering technology. Since mitigation measures for the identified impacts can be readily defined, adverse impacts are not expected to be diverse or irreversible, and they will be limited to the project area.

Description of key Environmental and Social Issues and Mitigation:

The Unincorporated Joint Venture ("UJV") for the Phase 1 Development of the Jubilee Field has presented plans to address the identified impacts for the Phase 1 Development, as discussed in the Tullow and Kosmos ESRS's. These plans, including Contractor HSE Performance Requirements and the FPSO technical specifications, and the MODEC corporate and project HSE management systems will ensure that the proposed project, which is a component of the Phase 1 Development project, will, upon the implementation of the specific agreed measures, comply with the environmental and social requirements: 1) the host country laws and regulations, 2) the international treaties and industry standards, 3)

the IFC environment and social Performance Standards and 4) the applicable and relevant IFC environmental, health and safety guidelines. The information about how the potential impacts will be addressed by the Project is summarized in the paragraphs that follow. The sponsor has developed and agreed to implement the attached Environmental and Social Action Plan (“ESAP”) to address the gaps in its current environmental and social assessment and management system, applicable to the proposed project, and to meet the requirements of the applicable IFC’s Performance Standards and identified aspects of the relevant and applicable EHS Guidelines.

PS 1: Social and Environmental Assessment and Management Systems

Assessment. Under the Ghana Environmental Assessment Regulations LI 1652 1999, Tullow and partners were required to submit an Environmental Impact Statement (“EIS”) for the Jubilee field to the Ghana EPA. The final EIS was submitted in November 2009. FPSO installation, commissioning and operation (i.e., production, hydrocarbon processing, crude oil offloading, and support and maintenance activities) are activities included in the Phase 1 Development project. On December 31, 2009 the EPA issued an environmental permit allowing the installation of equipment and commissioning of the Jubilee Field Phase 1 Development project. The EPA will issue a separate permit for the operations phase of the Phase 1 Development, subject to the submission of additional information prescribed under the permit schedule. It is a responsibility of Tullow Ghana, the Unit Operator, to meet the EPA’s requirements to obtain the permit for the operations phase. MODEC and its subsidiary MODEC Ghana will follow the relevant Contractor HSE Performance Requirements defined by the Phase 1 Development project, and therefore will meet the relevant requirements of the Ghana EPA permits.

Management Program. The sponsor has a Corporate HSE Management System (“HSE MS”) that is accredited to ISO 14001 and OHSAS 18001. The management system is fully developed and is currently being implemented throughout MODEC facilities and operations worldwide. The HSE MS follows a structured hierarchical approach to managing HSE risks, according to the following levels: Tier 1: HSE Policy; Tier 2: HSE Standards; Tier 3A: Corporate Management System, comprising procedures and processes outlining activities for managing HSE, which are applicable across all Sponsor’s operations; and Tier 3B: Worksite Management System, outlining processes and activities to manage HSE aspects for either a project or a facility (including an FPSO). This is consistent with the HSE performance requirements of the Phase 1 Development project, requiring MODEC to develop and implement an HSE management system specific to Jubilee FPSO.

A Project HSE Plan was developed at the beginning of the construction phase in late 2008, and has been implemented during the execution of the project. The plan constitutes the prime element of the HSE MS for the Jubilee FPSO (vessel, topsides and external turret) project and defines the sponsor’s strategy, systems, and responsibilities for the project during engineering, procurement, construction, integration, and pre-commissioning. Separate plans will be developed for the transit voyage from the shipyard to the Ghana offshore location and for the offshore installation hook-up and commissioning activities. A worksite HSE MS for the Jubilee FPSO operation phase is currently under development and will comply with IFC Performance Standards. The system under development includes a management of change standard ensuring that all changes in design, operations, risk management, project organization and personnel, and legislation are taken into consideration. MODEC HSE MS includes relevant methods to prequalify, monitor and

evaluate the HSE performance of its suppliers and subcontractors, and these methods will be consistently applied for the management of all suppliers and subcontractors involved in Ghana operation. MODEC will periodically review its Jubilee FPSO HSE MS – at least once a year but possibly more often during early stages – to determine whether changes in the HSE management need to be undertaken. Interface documents with the Tullow Ghana EHS management system and MODEC HSE management system are under development and will be available prior to operations.

Organization and Training. The overall responsibility for the implementation of the HSE MS and for compliance with relevant and applicable laws and standards for the Jubilee FPSO operations will stay with MODEC's West Africa Operations Manager. MODEC is developing a staffing and training plan, with appropriate job descriptions, to ensure the ongoing management of the project according to the HSE MS. MODEC will ensure that all offshore and onshore staff - and its subcontractors involved in the Jubilee FPSO operations - understand the basic environmental and social policies, procedures and actions of the project.

PS 2: Labor and Working Conditions

Working Conditions. Since late 2008, MODEC has prepared and started the implementation of a Ghana Local Content Plan. The sponsor plans to hire Ghanaian nationals for the majority of onshore staff and a certain number of offshore positions. A preliminary local hiring plan indicates approximately 85 staff will be hired by MODEC in Ghana operations, out of which 88 percent are expected to be nationals after five years. MODEC has global human resources guidelines and policies, which commit to comply with all regulatory and local laws. MODEC will finalize a human resources policy for Ghana that will recognize the rights of workers under Ghanaian law, including hours of work, overtime arrangements and compensation, policies on leave, principles of equal opportunities and non-discrimination, and rights to work organization and collective bargaining. The human resources policy will also spell out a worker grievance mechanism that will be accessible, transparent and prompt. Subcontractor management procedures will include a review of subcontractor's compliance with labor laws.

Worker Health and Safety. The project has developed health and safety policies and procedures for the construction, commissioning and operation phase. The main procedures will be based on the relevant plans developed at corporate level, i.e., Management of Safety, Management of Occupational Health, and Occupational Health and Safety Operation Performance Criteria. The health and safety policies and procedures are designed to ensure that MODEC will include appropriate use of personal protective equipment for different areas of operation, identification of hazards and measures to reduce potential injuries to workers, labeling of different materials according to their hazards, training of workers, documentation and analysis of incidents and accidents, and implementation of an emergency response plan to protect workers, as required by PS 2. An Emergency Response Plan and a Crisis Management Procedure will be developed for the FPSO operation. They will present the emergency response and crisis management arrangements and organization for MODEC operations in Ghana. Provisions for escape, temporary refuge, evacuation and rescue have been developed for the Jubilee FPSO, based on the formal safety assessment required by MODEC. The permit-to-work system (which includes a task risk assessment) is extensively used by MODEC in all its operations and has been adopted for the Jubilee project, since the construction phase. The project is consistently implementing the corporate standard on incident notification, investigation and reporting, in accordance to industry standards

(International Association of Oil and Gas Producers). Since the beginning of construction, project occupational health and safety performance has been tracked, analyzed and reported in a consistent and thorough way, including performance of MODEC staff and contractors, through a set of leading indicators, lagging indicators, loss time injury frequencies and total recordable incident rates. Training, competency assessment, audits and drills are planned and will be consistently implemented. MODEC will develop a workplace monitoring plan for its Ghana operations.

PS 3: Pollution Prevention and Abatement

Atmospheric Emissions and Noise: The Jubilee FPSO has been designed and will be operated to meet the applicable and relevant requirements of the Jubilee Field Phase 1 Development project for both atmospheric emissions and noise. Project activities during FPSO installation, commissioning and production operations will emit varying amounts of air pollutants, including carbon monoxide (CO), oxides of nitrogen (NO_x) and sulfur (SO_x), volatile organic compounds (VOCs), and particulate matter. The main emission point sources of the Jubilee FPSO are the three power generation units, consisting of dual fuel turbine driven electrical generators with a capacity of 28.6 MWe each. As discussed in the Jubilee Field EIS, dilution and dispersion of the relatively limited amount of air pollutant emissions from the FPSO are expected to be rapid and the potential effects on ambient air quality to be limited to a short distance from the emission sources. Thus, no detectable effects on ambient air quality onshore in Ghana and Côte d'Ivoire are expected considering the distance from shore, and the UJV for the Jubilee Field Phase 1 Development project will demonstrate that the emission levels from the turbines are protective of human health and the environment. The UJV has committed to ensure that offshore facilities and support vessels will comply with the requirements of MARPOL Annex VI (relevant to sulfur oxide and nitrogen oxide emissions from ship exhausts and diesel engines, prohibition of deliberate emissions of ozone-depleting substances, and prohibition of the incineration of certain products on board) and their management will be consistent with relevant IFC guidelines. The UJV has also committed to minimize venting and flaring (consistent with the Global Gas Flaring and Venting Reduction Voluntary Standard) and minimize fugitive emissions. A vapor recovery unit was installed in the FPSO and will collect the vapors from TEG (tri-ethylene glycol) dehydration reboiler unit of the gas treatment system, mitigating the venting of aromatic hydrocarbons. No continuous flaring or venting of hydrocarbon gases will be allowed. The UJV for the Jubilee Field Phase 1 Development has established a design and operational target for abnormal flaring during operations that will not exceed 2.5 percent of the monthly average total produced gas. The volume of gas flared will be continuously metered.

MODEC will implement routine inspection and maintenance of engines, generators, and other equipment, noise and air emissions monitoring and use of low-sulfur diesel fuel, as required under the contract with the Jubilee Field Phase 1 Development project.

Greenhouse Gas Emissions: According to the Plan of Development for the Phase 1 Development of the Jubilee Field all associated gas (net after fuel use on the FPSO) will be re-injected into the formation for future recovery and use. Therefore, the FPSO is designed to have the capacity to handle and re-inject 100% of associated gas volumes – up to 160 millions of standard cubic feet per day (MMscfd) - to the field through two gas injection wells, and hence to avoid excess flaring during production operations at all times. Flaring will be reserved during initial FPSO commissioning, and during operations only in case of

emergency shutdown events to ensure the safety of the facility. Greenhouse gas emissions (“GHG”) will be generated from engines, burner fuel consumption, and fugitive emissions of associated gas. The Jubilee Field EIS estimated the total GHG emissions during the installation of the FPSO to be approximately 75,000 tons of CO₂-equivalent. The annual GHG emission during production operations was estimated at approximately 150,000 tons CO₂-equivalent per year. As required by PS 3 for projects with GHG emissions greater than 100,000 tons CO₂-equivalent per year, MODEC will maintain a monitoring program for GHG emissions from its activities, and will establish programs to minimize the emissions, based on the monitoring data.

Waste: Waste streams associated with Jubilee FPSO activities will include hydrotest water, produced water, cooling water, gray water and sewage, bilge water, deck drainage, ballast water, cooling water, and solid waste. Hydrostatic testing water discharge will be reduced, by implementing an extensive pre-commissioning and commissioning testing of the FPSO equipment at the conversion yard in Singapore. Hydrostatic testing of equipment and lines offshore will involve pressure testing typically with filtered seawater to verify equipment and pipeline integrity. For the testing that will remain to be conducted offshore Ghana, MODEC will develop hydrotesting procedures, consistent with the relevant requirements in the Phase 1 Development Hydrotesting Plan.

Produced water will include formation water, injection water, and process water. Produced water is likely to be the largest effluent discharge during production. It is anticipated that quantities will be low during initial production, but may increase as the Jubilee field matures. The design throughput capacity of the FPSO is for handling up to 160,000 barrels of total fluid (i.e., oil and produced water), out of which a maximum of 80,000 barrels of produced water per day can be processed. Produced water will be treated through oil water separation to meet IFC guidelines (oil and grease not to exceed 42 mg/L daily maximum or 29 mg/L monthly average) before being discharged overboard. A produced water discharge sampling point has been installed in the FPSO and relevant procedures will be developed to monitor compliance with the IFC guidelines.

Only limited non-contact cooling water will be discharged into the marine environment. Tanker vetting procedures will be responsibility of the Jubilee Field Unit Operator. The FPSO has separate ballast water tanks that will only allow for routine discharge of clean ballast water, conducted in accordance with the Operation Manual for Ballast System. Sewage will be treated using marine sanitation devices that will produce an effluent with a minimum residual chlorine concentration of 1.0 mg/L and no visible floating solids or oil and grease. Treatment sludge will be transported to shore for disposal at an approved facility. Food waste will be ground prior to discharge, in accordance with MARPOL requirements. The FPSO includes design features that will contain runoff and prevent oily drainage from being discharged: potentially contaminated deck drainage, collected by an open drain system, is diverted to oil-water separation systems. The FPSO is designed to only allow for discharge of water meeting the criteria of 42 mg/L and 29 mg/L oil, daily maximum and monthly averages respectively. It will also not allow the discharge of free oil in deck drainage that would cause a film, sheen, or discoloration of the surface of the water, or a sludge or emulsion to be deposited beneath the surface of the water. The drain system on the processing deck will include a closed drain system, collecting oily fluids, which will be sent to a cargo tank.

All solid waste generated aboard will be managed according to a Waste Management Plan

developed for the Jubilee FPSO, in compliance with the requirement of Annex V, Regulation 9 of MARPOL 73/78, and integrated with instructions designed to manage all shipboard wastes. As needed, waste will be transported to shore by service vessels for disposal at approved facilities, in accordance with the provisions of Tullow Waste Management Plan. Disposal of trash and debris in the ocean will be prohibited consistent with MARPOL requirements. MODEC will develop a chemicals and process material safety procedure to handle all hazardous chemicals that are produced, used, or stored aboard the FPSO, ensuring therefore consistency with IFC guidelines. Transportation of hazardous materials will comply with United Nations regulations and specific training will be provided to all personnel.

Emergency Preparedness and Response: In accordance with industry practice, the FPSO has been designed for the site-specific worst environmental conditions that could be experienced at the Jubilee Field in a return period of 100 years. The weather conditions in the Gulf of Guinea are relatively benign and model tests have shown the predicted vessel motions to be less than those of similar FPSO systems elsewhere in the world. The FPSO hull integrity and safety measures adopted are in accordance with industry practice and include planning, design, construction, and operation measures. MODEC will have in place all necessary best practice safety measures to minimize risks. The project employs American Bureau of Shipping (“ABS”) as its hull verification agent which has oversight over the hull conversion to ensure guidelines are met and that the conversion is suited to the Ghanaian sea conditions for up to 20 years without need to re-enter dry-dock. The project is putting in place the capability to do the required hull inspection in situ externally, and will also have access to hull tanks internally. A Jubilee Operations Safety Case was implemented, covering the design through to the operations of the FPSO. The Safety Case demonstrated that (i) the hazards have been identified and evaluated; (ii) risks from major accident hazards have been reduced to as low as reasonably practical (“ALARP”), and (iii) the management systems developed and in place for the Jubilee operations are capable to systematically and continually identifying and assessing hazards, and eliminating or minimizing the risks to personnel, as far as reasonably practicable. Several HSE studies were conducted, including fire risk analysis, explosion risk analysis, and a third party quantitative risk assessment of collision hazards and risks from vessel traffic around the FPSO.

A number of important mechanisms will be employed in the Phase 1 Development project to mitigate the spill risks, including, but not limited to, the collision risks: (i) turret mooring (instead of spread-mooring), (ii) crew competence, (iii) collision avoidance and warning systems, including communication and navigation aids meeting the requirements of the International Convention for the Safety of Life at Sea (“SOLAS”), (iv) double jeopardy tugs, (v) independent vetting agency for tankers, (vi) a 1,000 meter radius exclusion zone and an advisory zone of 10 km radius (marked on nautical charts), (vii) weather/sea limits of operation, (viii) pneumatic rubber fenders installed to protect cargo tanks and absorb potential supply boat impacts, (ix) use of FPSO wing tanks as ballast tanks, slop tanks and void tanks in areas where supply boat operations will be conducted, (x) corrosion prevention/inspection (including corrosion modeling for steel renewals, coating protection, cathodic protection and use of sacrificial anodes in all cargo and ballast tanks for protection from corrosion), and a number of other measures. Further, the FPSO will comply with all relevant and applicable MARPOL requirements and will be ABS-classed and follow applicable ABS rules and guidelines. FPSO inspection/survey will be carried out as per ABS requirements and such surveys will be managed under MODEC computerized maintenance

management system.

As discussed in the Tullow and Kosmos ESRS, the Phase I Development project will install downhole safety devices - surface-controlled subsurface safety valves (“SCSSVs”) - at each well, which will be controlled by subsea and FPSO safety control systems. These systems will shut the valve in the event of an emergency or operational upset in the well or process. Specific requirements, providing for controls for all vessels activities and based on international guidance, including the International Safety Guide for Oil Tankers and Terminals, will be developed to govern all crude oil transfers from the FPSO to export tankers.

As required under the Corporate HSE Standard 10 on Crisis and Emergency Management, MODEC will develop and implement Operations Phase Emergency Response Procedures, a Field Response Plan, and a Shipboard Oil Pollution Emergency Plan to respond to emergencies. The number of environmental incidents reported for sponsor’s worldwide operations yearly is low, as shown in the corporate-wide incident register, which combines the registers maintained at all facilities operated (FPSOs, other vessels, offices and other facilities). MODEC conducts extensive environmental investigation and analysis for environmental (and non-environmental) incidents, including minor spills below 1 liter volume, and consistently identifies corrective actions to prevent recurrence. Emergency plans and procedures for the Jubilee FPSO will be integrated in the Tullow Ghana’s Emergency Response Plan and Oil Spill Contingency Plan. Please refer to the Tullow and Kosmos ESRS for a discussion of the relevant studies and mitigations.

PS 4: Community Health, Safety and Security

Safety and Security. The Phase 1 Development will have a 1000 m radius exclusion zone around the FPSO and a 10 km radius advisory zone. The advisory zone will be marked on nautical charts to ensure that the presence of an oil production area is known to other mariners. Non-essential users will receive proper information if they enter the advisory area and a recommendation not to enter in the zone, although entrance will not be excluded. Management of community (including fishing communities) health, safety, and security issues are responsibility of Tullow, as the Jubilee Field Unit Operator. Please refer to the Tullow ESRS for details. MODEC will develop and implement a Ship Security Plan, in accordance with relevant international standards, including Chapter XI-2 of SOLAS and the International Ship and Port Security Code, Part A and Part B, as relevant. The plan will assist the Security Officer of Tullow, the Master, the Ship Security Officer and the crew to ensure the safety and security of the vessel, cargo and crew, and will be integrated in the relevant plans and procedures developed by the Phase 1 Development.

Client Community Engagement:

The responsibility to develop and implement a Public Consultation and Disclosure Plan through the several phases of the Phase 1 Development project stays with Tullow Ghana, as Unit Operator of the Jubilee Field. Interactions between communities and contractors will be managed according to the local regulatory requirements and according to the mandated requirements of the service contracts with Tullow Ghana. MODEC will submit relevant reporting and provide relevant information, including performance measures and objective evidence of functioning HSE MS, to Tullow as per contractual requirements.

Local access of project documentation:

Project documents will be available at the following addresses:

Cy X. Sharp
Director, Global HSE Affairs
MODEC International Inc

14741 Yorktown Plaza Drive
Houston, Texas 77040
Phone: +1 281.529.8265
E-mail: Cy.Sharp@modec.com

Craig Duthie
Region Manager West Africa and Country Manager Ghana
MODEC Ghana, Ltd.
Address: No. 22 Angola Road Casa Maria Osu Kuku Hill
Accra
Phone::+223 2178 3616

Website: <http://www.modec.com/>

ENVIRONMENTAL AND SOCIAL ACTION PLAN
MODEC - Jubilee Ghana MV 21
March 9, 2010

Item	Action	Completion Indicator	Timetable
PS1: Social and Environmental Assessment and Management Systems			
1	MODEC will have a Jubilee FPSO Health, Safety and Environment Management System (HSE MS) consistent with ISO 14001 and OHSAS 18001 and with the applicable IFC Performance Standards.	(a) The Project has developed the HSE Plan for the installation hook up and commissioning phase and submitted it to IFC. (b) The Project has developed the HSE MS for production operations and submitted it to IFC. (c) The Project has established and implemented an HSE MS audit program, acceptable to IFC. (d) The Project has submitted copy of the audit program reports.	(a) Before installation hook up and commissioning. (b) Two months before operations. (c) Two months before operations (d) Three months after end of each calendar year.
2	MODEC will develop a staffing and training plan and ensure that all offshore and onshore staff - and its subcontractors involved in the Jubilee FPSO operations - understand the project environmental and social policies and procedures.	The Project has provided evidence of training and developed a specific training procedure to be included in the Project training plan.	One month before operations.
PS2: Labor and Working Conditions			
3	MODEC will have a Human Resources Policy for its Ghana operations that communicates to workers their rights under Ghanaian law and spells out terms of employment, including equal opportunity principles, benefits, and leave policies.	The Project has developed and submitted the policy acceptable to IFC.	June 2010.
4	MODEC will include a review of subcontractor's compliance with labor laws in its subcontractor management procedures for Ghana operations	The Project has developed and submitted the review procedure acceptable to IFC.	June 2010

ENVIRONMENTAL AND SOCIAL ACTION PLAN
MODEC - Jubilee Ghana MV 21
March 9, 2010

Item	Action	Completion Indicator	Timetable
	PS3: Pollution Prevention and Abatement		
5	MODEC will maintain a monitoring program for greenhouse gases (GHG) for the Jubilee FPSO Project.	Periodic reporting of GHG emissions for the Jubilee FPSO production operations.	Three months after end of each calendar year.