



PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED

PTTEP INTERNATIONAL LIMITED

PTTEP ENERGY DEVELOPMENT COMPANY LIMITED

CALL FOR TENDER NO.: THC19-5245

FOR

**BUNDLED PHASES 3 WELLHEAD PLATFORMS, ASSOCIATED
PIPELINES, BROWNFIELD MODIFICATIONS AND TIE-INS PROJECT**

(EPC PART)

INSTALLATION IN 2022-2026

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INSTRUCTIONS TO TENDERERS

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1. **PURPOSE**

- 1.1 Through this CFT, PTT Exploration and Production Public Company Limited, PTTEP International Limited and PTTEP Energy Development Company Limited (all together hereinafter referred to as “**COMPANY**”) are seeking to nominate a contractor for the performance of works/services under the Contract No. THC19-5245. The details of the works/services are specified in Exhibit A of Form of Contract (PART II of the CFT).
- 1.2 The estimated Contract duration is 6 years 9 months starting from 1st October 2020 until 30th June 2027.
- 1.3 Special requirement shall be referred in Summary for TENDERER in Appendix 3 of this document.

2. **CLOSING DATE AND TIME**

The closing date and time for the submission of the TENDER is **22nd May 2020 at 14.00 hrs., Bangkok time.**

Failure of a TENDERER to comply with this deadline may result in rejection of the TENDER Package and disqualification of the TENDERER.

3. **DEFINITIONS**

For all purposes of this CFT, the terms defined here below shall have the meanings assigned to them hereafter.

- 3.1 **AGREEMENT** shall mean Form of Contract No. THC19-5245.
- 3.2 **CFT** shall mean the Call for TENDER No. THC19-5245.
- 3.3 **COMPANY GENERAL CLARIFICATIONS** means modification to the TENDER DOCUMENTS or other instructions, issued by COMPANY to all TENDERERS after the opening of the Technical and Contractual Proposals.
- 3.4 **QUALIFICATIONS** means a deviation or exception to the requirements of the Call for TENDER.
- 3.5 **REQUEST FOR CLARIFICATION** means a request made by a TENDERER prior to the closing date and time set out in Item 2 for clarification of the Call for TENDER.
- 3.6 **SERVICES (or WORK)** shall mean the works or services and other obligations to be performed by a successful TENDERER as described in the TENDER DOCUMENTS, in particular Exhibit A of the Form of Contract.
- 3.7 **TENDER** shall mean the TENDERER’s offer to perform the SERVICES, and any subsequent revised offer in response to COMPANY’s request.
- 3.8 **TENDER DOCUMENTS** shall mean this CFT and any document related thereto remitted by COMPANY together with any addenda that may be issued by COMPANY to TENDERER prior to the closing date and time set out in Item 2.
- 3.9 **TENDERER** shall mean the company, partnership or other person who receives this CFT (either via email or any other ways) from COMPANY.

3.10 **TENDER CLARIFICATION** means a written request from COMPANY to a TENDERER made after the Tender closing date for further and better information.

4. ACKNOWLEDGMENT OF RECEIPT OF CALL FOR TENDER DOCUMENTS

4.1 Within forty-eight (48) hours from the receipt of this CFT, TENDERER shall sign and return a Letter of Acknowledgement in the form given in ITT Annex 1 to COMPANY. TENDERER shall specify tendering entity, the name, position, phone number, and email address of the person in charge of its TENDER.

4.2 For any TENDERER submitting his TENDER in form of Consortium or Joint Venture, all participants under such Consortium or Joint Venture shall be confirmed in Letter of Acknowledgement. Any change on tendering entity later from this stage without APPROVAL from COMPANY will result in disqualification and exclusion of a TENDERER from further involvement in the Tender Process.

4.3 If TENDERER does not wish or is unable to tender, it shall decline by submitting the Letter of Acknowledgement (ITT Annex 1) and return all TENDER DOCUMENTS to COMPANY without delay.

5. COMMUNICATIONS CONCERNING THE TENDER DOCUMENTS

5.1 Generally

All correspondences related to this CFT are to be addressed to:

PTT Exploration and Production Public Company Limited
PTTEP International Limited and
PTTEP Energy Development Company Limited
Energy Complex Building A, Floors 6, 19-36
555/1 Vibhavadi Rangsit Road, Chatuchak,
Bangkok 10900, THAILAND

Telephone: +66(0) 2537 4000
Fax: +66(0) 2537 5043, + 66(0) 2537 4464

Attention: **Mr. Chindanai Preuksapanich** (*Focal Point for this RFQ*)
Officer, Procurement and Contracts
Bundle3@pttep.com

5.2 Verification of the TENDER DOCUMENTS

TENDERER shall check and verify that all TENDER DOCUMENTS have been properly received and shall immediately inform the COMPANY if any are incomplete or missing.

No representation or warranty, expressed or implied, is made by COMPANY with respect to the completeness or accuracy of the information contained herein or the assumptions used. TENDERER shall make his own independent interpretation, evaluation and assessment of the documents and information in the TENDER DOCUMENTS.

TENDERER shall carefully examine the TENDER DOCUMENTS on receipt to ensure such documents and information therein is adequate, sufficient, and complete and contains no errors, omissions, contradictions, inconsistencies, ambiguities or discrepancies. Upon discovery of any of the foregoing, TENDERER shall immediately issue REQUEST FOR CLARIFICATION to focal point of this CFT listed in 5.1.

5.3 REQUEST FOR CLARIFICATION

TENDERERS shall make any REQUEST FOR CLARIFICATION in accordance with the instruction described in ITT Annex 7 using pro-forma excel sheet and shall submit the same to the focal point of this CFT listed in 5.1 by email.

The deadline for receipt by the COMPANY of REQUEST FOR CLARIFICATION is **fourteen (14) days before the Tender closing date**. COMPANY will not respond to any REQUEST FOR CLARIFICATION received during the last fourteen (14) days of the Tender Period.

COMPANY's answer to each proposed REQUEST FOR CLARIFICATION shall be considered to be final and the item shall not reappear as a QUALIFICATION in the Technical and Contractual Proposal.

Unless the answer to a REQUEST FOR CLARIFICATION is specific to a TENDERER, it will be distributed equally to all TENDERERS by Tender Bulletin. The identity of the TENDERER who raised the REQUEST FOR CLARIFICATION will not be revealed to the other TENDERERS.

5.4 Tender Bulletins

COMPANY may modify or amend any part of the TENDER DOCUMENTS before the Tender closing date by means of Tender Bulletins issued by COMPANY simultaneously to all TENDERERS. TENDERER shall immediately acknowledge receipt of each Tender Bulletin to focal point of this CFT listed in 5.1 and confirm that the contents of the Tender Bulletin will be addressed in its TENDER.

5.5 QUALIFICATIONS

The TENDER shall be prepared and submitted strictly accordance with the terms and conditions of this Instruction to TENDERERS. COMPANY requires the TENDER to be submitted without deviations and or exceptions (QUALIFICATIONS).

QUALIFICATIONS may only be made for requirements that TENDERER is unable to comply with under any circumstance or which cannot be priced.

All QUALIFICATIONS must be prepared in accordance procedure using the M.S. Excel submission forms and coded in accordance with the procedure described in ITT Annex 8 hereto. All QUALIFICATIONS shall be only included in Section 4.0 of Volume 1.

TENDERER must not include any QUALIFICATIONS or exceptions in Volume 2 – Commercial Proposal nor on the Priced Supplementary Proposal.

No TENDER shall be conditional upon the availability of Contractor's Personnel, Construction Equipment, Contractor Items or any other resources to be provided by the TENDERER for the performance of the WORK. Availability of same shall be fully evidenced by TENDERER in its Technical and Contractual Proposal and with supporting documents.

A QUALIFICATION or exception to the requirements of the TENDER DOCUMENTS made other than in Section 4.0 of Volume 1- the Technical and Contractual Proposal shall be considered invalid and shall be disregarded.

The failure of a TENDERER to comply with the foregoing requirements may result in disqualification of the TENDERER and rejection of a TENDER.

5.6 Communications after the Submission of the TENDER

TENDERER **shall not** under any circumstances enter into any communications whatsoever with COMPANY after submission of the TENDER except unless as response to a request or communication from COMPANY. Failure to comply with this requirement may result in disqualification of the TENDERER and rejection of the TENDER.

5.7 TENDER CLARIFICATION

COMPANY may request clarification from a TENDERER in aspects of a Technical and Contractual Proposal that are vague, insufficient or unclear by means of TENDER CLARIFICATION.

TENDERER shall immediately acknowledge receipt of each TENDER CLARIFICATION to the focal point of this CFT listed in 5.1 by email and shall provide the information requested by the deadline stated in the TENDER CLARIFICATION.

5.8 COMPANY GENERAL CLARIFICATIONS

COMPANY may modify or amend any part of the TENDER DOCUMENTS after the opening of the Technical and Contractual Proposals by means of COMPANY GENERAL CLARIFICATIONS issued by COMPANY simultaneously to all TENDERERS.

TENDERER shall immediately acknowledge receipt of each COMPANY GENERAL CLARIFICATION to the focal point of this CFT listed in 5.1 by email and confirm agreement to the same and that the contents will be addressed in its TENDER.

5.9 Unsolicited Price Adjustments

Unsolicited price adjustments offered by a TENDERER will be rejected or returned unopened.

5.10 Updates to the Form of Contract

Only the Tender Bulletin, TENDER CLARIFICATION, COMPANY GENERAL CLARIFICATIONS with a Y entered in the "Update Form of Contract (Y/N)" column will be incorporated into the final Contract. Items with an N in Column are instructions to TENDERERS or merely clarifications which do not change the Contract.

5.11 Tender Clarification Meeting

Each TENDERER shall be prepared to discuss in COMPANY offices, at TENDERER's own cost and expense any aspect of his TENDER at any time between TENDER submission and Contract award.

As part of the Tender Clarification process a Tender Clarification Meeting will be held separately with each TENDERER at COMPANY's offices in Bangkok, Thailand on a date to be advised by COMPANY. The objective of the Clarification Meetings is to ensure that all aspects of a TENDERER's proposals are satisfactorily elaborated and to confirm COMPANY's response to QUALIFICATIONS. The outcome of the meeting will be documented and signed by COMPANY and TENDERER as a true record. The meeting will be confined to one (1) day only.

6. TENDER SUBMISSION

- 6.1 TENDERER shall submit to COMPANY a Letter of Submission in the form set out in ITT Annex 2 together with its TENDER.
- 6.2 COMPANY will only consider the TENDER from TENDERER who receives the CFT (either via email or any other ways) from COMPANY. The TENDER from other persons or companies will not be considered.
- 6.3 The TENDER shall be submitted in **two (2) original documents** which are **one (1) original Technical Proposal** and **one (1) original Commercial Proposal**, clearly identified “**ORIGINAL**” on each document, and one (1) copy of both documents, clearly identified “**COPY**” on each document. **Each Proposal shall be sealed in a separate envelope.**
- 6.4 In addition to the hard copy submission, TENDERER shall submit two (2) CDs. The first CD, clearly marked “**Technical Proposal CD**”, shall contain completed Technical Proposal in editable native files. The second CD, clearly marked “**Commercial Proposal CD**”, shall contain completed Commercial Proposal in editable native files. **Each CD shall be packed in a separate and sealed envelope.**
- 6.5 The following mention shall be indicated on the top left corner of each sealed envelope:

NAME OF TENDERER

**BID FOR PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED
PTTEP INTERNATIONAL LIMITED
PTTEP ENERGY DEVELOPMENT COMPANY LIMITED**

CALL FOR TENDER NO: THC19-5245 (EPC)

**BUNDLED PHASES 3 WELLHEAD PLATFORMS, ASSOCIATED PIPELINES,
BROWNFIELD MODIFICATIONS AND TIE-INS PROJECT (EPC PART)**

COMMERCIAL PROPOSAL or TECHNICAL PROPOSAL *(Please specify)*

ORIGINAL or COPY *(Please specify)*

“NOT TO BE OPENED”

Both originals and copies of Technical and Commercial Proposals are to be addressed in a larger envelope and shall be labelled as follows:

NAME OF TENDERER
ADDRESS OF TENDERER

BID FOR PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED
PTTEP INTERNATIONAL LIMITED
PTTEP ENERGY DEVELOPMENT COMPANY LIMITED

CALL FOR TENDER NO: **THC19-5245 (EPC)**

**BUNDLED PHASES 3 WELLHEAD PLATFORMS, ASSOCIATED PIPELINES,
BROWNFIELD MODIFICATIONS AND TIE-INS PROJECT (EPC PART)**

“NOT TO BE OPENED”

TO: **MR. ANUSORN WUTHIJAROEN**
VICE PRESIDENT, GLOBAL SUPPLY CHAIN, PROCUREMENT AND
CONTRACTS DEPARTMENT
(For Mr. Chindanai Preuksapanich)

PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED
ENERGY COMPLEX BUILDING A, FLOORS 6, 19-36
555/1 VIBHAVADI RANGSIT ROAD
CHATUCHAK, BANGKOK 10900
THAILAND

(PTTEP'S MAILROOM, PARKING 2)

- 6.6 The TENDER shall be addressed to COMPANY in such a manner that it reaches COMPANY's mailroom, Bangkok office before the closing date and time mentioned in Item 2 above. The TENDER that arrives after such closing date and time may not be considered.
- 6.7 It is TENDERER's responsibility to send along a document transmittal/delivery form and obtain from COMPANY's addressee a receipt for the delivery of the TENDER before the closing date and time. Without such receipt, no claim will be examined.
- 6.8 TENDERER is advised that by mailing its TENDER, it runs the risk of envelopes being accidentally opened which would make the TENDER invalid. COMPANY would strongly recommend avoiding normal mailing and giving preference to the use of a reputable courier service.
- 6.9 The TENDER which is incomplete or vague shall not be considered.
- 6.10 COMPANY does not intend to organize site visit prior to submission of TENDERS.
- 6.11 **Any financial or commercial matters that in any way related to TENDERER's Commercial Proposal must only specify in the Commercial Proposal. Also, these matters shall not be transmitted by e-mail or fax unless specifically instructed otherwise by COMPANY.**
- 6.12 **COMPANY will not consider the TENDER from TENDERER who fails to meet the technical critical requirements below:**

Compliance with Instructions to TENDERER (ITT) and Contract Terms

- TENDERER shall comply with this ITT and agree on Contract's terms and condition.

- TENDERER shall comply with Integrity Pact for Cooperation to prevent and anti-corruption for Government agency/State-Owned Enterprise/Public Organization and Private Sector (refer to form in attachment 1 (Thai Version) of this ITT).

Pre-Qualification

- TENDERER shall be qualified under COMPANY pre-qualification system for the respective Work Category.

Financial and Business Ethics

- TENDERER must not be in bankruptcy OR receivership OR insolvent OR in administration/operating under supervision OR court ordered reorganization OR having high risk according to COMPANY financial review.
- TENDERER must not be considered as currently being in material breach of a contract with COMPANY.
- TENDERER must not have any significant dispute contractual claims and/or major dispute change orders outstanding against COMPANY.
- TENDERER must not have any judgements, legal or arbitration proceedings or suits pending or outstanding that may be considered by COMPANY to affect the ability of the TENDERER to perform the Work in the case of award.
- TENDERER must have Moody's credit rating B3 or higher.
- TENDERER must have equity greater than USD 17.6 million for the latest financial year. Otherwise, TENDERER shall provide financial mitigation in a form of a performance security (issued by a reputable bank) or a parent company guarantee or cash to assure work performance and minimal disruption to operations.

Schedule of Work

- TENDERER shall propose the minimum level 2 schedule of work which complies with COMPANY's Key Dates and Completion Dates in Exhibit C for supplying of minimum six (6) WHPs up to fifteen (15) WHPs.

Fabrication Worksite(s) Capability, Availability and Ownership

- TENDERER shall demonstrate that the proposed worksite(s) have capable facilities and adequate yard layout availability, after considering committed and forecast workload, for fabrication and erection of six (6) topsides & six (6) jackets for installation year 2022.
- TENDERER shall demonstrate that the proposed worksite(s) have capable facilities and adequate yard layout availability, after considering committed and forecast workload, for fabrication and erection of six (6) topsides & six (6) jackets up to fifteen (15) topsides & fifteen (15) jackets for installation years 2023 – 2026.
- In case TENDERER allocates some part of fabrication works to subcontractor's worksite(s) or shared ownership worksite(s), the commitment letter(s) of those proposed fabrication yard(s) from the yard owner(s) shall be provided. The letter(s) shall clearly indicate that TENDERER will be supported by the fabrication yard(s) throughout the contract period.
- At least one of the proposed worksite(s) shall be owned or fully operated throughout the contract period by TENDERER. These worksite(s) shall have capable facilities and adequate yard layout availability, after considering committed and forecast workload, for fabrication and erection of six (6) topsides for installation year 2022 and up to fifteen (15) topsides for installation years 2023 – 2026.
- The quayside and waterway access are capable for load-out and transportation of the topsides and jackets as per Exhibit A.

Experiences/ Project References

- TENDERER shall demonstrate that TENDERER has performed at least two (2) *Offshore Facilities Construction Projects* on EPC scope as a main contractor within the last seven (7) years.

- In case TENDERER proposes to subcontract the major parts of the works, i.e. Detailed Engineering and Fabrication work, TENDERER shall demonstrate that his proposed subcontractor(s) have performed at least two (2) *Offshore Facilities Construction Projects* within the last seven (7) years. The commitment letter(s) of the proposed main subcontractor(s) shall be provided. The letter(s) shall clearly indicate that TENDERER will be supported by the subcontractor(s) throughout the contract period.

Remark: For clarity, “*Offshore Facilities Construction Project*” shall mean offshore wellhead platform(s) or processing module(s) or central processing platform(s), with total topside/module weight of at least 3,000t for one installation campaign. For example, a project to construct four (4) wellhead platforms with the topside weight of 750t for each platform (3,000t in total) for installation in one campaign can be counted as one *Offshore Facilities Construction Project*.

6.13 COMPANY may not consider the TENDER from TENDERER who fails to meet the technical general requirements below:

Project Management Execution

- PMT Organization: All parts of the work scope is accounted for adequate and suitable and distributed clearly between each party.
- Work Location: Work locations are clearly defined, adequate, suitable, manageable and accessible for each phase of project.
- Interface Management: Plans and responsible matrix for interface management between TENDERER and main Subcontractors are adequate and clearly defined.

Engineering Execution

- Engineering Capability: TENDERER or his Engineering Sub-contractor shall demonstrate that his engineering team has performed Detailed Engineering, and Follow-on Engineering at least two (2) similar or more complicated offshore projects during the last seven (7) years. In case of engineering sub-contractor, TENDERER shall provide commitment letter.
- Engineering Manpower: TENDERER shall demonstrate reasonable manpower histogram and/or sufficient manpower resources for each discipline.
- Lead Engineer Experience: TENDERER shall propose capable Lead Engineers who have performed similar or more complicated projects as lead engineer more than two (2) years and also have overall experience at least ten (10) years in Engineering works.
- Engineering Deliverables: TENDERER shall clearly demonstrate his understanding in engineering scope of work and his compliance with COMPANY’s Standards and Software requirements and also provide effective execution plan to achieve all engineering deliverables.

Procurement Execution

- Procurement Organization & Manpower: TENDERER shall propose Procurement Organization chart with sufficient and experienced personnel.
- Procurement Procedures/Plan: TENDERER shall propose clearly defined procurement procedures and plan including key procurement milestones, i.e. RFQ, PO, ROS dates, of all major equipment and long lead materials with proper control & monitoring strategy and contingency plan in order to meet and integrate with Construction schedule.

Onshore Work Execution

- Fabrication Capacity: TENDERER shall propose detailed, reasonable and logical organization and resources plan to meet the project requirements in the following elements – Fabrication Organization, Manpower Histogram, Construction Equipment Plan, and Workload Forecast.
- Fabrication Plan: TENDERER shall propose clear, reasonable and logical fabrication plan regarding project requirements in the following elements – Planning and Progress Control,

Construction Sequence, Document Control, Performance Control, Material Control, and Weight Monitoring and Control.

Personnel Resources

TENDERER's proposal of organization has sufficient key personnel and qualified manpower distributed to complete the work. Key and lead personnel have ample experience in similar or larger scales of EPC offshore projects.

- Project Manager: overall related experience > fifteen (15) years & minimum three (3) years in project manager role
- Engineering Manager: overall related experience > ten (10) years & minimum two (2) years in manager role
- Construction Manager: overall related experience > ten (10) years & minimum two (2) years in manager role
- Procurement Manager: overall related experience > ten (10) years & minimum two (2) years in manager role
- Project Control Manager: overall related experience > ten (10) years & minimum two (2) years in manager role

Quality Assurance/Quality Control

- Quality Management System: TENDERER and his key subcontractors are certified to ISO 9001 or ISO 29001 by an accredited certification body with the scope of certification similar to the scope of work to be performed for each worksite.
- Project Quality Organization & Manpower: TENDERER shall propose Project Quality Organization chart with sufficient and experienced qualified personnel. The following Key and lead personnel have ample experience in the field and exposure to Offshore Wellhead Platform or more complicated projects for oil and gas industry.
 - a) QA/QC Manager: overall related experience > twelve (12) years & minimum three (3) years in QA/QC manager role
 - b) QA/QC Engineer: overall related experience > seven (7) years
 - c) Welding Engineer: overall related experience > seven (7) years
 - d) Lead Procurement QA/QC Engineer: with overall related experience > ten (10) years
- QA/QC Documents: TENDERER shall provide following comprehensive QA/QC documents – 1) Preliminary Project Quality Plan for all EPC phases, 2) Inspection & Test Plan (ITP) utilized in recent or ongoing projects for structural steel work and piping work, and 3) QA/QC Procedures as required in ITT and Form of Contract.

Safety, Security, Health, and Environment

- TENDERER has capability to meet COMPANY's SSHE Requirements.

6.14 Commercial proposal must be submitted in the form provided in this TENDER DOCUMENTS (Exhibit B) without modification, otherwise such Proposal will not be considered by COMPANY.

7. BASIS OF TENDER

The TENDER shall be prepared and submitted strictly in accordance with these Instructions to TENDERERS and the content of the TENDER shall be described below;

7.1 TENDER Original Proposals

7.1.1 The Technical and Contractual Proposal

The format and content of the Technical and Contractual Proposal shall be as per Appendix 1 Volume 1. The Technical and Contractual Proposal shall not contain any prices or price information.

7.1.2 The Commercial Proposal

The format and content of the Commercial Proposal shall be as per Appendix 1, Volume 2. The Exhibit B in Form of Contract shall be utilized. The Commercial Proposal shall not contain any QUALIFICATIONS.

TENDERER shall separately submit Technical and Commercial Proposals in the manners set out in Appendix 1 and Appendix 2.

7.2 Supplementary Proposals (Delta cost impact after Technical, Commercial and Contractual Clarification)

TENDERER shall not submit the Priced Supplementary Proposal unless requested by COMPANY to do so.

After TENDERER has submitted a modified TENDER in accordance with below Item 9, upon completion of the TENDER clarification process (including Technical, and Contractual Clarification), TENDERER will be requested by COMPANY to submit Supplementary Proposal which includes:

- a) Unpriced Supplementary Proposal which includes:
 - a) Confirmation letter as per ITT Annex 9,
 - b) Unpriced Delta Price Adjustment Sheets for normalization items issued via COMPANY GENERAL CLARIFICATIONS so that all TENDERERS are pricing on the same basis,
 - c) Unpriced Delta Price Adjustment Sheets for TENDER CLARIFICATIONS,
 - d) Unpriced Delta Price Adjustment Sheets for QUALIFICATIONS (Technical and Contractual) with TENDERER's initial on each page,
 - e) Updated final Certificate of Design Endorsement (if any),
 - f) Any other documents or information that COMPANY may request.

The purpose of the Unpriced Supplementary Proposal is to document conclusions reached during the Tender Clarification Process and the COMPANY's final position with regard to the clarifications. TENDERER will be given opportunity to indicate either Y/N for cost impact against each.

TENDERER shall confirm its agreement to the Unpriced Supplementary Proposal, if and when requested by COMPANY, by submission of the Confirmation Letter, the final updated Design Endorsement Certificate and the TENDER CLARIFICATIONS, QUALIFICATIONS, and COMPANY GENERAL CLARIFICATIONS sheets with each page signed by TENDERER's authorized representative and stamped with TENDERERS official company stamp.

Delta Prices shall not be submitted in the Unpriced Supplementary Proposal.

Failure of a TENDERER to confirm its agreement to the Unpriced Supplementary Proposal, as aforesaid without QUALIFICATION, deviation or amendment within 72 hours of being requested to do so by the COMPANY may result in disqualification and rejection of the TENDER.

- b) Priced Supplementary Proposal, which is the same as the agreed clarification documents without modifications other than the inclusion of the individual Delta Cost Impact for all the items previously indicated by TENDERER in its Unpriced Supplementary Proposal as having cost impact. Priced Supplementary Proposal must be initialed on each page by TENDERER. TENDERER shall also update and submit Exhibit B (Form of Contract) and all relevant Annexes included the cost impact from agreed Clarifications. TENDERER to be final Commercial Proposal.
- TENDERER shall bear all responsibilities for any errors, omissions, discrepancies contained in the Supplementary Proposal submitted by TENDERER to incorporate cost impacts from agreed clarifications. The updated Exhibit B (Form of Contract) after incorporated agreed clarifications will be used as final to perform Commercial Evaluation Result. TENDERER shall ensure his correction and contain no error for his TENDER submission.

Note:

1. Delta Cost Impact is the difference of cost (whether negative or positive) between commercial proposal after agreed technical and contractual clarifications and original commercial proposal.
2. The individual Delta Cost Impact shall relate to and shall reflect the impact of the final responses from COMPANY on each individual qualification as per the Unpriced Supplementary Proposal.
3. Any items not priced will be considered as included in the relevant item in the original commercial proposal for such items.

The Supplementary Proposal shall be submitted the original documents as mentioned above Item 7.2 sealed in an envelope.

TENDERER is advised that any attempt to submit a revised TENDER at the time of submitting the Supplementary Proposal without COMPANY's request will automatically disqualified TENDERER.

8. COMMERCIAL PROPOSAL

TENDERER's Commercial Proposal shall be established by taking into account all the information and provisions included in the TENDER DOCUMENTS (including, but is not limited to, PART II - Form of Contract) as well as subsequent clarifications between COMPANY and TENDERER.

Moreover, TENDERER shall obtain all information and take into account all circumstances, regarding proposed operations and their location which may affect its costs and expenses included in its TENDER.

TENDERER shall also initial all the pages of its TENDER and endorse with their company stamp all pages that contain prices, alterations and signatures.

9. MODIFIED TENDER

9.1 If TENDERER wishes to submit a modified TENDER on the basis of the modifications to the TENDER DOCUMENTS, in particular the Form of Contract and its attachments, it may do so but COMPANY will not consider such TENDER unless it fully complies with the following conditions:

- all such modifications shall be presented in a precise alternative wording; generalizations or other imprecise languages will not be considered; and
- each modification shall be presented in a "QUALIFICATIONS" (in the form set out in ITT Annex 8), showing clearly the impact, if any, on price and schedule.

9.2 For various technical options, TENDERER may submit those options in its modified TENDER.

9.3 COMPANY reserves the right to give precedence to those TENDERERS who submit their TENDERS without modifications.

10. PERIOD OF TENDER VALIDITY

The TENDER shall remain valid for a period of **at least 8 months after the closing date and time** set out in Item 2 above. However, COMPANY reserves the right to request the extension of the validity period.

11. COST OF TENDERING

All direct and indirect costs and expenses incurred by the TENDERER for preparation, submission and clarification of the TENDER, attending clarification meetings and any visits and all other aspects whatsoever shall be to TENDERER's own account. In no case will any cost or expense incurred by TENDERER in the preparation, submission, and clarifications of its TENDER be borne by COMPANY.

12. COMPLIANCE WITH INSTRUCTIONS

The TENDER shall be submitted in accordance with all instructions contained in PART I – INSTRUCTIONS TO TENDERERS, especially **Item 6 (TENDER SUBMISSION)**, **Item 7 (BASIS OF TENDER)**, **Item 10 (PERIOD OF TENDER VALIDITY)** and **Item 14 (CONFIDENTIALITY)**. Any TENDER which does not comply with such instructions may be disqualified and may not be considered by COMPANY.

13. WITHDRAWAL OF TENDER

The TENDER submitted by TENDERER shall not be withdrawn during the period of its validity stipulated in Item 10. If TENDERER does or attempts to do so, it may be debarred from COMPANY's future call for tender.

14. CONFIDENTIALITY

14.1 The TENDER DOCUMENTS are confidential, contain proprietary information belonging to COMPANY and may only be reproduced or disclosed by TENDERER for the purpose of preparing its TENDER, subject however to prior written permission of COMPANY.

14.2 The TENDER DOCUMENTS shall remain the property of COMPANY.

14.3 TENDERER and TENDERER's AFFILIATES, associated companies, Subcontractors and Vendors, shall not make any publicity announcements (press release, news release, media release, press statement / report, internet posting or video release, etc.) concerning any aspect of the project, the Call for TENDER package, the TENDER DOCUMENTS, the TENDER nor the award or non-award of the Contract unless prior written permission is obtained from COMPANY.

Likewise TENDERER's name and or that of TENDERER's affiliates, associated companies, Subcontractors and Vendors shall not appear in nor be mentioned in any publicity announcement unless COMPANY is required to disclose such information under laws and/or regulations.

14.4 Failure to comply with the foregoing requirements will result in disqualification and exclusion of a TENDERER from further involvement in the Tender Process if such non-compliance results in harm or damage to the COMPANY and/or its reputation. COMPANY decision in this respect shall be final and not open to challenge by TENDERER.

15. OWNERSHIP OF TENDER

All documents submitted by TENDERER in response to this CFT shall become the property of COMPANY. However, intellectual property in the information contained in such documents shall remain vested in TENDERER. This Item 15 is without prejudice to any provisions to the contrary in any subsequent contract between COMPANY and TENDERERS.

16. JOINT VENTURE OR CONSORTIUM

In addition to the other requirements of these Instructions to TENDERERS, a TENDER submitted by Joint Venture or Consortium shall also comply with the following additional requirements:

- a) The Form of Letter of Submission (Ref. ITT Annex 2) shall be signed by all participants in the Joint Venture or Consortium so as to be legally binding on each participant.
- b) A notarised copy of the Joint Venture Agreement (JVA) or Consortium Agreement (CA) shall be provided in the Technical and Contractual Proposal (part of Appendix 1, Volume 1 Section 7).
- c) The following shall be given in a statement signed by all the participants.
 - The participants shall be jointly and severally liable for the performance of the Contract in accordance with its terms and that in the event that any one of the participants ceases to be a member of the Joint Venture or Consortium, defaults or goes into liquidation then the surviving participant(s) shall have the full obligation to carry out and complete the WORK and shall be empowered to use all resources furnished by any party in the Joint Venture or Consortium and shall be entitled to have any subcontracts assigned to it.
 - The interest of each of the participants under the JVA or CA and the allocation / split of the WORK between the participants
 - The nominated leader/prime Contractor and the name of the participant nominated to act as manager of the Joint Venture or Consortium and who in such capacity is authorized to incur liabilities and enter into a contractual relationship with third parties, to receive instructions and action instructions from COMPANY and to make and receive payments on behalf of the Joint Venture or Consortium.
 - That the declaration given takes precedence over anything which may be contained in the said JVA or CA.
- d) If a participant in the Joint Venture or Consortium is a subsidiary of another company, entity or corporation, a satisfactory ultimate parent company guarantee shall be provided as per the requirements of sub-article 33.2 of the AGREEMENT.
- e) Each of the participants in the Joint Venture or Consortium shall comply with the requirements of these Instructions to TENDERERS.
- f) Each TENDERER, either as main contractor or a consortium or joint venture partner, has the right to submit only one TENDER. In addition, a TENDERER, its affiliate companies, its subsidiaries, its sister company and its parent companies have the right to submit only one TENDER.

17. MISCELLANEOUS INSTRUCTIONS

17.1 TENDERER shall be responsible to comply with and be fully aware of all applicable governmental and local laws, regulations, practices, codes and requirements in relation with, but

not limited to, safety, taxation and customs, which might affect TENDERER when Tendering, executing the Contract for the SERVICES and provision of the SERVICES.

17.2 TENDERER shall clearly specify its position regarding local taxes, with reference to the Form of Contract (PART II of the CFT) and shall indicate (i) the official name of the TENDERER who, in case of a successful TENDER, will sign the Contract with COMPANY, (ii) TENDERER's country of registration, and (iii) whether TENDERER has established or not a permanent office or local company in Thailand.

17.3 TENDERER's legal status, country of incorporation and country of residence for tax purposes (if different from country of incorporation) must be disclosed. Financial statement and valid TENDERER Registration Certificate which clearly indicates its classification of business field/sub-field and qualification of expertise have to be provided.

17.4 No TENDER shall be conditional upon the availability to TENDERER of goods, labor, equipment, material or any other resources required for the performance of the SERVICES. If requested by COMPANY, TENDERER shall provide supporting documents to evidence the availability of same.

17.5 TENDERER's information as requested in Items 17.2 – 17.4 shall be an essential part of the TENDER and, in the case of a successful TENDER, may be incorporated as appropriate in the Contract between COMPANY and TENDERER.

17.6 The TENDER and all attachments, information, notes, catalogues, and any other written material shall be in the English language.

17.7 COMPANY reserves the right to visit, inspect and satisfy itself regarding the premises, facilities, equipment and other resources of TENDERER, and to carry out a technical and commercial appraisal prior to awarding a Contract.

17.8 After the closing date and time set out in Item 2, COMPANY reserves the right to request TENDERER for any further information it may deem necessary to evaluate the TENDER.

18. ACCEPTANCE OF TENDER AND FINAL AWARD

18.1 TENDERER understands and agrees that COMPANY shall be under no obligation to accept the lowest or any TENDER. The decision made by COMPANY on this matter shall be final and shall not be contested or opposed by TENDERER. COMPANY shall not enter into correspondence with TENDERER regarding the reasons for non-acceptance of the TENDER.

18.2 COMPANY reserves the right of accepting any portion of the TENDER as COMPANY may decide, unless TENDERER expressly stipulates to the contrary in its TENDER.

18.3 No TENDERER may consider itself successful unless and until it receives written notice to that effect from COMPANY.

18.4 COMPANY may notify its acceptance of the unmodified or modified TENDER, as the case may be, by sending TENDERER a Letter of Intent to Award ("LOI"). In such case, TENDERER shall confirm its agreement to the terms and conditions of the LOI within two (2) days of receipting it. Then the LOI shall constitute a binding agreement between COMPANY and TENDERER pending completion and exchange of formal Contract.

19. GOOD CORPORATE GOVERNANCE AND BUSINESS ETHICS

PTTEP Group operates in a lawful, transparent, fair and accountable manner, as well as in compliance with its Good Corporate Governance Principles and Code of Business Ethics (CG&BE). For the details of CG&BE, please visit

<http://www.pttep.com/en/Aboutpttep/Corporategovernance/CgandbusinessEthics.aspx#topic-179>

In case TENDERER is aware or suspect in good faith that any person acting on behalf of PTTEP Group has been involved in Misconduct (as defined in item 2 of the link below) or suspected Misconduct or may breach the law or violate the CG&BE, please file a report to one of the channels listed in item 7 of the link below. For more information regarding PTTEP group's Reporting & Whistleblowing Regulations, please visit the link below.

<http://www.pttep.com/en/Aboutpttep/Corporategovernance/Reportingandwhistleblowingregulations.aspx>

PTTEP Group is committed to protecting people who report Misconduct in good faith.

PART I – INSTRUCTIONS TO TENDERERS

APPENDIX

APPENDIX 1

DOCUMENT TO BE INCLUDED IN TENDER

APPENDIX 1

DOCUMENT TO BE INCLUDED IN TENDER

These below sections are required for TENDERER to complete and submit as part of TENDER package for COMPANY to evaluate TENDERER status, past/current performance and capability against the pre-established criteria. Only compliant TENDERER will be considered for further commercially evaluation.

The documents to be included in the TENDER are as follows:

Volume 1 - Technical and Contractual Proposal

Section 1 : Letter of Submission (in the Form set out in ITT Annex 2)

TENDERER shall submit the signed Integrity Pact (Thai Version), affixed with TENDERER company's stamp, in this Section 1 of the Technical and Contractual Proposal

Section 2 : Legal Documents - Memorandum of Associate, Affidavit, Power of Attorney, or other documents showing the name of authorized person who can sign on behalf of and bind TENDERER regarding the TENDER and a relevant contract/agreement between COMPANY and TENDERER, copy of tax certificate etc.

Section 3 : UNPRICED Commercial Terms and Schedule of Rates in the form as given in Exhibit B and its Annex 1 to 3 and 5 to 7 of the Form of Contract duly completed with "QUOTED" for quoted items or "NOT QUOTED" for items that are not quoted. **Prices shall NOT be indicated anywhere in the UNPRICED Commercial Terms and Schedule of Rates.** TENDERER shall quote all the rates as specified in Exhibit B and its Annex 1 to 3 and 5 to 7 of the Form of Contract for COMPANY's evaluation. Of which marked "NOT QUOTED", TENDERER shall raise QUALIFICATION providing the justification as part of section 4 below.

Section 4 : QUALIFICATIONS (if any, in the form set out in ITT Annex 8)

TENDERER shall separately prepare and raise any Exception/ Deviation form part of his TENDER as following;

- 4.1 Contractual QUALIFICATIONS
- 4.2 Technical QUALIFICATIONS

Section 5 : Summary TENDER Proposal (Form in ITT Annex 10)

Section 6 : Original TENDER bond in the Form set out in ITT Annex 3, issued by a bank acceptable to COMPANY.

The original Tender Bond shall be enclosed in a separate sealed envelope in the TENDER. A TENDERER who does not include a satisfactory Tender Bond shall be disqualified.

The Tender Bond shall be in the amount of Five Hundred Thousand US Dollars (USD 500,000) and shall be valid for at least eight (8) months from the Tender closing date, or until;

- TENDERER receives notification from the COMPANY that the Contract with the successful TENDERER has been executed, in the case of acceptance, the TENDERER has submitted a satisfactory Performance Bank Guarantee in accordance with sub-article 33.1 of the AGREEMENT, or
- Eight (8) months after the Tender closing date or such extended period as the COMPANY may request,

whichever is the earlier.

The COMPANY may make a call on the Tender Bond and draw down any sum it sees fit on any number of occasions up to the full value of the Tender Bond in the following circumstances if the TENDERER should:

- withdraw his TENDER, without COMPANY's agreement, after the Tender closing date and before the expiry of its period of validity, or if,
- TENDERER refuses to accept the correction of pricing errors and or other errors in his TENDER in accordance with terms of the Call for TENDER Package, or if,
- in the case of acceptance, refuse to execute the formal written CONTRACT, or if,
- fail to provide a satisfactory Performance Bank Guarantee.

COMPANY decision in this matter shall be final and not open to challenge by the TENDERER.

Note: The original Tender Bond must be enclosed in a **separate sealed envelope** marked 'ORIGINAL TENDER BOND' enclosed within the Package containing the original of the TENDER proposal and able to be opened independently.

Section 7 : Letter of Consortium Partner Formation (If any)

- 7.1 Partner Formation,
- 7.2 Copy of Signed Consortium Agreement (Period and Terms of Consortium Agreement shall be corresponding to the Bundled Phases 3 EPC WORKS),
- 7.3 Letter of undertaking to provide Parent Company Guarantee (Form in ITT Annex 5).

Section 8 : Letter of undertaking to provide Performance Bank Guarantee(s) (Form in ITT Annex 4)

Section 9 : Design Endorsement Certificate (in form set out in Form of Contract in AGREEMENT/ Annex 5)

Section 10 : Financial and Business Ethics

TENDERER shall provide Financial and Company Information as follows:

- 10.1 Copy of its audited financial statements for the last three (3) years (2017 – 2019),
- 10.2 Corporate organization chart showing relationship with any parent and subsidiary companies,
- 10.3 List of all major shareholders/owners,
- 10.4 List of Company Board of Management/Directors,
- 10.5 TENDERER's legal status, registration number, registered name & address, deed of incorporation and country of residence for tax purposes,
- 10.6 (In case, TENDERER is subsidiary of another company) entity or corporation, the ultimate parent company shall provide information same as listed above

Section 11 : Schedule of WORK

TENDERER shall submit the minimum level 2 schedule of work and related resource histograms which complies with COMPANY's Key Dates and Completion Dates as specified in Exhibit C of the Form of Contract for supplying of minimum four (4) up to fifteen (15) wellhead platforms per one installation year. TENDERER shall submit the schedule of work for following twelve (12) cases.

- Case 1: 4 WHPs per installation year
- Case 2: 5 WHPs per installation year
- Case 3: 6 WHPs per installation year
- Case 4: 7 WHPs per installation year
- Case 5: 8 WHPs per installation year
- Case 6: 9 WHPs per installation year
- Case 7: 10 WHPs per installation year
- Case 8: 11 WHPs per installation year
- Case 9: 12 WHPs per installation year
- Case 10: 13 WHPs per installation year

- Case 11: 14 WHPs per installation year
- Case 12: 15 WHPs per installation year

Section 12 : Fabrication Worksite (s), Capacity, Availability and Ownership

As minimum, TENDERER shall provide detailed description of Worksites intended to be used for fabrication WORK as listed below;

TENDERER shall submit separately information below for each Worksite.

12.1 Worksites Capability and Availability.

TENDERER shall demonstrate that the proposed worksite(s) have capable facilities and adequate yard layout availability, after considering committed and forecast workload, for fabrication and erection of six (6) topsides & six (6) jackets for installation year 2022.

TENDERER shall demonstrate that the proposed worksite(s) have capable facilities and adequate yard layout availability, after considering committed and forecast workload, for fabrication and erection of up to fifteen (15) topsides & fifteen (15) jackets for installation years 2023 – 2026.

In case TENDERER allocates some part of fabrication WORKS to subcontractor's worksite(s) or shared ownership worksite(s), the commitment letter(s) of those proposed fabrication yard(s) from the yard owner(s) shall be provided. The letter(s) shall clearly indicate that TENDERER will be supported by the fabrication yard(s) throughout the contract period.

At least one of the proposed worksite(s) shall be owned or fully operated throughout the contract period by TENDERER. These worksite(s) shall have capable facilities and adequate yard layout availability, after considering committed and forecast workload, for fabrication and erection of six (6) topsides for installation year 2022 and up to fifteen (15) topsides for installation years 2023 – 2026.

Following information shall be provided at a minimum.

- (i) Worksite location and address,
- (ii) Worksite layout and facilities, including;
 1. Layout of Assembly area,
 2. Fabrication area,
 3. Painting workshop,
 4. Warehousing/storage (covered, open areas).
- (iii) Fabrication layout plan topside and jacket (on the same scale),
- (iv) Access to yard (road, rails, air, waterways),
- (v) TENDER shall include tabulation in graphical form showing TENDERER's committed and prospective work-load and forecast work-load throughout the CONTRACT period. All projects shall be individually identified by location and project operator. The tabulation shall be expressed in terms of direct man-hours and shall show the optimum activity level for TENDERER's facilities.

12.2 Ownership of Worksites

- a) Topside Fabrication yard,
- b) Jacket Fabrication yard (if any),
- c) Pre-fabrication yard (if any).

- 12.3 Capacity of the quayside and waterway access for load out.
TENDERER shall demonstrate that the quayside and waterway access are capable for load-out and transportation of the topsides and jackets by providing listed documents below:
- a) Plotting Drawing of Topside/Jacket showing sufficient access to quayside and loadout plan,
 - b) Calculation showing sufficient bearing load capacity including skid ways,
 - c) Water depth contour at jetty and latest bathymetric survey.
- 12.4 Previous Experience: Proposed onshore fabrication yard(s) and work location have sufficient capability to perform the WORK, supported by history and proven track records.

Section 13 : Experiences/ Project References

13.1 TENDERER Project Experience

TENDERER/TENDERER's Parent Company shall provide the detailed description of experiences as a main EPC contractor at least two (2) *Offshore Facilities Construction Projects* in past seven (7) years tabulated as follows (TENDERER's promotional brochures and company profiles shall not be admissible):

- a) Name of project,
- b) Client Reference,
- c) Brief description/ scope of work (e.g. CPP or wellhead topsides, jackets),
- d) Size and complexity of the projects (e.g. weight & size of topsides/jackets/piles),
- e) Primary geographic location,
- f) Water depth,
- g) Start and completion schedule,
- h) Final schedule deviation (+/- days),
- i) Project value USD.

The above past project experiences/ records shall demonstrate the capability and capacity of TENDERER and/or SUBCONTRACTOR who propose to execute the work for Bundled Phases 3 EPC relevant scopes.

- 13.2 Main Subcontractor's Project Experience: In case, TENDERER proposes to subcontract the major parts of the WORK, i.e. Detailed Engineering and Fabrication WORK, TENDERER shall demonstrate that his proposed subcontractor(s) have performed at least two (2) *Offshore Facilities Construction Projects* within the last seven (7) years as similar details as Section 13.1 above.

Remark: For clarity, "*Offshore Facilities Construction Project*" shall mean offshore wellhead platform(s) or processing module(s) or central processing platform(s), with total topside/module weight of at least 3,000t for one installation campaign. For example, a project to construct four (4) wellhead platforms with the topside weight of 750t for each platform (3,000t in total) for installation in one campaign can be counted as one *Offshore Facilities Construction Project*.

Section 14 : Detailed Execution Proposal

TENDERER must provide logical execution schemes for all EPC phases, including availability of personnel and organization to manage the project. Execution plan that demonstrate logical sequence and coverage of work, extensive management, accountable resources, and clear structure for interface will be credited more.

14.1 Project Management Execution

TENDERER shall provide;

- a) Overall Project Organization: All parts of the WORK is accounted for and distributed clearly between each party covering PMT/ Engineering/ Procurement/ Onshore Construction (each fabrication yards). All parties should be clearly identified, and no part of the scope should be left ambiguous. The summary of overall proposed Project Execution Plan and Strategy shall be provided,
- b) WORK Location: WORK locations for each part of the WORK are clearly defined, adequate, suitable and accessible,
- c) Interface Management Plan: Plans and responsible matrix for interface management between TENDERER, main Subcontractors and T&I CONTRACTOR are adequate and clearly defined.

14.2 Engineering Execution

TENDERER shall provide;

- a) Engineering Capability: Within the last seven (7) years, TENDERER or his Engineering Sub-contractor has performed Detailed Engineering, and Follow-on Engineering at least two (2) similar or more complicated offshore projects. Details shall contain following, as minimum;
 1. Name of project,
 2. Client Reference,
 3. Brief description,
 4. Summary project record including engineering man-hour by disciplines, specific software used, year/ duration,
 5. Scope of work,
 6. Work location,
 7. Organization Chart.

In case TENDERER propose to subcontract Detailed Engineering WORK, TENDERER shall provide a commitment letter from the Engineering Subcontractor confirming his availability to undertake the WORK and providing full details of his organization, his work capacity, resource availability, past experience in this work with client names and dates of projects and description of the work performed and work location as similar details as above Section 14.2 a),

- b) Engineering Manpower: TENDERER shall demonstrate reasonable manpower histogram for each discipline.

TENDERER shall include tabulation in graphical form showing TENDERER's committed and prospective engineering work-load and forecast work-load throughout the Contract period. All projects shall be individually identified by location and project operator. The tabulation shall be expressed in terms of in-house engineering manpower and outsourcing manpower,

Lead Engineer Experience: TENDERER shall propose together with CV of capable Lead Engineers for all disciplines who have performed similar or more complicated projects as lead engineer more than two (2) years and having overall experience at least ten (10) years in Engineering works. In case TENDERER propose to use Detailed Engineering Subcontractor, the Lead Engineers shall be nominated from Detailed Engineering Subcontractor

- c) Engineering Deliverables:
 1. TENDERER shall demonstrate understanding of detailed engineering work. If any changes of engineering deliverables and software (listed in Exhibit A Annex 1 and Annex 2 of Form of Contract), TENDERER shall utilize the same

format/ content and shall submit Exception/ Deviation for COMPANY Review,

2. TENDERER shall provide Engineering Execution Plan, including engineering project organization chart, work schedule, work location/ allocation, engineering interfacing plan, quality control of engineering work, list of sub-contractor, third-party study plan, etc.

14.3 Procurement Execution

TENDERER shall provide;

- a) Procurement Capability: TENDERER shall provide past project experiences and records to procure tag equipment/ Long Lead Items for similar wellhead construction or more complicated project. Reference project details shall contain following, as minimum;
 1. Name of project,
 2. Client Reference,
 3. Brief description,
 4. Summary project record including list of procured items, procurement services man-hour by disciplines, year/ duration,
 5. Scope of work,
 6. Work location,
 7. Organization Chart.
- b) Procurement Organization & Manpower: TENDERER shall propose Procurement Organization chart with sufficient and experienced personnel including CV,

TENDERER shall include tabulation in graphical form showing TENDERER's committed and prospective procurement services work-load and forecast work-load throughout the CONTRACT period. All projects shall be individually identified by location and project operator,

- c) Procurement Procedures/Plan: TENDERER shall propose clearly defined Procurement procedures and plan including key procurement milestones, i.e. RFQ, PO, ROS dates, of all major equipment and long lead materials with proper control & monitoring strategy and contingency plan in order to meet and integrate with Construction schedule.

14.4 Onshore Work Execution

TENDERER shall provide;

- a) Fabrication Capacity: TENDERER shall propose an Fabrication Organization chart with sufficient and capable personnel including CV of lead fabrication engineer, pre-commissioning/ commissioning team leader, manpower histogram, list of major construction equipment and other resources/subcontractors to perform the works including load-out activity, and workload forecast.
- b) Fabrication Plan: TENDERER shall propose Fabrication Plan including fabrication sequence, schedule, and clearly defined, completed scope coverage, and, logically sequenced and comply with COMPANY's requirements. TENDERER shall demonstrate technical plan for site move for load out using experienced SUBCONTRACTOR. The following procedure shall also be provided by TENDERER.
 1. Planning and progress control
 2. Construction sequence
 3. Document control
 4. Performance control
 5. Material control
 6. Weight monitoring and control

c) Fabrication Yard Utilization Plan for Different Required Number of WHPs per Installation Year

In case multiple fabrication yards are required to deliver the PLATFORM, TENDERER shall clearly identify which fabrication yard will be utilized for fabricating topside, jacket, pile and other accessories by filling in the below table.

No. of WHPs per installation year	Topside	Jacket	Pile	Other Accessories (Please specify)
4 WHPs				
WHP#1	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#2	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#3	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#4	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
5 WHPs				
WHP#1	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#2	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#3	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#4	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#5	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
6 WHPs				
WHP#1	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#2	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#3	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#4	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#5	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#6	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
7 WHPs				
WHP#1	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#2	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#3	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#4	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#5	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#6	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#7	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
8 WHPs				
WHP#1	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#2	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#3	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#4	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#5	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#6	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#7	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#8	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
9 WHPs				
WHP#1	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#2	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#3	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#4	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#5	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#6	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#7	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#8	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#9	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
10 WHPs				
WHP#1	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#2	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#3	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#4	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#5	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#6	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#7	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#8	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#9	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"

WHP#11	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#12	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#13	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#14	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"
WHP#15	"Name of Yard"	"Name of Yard"	"Name of Yard"	"Name of Yard"

- d) List and plan for Subcontractor for the main works.

Section 15 : Personnel Resources

TENDERER shall provide resumes of the Contractor Representative and Key Personnel (both Level 1 and Level 2) as identified in Exhibit K and TENDERER’s project detailed organization charts in Section 14.

TENDERER proposal of organization has sufficient key personnel and qualified manpower distributed to complete the work. Key and lead personnel have ample experience in similar or larger scales of EPC offshore projects, for example;

- a) Project Manager: overall related experience > fifteen (15) years & min. three (3) years in Project Manager Role
- b) Engineering Manager: overall related experience > ten (10) years & min. two (2) years in Manager Role
- c) Construction Manager: overall related experience > ten (10) years & min. two (2) years in Manager Role
- d) Procurement Manager: overall related experience > ten (10) years & min. two (2) years in Manager Role
- e) Project Control Manager: overall related experience > ten (10) years & min. two (2) years in Manager Role
- f) Interface Manager: overall related experience > ten (10) years & min. two (2) years in Manager Role

Section 16 : Quality Management

TENDERER shall submit:

- 16.1 Quality Management System: TENDERER and his key sub-contractor are certified to ISO 9001 or ISO 29001 by an accredited certification body with the scope of certification similar to the scope of work to be performed for each Worksite.
- 16.2 Project Quality Organization & Manpower: TENDERER shall propose Project Quality Organization chart with sufficient and experienced qualified personnel for each Worksite. The following key and lead personnel have ample experiences in the field and exposure to Offshore Wellhead Platform or more complicated projects.
 - a) QA/QC Manager: with overall related experience > twelve (12) years & min. three (3) years in QA/QC Manager Role
 - b) QA/QC Engineer: with overall related experience > seven (7) years
 - c) Welding Engineer: with overall related experience > seven (7) years
 - d) Lead Procurement QA/QC Engineer: with overall related experience > ten (10) years
- 16.3 QA/QC Documents: TENDERER shall provide well-organized QA/QC procedures and preliminary Project Quality plan for each phase of EPC works and integrated into proposed execution schedule. Competent Quality Control Plan and Inspection & Test Plan (ITP) utilized in recent or ongoing projects for structural steel work and piping work shall be provided.

16.4 TENDERER's Quality Manual

16.5 Procedures list covering all project activities including management, engineering, procurement and fabrication.

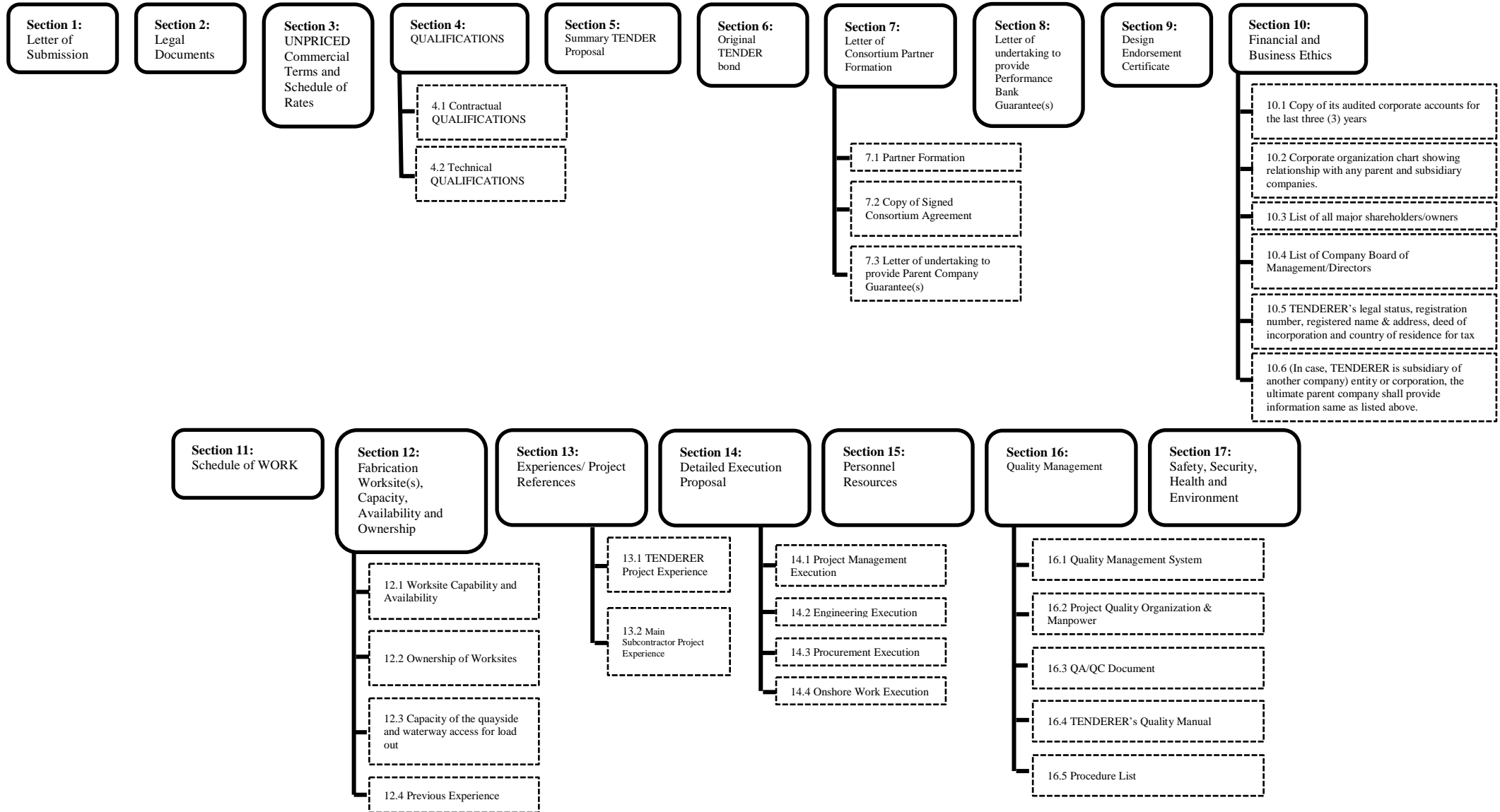
Section 17 : Safety, Security, Health and Environment

TENDERER shall submit as per requirements provided in the ITT Annex 11: Contractor SSHE Capability Assessment Questionnaire. TENDERER shall provide SSHE documentation based on his review of Form of Contract Exhibit L and associated CONTRACT requirements.

In all cases SSHE documentation provided by TENDERER at TENDER stage, if successful, is not deemed COMPANY approval on the basis of award. Further upgrade may be necessary in achieving COMPANY requirements, compliance with Instructions to TENDERER (ITT) and Contract Terms.

Instruction for Folder (electronic copy) Compilation of Volume 1 - Technical and Contractual Proposal

TENDERER shall provide the PDF and including all the native files (*.doc, *.xls, *.ppt) along with his TENDER submission as following structure.



Volume 2 - Commercial Proposal

Commercial Terms and Schedule of Rates (in the Form as given in Exhibit B of the Form of Contract duly completed with price proposal) shall comprise:

1. Lump Sum Price Breakdown by Work Package (Form in Exhibit B Annex 1)
 - a) Sub Work Unit 1.1 Project Management and Services & Facilities to COMPANY, for Services and Facilities to COMPANY TENDERER shall fill in the Lump Sum price in the Exhibit B Annex 1 for scope identified as per Exhibit B Annex 7 (Form of Contract). For part under Services and Facilities to COMPANY which has been identified as “Call Off”, TENDERER shall not price it as part of Sub Work Unit 1.1 which type and quantity will be defined by COMPANY at execution stage, refer to Exhibit B Section 3.5.2 (Form of Contract).
 - b) In order to promote and ensure effective SSHE management for the PROJECT, Sub Work Unit 1.2 SSHE Management and Execution shall be priced based on mechanism below

Sub Work Units for SSHE Management and Execution = 1.5% of total value of WU2 to WU4 under each Work Package

- c) In order to promote and ensure effective Quality management for the PROJECT, Sub Work Unit 1.3 Quality Management and Execution shall be priced based on mechanism below

Sub Work Units for Quality Management and Execution = 1% of total value of WU2 to WU4 under each Work Package

2. List of Prices for Optional Items (Form in Exhibit B Annex 2)
TENDERER shall fill in the given table specified in Exhibit B Annex 2 (Form of Contract) and submit without modification of format.
3. Work Unit Rates for Pricing CHANGE ORDERS (Form in Exhibit B Annex 3)
TENDERER shall fill in the given table specified in Exhibit B Annex 3 (Form of Contract) and submit without modification of format.
4. Time Unit Rates for Pricing CHANGE ORDERS (Form in Exhibit B Annex 5)
TENDERER shall fill in the given table specified in Exhibit B Annex 5 (Form of Contract) and submit without modification of format.
5. Services and Facilities to COMPANY (Form in Exhibit B Annex 7)
COMPANY provides the lists and types of Services and Facilities for COMPANY as part of Form of Contract, TENDERER shall input unit rate for each type of services and facilities that are to be applied by Call Off Basis, refer to Exhibit B Section 3.5.2 (Form of Contract).

The Call for TENDER included source files for the TENDER Package Volume 2 (Commercial Proposal), TENDERER shall utilize these files in preparing its TENDER.

TENDER Package Volume 2 (Commercial Proposal) shall solely comprise information as listed above duly completed with TENDERER’s prices and rates. No other information will be submitted in this package.

All prices contained in TENDER shall be in US Dollars (USD). The Prices and Rates shall be fixed and firm for the duration of the CONTRACT.

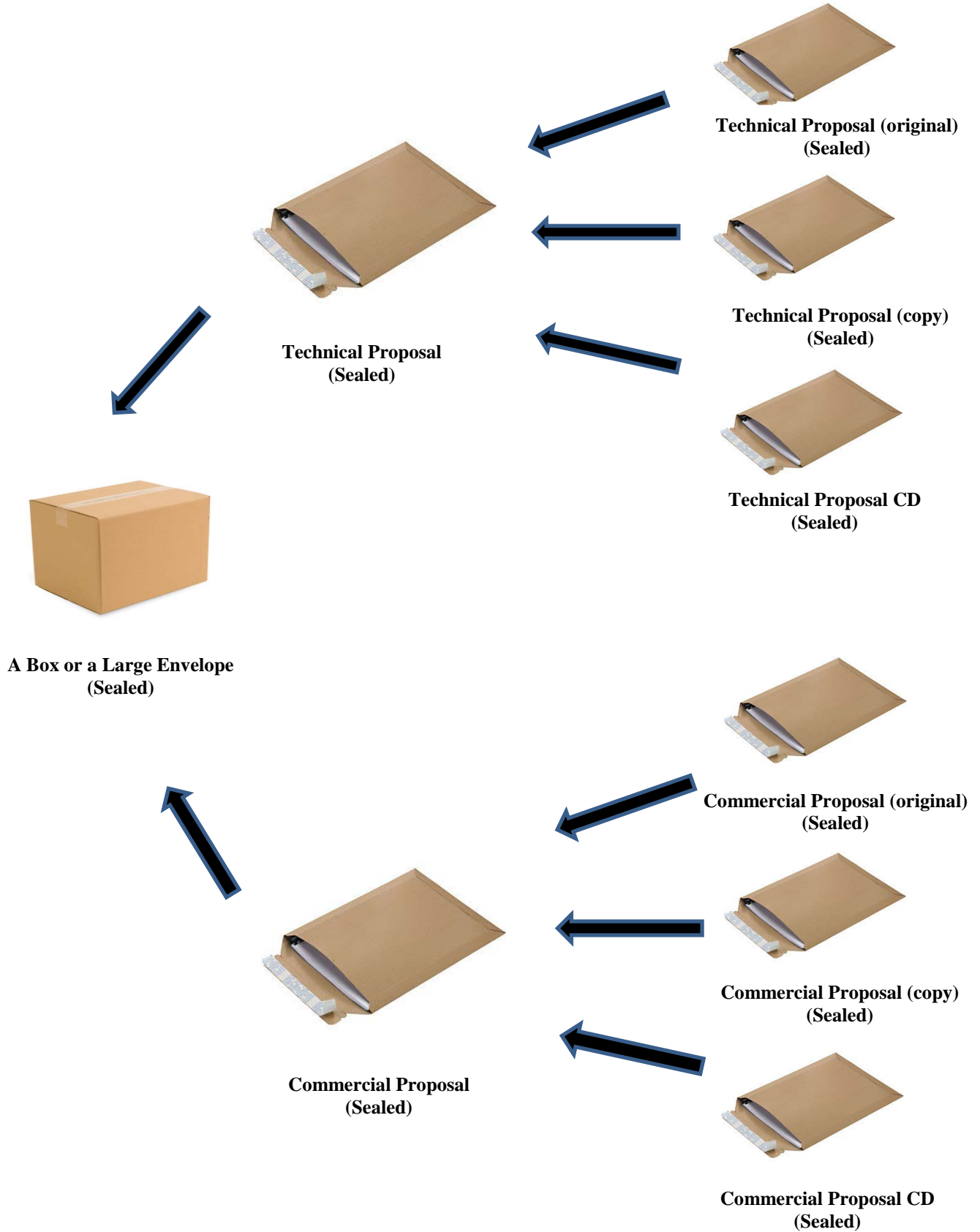
TENDER Package Volume 2 shall comprise a paper and electronic copy which shall be the relevant native files provided in the Call for TENDER as completed by TENDERER to produce the paper copy. The original and all paper copies of the TENDER shall include an electronic copy (pdf and native file i.e. *. doc, *. xls as applicable) of the TENDER.

APPENDIX 2

HOW TO SUBMIT TENDER

APPENDIX 2

HOW TO SUBMIT TENDER



The following mention shall be indicated on the top left corner of each sealed envelope:



NAME OF TENDERER

**BID FOR PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED
PTTEP INTERNATIONAL LIMITED
PTTEP ENERGY DEVELOPMENT COMPANY LIMITED**

CALL FOR TENDER NO: **THC19-5245 (EPC)**

**BUNDLED PHASES 3 WELLHEAD PLATFORMS, ASSOCIATED PIPELINES,
BROWNFIELD MODIFICATIONS AND TIE-INS PROJECT (EPC PART)**

COMMERCIAL PROPOSAL or TECHNICAL PROPOSAL *(Please specify)*

“NOT TO BE OPENED”

The following mentions shall be indicated on the top left corner of a box or a large envelope:



NAME OF TENDERER

ADDRESS OF TENDERER

**BID FOR PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED
PTTEP INTERNATIONAL LIMITED
PTTEP ENERGY DEVELOPMENT COMPANY LIMITED**

CALL FOR TENDER NO: **THC19-5245 (EPC)**

**BUNDLED PHASES 3 WELLHEAD PLATFORMS, ASSOCIATED PIPELINES,
BROWNFIELD MODIFICATIONS AND TIE-INS PROJECT (EPC PART)**

“NOT TO BE OPENED”

**TO: MR. ANUSORN WUTHIJAROEN
VICE PRESIDENT, GLOBAL SUPPLY CHAIN, PROCUREMENT AND
CONTRACTS DEPARTMENT
(For Mr. Chindanai Preuksapanich)**

**PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED
ENERGY COMPLEX BUILDING A, FLOORS 6, 19-36
555/1 VIBHAVADI RANGSIT ROAD
CHATUCHAK, BANGKOK 10900
THAILAND**

(PTTEP’S MAILROOM, PARKING 2)

APPENDIX 3

SUMMARY FOR TENDERER

APPENDIX 3**SUMMARY FOR TENDERER**

Call for Tender for Bundled Phases 3 Project for Wellhead Platforms, Associated Pipelines, Brownfield Modifications and Tie-ins includes two TENDER packages: (1) Engineering, Procurement and Construction (EPC) (Installation in 2022-2026) and (2) Transportation and Installation (T&I) (Installation in 2022-2024). TENDERER shall receive TENDER package specifically for their confirmation in previous EOI in early November 2019. This annex is to summarize key points for TENDERER to be aware during preparing TENDER document.

1. TENDER document

This TENDER document (THC19-5245) is only applicable for Engineering, Procurement and Construction scope for Bundled Phases 3 of Wellhead Platforms, Associated Pipelines, Brownfield Modifications and Tie-ins for Installation in 2022-2026.

COMPANY will only consider the TENDER from TENDERER who receives the CFT Package.

2. Confirmation from EOI

TENDERER already signed and understand in EOI as follows:

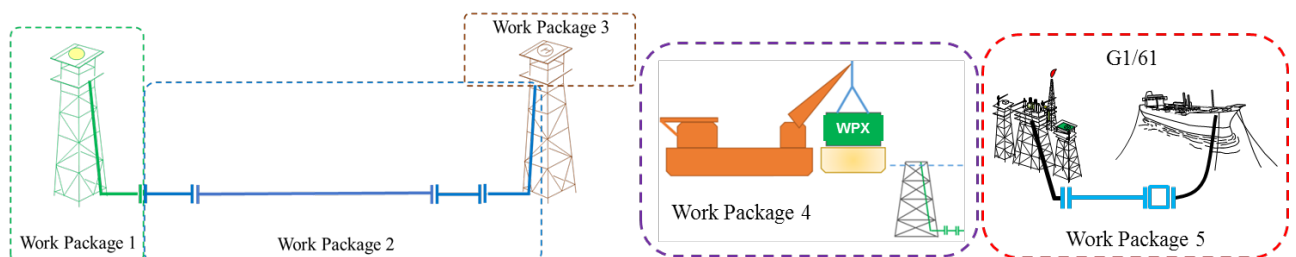
- This TENDER is conducted with only TENDERER who own a fabrication yard.
- For Joint Venture or Consortium, all parties shall pass Pre-Qualification process.
- Any changes of TENDER entity confirmed during EOI in early November 2019 are not acceptable for participating the TENDER and/or disqualify for the TENDER.
- Each TENDERER (including its affiliated companies, its subsidiaries, its sister company and its parent companies), either as a main contractor or a consortium or joint venture partner, has the right to submit only one proposal for each TENDER Package.
- COMPANY intends to carry out evaluation for both EPC and T&I TENDERS together to select tenderer(s) who offer the best benefits to COMPANY in terms of total project cost.
- A TENDERER (including Joint Venture or Consortium, its affiliated companies, its subsidiaries, its sister company and its parent companies) who is capable and qualified to participate both EPC and T&I TENDERS has the right to submit cost optimization/discount for consideration during evaluation, in case TENDERER is awarded for both EPC and T&I TENDER.

3. Contract Period

Contract period for EPC scope of work is 6 years 9 months starting from 1st October 2020 until 30th June 2027.

4. Scope of Work

Scope of work for Bundled Phases 3 Project is brief as below picture:



- Work Package 1: Wellhead Platform
- Work Package 2: Associated Pipeline and Tie-in spools
- Work Package 3: Existing Topside Brownfield Modification
- Work Package 4: Existing Topside Relocation
- Work Package 5: New FSO Pipeline, PLEM and Tie-ins

TENDERER shall refer scope of work quoted as “EPC” in below table. All detailed of work shall be read in Exhibit A of Form of Contract (PART II of the CFT). Moreover, Interfacing matrix and document as per Exhibit A Annex 10 of Form of Contract (PART II of the CFT) shall be used for managing between two Contracts (EPC and T&I).

Work Package	Activity	Engineering	Procurement	Onshore Construction / Fabrication	Transportation & Installation
1	Wellhead Platforms	EPC	EPC	EPC	T&I
2	Associated Pipelines and Tie-ins	T&I	T&I	T&I	T&I
3	Existing Topside Brownfield Modifications	EPC	EPC	EPC	T&I
4.1	Existing Topside Relocation	T&I			T&I
4.2	Existing Topside Verification, New Jackets and Nav-Aid Platform	EPC	EPC	EPC	T&I
5	New FSO Pipeline, PLEM and Tie-ins	T&I	T&I	T&I	T&I

5. Preliminary requirement

COMPANY intends to order minimum four (4) units of Wellhead Platform in 2022 and minimum six (6) units of Wellhead Platform per year during 2023-2026.

However, the confirmation of order quantity of Wellhead Platform shall be issued by Notice-to-Proceed (NTP) each year. In case the order quantity per year is less than specified minimum order. COMPANY shall pay CONTRACTOR only the price quoted in Exhibit B of Form of Contract (PART II of the CFT). Therefore, CONTRACTOR shall ensure all cost incurred have been covered.

6. Maximum Capability of Wellhead Platform Construction

Potentially, COMPANY have requirement up to fifteen (15) units of Wellhead Platform per year throughout Contract period. TENDERER therefore shall demonstrate their capability of fabrication, management and other related works to support this requirement.

7. Price structure

TENDERER shall only quote for the proposal based on the installation in year 2022 as per Exhibit B of Form of Contract (PART II of the CFT). Later, COMPANY shall apply escalation index to cover the next four (4) installation years as per below table.

Activity	Compensation Mechanism	Index
Project Management & Services	Fixed Lump Sum price per PLATFORM subject to annually adjustment by index	Manpower index
Engineering	Fixed Lump Sum price per PLATFORM subject to annually adjustment by index	Manpower index

Activity	Compensation Mechanism	Index
Procurement	<u>Material Group 1</u> - Material: At Cost - Services Fee: Fixed Lump Sum price per PLATFORM subject to annual adjustment by index	- Manpower index
	<u>Material Group 2</u> • Fixed Lump Sum price per PLATFORM subject to annual adjustment by index	Material index
Fabrication	Fixed Lump Sum price per PLATFORM subject to annually adjustment by index	Yard index

Each index is referred to below database:

- Manpower index: Mercer Global Compensation Planning Report, average for 4 countries (Thailand, Indonesia, Vietnam, and Malaysia)
- Material index:
 - 60% UCCI Market, Global Steel, Structural, Asia (IHS), and
 - 40% UCCI Market, Bulk Materials, Wire/Cable, Asia (IHS)
- Yard index:
 - 60% Mercer Global Compensation Planning Report, Average for 4 countries (Thailand, Indonesia, Vietnam, and Malaysia), and
 - 40% UCCI Market, Yard- Fabrication, Upstream Order, Asia (IHS)

Moreover, TENDERER who is capable and qualified to participate both EPC and T&I Package has the right to submit cost optimization/discount for consideration during evaluation as per Exhibit B Annex 1 of Form of Contract (PART II of the CFT).

8. Others

1. Price validity is at least eight (8) months after bid closing date and time.
2. Pre-Bid clarification meeting shall be tentatively conducted within 2 weeks after CFT issuance, COMPANY shall confirm the exact date. Pre-Bid clarification meeting shall be a teleconference meeting, tentatively conducted through Microsoft Team.
3. There is no Company Furnished Material and Equipment (CFME) for this EPC package.
4. Tender bond of 500,000 USD shall be submitted altogether with Tender submission. Tender bond shall be submitted with Banks in Thailand or any Banks having branches in Thailand.

PART I – INSTRUCTIONS TO TENDERERS

ANNEXES

ANNEX 1

FORM OF LETTER OF ACKNOWLEDGEMENT

ANNEX 2

FORM OF LETTER OF SUBMISSION

ANNEX 2

FORM OF LETTER OF SUBMISSION

(To be printed on TENDERER's letter head paper)

QUOTE

Date:

Subject: Call for TENDER No: **THC19-5245**

Bundled Phases 3 Wellhead Platforms, Associated Pipelines, Brownfield Modifications and Tie-ins Project (EPC Part)

Dear Sirs,

Having examined the TENDER DOCUMENTS contained in the above mentioned Call for TENDER issued by you on, we, the undersigned, undertake to offer the performance of the SERVICES and all obligations described in the said TENDER DOCUMENTS within the contractual dates specified therein, for the prices and rates mentioned in the present TENDER.

- Our TENDER is in full compliance with the terms and conditions set forth in the TENDER DOCUMENTS.
- Our TENDER contains modifications/exceptions to the following terms and conditions, all of which are provided in the separate QUALIFICATIONS provided in ITT Annex 8:
 - Technical requirements/specifications
 - Contractual terms and conditions

CONTRACTOR hereby confirm to participate in full scope including wellhead platform, associated pipelines, tie-ins, and brownfield modifications.

We agree to keep our TENDER valid for a period of **Eight (8) months** from the closing date and time stipulated in Section 2 of the INSTRUCTIONS TO TENDERERS and it shall remain binding upon us and may be accepted by you at any time before the expiration of such period.

If our TENDER is accepted within the period mentioned above, we agree to enter into a formal agreement for the SERVICES in accordance with the conditions of the Form of Contract.

We understand and agree that:

- (i) you shall be under no obligation to accept the lowest or any TENDER; the decision made by you on this matter shall be final and shall not be contested or opposed by us;
- (ii) our TENDER is proposed and submitted at our cost and expense; in no case will any cost or expense incurred by us in the preparation or submission of our TENDER be borne by you; and
- (iii) all documents submitted by us in response to this CFT shall become the property of COMPANY, except for any intellectual property rights in such documents which shall remain vested in us.

All capitalized terms in this letter shall have the meaning ascribed to them in the INSTRUCTIONS TO TENDERERS (PART I of the Call for TENDER).

UNQUOTE

ANNEX 3

FORM OF TENDER BOND

ANNEX 3

FORM OF TENDER BOND

(BANK GUARANTEE)

- I. We, the Undersigned (1) (hereinafter referred to as “**GUARANTOR**”), established at (2) represented by (3) have taken notice of the Call for Tender No. **THC19-5245** for **BUNDLED PHASES 3 WELLHEAD PLATFORMS, ASSOCIATED PIPELINES, BROWNFIELD MODIFICATIONS AND TIE-INS PROJECT (EPC PART)**, submitted by (6) whose registered office is at (7) (hereinafter referred to as “**TENDERER**”) to PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED, PTTEP INTERNATIONAL LIMITED AND PTTEP ENERGY DEVELOPMENT COMPANY LIMITED (hereinafter referred to as “**COMPANY**”) a Company registered under the laws of the Kingdom of Thailand, with its registered office at Energy Complex Building, Floors 6, 19-36, 555/1 Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900 THAILAND.
- II. The **GUARANTOR** hereby irrevocably guarantees that if **TENDERER** withdraws its tender for the above mentioned Call for Tender before the expiry of its tender’s validity, or fails, after receipt from **COMPANY** of notice of award, to enter into the contract for such Call for Tender with **COMPANY**, or fails to provide performance guarantee within the period set forth in the contract, the **GUARANTOR** undertakes on behalf of **TENDERER** to pay to **COMPANY** **any sum or sums in aggregate not exceeding Five Hundred Thousand US Dollars (USD 500,000)**. This guarantee is given at the request of **TENDERER** made to the **GUARANTOR** in accordance with the above mentioned Call for Tender.
- III. Each demand by **COMPANY** for payment under this guarantee shall be made in writing (including telex or cable) to the following address:
(10),
.....,
The **GUARANTOR** shall promptly notify **COMPANY** any change in the above address.
- IV. The **GUARANTOR** shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by **TENDERER**. **GUARANTOR** shall not require **COMPANY** to justify the breach indicated in its demand for payment, nor shall **GUARANTOR** have any recourse against **COMPANY** in respect of any payment made hereunder.
- V. The **GUARANTOR** shall pay the sum demanded by **COMPANY** hereunder within fifteen (15) days after the date of receipt of **COMPANY**’s demand.
- VI. No alteration in the terms of the **TENDERER**’s offers or proposal for the above mentioned Call for Tender made by agreement between **TENDERER** and **COMPANY** shall in any way release the **GUARANTOR** from all or any part of its liabilities under this Guarantee.
- VII. This Guarantee shall be from till as set out in the Call for TENDER no. THC19-5245 and in the event that **TENDERER** is notified of the award of the Contract by **COMPANY** it shall in addition be valid until signature of the contract by **TENDERER** and **COMPANY**.
- VIII. This guarantee shall be interpreted in accordance with the laws of the Kingdom of Thailand.
- IX. The **GUARANTOR** represents that this guarantee has been established in such form and with such content that it is fully and freely enforceable against the **GUARANTOR** in the manner provided in all paragraphs above.

X. If any provision (or part thereof) of, or pursuant to, this guarantee, is or become unlawful, void, or unenforceable, the legality, validity or enforceability of any other part of that provision or any other provision shall not be affected but shall continue in full force and effect.

(Date)

(Common Seal of Signature of the GUARANTOR or such other formality as may be required under the law to render a unilateral promise binding on the GUARANTOR).

- (1) Name of the Bank proposed by TENDERER and approved by COMPANY.
- (2) GUARANTOR's address
- (3) GUARANTOR's authorized representative
- (6) Name of TENDERER
- (7) TENDERER's address
- (10) Bank address for notices

ANNEX 4

LETTER OF UNDERTAKING TO PROVIDE PERFORMANCE BANK GUARANTEE(S)

ANNEX 4

LETTER OF UNDERTAKING TO PROVIDE A PERFORMANCE BANK GUARANTEE

(To Be Typed On The Issuing Bank's Letterhead)

To: **PTT Exploration and Production Public Company Limited**
PTTEP International Limited
PTTEP Energy Development Company Limited

Energy Complex Building A, Floors 6, 19-36
555/1 Vibhavadi Rangsit Road, Chatuchak,
Bangkok 10900, THAILAND
Attention:

Subject: Letter of Undertaking to Provide a Performance Bank Guarantee
Call for TENDER No.: **THC19-5245**

Bundled Phases 3 Wellhead Platforms, Associated Pipelines, Brownfield Modifications and Tie-ins Project (EPC Part)

Dear Sir,

We, (1), at the request of (2) of (hereinafter referred to as TENDERER), do hereby irrevocably undertake and agree that, in the event TENDERER is awarded CONTRACT reference to Call for TENDER No. THC19-5245 for BUNDLED PHASES 3 WELLHEAD PLATFORM, ASSOCIATED PIPELINES AND TIE-INS PROJECT (EPC PART), that we will within thirty (30) days from the EFFECTIVE DATE of such CONTRACT issue a Performance Bank Guarantee to COMPANY in full accordance with the "Form of Performance Bank Guarantee" as included as Annex 1/A to the AGREEMENT forming part of the specimen CONTRACT, part of Call for TENDER No. THC19-5245.

For clarity we confirm that terms used in this letter which are in capitalized text shall and are defined in Call for TENDER No. THC19-5245 shall the meanings so defined.

Date Signature(s)

Attachment-1 Copy of the proforma Performance Bank Guarantee

- (1) *Name and branch of Issuing Bank*
- (2) *Address of branch of issuing bank*

Attachment-1 to the Letter of Undertaking to Provide a Performance Bank Guarantee

ANNEX 5

LETTER OF UNDERTAKING TO PROVIDE A PARENT COMPANY GUARANTEE

ANNEX 5

LETTER OF UNDERTAKING TO PROVIDE A PARENT COMPANY GUARANTEE

(To Be Typed On the Parent Company Letterhead)

To: **PTT Exploration and Production Public Company Limited**
PTTEP International Limited
PTTEP Energy Development Company Limited

Energy Complex Building A, Floors 6, 19-36
555/1 Vibhavadi Rangsit Road, Chatuchak,
Bangkok 10900, THAILAND
Attention:

Subject: Letter of Undertaking to Provide a Performance Bank Guarantee
Call for TENDER No.: **THC19-5245**
Bundled Phases 3 Wellhead Platforms, Associated Pipelines, Brownfield Modifications and Tie-ins Project (EPC Part)

Dear Sir,

We, [REDACTED], at the request of [REDACTED] insert name of TENDERER, hereby irrevocably undertake and agree that, in the event TENDERER is awarded the CONTRACT reference to Call for TENDER No. THC19-5245 for BUNDLED PHASES 3 WELLHEAD PLATFORM, ASSOCIATED PIPELINES AND TIE-INS PROJECT (EPC PART), we will within fourteen (14) days from the EFFECTIVE DATE issue to COMPANY a Parent Company Guarantee in full accordance with the "Form of Parent Company Guarantee" as included as Annex 1/C to the AGREEMENT forming part of the Form of Contract, part of Call for TENDER No. THC19-5245.

Furthermore Additional text to be added here in case of Joint Venture or Consortium

For clarity we confirm that terms used in this letter which are in capitalized text shall and are defined in Call for TENDER No. THC19-5245 shall the meanings so defined.

Date _____ Signature(s) _____

ANNEX 6

(NOT USED)

ANNEX 7

REQUEST FOR CLARIFICATION

(This form is to be used for Tender Clarification during Tender Preparation stage
and to be submitted no later than fourteen (14) calendar days prior Tender closing date)

ANNEX 7

REQUEST FOR CLARIFICATION

1.0 REQUESTS FOR CLARIFICATION of the Call for Tender Package

- 1.1 All REQUESTS FOR CLARIFICATION (RFC) of the CFT Package shall be made, submitted and responded to as per Sections 5.2, 5.3, 5.4 and this Annex 7 of the ITT.
- 1.2 A RFC shall only be submitted if something in the CFT Package is not clear or for errors, omissions, deficiencies, inaccuracies, contradictions, ambiguities, discrepancies, mis-description, conflicts, contradictions and inconsistencies in the CFT Package.
- 1.3 Requests / proposals to deviate from the requirements of the CFT Package shall not be submitted as RFCs but shall be submitted as QUALIFICATIONS in Section 4 of Volume 1 of the TENDERER’S Technical Proposal (refer to Section 5.5 of the ITT).
- 1.4 RFCs shall be submitted on a progressive basis using the below described RFC Submission Form as native Excel file.
- 1.5 RFCs shall be submitted no later than 14 days before the Tender Closing Date (2nd paragraph of Section 5.3 of the ITT refers).

2.0 Guidelines for Filling Out the RFC Submission Form

2.1 The following pro-forma RFC Form shall be used.

Bundled Phases 3 Project (EPC Part)

CFT No. THC19-5245

REQUEST FOR CLARIFICATION FORM

Number Col-1	Contract Document			Dis. Col-5	Request for Clarification Col-6	RFC Attachment Col-7
	CD Ref. Col-2	Section Col-3	Technical Document / Drawing Reference Col-4			

Shall be filled out as per the requirements stipulated in ITT Annex-7 Table 1.

A native Excel file of RFC Form is attached in the PDF version of this ITT Annex 7.

2.2 Each RFC shall be filled out in accordance with the protocol in Annex 7 Table-1. The COMPANY reserves the right, but not as an obligation, to correct errors in RFCs.

TENDERERS are requested to use the attached proforma Excel sheet as follows:

Table-1: Protocol for Filling Out RFC Submission Form

Column	Requirements
Column-1 RFC Number	Enter a sequential RFC Number as AAA-NNNN, where AAA = TENDERER’S three letter short name identifier NNNN = Sequential number starting with 0001 then 0002, 0003 0004 etc. So if PTTEP was a TENDERER, the first sequential number of an RFC by PTTEP would be numbered PTT-0001.
Column-2	Enter the short name for the applicable CONTRACT DOCUMENT from the drop-down list in the RFC Form e.g.

Column	Requirements																										
CONTRACT DOCUMENT	<ul style="list-style-type: none"> EXA for Exhibit A EXA-A1 for Exhibit A Annex 1 EXA-A1 Att-1 for Exhibit A Annex 1 Attachment-1 																										
Column-3 Section Number	The applicable section of the referenced document shall be stated. Note: Always use an apostrophe ' in front of the section reference in the Excel RFC Form. This to allow easy sorting by the COMPANY.																										
Column-4 Document / Drawing Reference Number	Enter the applicable Technical Document / Drawing number e.g. TH-G1-61-1A-GEN-PRO-BOD-0001 Rev.C1 If possible only enter one Technical Document / Drawing in Column 4 per RFC and make reference to any others in the RFC question in Column 6.																										
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Column-6 REQUEST FOR CLARIFICATION	Each RFC shall: <ol style="list-style-type: none"> have a title, and describe what is not clear or the error, omission, deficiency, inaccuracy, contradiction, ambiguity, discrepancy, mis-description, conflict, contradiction or inconsistency, and contain a clear concise question. A RFC Attachment (PDF) shall be submitted for marked up extracts of the applicable docents / drawings.																										
Column-7 RFC Attachment	RFC attachments shall be numbered as 'AAA-XXXX Att-NN where 'AAA = TENDERER's three letter short name identifier XXXX = Sequential number starting with 0001 then 0002, 0003, 0004, etc. NN = The attachment number																										

3.0 COMPANY Responses to RFCs

- 3.1 The COMPANY at its sole discretion and decision will review and respond to timely and properly submitted RFCs by means of Tender Bulletin(s) as per the requirements of Sections 5.2 and 5.3 of the ITT.
- 3.2 Example of the Form of Tender Bulletins is shown below.

ANNEX 8

QUALIFICATIONS

(This form shall be submitted together in Section 4 of Volume 1 - Technical Proposal)

ANNEX 8

QUALIFICATIONS

1.0 Generally

1.1 QUALIFICATIONS shall be submitted in Section 4 of Volume 1 of the TENDERER's Technical Proposal as per the requirements of this ITT Annex 8 and Sections 3.4 and 5.5 of the ITT.

1.2 QUALIFICATIONS shall be categorized as either:

- 1) **Contractual**, concerning the ITT, AGREEMENT, Exhibit B, Exhibit E Annex 8 and Exhibit G Annexes 1 to 10, or
- 2) **Technical**, concerning Exhibit A, C, E, Exhibit E Annexes-1, 2, 3, 4, 5, 6, 7, 9, 10 and 11 and Exhibits H, I, J, K and L

1.3 Separate sheets shall be submitted for (1) Contractual QUALIFICATIONS and (2) Technical QUALIFICATIONS. Native Excel files of the pro-forma submission forms are attached in the PDF version of this ITT Annex 8.

2.0 Protocol for Filling Out QUALIFICATIONS Sheets

Column	Requirements																		
Column-1 QUALIFICATION Number	Number each QUALIFICATION as either AAA-CON-0001 or AAA-TEC-0001 where: AAA = TENDERER's three letter short name identifier CON = Contractual TEC = Technical NNNN = Sequential number starting with 0001 then 0002, 0003 etc.																		
Column-2 CONTRACT DOCUMENT	Enter the short name for the applicable CONTRACT DOCUMENT from the drop-down list in the RFC Form e.g. <ul style="list-style-type: none"> • EXA for Exhibit A • EXA-A1 for Exhibit A Annex 1 • EXA-A1 Att-1 for Exhibit A Annex 1 Attachment-1 																		
Column-3 Section Number	The applicable section of the referenced document shall be stated. Note: Always use an apostrophe 'in front of the section reference in the Excel RFC Form. This to allow easy sorting by the COMPANY.																		
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	PCC = Pre-comm and Comm. MWS = Marine Warranty Surveyor
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	EIC = Independent Engineering review, Inspection and Certification.
Column-6 QUALIFICATION	Each QUALIFICATION shall have a title and be a clear concise statement of the proposed deviation. If more space is needed than allowed in the Excel Cell, TENDERERS may submit an Attachment in PDF format, also for marked up extracts from the applicable documents / drawings.
Column-7 QUALIFICATION Attachment	QUALIFICATION attachments shall be numbered as 'AAA-CON-0001 Att-NN or 'AAA-TEC-0001 Att-NN where AAA = TENDERER's three letter short name identifier CON = Contractual TEC = Technical XXXX = Sequential number starting with 0001 then 0002, 0003 etc. NN = The attachment number 01, 02, etc.
Column-8 Reason for the QUALIFICATION	State and explain why the TENDERER cannot comply with the requirement of the CFT as updated by Tender Bulletins
Column-14 Indication of Price Impact (Y/N)	Indicate (Y/N) if there will be a price impact if the QUALIFICATION is not agreed to by the COMPANY. Do not enter the price impact in Column-15 until instructed by the COMPANY to do so.

3.0 Clarification of QUALIFICATIONS

3.1 QUALIFICATIONS shall be clarified and resolved / concluded on a per individual TENDERER basis during the evaluation of TENDERER's Technical Proposal.

Step-1 The COMPANY will consider QUALIFICATIONS from a TENDERER, mark up its responses in Column-9 (COMPANY's Response), Column-13 (Update FOC Y/N) and will return the updated QUALIFICATION sheets to the TENDERER by email.

Step-2 The TENDERER shall consider the COMPANY's response and shall enter in Column-10 (TENDERER's Reply) either:
a) Confirmation of its agreement, or
b) Provide its response.

The TENDERER shall return the updated QUALIFICATION Sheets to the COMPANY by email on or before the deadline stated by the COMPANY.

Step-3 The COMPANY will then update Column-11 (Resolution / Conclusion), Column-12 (Status) and share the updated QUALIFICATION Sheets with the TENDERER in advance of the Tender Clarification Meeting.

Step-4 The COMPANY will invite the TENDERER to a Tender Clarification Meeting to be held in the COMPANY's office in ENCO Building in Bangkok, Thailand.

4.0 Resolution / Conclusion of QUALIFICATIONS

- 4.1 A Tender Clarification Meeting (QUALIFICATIONS) shall be held with each TENDERER on an individual basis. The purpose being to verify and ensure that all QUALIFICATIONS for the TENDERER are closed out on or before the day of the Tender Clarification meeting.
- 4.2 The respective Contractual teams and Technical Teams will meet (separate meeting rooms) to resolve Contractual and Technical QUALIFICATIONS.
- 4.3 Priority will to discuss the top-ten QUALIFICATIONS only. Other QUALIFICATIONS may be discussed if time permits, subject to the condition that **All QUALIFICATIONS shall be closed on the day of the meeting.** TENDERERS shall ensure their meeting attendees have sufficient authority to agree / conclude without referral to others who are not attending the meeting.
- 4.4 Resolutions / Conclusions for QUALIFICATIONS in the QUALIFICATIONS Sheets will be updated by the COMPANY on a progressive basis during the Tender Clarification Meeting. At the end of the meeting the updated QUALIFICATION Sheets will be printed (two copies) and signed COMPANY and TENDERER representatives at the end as a true record. One set will be retained by the COMPANY and the other by the TENDERER.
- 4.5 If a QUALIFICATION from a TENDERER is not resolved / concluded prior to Stage 6 of the Tender Clarification Meeting it shall be considered withdrawn and the TENDERER shall comply with the requirement of the CFT Package as updated by Tender Bulletins in respect of the subject matter of the unresolved QUALIFICATION. The updated QUALIFICATION Sheets shall be annotated accordingly.
- 4.6 Remaining open Tender Clarifications (if any) shall also be discussed and to the extent feasible resolved on the day of the Tender Clarification Meeting.

ANNEX 9

CONFIRMATION LETTER FOR UNPRICED SUPPLEMENTARY PROPOSAL

ANNEX 9

CONFIRMATION LETTER FOR UNPRICED SUPPLEMENTARY PROPOSAL

(To Be Typed On The Parent Company Letterhead)

**PTT Exploration and Production Public Company Limited
PTTEP International Limited
PTTEP Energy Development Company Limited**

Energy Complex Building A, Floors 6, 19-36
555/1 Vibhavadi Rangsit Road, Chatuchak,
Bangkok 10900, THAILAND

Attention:

Call for TENDER No.: **THC19-5245**
Bundled Phases 3 Wellhead Platforms, Associated Pipelines, Brownfield Modifications and Tie-ins Project
(EPC Part)

Subject: Confirmation Letter for Unpriced Supplementary Proposal

Dear Sir,

We hereby confirm as follows:

- a) TENDERER agrees with the content of the attached Unpriced Supplementary Proposal without exception and or deviation, and
- b) All our QUALIFICATIONS (qualifications, deviations, exceptions) to TENDER DOCUMENTS are included the Unpriced Supplementary Proposal (copy attached) and that there are no further or outstanding; REQUEST FOR CLARIFICATION, TENDER CLARIFICATIONS, COMPANY GENERAL CLARIFICATIONS, QUALIFICATIONS, Deviations or Exceptions, and
- c) Within the QUALIFICATIONS, TENDER CLARIFICATIONS, COMPANY GENERAL CLARIFICATIONS Sheets in the Unpriced Supplementary Proposal we have indicated Y or N in the Column entitled "Adjustment to TENDER Price (+ve, 0, or -ve)".
- d) TENDERER will submit the Priced Supplementary Proposal (as per Item 7.2 b) of the Instructions to TENDERERS) without amendment or alteration strictly in accordance with COMPANY instructions when and if requested to do by the COMPANY.
- e) All impacts on the already submitted TENDER Price will be priced by us within the Priced Supplementary Proposal as Delta Price Adjustments (+ve, -ve or zero as applicable) against each of the individual line items as indicated in the Unpriced Supplementary Proposal.
- f) Terms used in this letter which are in capitalized text shall and are defined in Call for TENDER No. THC19-5245 shall have the meanings so defined.

Yours Sincerely

Name:

TENDERERs Duly Authorized Representative

Attachment – Unpriced Supplementary Proposal

ANNEX 10

SUMMARY TENDER PROPOSAL FORM

ANNEX 10

SUMMARY TENDER PROPOSAL FORM

**CALL FOR TENDER NO. THC19-5245
BUNDLED PHASES 3 WELLHEAD PLATFORM, ASSOCIATED PIPELINES AND TIE-INS
PROJECT (EPC PART)**

(Native file in Excel format is provided)

ANNEX 11

CONTRACTOR SSHE CAPABILITY ASSESSMENT QUESTIONNAIRE

ANNEX 11

CONTRACTOR SSHE CAPABILITY ASSESSMENT QUESTIONNAIRE

TENDERER is advised that a competent SSHE designate should review and prepare the SSHE response with appropriate input where necessary from the fabrication team in preparing responses and evidence related to Contractor SSHE Capability Assessment Questionnaire Sections 1 to 16 below. TENDERER should review any guidance notes provided within each section.

COMPANY Evaluation will be based on the quality of the written information received related to the subject matter, and where applicable the effectiveness of TENDERER assessment of requirements and content of supportive documents as requested which correlate with and where drafted for the purpose of the bidding process in alignment of the PROJECT related SCOPE OF WORK.

Sub Section 1: SSHE Policies	
TENDERER to provide SSHE Policies endorsed by top management, including as available	
<ul style="list-style-type: none"> • Security • Health • Safety • Welfare • Environment • Substance Abuse 	<ul style="list-style-type: none"> • Medical Check Up • Zero Tolerance • Stop Work Authority • PPE Policy • Work at Nights & Work Out Of Hours Policy • Work Near or Overwater Policy
<p>Guidance:</p> <ol style="list-style-type: none"> 1. As is common Industry practice, TENDERER may group Policies into one, <i>for example HSE or SSHE or SSHE and Welfare Policy.</i> 2. If specific Policies are not already established TENDERER may submit example Policies which he proposes to be later developed for Project and top management endorsement. 3. If TENDERER has other SSHE related Policies in place not listed above, TENDERER shall provide them to COMPANY for review. 	

Sub Section 2: SSHE Management System
<p>TENDERER to demonstrate SSHE Management System which contains the related SSHE documents to ensure safe operation as TENDERER is responsible for SSHE Management System to provide assurance that the personnel for whom he is responsible are qualified and healthy for the job and that the tools and machinery he is providing are properly maintained and suitable for the job.</p> <p>TENDERER shall submit following documents for review.</p> <ol style="list-style-type: none"> 1. Contractor SSHE Management System 2. Contract SSHE Monitoring Program 3. Contract SSHE Management Plan 4. Project Work Instruction

Sub Section 3: SSHE Statistics and Recovery Programs
<p>TENDERER to provide last five (5) years SSHE statistics compared to TENDERER SSHE annual targets for onshore operations [Fatality Rate, LTIR, TRIR, High Potential Incident Rate, and Major Accident rate].</p> <p>TENDERER to provide a summary table with brief details and root cause findings of any Fatality, Lost Time Incident, Restricted Work Day Cases, Medical Treatment Cases for each year over the previous five (5) years.</p> <p>TENDERER shall include with its previous five (5) Years submission to COMPANY a statistic improvement plan detailing the primary incident / accident causation trends and provide brief details of the initiatives and programs plotted against the performance trend timeline that have been taken to further promote improvement and arrest any deteriorating performance.</p>

Guidance:

1. The Frequency rates are to be based on 1,000,000 Man-hour frequency calculations

Sub Section 4: Key SSHE Personnel (Construction)

TENDERER shall provide CV, SSHE Certification and details of SSHE qualifications and experience as per Exhibit L requirements of the following positions:

5. Project SSHE Manager
6. Deputy SSHE Manager
7. SSHE Supervisor
8. SSHE Officer
9. SSHE Equipment Inspector
10. Working at Height SSHE Inspector
11. Transport Safety Advisor
12. Permit to Work Coordinator
13. Yard Nurse or Doctor

Guidance:

1. TENDERER is advised to carefully review SSHE Exhibit L and Exhibit K.
2. Medical Personnel shall be approved by the Government Medical Board in the country of assignment.
3. Permit to Work Coordinators shall be part of the SSHE Team to avoid unnecessary work conflict.

Sub Section 5: Key Project Personnel (Engineers)

TENDERER shall provide CV demonstrating SSHE experience of the following proposed personnel:

1. Project Lead Discipline
2. Project Engineers
3. Lead Engineers
4. Technical Safety Engineers

Guidance:

Project team experience both operational and technical safety in contractor company with three (3) years up

- Operational Safety
- HAZID, HAZOP
- Safety Studies such as consequence analysis, SIL
- Quantitative/Qualitative Risk Assessment
- Safety Loss Prevention

Sub Section 6: SSHE Organisation and Histogram

TENDERER shall provide draft Project SSHE Organisation and Histogram detailing the number of Site SSHE personnel and providing industry recognised qualified SSHE discipline personnel related to the ratio of 1:100 based on the estimated Project discipline Histogram; and covering all yards to be utilised for the Project as may be applicable.

Guidance:

1. The Histogram shall indicate the number of SSHE disciplines for each SSHE function, based as a minimum on the Project Proposed Discipline Histogram.
2. All SSHE functions shall be engaged directly within the Project SSHE department and reporting directly to the Project SSHE Manager and have the required SSHE certification, qualification and experience comparable to requirements of Exhibit L.
3. High Risk WORKS, High Risk Threat Locations and Remote Locations may require SSHE functions to be assigned in excess of this 1:100 Ratio. TENDERER should consider this in the presented Organisational Chart and Histogram and provide statements highlighting the need for increased SSHE functions accordingly.
4. All functions are considered to be assigned on a full-time basis to the Project, if functions are to be established part-time or ad-hoc basis to the project this is to be clearly identified and justification provided.

5. “Safety in Charge” and SSHE Personnel without formal qualification are not considered as part of the SSHE Ratio. The functions must be dedicated to and report to the SSHE Department, and be on a clear path to SSHE Certification refer to Exhibit L for consideration regarding ratio assignment criteria.
6. TENDERER should thoroughly assess the SCOPE of WORK, locations, facilities and Project Risks in developing the details of functions necessary to ensure successful completion of the Project.

Sub Section 7: Project SSHE Execution Plan:

TENDERER shall provide an example Project SSHE Execution Plan (Planner/Timeline) or schedule of both preparation and execution phase’s (separate for Onshore and, Offshore) detailing specific key SSHE elements to be established for the project as applicable.

- Guidance:
- Purpose is to assess TENDERERS SSHE planning in relation to SSHE Preparation and Execution Phases for key phases of the Project. Therefore the execution plan examples should be a timeline (SSHE elements schedule during preparation and execution) detailing establishment of execution deliverables and also the Execution impletion of the SSHE elements proposed.
 - TENDERER is expected to develop the SSHE Execution Plans for Onshore Scope and link with the SSHE Incentive Program.

Sub Section 7.1: SSHE Performance Report

TENDERER shall closely monitor their SSHE performance and establish frequent SSHE Reports that track performance against Project set targets. TENDERER shall provide example Project SSHE Reports, detailing targets; Targets shall be set for *Leading and Lagging* Indicators for example:

- Observations Cards and Hazard Report Cards
- Number of Inductions, Personnel Trained, Inspections, Tool Box talks, Management Walkthroughs, Mass Meetings, Safety Committee Meetings, Permits Raised, HAZIDs, Emergency Drills & Excercises
- Number of Inspections, Percentage (%) Target close out on week to week or monthly basis
- Trending and Classification Graphs for Incidents, Anomolies
- Percentage (%) Target Rating for Site Weekly SSHE Management and Health and Hygiene Inspections

- Guidance:
1. TENDERER should indicate his proposed targets for the Lagging Indicators (Frequency Rates) based on anticipated (budgeted man-hours for the Project)
 2. Also list the anticipated Leading Indicators and relevant targets to be achieved for each, as TENDERER deemed applicable for the Project.

Sub Section 8: Project SSHE Risk Assessment

TENDERER shall review and populate the Project SSHE Risk Ranking as per ITT Annex 11 Attachment 1 herewith, as provided by COMPANY;

- The pre-populated SSHE Hazards shall be assessed considering Project scope, and TENDERERS onshore activity. The qualification risk ranking shall be based on the COMPANY SSHE Risk Matrix as provided in Annex 3 of Exhibit L.
- TENDERER should consider the hazards without any risk mitigations, (initial risk) thereafter TENDERER shall detail the proposed risk mitigations and safety controls which TENDERER considers would if implemented reduce the risk and reassess the risk ranking which demonstrate risk values may be reduced to as low as possible.

- Guidance:
- Purpose of the activity is to assess TENDERER concept and acknowledgement of Project related SSHE risks and the anticipated risk mitigation options it would consider during execution.

- In the event of award the document shall be utilised as applicable in preparation of specific Work Instructions, Job Safety Analysis and any relevant top hazards included within monthly Project Risk Management reviews.

Sub Section 9: Training and Coaching

TENDERER is to provide a SSHE training Matrix for onshore scope of work covering Contractor and Sub-Contractor personnel and the coaching and training needs of the Project. Training shall be indicated as either internal or third party providing due consideration to the COMPANY Training standards and requirements of in country law. Details shall be included with regard to how Worker Competency and SSHE Assessment / Assurance is established and maintained throughout the life cycle of the Project.

- | | |
|---|--|
| <ul style="list-style-type: none"> • Induction and Orientation Programs • SSHE functions competency and training • Site Coaching • Discipline certification and training • Activity training i.e. work at height, confined space | <ul style="list-style-type: none"> • Emergency Response Personnel and teams • HSE leadership programs and training • JSA and Risk Assessment training • Permit To work • Hazard Awareness • SSHE Rules |
|---|--|

Guidance:

Purpose of the activity is to assess whether TENDERER has established systems for assessing personnel competency and training personnel to meet with required industry and SSHE standards.

Sub Section 9.1: SSHE Training Gap Analysis

TENDERER shall review COMPANY Training and Competency Standard SSHE-106-STD-340 as provided in Exhibit L and undertake a GAP Analysis in comparing its own Training systems. Provide an analysis report aligned with table format provided below shall be provided for review.

Guidance:

- The purpose of this deliverable is to provide confidence that the TENDERER has reviewed COMPANY SSHE Exhibit L related training articles, and Exhibit L Annexes in regards to; Training Standards and SSHE Instructions (where applicable), where necessary TENDERER will acknowledge the intention to upgrade his own systems wherever applicable or indicate where his systems match, or exceed the requirements.
- TENDERER shall see Form of Contract Exhibit L Annex 5 for Gap analysis template to be used for SSHE traing gap analysis.

Sub Section 10: Resources and Sub-Contractor Management

TENDERER to provide details of its proposed Sub-Contractors for its Fabrication phase and details its SSHE Selection and Qualification Process (SQP) assigned in assessing the SSHE-Management systems and SSHE Competency of the Sub-Contractors both pre-selection and post award.

- Where Sub-Contractors proposed have yet to be awarded scopes of the WORK then TENDERER shall clearly identify how it proposes to validate the suitability of the Sub-Contractor for the Scope of Work.
- Where Sub-Contractors have already been awarded TENDERER is to provide the latest SSHE SQP Assessments and any improvement actions assigned.

Guidance:

Purpose of the activity is to assess whether TENDERER has established adequate systems for Prequalification and Selection of Sub-Contractors.

Sub Section 10.1: Post Award Assurance Program (Sub-Contractor Management)

TENDERER to provide details of its program established in continued SSHE assessment and Competency Assurance of the/ its proposed Sub-Contractors as well as the Competency and Health of their workers.

Guidance:

Purpose of the activity is to assess how the TENDERER, once WORKS are awarded, monitors and tracks the organisations SSHE performance and how it assures the competency, health of their workers.

<p>Sub Section 11: Contract SSHE Requirements and Deliverables</p> <p>TENDERER to provide details of how it will cascade the Project Contractual and Site SSHE and Performance requirements to its Sub-Contractor Management and their Personnel. Especially when considering COMPANY and Project Policies, provisions, standards, arrangements, competencies, objectives, Exhibit L, penalties and SSHE Incentive as established to promote focus on leading indicator performance.</p> <p>Furthermore, TENDERER is to provide example Sub-Contractor Contract SSHE articles for COMPANY review and indicate what revisions may be made in considering COMPANY SSHE Requirements as laid down in Exhibit L and associated Annexes.</p> <p>Guidance: Purpose of the activity is to assess how TENDERER cascades the SSHE requirements of the Project Contract to its Sub-Contractors. <i>In absence of TENDERER own similar site standard instructions TENDERER is advised refer to the SSHE Requirements for SUB-CONTRACTORS in Exhibit L and may refer to this document in confirming some of its response to this requirement.</i></p>
--

<p>Sub Section 12: Equipment/ Tools/ Plant / Supplies Control, Inspection, Maintenance and Certification System Procedure</p> <p>TENDERER shall provide details of how it ensures that equipment both TENDERER and Sub-Contractor is maintained in a safe working condition as per manufacturer design and operation intent and in compliance with in country REGULATION and the requirements of Exhibit L.</p>	
<ul style="list-style-type: none"> • Onshore Cranes / Lifting Equipment and or Mobile Plant used for Lifting (materials and personnel) • Onshore Lifting Gear (materials and personnel) • Mobile Elevated Systems used for work at heights • Compressors, Generators, Welding Sets; including those used in ZONED environments • Pressure Testing Equipment and Systems • Vehicles and Mobile Plant 	<ul style="list-style-type: none"> • Electrical Tools and Supplies • Scaffolding • Radiography Sources & X-Ray equipment • Industrial Gases • Safety Critical Equipment • Safety Critical and Emergency Equipment
<p>Guidance:</p> <ul style="list-style-type: none"> • The Programs or Procedure provided shall clearly identify the user, electrical and mechanical technician site arrival and pre-use recorded checks and certification validation process; including any equipment “safety passport” as issued by the TENDERER and the frequency of inspections as undertaken in relation to the use of the item or equipment. Equipment, Plant, Tools Programs COMPANY anticipates TENDERER will consider. • TENDERER is to provide in support to his inspections program example inspections records and related tagging systems. 	

<p>Sub Section 13: Management of Lifting Operation</p> <p>TENDERER shall demonstrate Lifting operation management system as following;</p> <ul style="list-style-type: none"> - Usage of cranes will be undertaken by a minimum of four competent personnel (crane supervisor, crane operator, signal man and rigger) as per Thai regulation. - Lifting Plan - Training Certificate - Lifting Equipment Certificate - Lifting Equipment Maintenance Record - Lifting Operation Risk Assessment and JSA

<p>Sub Section 14: Emergency Response Plan</p> <p>TENDERER shall evaluate the emergency situation for Project execution and provide examples for Onshore, Scope;</p>

- Medical Emergency Response Plans Onshore, considering where applicable and Remote working and the competency of Medical Response Personnel, Response Timings.
 - General Emergency Response and Contingency Plan, covering all potential events onshore and offshore and environments as well as hydrocarbon facilities where applicable.
 - Security Management
- Tenderer shall provide an example list of Safety Critical Emergency Equipment proposed for Onshore. Tenderer shall provide an example of Emergency Response Team Organisation Chart for Onshore considering;
- Management
 - Onshore Support
 - Medical Response Organisation (MRO) / Treating Hospitals
 - Fire Fighters
 - Muster Checkers
 - Medical Response Team
 - Recover from heights and confined spaces
 - Spill

Guidance:

Purpose of the activity is to assess whether TENDERER has robust systems for effective emergency response and contingency. Tenderer shall review Exhibit L relevant articles and refer to included Annex Emergency Standards and Procedures. If TENDERER own plans do not meet with COMPANY requirements, they are advised to provide details on how they plan to bridge the GAPS.

Sub Section 14.1: Emergency Preparedness

TENDERER shall provide details of Emergency Drill and Exercise Program for Onshore and example reports with improvement actions

Guidance:

Purpose of the activity is to assess whether TENDERER has robust systems for testing his own systems.

Sub Section 15: Green Procurement

Refer to Exhibit G Annex 2 Procurement and Material Control, Attachment-2 Green Procurement Process

TENDERER shall confirm its "Green Procurement" Process,

- Shall provide its Policy and "OR" management system with related to environmentally friendly process, for example related to; pollution prevention, ISO 14001 (if applicable, not mandatory), energy saving, GHG reduction, etc.
- To provide details of its awareness campaigns with related to environmental awareness.
- To provide Procedure or work instruction for waste management covering, for example; waste minimization (e.g. reduce, reuse, recycle concepts) and proper waste disposal.
- To provide details prevention methods / controls for related air pollution, wastewater, wastes to environment.
- To provide details of its Procedure/work instruction for oil/chemical handling and spill response.
- To provide details of its Procedure/work instruction Preventive maintenance program for equipment and facilities related to pollution treatment unit e.g. air emission treatment for paint shop, oil separator.
- To provide details tracking system for material and consumables utilization and waste minimization.
- To provide details system for ensuring painting products are low Volatile Organic Compound (VOC) or registration of "GREEN or ENVIRONMENTALLY FRIENDLY LABEL" or equivalent.
- Employees and workers participation program in environmental concern.
- To provide details of pending environmental complaints / convictions of any environmental related offense TENDERER shall complete the required documents under Exhibit G Annex 2 Procurement and Material Control, Attachment-2 (Green Procurement Process) and provide supportive evidence to the required queries of the questionnaire.

Guidance:

Purpose of the activity is to assess whether TENDERER has robust systems for GREEN Procurement considering the life cycle of product purchase, storage, use, and disposal as well as spill response and

the environmental awareness of the personnel employed. Furthermore, its activity emissions and concepts for reducing its environmental foot print during Project execution.

Sub Section 16: Medical Check Up Programs (MCU)

TENDERER shall provide workers who are medically fit to safely perform the tasks related to their specific jobs. TENDERER shall provide details of the MCU provided for its own personnel and required with its Sub-Contractors considering General and Discipline specific both MCU and that related to requirements of in country LAW and TENDERER own systems considering discipline risks.

Guidance:

Purpose of the activity is to assess whether disciplines including Sub-Contractors receive adequate employment, annualised and discipline specific MCU in meeting with Law.

<p>PROJECT SSHE RISK ASSESSMENT</p> <p>Annex 11 Contractor SSHE Capability Assessment Questionnaire</p> <p>Attachment-1: Project SSHE Risk Assessment</p>	
Project Risk Ranking/ Assessment	
1. Contract Title: BUNDLED PHASES 3 WELLHEAD PLATFORMS, ASSOCIATED PIPELINES, BROWNFIELD MODIFICATIONS AND TIE-INS PROJECT (EPC PART)	
2. Contract No:	THC19-5245

Note:

<p>TENDERER shall review and populate the Project SSHE Risk Assessment as per this format.</p> <ul style="list-style-type: none"> • The pre-populated SSHE Hazards shall be assessed considering Project scope, and TENDERERS onshore activities. The qualification risk assessment shall be based on the COMPANY SSHE Risk Matrix as provided and Standard BS EN ISO 17776:2016 Petroleum and natural gas industries. Offshore production installations. Major Accident hazard management during the design of new installations. • TENDERER should consider the hazards without any risk mitigations, (initial risk) thereafter TENDERER shall detail the proposed risk mitigations and safety controls which TENDERER considers would if implemented reduce the risk and reassess the risk ranking which demonstrate risk values may be reduced to as low as possible.
<p>Guidance:</p> <ul style="list-style-type: none"> • TENDERER is expected to update the Risk Ranking table Mitigations and contingencies accordingly. • Purpose of the activity is to assess TENDERER concept and acknowledgement of Project related SSHE risks and the anticipated risk mitigation options it would consider during execution. • In the event of award, the document shall be utilized as applicable in preparation of specific Work Instructions, Job Safety Analysis and any relevant top hazards included within monthly Project Risk Management reviews. • TENDERER if successful will utilize and continually revise this document under the Project Monthly Risk Assessment. • TENDERER at its own discretion may additional activity activities and assess accordingly; utilizing COMPANY Risk Standard and BS EN ISO 17776:2016 as necessary. • The Initial Risk Rankings are subjective assessment and will be revised with Project Team during execution.

- Part 1: Project Management Risk Assessment
- Part 2: Onshore Fabrication Risk Assessment

Risk Matrix

Tenderer is advised to confirm the Matrix revision validity within Exhibit L and SSHE Risk Management Standard SSHE-106-STD-400.

Impact Rating	Property damage (**)	People (*)	Environment (***)	Image / Reputation	Likelihood				
					Rare (1) Event occurrence is remote and/or never heard of in the EP industry	Unlikely (2) Event has occurred a few times in the EP industry or is unlikely to occur in PTTEP	Possible (3) Event has occurred several times in the EP industry or occurred once in PTTEP or may occur in PTTEP	Likely(4) Event has occurred several times per year in the EP industry or more than once per year in PTTEP or occurred in the same location or is likely to occur in PTTEP	Almost certain (5) Event has occurred frequently in the EP industry or occurred more than once per year at the same location or is expected to occur in PTTEP
Critical (5)	Loss > \$50M	Multiple fatalities	<ul style="list-style-type: none"> Spill > 100,000 bbl Tier 3 International assistance 	<ul style="list-style-type: none"> International media coverage Formal complaint from international authority 	Note (1) MEDIUM (5, 1)	Note (1) MEDIUM (5, 2)	HIGH (5, 3)	HIGH (5, 4)	HIGH (5, 5)
Serious (4)	Loss between \$5 - 50M	<ul style="list-style-type: none"> Multiple LWDC One permanent disability One fatality 	<ul style="list-style-type: none"> Spill > 10,000 bbl Tier 2 Regional assistance 	<ul style="list-style-type: none"> National media coverage Local community protest with national influencer 	MEDIUM (4, 1)	MEDIUM (4, 2)	MEDIUM (4, 3)	HIGH (4, 4)	HIGH (4, 5)
Significant (3)	Loss between \$100K - 5M	<ul style="list-style-type: none"> Single LWDC Multiple RWDC 	<ul style="list-style-type: none"> Spill > 1,000 bbl Tier 1 Localised effect 	<ul style="list-style-type: none"> Regional media coverage Online media spread Local community protest with provincial / state influencer 	LOW (3, 1)	MEDIUM (3, 2)	MEDIUM (3, 3)	MEDIUM (3, 4)	HIGH (3, 5)
Moderate (2)	Loss between \$10K - 100K	<ul style="list-style-type: none"> MTC Single RWDC 	<ul style="list-style-type: none"> Spill > 1 bbl Minor effect 	<ul style="list-style-type: none"> Local media interest influencer Online media post Local community aggregation 	LOW (2, 1)	LOW (2, 2)	MEDIUM (2, 3)	MEDIUM (2, 4)	MEDIUM (2, 5)
Minor (1)	Loss < \$10K	Minor injury with First Aid	<ul style="list-style-type: none"> Spill < 1 bbl Slight effect 	<ul style="list-style-type: none"> No news coverage Non-influenced online media post Local community complaint 	LOW (1, 1)	LOW (1, 2)	LOW (1, 3)	Note (2) MEDIUM (1, 4)	Note (2) MEDIUM (1, 5)

Part 1: Project Management Risk Assessment

Note: Risk Ranking is made without consideration of Safety Precautions and Contingencies have no bearing on the risk ranking and are related to “response” arrangement in the event the risk is realized and a loss occurs).

Project Step / Activity	ISO Hazard Reference	Element: SA - Safety SE - Security H - Health E - Environment	Hazards Arising	Hazard Initiated by	Consequences	Initial Risk Evaluation		Risk Ranking Impact x Likelihood	SSHE Precautions (Risk mitigations to prevent hazard occurring) What will be implemented to reduce the Risk to ALARP	Contingencies (Emergency & Crisis arrangements, spare equipment, back up plans if applicable)	Post Risk Ranking (Residual Risk Impact x Likelihood)
						Impact (Consequence)	Likelihood (Frequency)				
Site to Site / Facility Travelling/ Transportation	21.15 21.16	SA, SE	<ul style="list-style-type: none"> Collision Break down Speeding Detention / Fines by authorities fatigue Unfit 	<ul style="list-style-type: none"> Poor driver competency / inability related to defensive driving Poor vehicle condition No journey management assessment Drugs & Alcohol No MCU/ UDAT Long driving hours 	<ul style="list-style-type: none"> Injury, Fatality Reputation Delay 	4	3	12 (medium)	<ul style="list-style-type: none"> Defensive driver training Vehicle minim standards and inspections Driver license Driver SSHE Rules UDAT Program Fit To Work program / eye tests Journey Management Control / Planning Fatigue Management 	<ul style="list-style-type: none"> ERP First Aid kits Fire Extinguisher Break down equipment Means of communication 	
Work Permit Arrangement (Services to Company/ Contractor and Sub-Contractor personnel)		SA, SE	<ul style="list-style-type: none"> Detention of personnel by authorities 	<ul style="list-style-type: none"> Lack of assessment in relation to visa / WP process Company and Contractor 	<ul style="list-style-type: none"> Detained by authorities Reputation Project Delay 	3	3	9 (medium)	-		
Accommodation Arrangements (Services to Company/ Contractor and Sub-Contractor personnel)	27.02 24.04 24.05 24.06	SA, SE, H, E	<ul style="list-style-type: none"> Health Impacts Fire / Explosion Security 	<ul style="list-style-type: none"> Ineffective assessment of facilities 	<ul style="list-style-type: none"> Injury Ill-health Project damage Delay Thefts/ assaults 	4	3	12 (medium)	-		
Employment of Sub-Contractors	27.02 27.04	SA, SE, H, E	<ul style="list-style-type: none"> Disputes/ Strike 	<ul style="list-style-type: none"> Delayed payment to subcontractor salaries Poor Cash Flow 	<ul style="list-style-type: none"> Reputation Project Delay 	4	4	16 (high)	-		
Country - Socio Political Events Employment of local workforce (avoid dispute) / Elections & Religious Events, Labour days (protests)	27.04 27.02	SE, SA	<ul style="list-style-type: none"> Dispute with local community 	<ul style="list-style-type: none"> Ineffective CSR plan Poor CSR consultation process and plan 	<ul style="list-style-type: none"> Reputation Project Delay Injury 	3	3	9 (medium)	-		
Natural Disasters/ Weather	9.01 9.02 9.03 25.09 24.04 24.05	SA, E, SE, H	<ul style="list-style-type: none"> Earthquake Storm / Lightening Flooding Security Impacts: Civil Unrest Water & Food Borne Bacteria 	<ul style="list-style-type: none"> Natural event 	<ul style="list-style-type: none"> Project Delay Injury/ fatality Ill-health Damage Fire/ Explosion 	4	3	12 (medium)	-		

Part 2: Onshore Fabrication Risk Assessment

Note: Risk Ranking is made without consideration of Safety Precautions and Contingencies have no bearing on the risk ranking and are related to “response” arrangement in the event the risk is realized and a loss occurs).

Project Step / Activity	ISO Hazard Reference	Element: SA - Safety SE - Security H - Health E - Environment	Hazards Arising	Hazard Initiated by	Consequences	Initial Risk Evaluation		Risk Ranking Impact x Likelihood	SSHE Precautions (Risk mitigations to prevent hazard occurring) What will be implemented to reduce the Risk to ALARP	Contingencies (Emergency & Crisis arrangements, spare equipment, back up plans if applicable)	Post Risk Ranking (Residual Risk Impact x Likelihood)
						Impact (Consequence)	Likelihood (Frequency)				
Award / appointment of Fabrication Sub-Contractors	25.12 25.13 25.14 25.15 25.16	SA, SE, H, E	<ul style="list-style-type: none"> Unaware of Hazards/ Lack of Awareness Unaware of SSHE systems Incompetent personnel Poor SSHE culture Contractor Leadership "standoff" – Sub-Contractor responsibility 	<ul style="list-style-type: none"> Lack of effective Pre-Selection and Qualification process Ineffective cascading of Contract SSHE requirements 	<ul style="list-style-type: none"> Increased frequency and severity of Incidents/ accidents Project Delay Downgrade SSHE incentive Injury, damage, delay Reputation Incentive \$ Downgrade 	4	4	16 (high)	<ul style="list-style-type: none"> Effective Pre-Selection and Qualification Process Contract Exhibits include details of HSE and cascade requirements of Project including and \$ Weighted requirements Clear HSE Deliverables established for Sub-Contractor Effective Induction & Training Program and certification verification Competent Supervision Audit and Inspection corrective action plans Sub-Contractor HSE Performance reports and reviews Developed Project SSHE rules with Company Life Saving Icons 	<ul style="list-style-type: none"> Approved ERP Approved ERT Tested ERT Systems Alternate Sub-Contractors pre-selection 	
Award / appointment of Fabrication & Offshore Sub-Contractors	As above	SA, SE, H, E	<ul style="list-style-type: none"> Focused on Productivity Poor SSHE culture/ attitude Sub-Contractor dispute 	<ul style="list-style-type: none"> No SSHE deliverables within Contract terms Contracts department failure to review Project Terms and Conditions for Sub-Contractor T&CS 	As above	4	4	16 (high)	-	-	
Work / Task Supervision	26.06 25.13 25.14 25.15 25.16	SA,H, E	<ul style="list-style-type: none"> Poor SSHE Competency of Supervisor Stop Work conflicts with Company during execution phase Productivity Focus 	<ul style="list-style-type: none"> Project Delay Injury Damage 	<ul style="list-style-type: none"> Injury Damage Delay Reputation Incentive \$ Downgrade 	4	4	16 (high)	-	-	
Onsite Transportation	29.01 21.15 21.16	SA, H,	<ul style="list-style-type: none"> Pedestrians/ other vehicles Speeding Unfit Drugs and Alcohol 	<ul style="list-style-type: none"> Poor driver competency / inability related to defensive driving Poor vehicle condition Lack of speed limitations / Site Rules No MCU / UDAT 	<ul style="list-style-type: none"> Injury Damage Delay Reputation Incentive \$ Downgrade 	4	3	12 (medium)	-	-	

Work at Nights/ Overtime	25.14 25.15 25.16 26.04 26.05 25.09	SA	<ul style="list-style-type: none"> Fatigue Darkness / shadow Unfit 	<ul style="list-style-type: none"> Ineffective work planning No Policy for Overtime / Out Of hour working Lack of lighting Lack of supervision 	<ul style="list-style-type: none"> Injury Damage Delay Incentive \$ Downgrade 	3	3	9 (medium)	-	
Mobilization of personnel	25.13 25.12 29.01	SA, H	<ul style="list-style-type: none"> Mismatch of work to physical abilities Unfit 	<ul style="list-style-type: none"> Ineffective personnel assessment Lack of Supervision Lack of effective MCU Ineffective Induction No Green Hat Policy 	<ul style="list-style-type: none"> Injury Damage Delay Incentive \$ Downgrade 	3	3	9 (medium)	-	
Work at Heights	6.01 6.02 6.03 25.12	SA	<ul style="list-style-type: none"> Personnel at height >2m Personnel at height <2m Overhead equipment Mismatch of work to physical abilities 	<ul style="list-style-type: none"> Inadequate access arrangement No WAH policy Lack of Fall protection system Lack tool lanyard Poor housekeeping No Cordon below work 	<ul style="list-style-type: none"> Injury Fatality Damage Reputation Delay Incentive \$ Downgrade 	4	3	12 (medium)	-	
Lifting using Cranes & Lifting using Mechanical means other than cranes	6.03 9.01 15.04	SA	<ul style="list-style-type: none"> Overhead equipment Bad weather/ winds/ lighting Dropped object Failure of equipment Nip point 	<ul style="list-style-type: none"> Competence No work area cordon Bad weather Lack of impact glove/ load control Lifting overhead 	<ul style="list-style-type: none"> Fatality Injury Damage Delay Reputation Incentive \$ Downgrade 	4	3	12 (medium)	-	
Naked Flame Hot Work	31.0 11.03 2.03 2.04 3.01 19.06 20.06	SA, E	<ul style="list-style-type: none"> Fire / explosion Use of propane / LPG Smoke/ Fumes 	<ul style="list-style-type: none"> Gas cylinders leak Fuel storage Work conflicts Poor Housekeeping/ combustibles Hot Sparks/ Slag 	<ul style="list-style-type: none"> Injury Damage Delay Incentive \$ Downgrade 	3	3	9 (medium)	-	
Use of Grinders/ Hand Held Grinding Machines	8.04 8.05	SA	<ul style="list-style-type: none"> Use of hazardous hand tools (grinding, sawing) Equipment with moving or rotating parts Fire / explosion Use of propane / LPG Disc failure 	<ul style="list-style-type: none"> Gas cylinders leak Fuel storage Work conflicts Poor Housekeeping/ combustibles Hot Sparks/ Slag Incorrect disc 	<ul style="list-style-type: none"> Injury Fatality Damage Delay Reputation Incentive \$ Downgrade 	4	4	16 (high)	-	
Confined Space Entry	19.01 19.02 20.02 25.09 25.04	SA	<ul style="list-style-type: none"> Insufficient oxygen atmospheres Excessive CO2 Smoke/ Fumes (hot work/ exhausts) Darkness/ Shadow Drowning / Heat Stress 	<ul style="list-style-type: none"> Running Mobile plant Hot Work Inadequate lighting Entry to Restrictive/ enclosed space / Excavation Water Ingress 	<ul style="list-style-type: none"> Injury Fatality Damage Reputation Delay Incentive \$ Downgrade 	5	4	20 (high)	-	
Blasting	22.12 31.01 19.01 15.05	SA, E	<ul style="list-style-type: none"> Dusts Fire / explosion Insufficient oxygen Static 	<ul style="list-style-type: none"> Inadequate air supply Hot Work conflict 	<ul style="list-style-type: none"> Injury Fatality Damage Reputation 	4	4	16 (high)	-	

Bundled Phases 3 Wellhead Platforms, Associated Pipelines, Brownfield Modifications and Tie-ins Project
(EPC Part)

	25.03 25.04 25.09		<ul style="list-style-type: none"> Respiratory damage Ingress sensitivity equipment / piping Hearing damage Heat Stress Darkness 	<ul style="list-style-type: none"> Blasting Media friction Hazardous Media contains Silica Lack of preservation Noise Lack of area control Inadequate lighting 	<ul style="list-style-type: none"> Delay Incentive \$ Downgrade 					
Pressure Testing	5.02 5.04 25.02 25.03 12.01 25.04		<ul style="list-style-type: none"> Overpressure Hearing damage Rupture Cold burns (N2/ He) Heat Stress 	<ul style="list-style-type: none"> Water under pressure in pipework's Lack of area control Air under high pressure Damaging noise release from valves/ gauges Non-hydrocarbon gas under pressure in pipework's Pressure Shock/ Hammer Cold surfaces 	<ul style="list-style-type: none"> Injury Fatality Damage Reputation Delay Incentive \$ Downgrade 	4	4	16 (high)	-	

PART II
FORM OF CONTRACT

(This part contains pages in total)



**PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED
PTTEP INTERNATIONAL LIMITED
PTTEP ENERGY DEVELOPMENT COMPANY LIMITED**

FORM OF CONTRACT FOR CFT No. THC19-5245

WITH

.....

FOR

**BUNDLED PHASES 3 WELLHEAD PLATFORMS, ASSOCIATED PIPELINES,
BROWNFIELD MODIFICATIONS AND TIE-INS PROJECT**

(EPC PART)

AGREEMENT and Annexes

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ANNEX-10	Form of NOTICE TO PROCEED

RECITALS

THIS CONTRACT, is made and entered into this day of 2020,

BY AND BETWEEN

PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED, (“PTTEP”), a company organized and existing under the laws of Thailand, having its registered office at 555/1, Energy Complex Building A, Floors 6, 19 – 36, Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand, acting as Operator for and on behalf of Blocks 14A, 15A and 16A in the Gulf of Thailand (“ARTHIT Concession”) for the Arthit Consortium which is presently comprised of :

	Shares of Interest
- PTT Exploration and Production Public Company Limited	80 %
- Chevron Thailand Exploration and Production, Ltd.	16 %
- MOECO Thailand Company Limited	4 %

PTTEP INTERNATIONAL LIMITED, (“PTTEPI”), a company organized and existing under the laws of Thailand, having its registered office at 555/1 Vibhavadi Rangsit Road, Energy Complex Building A, Floors 6, 19 - 36, Chatuchak, Bangkok 10900, Thailand, acting as Operator for and on behalf of Block G8/50 in the Gulf of Thailand for the G8/50 Consortium which is presently comprised of:

	Shares of Interest
- PTT International Limited	80 %
- Chevron Thailand Exploration and Production, Ltd.	16 %
- Siam MOECO Limited	4 %

PTTEP ENERGY DEVELOPMENT COMPANY LIMITED, (“PTTEP ED”), a company organized and existing under the laws of Thailand, having its registered office at 555/1, Energy Complex Building A, Floors 6, 19 – 36, Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand, acting as an operator

(i) for and on behalf of Block G1/61 for the G1/61 Consortium which is presently composed of::

	Shares of Interest
- PTTEP Energy Development Company Limited	60%
- MP G2 (Thailand) Limited	40%

(ii) and for Block G2/61 on its own behalf.

PTTEP, PTTEPI and PTTEP ED are referred to individually and collectively herein as “COMPANY”, as the context may require.

AND

..... (hereinafter referred to as the “CONTRACTOR” and/or “EPC CONTRACTOR”), a company organized and existing under the laws of, having its registered office at and represented by in his/her capacity as

WITNESSETH

WHEREAS, the COMPANY in support of its hydrocarbon activities, hereby entrusts the EPC CONTRACTOR to perform the EPC WORK including; project management, engineering, procurement services, supply, onshore construction, commissioning (to the extent specified), transportation, preparation for relocation of existing wellhead topside, brownfield modifications, and EPC WORK all in accordance with the terms and requirements of this CONTRACT, and if requested, to provide assistance to the COMPANY during offshore commissioning and start up as per sub-article 14.11.

WHEREAS, the EPC CONTRACTOR represents and warrants that he possesses the necessary knowledge, expertise, that he is fully experienced and is technically and otherwise competent to perform the EPC WORK, that he has the required facilities, that he is properly financed, organized, equipped, resourced and that he has the required experienced and qualified PERSONNEL to perform the EPC WORK in accordance with the terms and requirements of this CONTRACT.

NOW THEREFORE, the PARTIES agree as follows:

Article 1 **Object of the CONTRACT**

1.1 Performance of the EPC WORK

The COMPANY hereby entrusts the EPC CONTRACTOR with the performance of the EPC WORK and the EPC CONTRACTOR hereby agrees to perform and complete the EPC WORK in full compliance with the terms and the requirements of this CONTRACT.

1.2 Remedying of Defects and Deficiencies

The EPC CONTRACTOR shall, subject to sub-article 20.2, remedy defects and deficiencies in the EPC WORK, PLANT components and related items in compliance with the terms and requirements of this CONTRACT.

1.3 Fit for Purpose Requirements

The EPC WORK, the related PLANT components, and related items shall be fit for the purposes for which they are intended in accordance with this CONTRACT. However, if such purposes are not stated for any part of a PLANT component or for any of the EPC WORK it shall be fit for its ordinary purpose.

Article 2 **Definitions and Interpretation**

2.1 Definitions

The following expressions and derivatives thereof, appearing in upper case letters in this CONTRACT shall have the meaning hereby assigned to them. Unless otherwise specified, it being understood that such expressions appearing in lower case letters shall have their common meaning as the context requires. Further words and/or expressions may be defined in this AGREEMENT and/or the other EPC CONTRACT DOCUMENTS.

AFFILIATE in relation to any person means an entity controls, is controlled by, or is under common control with such person. For the purpose of this definition, “control” means the power to dictate and conduct the policy of such person, when such person is a company, the power to dictate and conduct the policy of such company through the direct or indirect control of more than fifty percent (50%) of the shares or voting rights in such company.

Notwithstanding the foregoing, PTT Public Company Limited shall not be considered as an AFFILIATE of the COMPANY.

AGREEMENT means the present document comprising the recitals and articles 1 to 58.

ANNEXES mean following Annexes 1 through 10. The term ANNEX shall be construed accordingly.

ANNEX-1A	Form of Performance Bank Guarantee
ANNEX-1/B	Bank Guarantee Form of Demand
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ANNEX-8	Form of FINAL ACCOUNT CERTIFICATE
ANNEX-9	Form of FINAL ACCEPTANCE CERTIFICATE
ANNEX-10	Form of NOTICE TO PROCEED

APPLICABLE LAWS means all and any statutes, decrees, ordinances, rules, regulations, by-laws, notices, circulars, guidelines, specifications, codes, orders, directions and other laws and conventions in effect from time to time, and any amendments or re-enactments thereto of any GOVERNMENT, any federal, state, provincial, or local government authority, any part thereof, and any department, authority, instrumentality, agency, bureau, judicial body or tribunal, having jurisdiction over the PARTIES, the EPC WORK, the T&I WORK, the performance of this CONTRACT, area or location where the EPC CONTRACTOR shall perform the EPC WORK, and which have the force of law. For clarity, the requirement to comply with APPLICABLE LAWS is a provision and term of this CONTRACT.

APPROVAL means review and comment with regard to CONTRACTOR DOCUMENTS submitted to the COMPANY pursuant to sub-article 14.4, and Exhibit A Annex-1 APPROVAL PROCESS.

The terms APPROVE and APPROVED shall be construed accordingly.

The term approve shall have its ordinary meaning, the terms approval, and approved shall be construed accordingly.

Any such APPROVAL or approval by the COMPANY shall not constitute agreement, validation or endorsement by the COMPANY, and shall not relieve the EPC CONTRACTOR of any of his obligations, responsibilities or liabilities under this CONTRACT, or APPLICABLE LAWS and shall only indicate that the COMPANY has no further comments at the time such an APPROVAL/approval is made.

The terms APPROVE, APPROVAL, APPROVED, approve, approval, approved shall be deemed to be completed by the expression “in writing”.

CHANGE ORDER means a modification to this CONTRACT made in accordance with article 22 and the other terms and requirements of this CONTRACT.

CLAIMS means all claims, damages, liabilities, losses, demands, liens, encumbrances, causes of action of any kind, obligations, costs, judgments, interest, and awards (including, without limitation, legal counsel fees and costs of litigation if awarded as part of the judgment in favor of the person asserting the CLAIMS), whether created by law, contract, tort, or otherwise, arising out of, related to, or in any way connected with this CONTRACT or the performance of it. The term CLAIM shall be construed accordingly.

COMPANY GROUP means the COMPANY, any COMPANY OTHER CONTRACTORS, CO-VENTURERS, their respective AFFILIATES and each of their PERSONNEL.

COMPANY INDEMNIFIED PARTIES means the COMPANY GROUP (other than EPC CONTRACTOR INDEMNIFIED PARTIES) performing work for or in relation to the PROJECT as well as SUPPLIER when such SUPPLIER is carrying out activities on or between a WORKSITE.

COMPANY OTHER CONTRACTORS mean:

- a) any person (other than a member of the CONTRACTOR GROUP) that is a party to a contract with the COMPANY and which is in any way connected to, or in proximity with, the EPC CONTRACTOR’s performance of this CONTRACT; and
- b) that person’s subcontractors at any tier.

COMPANY ITEMS mean the items identified as such in Exhibit I (if any).

COMPANY REPRESENTATIVE means the person appointed by the COMPANY as its duly authorized representative with respect to this CONTRACT pursuant to article 8.

COMPLETION DATE means a date identified as such in Exhibit C (and calculated in accordance with the applicable Exhibit C requirements and as be amended by means of CHANGE ORDER) on or before which the EPC CONTRACTOR is required to complete a stated portion of the EPC WORK. The term required COMPLETION DATE shall be construed accordingly.

COMPANY PROVIDED INFORMATION means the documents and information described as COMPANY PROVIDED INFORMATION in Exhibit C.

CONFIDENTIAL INFORMATION means any information and documents (in any form and of whatever nature) obtained under, or relating in any way to, this CONTRACT, the affairs of the COMPANY, including all information and data obtained by the EPC CONTRACTOR from the COMPANY GROUP or otherwise in the performance of the EPC WORK, the PLANT and/or the PROJECT.

CONFLICT means any of; error, omission, deficiency, inaccuracy, contradiction, ambiguity, discrepancy or mis-description.

CONSEQUENTIAL LOSS means indirect or consequential loss and without limitation, loss of; revenue, profit, anticipated profit, use, production, productivity, contracts, business

opportunity, COMPANY production facilities downtime (except when such COMPANY facilities downtime is specifically compensated under this CONTRACT, including under article 34 (Liquidated Damages), EPC CONTRACTOR, T&I CONTRACTOR, their respective VENDOR and SUBCONTRACTOR facilities downtime (except when such facilities downtime is specifically compensated under this CONTRACT), which is incurred whether such liability is based or claimed to be based upon any negligence, or through breach of duty (statutory or otherwise) or other acts or omissions irrespective of whether such loss is direct, or indirect, or consequential and whether or not foreseeable at the EFFECTIVE DATE.

CONSTRAINT means any and all; constraints, restraints, restrictions, limitations, acts of GOVERNMENT, APPLICABLE LAWS and any other matters and all events of whatever kind that restrict, prevent, affect or impede the timely performance of the EPC WORK, but does not include things for which the EPC CONTRACTOR is entitled to an extension of time for any of the reasons listed in sub-article 15.5.

CONSTRUCTION EQUIPMENT means all materials, supplies, plant (floating or otherwise), vessels, tugs, marine craft, machinery, equipment, tools, buildings and structures, including warehouses, offices, docks, berths, moorings, camps, garages, workshops, scaffolding, temporary work and all other items supplied used or consumed by the EPC CONTRACTOR and/or his SUBCONTRACTOR, in the performance of the EPC WORK but not incorporated into or forming part of the PLANT. The term CONSTRUCTION EQUIPMENT does not include WORKSHOP, WORKSITE, CONTRACTOR ITEMS, and COMPANY ITEMS. The term EPC CONSTRUCTION EQUIPMENT shall be construed accordingly.

CONTRACT means this signed AGREEMENT together with ANNEXES 1 to 10 and the following EXHIBITS including any Annexes and Attachments which are attached to and made part thereof.

- Exhibit A Scope of EPC WORK
- Exhibit B Schedule of Prices and Rates
- Exhibit C WORK TIME SCHEDULE
- Exhibit D Not Used
- Exhibit E DESIGN DOSSIER
- Exhibit F Particular Conditions for the Performance of the EPC WORK
- Exhibit G Co-ordination Procedures
- Exhibit H Quality Management
- Exhibit I COMPANY ITEMS
- Exhibit J VENDORS and SUBCONTRACTORS
- Exhibit K Organization, Resources and KEY PERSONNEL
- Exhibit L SSHE Requirements for Performance of EPC WORK

The term EPC CONTRACT shall be construed accordingly.

CONTRACT DOCUMENTS mean this AGREEMENT, ANNEXES and the EXHIBITS specified herein, including any Annexes and Attachments thereto as well as any documents referenced therein whether attached or not and signed CHANGE ORDERS. The term EPC CONTRACT DOCUMENTS shall be construed accordingly.

CONTRACT PRICE means the aggregate of all sums payable under this CONTRACT calculated in accordance with Exhibit B and the other terms and requirements of this CONTRACT, as may be modified by CHANGE ORDERS.

It being understood that the Initial CONTRACT PRICE for a PHASE is the amount to be established by the PARTIES immediately after the issuance of a NOTICE TO PROCEED for such PHASE, calculated in the manner prescribed in Exhibit B. It also being understood that the Final CONTRACT PRICE for a PHASE shall be the Initial CONTRACT PRICE for such PHASE as modified by CHANGE ORDERS, established as per the requirements of article 22, sub-article 32.6 and the other terms and requirements of this CONTRACT.

Accordingly, the Final CONTRACT PRICE for this CONTRACT shall be the total aggregate sum of the Final CONTRACT PRICES for all PHASES.

CONTRACTOR DOCUMENTS mean all documents prepared and/or issued on or after the EFFECTIVE DATE, by the EPC CONTRACTOR and/or SUBCONTRACTORS and/or VENDORS and to the extent applicable by SUPPLIERS, which are required and/or necessary for the proper and complete performance of the EPC WORK in accordance with the terms and requirements of this CONTRACT. The term EPC CONTRACTOR DOCUMENTS shall be construed accordingly.

CONTRACTOR GROUP means the EPC CONTRACTOR, any SUBCONTRACTOR and any VENDOR and their respective AFFILIATES and each of their PERSONNEL.

CONTRACTOR INDEMNIFIED PARTIES means the CONTRACTOR GROUP to the extent they are involved in the performance of EPC WORK. For the avoidance of doubt, CONTRACTOR INDEMNIFIED PARTIES shall include VENDOR when are carrying out activities on or between the WORKSITE.

CONTRACTOR ITEMS means any of; skid mounted assemblies, packaged equipment and associated items, itemized (tagged) materials and equipment, non-itemized (bulk) materials and all other things, procured by the EPC CONTRACTOR and/or SUBCONTRACTOR for and in connection with the EPC WORK for incorporation into the PLANT and/or related PLANT components and/or for handover to the COMPANY as per the requirements if this CONTRACT. The term EPC CONTRACTOR ITEMS shall be construed accordingly.

It being understood that Material Group 1 CONTRACTOR ITEMS shall have the meaning further ascribed in Exhibit A, Annex-12. The term Material Group 1 EPC CONTRACTOR ITEMS shall be construed accordingly.

It also being understood that required quantities of EPC CONTRACTOR ITEMS shall include the net material take off quantity, as per engineering Material Take Off plus allowances for construction loss, damage and waste, overbuy quantity, and to the extent applicable construction spare parts, first fills, inhibitors, test kits, consumables, special tools, and anything else required and/or necessary.

CONTRACTOR REPRESENTATIVE means the person appointed by the EPC CONTRACTOR as his duly authorized representative with respect to this CONTRACT pursuant to article 9. The term EPC CONTRACTOR REPRESENTATIVE shall be construed accordingly.

CO-VENTURER means any person with whom the COMPANY has entered into a joint operating agreement(s) or production sharing agreement(s) in respect of which this CONTRACT is being performed.

DESIGN DOSSIER means the documents and other information comprehensively listed in Exhibit E as forming Exhibit E and any and all documents included by reference in the listed documents, irrespective of if attached or not.

EFFECTIVE DATE means the date stated in article 56 on which this CONTRACT comes into force.

EXCEPTED RISKS have the meaning given in sub-article 37.2.

EXHIBITS mean Exhibits A through L together with any Annexes and Attachments thereto, as well as any documents included by reference in such Exhibits, Annexes and/or Attachments, irrespective of if attached or not. The term Exhibit shall be construed accordingly.

EXISTING G1/61 CONCESSION (ERAWAN CONCESSION) means Blocks B10 and B11 under Petroleum Concession No.1/2515/5 and Blocks B12 and B13 under Petroleum Concession No.2/2515/6, collectively also referred to Exploration Block G1/61 in the Gulf of Thailand. The term G1/61 (ERAWAN CONCESSION) shall be construed accordingly.

EXISTING G1/61 OPERATOR means Chevron Thailand Exploration and Production Ltd. who is a current operator of EXISTING G1/61 CONCESSION.

EXISTING G1/61 OPERATOR GROUP means the EXISTING G1/61 OPERATOR its co-venturers, their respective AFFILIATES, EXISTING G1/61 OPERATOR's contractors and their subcontractors.

EXISTING G2/61 CONCESSIONS (BONGKOT CONCESSION) means block 15 under Petroleum Concession No.5/2515/9, and block 16 and 17 under Petroleum Concession No.3/2515/7. The term G2/61 (BONGKOT CONCESSION) shall be construed accordingly.

EXISTING G2/61 OPERATOR means PTT Exploration and Production Public Company Limited acting on behalf of the existing concessionaires which are itself and TOTAL E&P Thailand.

EXISTING G2/61 OPERATOR GROUP means the EXISTING G2/61 OPERATOR its co-venturers, their respective AFFILIATES, EXISTING G2/61 OPERATOR's contractors and their subcontractors.

EXISTING OPERATORS means EXISTING G1/61 OPERATOR and EXISTING G2/61 OPERATOR.

FINAL ACCEPTANCE CERTIFICATE means a certificate issued by the COMPANY to the EPC CONTRACTOR after the end of the WARRANTY PERIOD for each PHASE pursuant to article 21, in the form as per ANNEX 9 hereto to record the effective date of the FINAL ACCEPTANCE CERTIFICATE. The term FINAL ACCEPTANCE shall be construed accordingly.

FINAL ACCOUNT CERTIFICATE means the certificate(s) issued by the COMPANY to the EPC CONTRACTOR pursuant to sub-article 32.6.3.

FINAL DOCUMENTATION means a type of EPC CONTRACTOR DOCUMENTS as further described and explained in Exhibit A, Exhibit A Annex-1 and elsewhere in this CONTRACT. The term EPC FINAL DOCUMENTATION shall be construed accordingly.

FORCE MAJEURE means any act or event which causes or contributes to a PARTY's failure to fulfil any of its obligations under this CONTRACT, provided the event is beyond the reasonable control of the PARTY, is not attributable to their fault or negligence and could not have been foreseen or prevented by them exercising reasonable diligence but shall not include:

- a) a strike, lock-outs, industrial disputes or any labor disruption affecting the EPC WORK that is originated or participated in by EPC CONTRACTOR's PERSONNEL and/or their respective SUBCONTRACTOR and/or VENDOR PERSONNEL.
- b) breakdown and/or loss of use of any EPC CONSTRUCTION EQUIPMENT unless caused by FORCE MAJEURE;
- c) a contractual commitment between the EPC CONTRACTOR and a third party;
- d) an act or omission of any member of the CONTRACTOR GROUP; or
- e) any financial distress on the part of the CONTRACTOR GROUP including insolvency, or bankruptcy or upon the occurrence of any of the items listed in sub-article 48.4.1 c).

Without limitation and/or restriction on the foregoing, FORCE MAJEURE shall include but is not limited to GOVERNMENT or authority orders that perniciously impact the COMPANY's operation and/or procurement functions and/or the performance of the COMPANY under this CONTRACT and/or otherwise.

GENERAL AVERAGE shall have the same meaning as per York/Antwerp Rules.

GOVERNMENT means any federal, national or local authority, or their agencies and instrumentalities having jurisdiction over any WORKSITE.

GROSS NEGLIGENCE for the purpose of this CONTRACT and notwithstanding the APPLICABLE LAWS means such acts, wanton, reckless conduct, carelessness or omission as constitutes in effect an utter disregard for their harmful, foreseeable and avoidable consequences. The term GROSS NEGLIGENCE is deemed to include willful misconduct which means an intentional, knowing-conscious or reckless act or omission, the pernicious results of which are detrimental to the interest of the other PARTY.

INTELLECTUAL PROPERTY RIGHTS mean patents, rights to apply for patents, trademarks, trade names, service marks, domain names, copyrights and all applications and registration of worldwide, schematics, industrial models, inventions, know-how, trade secrets, computer software programs, and other proprietary information.

INTERIM CERTIFICATE means any certificate(s) issued by the COMPANY pursuant to sub-article 19.1. The term INTERIM CERTIFICATES shall be construed accordingly.

- a) **MECHANICAL COMPLETION CERTIFICATE** means the certificate(s) issued by the COMPANY to the EPC CONTRACTOR pursuant to sub-article 19.1.1 a).
- b) **READY FOR LOAD OUT CERTIFICATE** means a certificate(s) issued by the COMPANY to the EPC CONTRACTOR pursuant to sub-article 19.1.1 b). The

term READY FOR LOAD OUT shall be construed accordingly. The term Load Out Operations shall have the meaning ascribed in Exhibit A.

- c) **READY FOR TRANSPORTATION CERTIFICATE** means a certificate issued by the COMPANY to the EPC CONTRACTOR pursuant to sub-article 19.1.1 c). The term READY FOR TRANSPORTATION shall be construed accordingly. The term Ready for Transportation Operations shall have the meaning ascribed in Exhibit A.

KEY PERSONNEL means the PERSONNEL identified as such in Exhibit K or as may be approved by the COMPANY pursuant to sub-article 25.2.

MECHANICALLY COMPLETE means in respect of a PLANT component that:

- a) it is constructed and to the extent required it is satisfactorily completed as per the terms and requirements of this CONTRACT,

and to the extent required,

- b) it is ready for commissioning including filled with all required and necessary lubricants, fuels, chemicals, water, consumables, inhibitors, gases, etc., and where applicable it has been commissioned,
- c) the respective parts of the PLANT component have been preserved in accordance with the terms and requirements of this CONTRACT, and
- d) EPC FINAL DOCUMENTATION necessary for commissioning and start-up has been reviewed and commented by the COMPANY prior to compilation and submission by the CONTRACTOR for APPROVAL.

The term MECHANICAL COMPLETION shall be construed accordingly.

NOTICE TO PROCEED means a notice issued to the EPC CONTRACTOR by the COMPANY, generally as per ANNEX 10 hereto, wherein the COMPANY shall identify the nature and extent of the EPC WORK to be performed by EPC CONTRACTOR within a particular PHASE and the applicable COMPLETION DATES.

OPTION means an optional item (if any) listed and described as such in Exhibit B. The price and schedule conditions for each OPTION is as stated in Exhibit B.

PARTIES mean the COMPANY and the EPC CONTRACTOR.

PARTY means the COMPANY or the EPC CONTRACTOR.

PERSONNEL means officers, directors, agents, employees, consultants, servants, representatives, licensees and invitees.

PETROLEUM ACT means Petroleum Act B.E.2514 and all amendments thereto.

PHASE means one or more PLATFORMS identified as such in a NOTICE TO PROCEED.

PLANT means permanent facilities as per CONTRACT requirements constructed and/or installed at a SITE. The term PLANT component means a portion of PLANT to be constructed and installed at the SITE. The term EPC WORK and related PLANT component(s) shall be construed accordingly.

PLATFORM means a specific part of the PLANT comprising a wellhead platform (including Topsides, Jacket, and Appurtenances), associated pipelines, tie-ins and brownfield modifications and any other associated EPC WORK.

PROJECT means the all of PLATFORMS and parts thereof including PLANT components, instructed by the COMPANY by means of NOTICES TO PROCEED issued pursuant to this CONTRACT as may be modified by CHANGE ORDER.

PROVISIONAL ACCEPTANCE CERTIFICATE means the certificate issued by the COMPANY to the EPC CONTRACTOR pursuant to sub-article 19.2. The term PROVISIONAL ACCEPTANCE shall be construed accordingly.

RELY UPON INFORMATION means the information listed and described as RELY UPON INFORMATION in Exhibit E Annex-8.

RESULT OF THE WORK means at a given date during the performance of the EPC WORK, the results of the EPC WORK performed from the EFFECTIVE DATE to such a date, of any or all of the following:

- a) CONTRACTOR DOCUMENTS,
- b) CONTRACTOR ITEMS (at any stage of completeness),
- c) Major PLANT components and related items not handed over to the T&I CONTRACTOR,
- d) COMPANY ITEMS (if any) delivered to the CONTRACTOR, and/or
- e) any other EPC WORK performed,

The term RESULTS OF THE EPC WORK shall be construed accordingly.

SITE means an offshore location where the PLANT and PLATFORM are to be constructed and/or installed and/or located and the vicinity thereof.

SPECIAL RISKS have the meaning given in sub-article 39.1.

SPECIFICATION means any and all Project Particular Specifications and/or COMPANY Specifications (as per Exhibit E) and all documents referenced therein, irrespective of if attached or not.

SUBCONTRACTOR means any person to whom the EPC CONTRACTOR has subcontracted the performance of any part of the EPC WORK and shall include subcontractors of any participating in the performance of EPC WORK. The term SUBCONTRACTOR does not include VENDORS. The terms SUBCONTRACTOR and SUBCONTRACT shall be construed accordingly.

SUPPLIER means supplier(s) of any COMPANY ITEM.

T&I CONTRACTOR means the contractor performing T&I WORK under the Contract No. THC19-5246 with regard to the PROJECT.

T&I WORK means the work to be performed by the T&I CONTRACTOR pursuant to the Contract No. THC19-5246 for and in connection with the development and timely completion of the PLANT and the respective PHASES thereof.

VENDOR means a supplier of CONTRACTOR ITEM to the EPC CONTRACTOR and/or SUBCONTRACTOR. For clarity, the term VENDOR shall include vendors of any tier engaged in the manufacturing and/or supply of CONTRACTOR ITEMS.

WARRANTY PERIOD means the period(s) referred to in sub-article 20.4.

WORK means all required and/or necessary work, services and other things to be provided, performed and/or arranged by the EPC CONTRACTOR, SUBCONTRACTOR, and VENDOR, as well as all other obligations and requirements imposed on the EPC

CONTRACTOR, SUBCONTRACTOR, and VENDOR under this CONTRACT and otherwise, as may be modified by CHANGE ORDER(S). The term EPC WORK shall be construed accordingly.

WORKSHOP means any location(s), other than a WORKSITE, including offices, premises and workshops where CONTRACTOR ITEMS shall be engineered, manufactured, assembled, and/or tested. The term WORKSHOP also includes offices, premises and workshops of SUBCONTRACTOR unless they are associated with the fabrication of any major components of the PLANT. The term EPC WORKSHOP shall be construed accordingly.

WORKSITE means the SITE and/or the onshore construction location(s) where any major components of the PLANT (such as topsides, jackets and appurtenances) shall be fabricated and assembled by the EPC CONTRACTOR.

The term WORKSITE shall also include the locations where linepipe is stored and coated. The term WORKSITE does not include WORKSHOP and does not include other WORK Locations. The term EPC WORKSITE shall be construed accordingly.

WORK TIME SCHEDULE means the commencement date of each PHASE, required Key Dates and required COMPLETION DATES as may have been modified by CHANGE ORDER.

The WORK TIME SCHEDULE for each PHASE shall be calculated in accordance with the EXHIBIT C requirements.

The required COMPLETION DATES for each PHASE shall be calculated in accordance with Exhibit C requirements and shall be set out in the relevant NOTICE TO PROCEED.

The term EPC Detailed Work Time Schedule shall have the meaning ascribed to it in Exhibit C. The term T&I Detailed Work Time Schedule shall be construed accordingly.

2.2

Interpretation

No rule of construction shall apply to the disadvantage of a PARTY because that PARTY was responsible for preparation of, or seeks to rely on, this CONTRACT or any part of it.

Unless the contrary intention appears, a reference in this CONTRACT to:

- a) The term document includes any variation, amendment or replacement of it and any annexure, schedule, attachment or exhibit attached to it and anything incorporated into it by reference, whether appended to it or not.

The term document shall include as the context may require; plans, procedures, technical query, statements, requisition, calculations, notes, data sheets, computer data, information, SPECIFICATIONS, drawings, plans, philosophies, bases of design, lists, sketches, procedures, any other document expressly referenced in this CONTRACT and anything else of a like and/or similar nature.

- b) An article or sub-article is a reference to an article or sub-article of the AGREEMENT.
- c) The word "person" includes an individual, a firm, a body corporate, a partnership, a joint venture, an unincorporated body or association, or any government and each of their successors and permitted assigns.
- d) Words in the singular include the plural and vice versa as the context demands.

- e) “days” or “months” shall mean “consecutive calendar days” or “consecutive calendar months.” It being understood that all dates and time periods referred to in the CONTRACT DOCUMENTS relate to the Gregorian calendar.
- f) Unless otherwise agreed and subject sub-article 2.2 g) a “working day” shall mean any day that is not a Saturday, a Sunday or a public holiday notified as such by the COMPANY to the Stock Exchange of Thailand.
- g) The term “non-working” day(s) applicable to WORK Locations shall be agreed by the PARTIES and recorded as such in the PROJECT calendar.
- h) The terms “he”, “him” and “his” are used in relation to the CONTRACTOR, whereas the terms “it” and “its” are used in relation to the COMPANY.
- i) The words “require”, “request”, “submit”, “clarify”, “clarification”, “answer”, “notify”, “instruct”, “inform”, “agree”, “advise”, “approve” and the like unless otherwise is stated shall be deemed to be completed by the expression “in writing”.
- j) The words “include”, “including”, “included”, “for example”, “such as” and the like unless otherwise is stated are deemed to be completed by the expression “but not limited to”.
- k) Any particular law, statute, order, decree, rule or regulation of any government authority includes any consolidation, re-enactment, amendment or replacement of it for the time being in force.
- l) In this CONTRACT, headings are for convenience only and do not affect interpretation.

Article 3 **Entire Agreement**

3.1 **Entire Agreement**

Subject to sub-articles 3.2 and 3.3, this CONTRACT embodies the entire agreement between the COMPANY and the EPC CONTRACTOR with respect to the EPC WORK, the PLANT components and related items and all matters in connection with and arising from this CONTRACT, and nullifies and supersedes all and any related oral and written understandings, agreements and qualifications made between the PARTIES prior to the EFFECTIVE DATE unless included within this CONTRACT.

Without prejudice to any liability for fraudulent misrepresentation or fraudulent misstatement, neither PARTY has relied on any representation, warranty, assurance, covenant, indemnity, undertaking or commitment which is not expressly set out in this CONTRACT.

For clarity, any EPC WORK performed subject to and pursuant to Letter of Intent to Award issued by the COMPANY to the EPC CONTRACTOR *[date and reference to be inserted]* shall be deemed part of the EPC WORK and subject to all the terms, conditions and requirements of this CONTRACT.

3.2 **Obligations Imposed by APPLICABLE LAWS**

If APPLICABLE LAWS place obligations on the EPC CONTRACTOR, VENDOR, SUBCONTRACTOR and/or SUPPLIER in respect of this CONTRACT, the CONTRACT requirements, the performance of the EPC WORK, the relevant T&I WORK and/or the PLANT components and related items, the EPC CONTRACTOR, VENDOR,

SUBCONTRACTOR and/or SUPPLIER will remain subject to such obligations provided however the terms and requirements of this CONTRACT as far as is legally permissible shall always take precedence over any APPLICABLE LAWS with which it conflicts or which are expressly excluded in this CONTRACT. Similarly, all communications between the PARTIES arising from and in connection with this CONTRACT and the EPC WORK and/or the relevant T&I WORK since the issue of the Letter of Intent to Award shall be deemed to have taken place under this CONTRACT.

3.3 Agreements and Guarantees

Agreements and/or guarantees (such as; design endorsement certificate(s), performance bank guarantee, parent company guarantee, and/or guarantees, warranties, patents and license grants, arrangements for financing and insurance coverage, indemnity and waiver of recourse agreements etc.) made with the COMPANY by and on behalf of the EPC CONTRACTOR or any SUBCONTRACTOR or any VENDOR or third party before the EFFECTIVE DATE shall remain in full force and effect.

However, the existence of such an agreement and/or guarantee, as aforesaid, shall not limit or restrict the obligations of the EPC CONTRACTOR, SUBCONTRACTOR and/or a VENDOR to provide any agreement and/or guarantee and/or warranty that is required to be submitted after the EFFECTIVE DATE as per the terms and requirements of this CONTRACT.

3.4 Invalidity and Severability

If any provision (or part thereof) of this CONTRACT, is or becomes unlawful, void, or unenforceable, the legality, validity or enforceability of any other part of that provision or any other provision shall not be affected but shall continue in full force and effect.

Article 4 Waiver and Amendments to the CONTRACT

4.1 Waiver

Except for waivers expressly stated elsewhere in this AGREEMENT:

- a) a right created under this CONTRACT or at law may only be waived in writing, signed by the PARTY giving the waiver, and
- b) a PARTY's failure to enforce, or delay in enforcing, any of its/his rights under this CONTRACT shall not constitute a waiver of such rights unless stated otherwise in this CONTRACT;
- c) a waiver of a right on one or more occasions shall not operate as a waiver of that right on other occasions; and
- d) an exercise of a right shall not prevent any further exercise of that right or of any other right.

Notwithstanding the 3rd paragraph of Section 381 of the Thai Civil and Commercial Code, the EPC CONTRACTOR hereby agrees that any failure by the COMPANY to reserve its rights to apply liquidated damages under this CONTRACT on any stage of acceptance of EPC WORK, the acceptance of any of the major PLANT components from the EPC CONTRACTOR, and/or by reason of payments made to the EPC CONTRACTOR under the terms of this CONTRACT shall not affect the COMPANY's right to CLAIM such liquidated damages at a later date.

Notwithstanding the foregoing and for clarity the exercise by the COMPANY of its right to reject a CLAIM as per the terms of this CONTRACT shall not be considered as waiver of the EPC CONTRACTOR's rights obligations and/or liabilities under this CONTRACT but shall be considered as the exercise of a COMPANY right under this CONTRACT.

4.2 Amendments to the CONTRACT

No amendment of this CONTRACT shall be valid unless made in writing and executed by the authorized representatives of the PARTIES. For clarity a modification to this CONTRACT made pursuant to article 22 (CHANGE ORDERS) shall not be considered as an amendment of this CONTRACT.

Article 5 **Language of the CONTRACT**

5.1 English Language

This CONTRACT has been executed in the English language, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this CONTRACT.

Unless otherwise specified or necessary, all matters arising from and/or in connection with this CONTRACT (including CONTRACTOR DOCUMENTS) and all communications between the PARTIES shall be conducted in English as being the language of the CONTRACT.

5.2 Translation

Official documents and/or certificates in a language other than English must be accompanied by an English translation prepared by an approved translator. The proposed appointment of translators shall be subject to approval by the COMPANY.

Article 6 **Interpretation of the CONTRACT**

6.1 Intention of the CONTRACT as a Whole

The misplacement, addition or omission of a word or character shall not change the intent of any part of this CONTRACT from that set forth in this CONTRACT as a whole.

The EPC CONTRACTOR shall be solely responsible for requesting any interpretation or clarification in such respect from the COMPANY and shall bear any costs and expenses arising from his failure to do so.

Any and all CONFLICTS in and/or between the EPC CONTRACT DOCUMENTS, shall not relieve the EPC CONTRACTOR from performing and completing all required and/or necessary EPC WORK and other requirements in accordance with the terms and requirements of this CONTRACT.

6.2 Headings

Refer to sub-article 2.2 hereabove.

6.3 Order of Priority of the EPC CONTRACT DOCUMENTS

For the purposes of interpretation, should there be any CONFLICT in or between any of the EPC CONTRACT DOCUMENTS, and unless expressly provided otherwise, priority shall be given in the order of precedence in which EPC CONTRACT DOCUMENTS appear, i.e. the articles of the AGREEMENT shall take precedence over the rest of this CONTRACT,

followed by the ANNEXES and then the EXHIBITS in the order they appear except for Exhibit F which shall have the lowest priority.

In case of any CONFLICT in an Exhibit or between documents listed in or forming an Exhibit, the most stringent requirement shall apply.

For clarity, Exhibit F may set out certain minimum requirements to be complied with by the EPC CONTRACTOR but shall not limit nor restrict the EPC CONTRACTOR's obligations to design, perform and complete the EPC WORK in accordance with this CONTRACT, and to provide everything necessary for the performance of the EPC WORK including the provision of additional and/or enhanced CONSTRUCTION EQUIPMENT, CONTRACTOR ITEMS, additional CONTRACTOR's PERSONNEL and anything else that may be necessary.

Subject to the foregoing, the EPC CONTRACT DOCUMENTS are intended to be correlative and mutually explanatory and any works and/or services required in one document and not mentioned in another shall be part of the EPC WORK at no additional cost or expense for the COMPANY regardless of the order of priority of the respective EPC CONTRACT DOCUMENTS.

6.4 Clarification of CONFLICTS

During the performance of the EPC WORK, should any CONFLICT becomes apparent in or between or among the EPC CONTRACT DOCUMENTS, the EPC CONTRACTOR shall immediately notify the COMPANY of same and shall obtain COMPANY's clarification prior to commencing any related part of the EPC WORK, it being understood that performance of any such EPC WORK prior to clarification shall be at EPC CONTRACTOR's own risk and cost.

The COMPANY shall give its clarification within fourteen (14) days of receipt of EPC CONTRACTOR's request for clarification unless the EPC CONTRACTOR has qualified the matter as urgent and important in which case the COMPANY shall give the main elements of its clarification within seven (7) days.

The EPC CONTRACTOR may appeal COMPANY's clarification within five (5) days of receipt thereof or, if the matter is qualified in writing as important and urgent, within three (3) days of receipt thereof, failing which such clarification shall be deemed final and binding.

The EPC CONTRACTOR shall proceed with the performance of the EPC WORK in accordance with COMPANY's clarification

If at any time, the COMPANY discovers a discrepancy as aforesaid, it shall so notify the EPC CONTRACTOR and give its clarification within the periods of time set out above.

Article 7 **Status of the PARTIES**

7.1 Status of COMPANY

The COMPANY enters into this CONTRACT for itself and as agent for and on behalf of the CO-VENTURERS.

Subject to the following provisions of this sub-article 7.1 each CO-VENTURER shall be liable to the EPC CONTRACTOR, severally and only to the extent of its interest,

respectively in, the ARTHIT Consortium, the G8/50 Consortium and the G1/61 Consortium,

Notwithstanding the foregoing:

- a) subject to the provisions of this sub-article 7.1 and without prejudice to the principle of several liabilities amongst the CO-VENTURERS, PTTEPI and PTTEP ED have appointed PTTEP as their sole agent and representative in all matters arising in connection with its obligations as the COMPANY. Said agent shall be the single point of contact with CONTRACTOR;
- b) the EPC CONTRACTOR agrees to look only to PTTEP for the due performance of this CONTRACT and/or the EPC WORK, insofar as it is related to the ARTHIT Concession and nothing contained in this CONTRACT shall impose any liability on, or entitle the EPC CONTRACTOR to commence any proceedings against any CO-VENTURERS in the ARTHIT Concession;
- c) the EPC CONTRACTOR agrees to look only to PTTEPI for the due performance of this CONTRACT and/or the EPC WORK, insofar as it is related to Block G8/50 and nothing contained in the CONTRACT shall impose any liability on, or entitle the EPC CONTRACTOR to commence any proceedings against any CO-VENTURERS in the Block G8/50;
- d) the EPC CONTRACTOR agrees to look only to PTTEP ED for the due performance of this CONTRACT and/or the EPC WORK, insofar as it is related to the G1/61 PSC and nothing contained in the CONTRACT shall impose any liability on, or entitle the CONTRACTOR to commence any proceedings against any CO-VENTURERS in the G1/61 PSC;
- e) the EPC CONTRACTOR agrees not to look to PTTEP for the due performance of this CONTRACT and/or the EPC WORK insofar as it is related to the G8/50 Concession and/or the G2/61 PSC.
- f) the EPC CONTRACTOR agrees not to look to PTTEPI for the due performance of this CONTRACT and/or the EPC WORK insofar as it is related to the ARTHIT Concession and/or the G1/61 PSC and/or G2/61 PSC.
- g) the EPC CONTRACTOR agrees not to look to PTTEP ED for the due performance of the CONTRACT and/or or the EPC WORK insofar as it is related to the ARTHIT Concession and/or Block G8/50.
- h) the EPC CONTRACTOR agrees to look only to the COMPANY for the due performance of this CONTRACT and nothing contained in this CONTRACT shall impose any liability on, or entitle the EPC CONTRACTOR to commence any proceedings against, any CO-VENTURERS other than the COMPANY;
- i) the COMPANY is entitled to enforce this CONTRACT on behalf of all CO-VENTURERS as well as for itself. For that purpose, the COMPANY shall commence proceedings in its own name to enforce all obligations and liabilities of the EPC CONTRACTOR and to make any CLAIM any CO-VENTURER may have against the EPC CONTRACTOR; and
- j) all CLAIMS recoverable by the COMPANY pursuant to this CONTRACT or otherwise shall include the CLAIMS of CO-VENTURERS except that such CLAIMS shall be subject to the same limitations or exclusions of liability

applicable to the COMPANY or the EPC CONTRACTOR under this CONTRACT.

Notwithstanding the foregoing generality, in the event of any dispute initiated by the EPC CONTRACTOR against the COMPANY and/or CO-VENTURER, each CO-VENTURER shall only be liable to the EPC CONTRACTOR, severally, up to a maximum amount being same percentage of such CLAIM as the percentage of the CO-VENTURERS participating interest in the respective consortium.

7.2 Status of the EPC CONTRACTOR (Independent Contractor)

- 7.2.1 The EPC CONTRACTOR is an independent contractor with respect to the CONTRACT and shall exercise independent management, implement, control and supervision in the performance of the EPC WORK subject to and as per the terms of the CONTRACT.
- 7.2.2 The EPC CONTRACTOR is not the COMPANY's agent or partner. The EPC CONTRACTOR shall be responsible for all costs and expenses resulting from his independent status including salaries, bonuses, insurances, taxes and social welfare contributions of any kind related to the EPC CONTRACTOR's PERSONNEL.
- 7.2.3 The EPC CONTRACTOR shall perform all obligations and duties under the CONTRACT at his own cost, risk and responsibility, in due compliance with the WORK TIME SCHEDULE and with the provisions of the CONTRACT.
- 7.2.4 The COMPANY shall not direct the execution of the EPC WORK, except as provided for under provisions of the CONTRACT covering defective performance by the EPC CONTRACTOR and/or take-over by the COMPANY.
- 7.2.5 Nothing in the CONTRACT implies, directly or indirectly, that any of the EPC CONTRACTOR's PERSONNEL are agents, servants or employees of the COMPANY. All of the EPC CONTRACTOR's responsibilities under the CONTRACT, including those concerning the EPC CONTRACTOR's PERSONNEL, shall be undertaken in the name of the EPC CONTRACTOR and not in the name of the COMPANY.
- 7.2.6 The EPC CONTRACTOR's failure to perform any obligations shall always be at his sole cost and risk.
- 7.2.7 Omissions or actions of the COMPANY and/or inspecting authorities or certifying agencies, including any comments or absence thereof, presence or absence of representatives at any time including during tests and inspections, issuance of certificates other than FINAL ACCEPTANCE CERTIFICATE (subject to surviving obligations), payments, approval and the like, shall not release the EPC CONTRACTOR in any way from any of his obligations and liabilities under the CONTRACT or at law, nor imply acceptance of defective EPC WORK.
- 7.2.8 The EPC CONTRACTOR shall not represent the COMPANY or act for or on behalf of the COMPANY or in its name without the prior approval from the COMPANY and then only as and when mutually agreed by the PARTIES. Relations with third parties shall be subject to procedures previously agreed to by the COMPANY. No PERSONNEL of the EPC CONTRACTOR shall be deemed in any way to be PERSONNEL of the COMPANY.

Article 8 **COMPANY REPRESENTATIVE**

8.1 Appointment

The COMPANY REPRESENTATIVE is the person named as such in article 55 of or if none is stated in article 55, the COMPANY shall appoint the COMPANY REPRESENTATIVE who, subject to sub-article 8.2 below shall be the only COMPANY authorized delegate for the purpose of this CONTRACT.

The COMPANY shall be entitled to replace the COMPANY REPRESENTATIVE at any time, in such event the COMPANY shall inform the EPC CONTRACTOR in writing.

8.2 Delegation

The COMPANY REPRESENTATIVE shall have the right to delegate specific tasks to one or more persons designated by him and belonging either to the COMPANY or to other entities including certifying and inspecting agencies. In such case, the COMPANY REPRESENTATIVE shall inform the EPC CONTRACTOR in writing of the names of such persons and the scope of their delegation. At all times during the performance of the EPC WORK, the COMPANY REPRESENTATIVE shall have the right to cancel in writing any such delegation.

8.3 COMPANY Instructions

The COMPANY REPRESENTATIVE and duly authorized delegate(s), in accordance with the terms of such delegation, shall have the right to instruct the EPC CONTRACTOR with regard to the performance of the EPC WORK, any other matters specifically provided for in this CONTRACT, and any matter arising from and/or in connection with this CONTRACT. Such instructions shall be made in writing and the EPC CONTRACTOR shall immediately comply with the same.

However, if the EPC CONTRACTOR should receive a verbal instruction from the COMPANY REPRESENTATIVE or duly authorized delegate(s) he shall immediately confirm the same in writing to the COMPANY REPRESENTATIVE and request confirmation.

Any such instructions not confirmed in writing within forty-eight (48) hours by the COMPANY REPRESENTATIVE or duly authorized delegate(s) in accordance with the terms of such delegation, shall be null and void.

8.4 Work Instructions

Notwithstanding sub-article 8.3, the COMPANY shall have the right at anytime to issue a Work Instruction to document an instruction from the COMPANY to the EPC CONTRACTOR which shall generally be in the format as per Exhibit G Annex-4 Attachment-2.

The EPC CONTRACTOR shall immediately comply with each Work Instruction as and when received, irrespective if the subject matter is a modification as per sub-article 22 or not and irrespective of if CONTRACTOR is entitled to a CHANGE ORDER or not.

Compliance by EPC CONTRACTOR with a Work Instruction shall not prejudice the rights of either PARTY to a CHANGE ORDER. Communication between COMPANY and CONTRACTOR with respect to a CHANGE ORDER shall be as per articles 15 and 22 and the other terms and requirements of the CONTRACT.

All requests for CHANGE ORDER pertaining to Work Instructions shall be notified, prepared and submitted in accordance with sub-articles 22.2.4, 22.3 and the other terms and requirements of this CONTRACT.

Article 9 EPC CONTRACTOR's Organization

9.1 EPC CONTRACTOR's Organization

In order to ensure the proper and timely performance of the EPC WORK in accordance with the terms and requirements of this CONTRACT, the EPC CONTRACTOR shall from the commencement of the applicable EPC WORK to its completion, and for each EPC WORK phase (project management, engineering, procurement services, supply, onshore construction, and commissioning (to the extent stipulated in the CONTRACT) transportation, and the rectification of defects and deficiencies) provide and maintain fully resourced functional organizations and shall provide corresponding resources, PERSONNEL, CONSTRUCTION EQUIPMENT and all other things required and/or necessary, to fulfil all of the EPC CONTRACTOR's obligations under this CONTRACT.

9.2 Association of Companies (Whenever applicable)

If the EPC CONTRACTOR is an association of companies or other form of juristic persons, all such companies and juristic persons shall be a PARTY to and shall sign this CONTRACT and shall be jointly liable under this CONTRACT; however without prejudice to the principle of joint liability, the EPC CONTRACTOR hereby irrevocably nominates for the duration of this CONTRACT as his sole agent with full power to represent the EPC CONTRACTOR for all matters, to act on his behalf, receive all payments and to settle any CLAIMS. Said agent shall be the single point of contact with the COMPANY and shall prepare and present all of the EPC CONTRACTOR's invoices in accordance with the requirements of this CONTRACT.

9.3 EPC CONTRACTOR REPRESENTATIVE

9.3.1 The EPC CONTRACTOR shall appoint and keep assigned to the EPC WORK during the entire course of the EPC WORK, an experienced EPC CONTRACTOR REPRESENTATIVE acceptable to the COMPANY who shall be fully knowledgeable in all aspects of this CONTRACT and the EPC WORK and have full charge of all operations of the EPC CONTRACTOR in respect of the EPC WORK and full authority to represent the EPC CONTRACTOR in all matters related to the performance of this CONTRACT. It being understood that notwithstanding the other terms of this CONTRACT the EPC CONTRACTOR REPRESENTATIVE has the full authority to agree and sign CHANGE ORDERS on behalf of the EPC CONTRACTOR.

9.3.2 Such authority shall include the power to agree on behalf of the EPC CONTRACTOR to any CHANGE ORDER. Any communications or notice given to the EPC CONTRACTOR REPRESENTATIVE by the COMPANY shall be considered as given to the EPC CONTRACTOR.

9.3.3 The EPC CONTRACTOR REPRESENTATIVE shall not be changed during the execution of the EPC WORK unless the COMPANY approves such change in writing. Such approval shall not be unreasonably withheld.

9.3.4 The EPC CONTRACTOR shall also appoint an experienced deputy EPC CONTRACTOR REPRESENTATIVE at each WORKSITE who shall be fully

authorized to act as EPC CONTRACTOR REPRESENTATIVE when the EPC CONTRACTOR REPRESENTATIVE is unavailable or absent. The appointment and any change of the deputy EPC CONTRACTOR REPRESENTATIVE shall be subject to the prior written approval by the COMPANY.

Article 10 Assignment and/or Novation

10.1 Assignment or Novation of the CONTRACT by the COMPANY

The COMPANY shall have the right at its sole discretion and by simple notice of assignment or novation as follows:

- a) to freely assign, novate, charge, transfer or declare any trust over this CONTRACT or any part thereof or any right, benefit or interest arising hereunder to any AFFILIATE of the COMPANY or CO-VENTURERS or PTT Public Company Limited, without the prior written consent of the EPC CONTRACTOR, or
- b) to assign or novate this CONTRACT to any future CO-VENTURER or CO-VENTURER's AFFILIATES or any third party. Such right shall be subject to the prior written consent of the EPC CONTRACTOR provided such consent shall not be unreasonably withheld or delayed.

Assignment or novation of this CONTRACT by the COMPANY or charge, transfer or declaration of any trust as aforesaid shall not relieve the EPC CONTRACTOR of any of his obligations or liabilities under this CONTRACT and otherwise.

The EPC CONTRACTOR hereby agrees to continue to perform all his duties and obligations under this CONTRACT notwithstanding any assignment or novation of this CONTRACT by the COMPANY or charge, transfer or declaration of any trust.

In the event of assignment or novation as aforesaid the EPC CONTRACTOR shall cause all Parent Company and Bank Guarantees related to the assigned or novated CONTRACT to be reissued for the benefit of the assignee or the novatee instead of the COMPANY, and such guarantees shall be exchanged against those already in force.

10.2 Assignment or Novation of the CONTRACT by the EPC CONTRACTOR

The EPC CONTRACTOR shall not assign and shall not novate this CONTRACT, nor transfer any part of it, nor any benefit, interest, right or obligation therein nor payment due hereunder without prior written approval from the COMPANY.

Article 11 SUBCONTRACTORS and VENDORS

11.1 General Obligations

The EPC CONTRACTOR shall be solely responsible and liable to the COMPANY for the expeditious and correct performance of EPC WORK by SUBCONTRACTORS and VENDOR which shall be performed in accordance with the terms and requirements of this CONTRACT and the applicable SUBCONTRACT / Purchase Order.

The EPC CONTRACTOR shall be responsible to the COMPANY for any and all acts, omissions, errors, deficiencies, defaults and/or neglects of his SUBCONTRACTORS and/or VENDORS and/or their respective PERSONNEL as if they were acts, omissions, errors, deficiencies, defaults and neglects of the CONTRACTOR and/or his PERSONNEL.

The obtaining of warranties and/or guarantees from SUBCONTRACTORS and VENDORS and/or the EPC CONTRACTOR's failure to obtain such warranties and guarantees shall not relieve the EPC CONTRACTOR of any of his obligations and liabilities under this CONTRACT.

11.2 Selection and Approval of SUBCONTRACTORS and VENDORS

11.2.1 Selection

The selection of potential SUBCONTRACTORS and VENDORS, tendering, evaluation and award of SUBCONTRACTS and the tendering, evaluation and award of Purchase Orders for CONTRACTOR ITEMS, shall be done in accordance with this article 11, Exhibit G Annex-2 (Procurement and Material Control), Exhibit J (List of SUBCONTRACTORS and VENDORS), applicable Exhibit K requirements and the other terms and requirements of this CONTRACT.

Where required by the terms of this CONTRACT the EPC CONTRACTOR shall ensure that SUBCONTRACTORS and/or VENDORS are pre-qualified as per the requirements stated in Exhibit G Annex-2.

The EPC CONTRACTOR shall not subcontract the whole of the EPC WORK.

11.2.2 Approval

The EPC CONTRACTOR shall not award any SUBCONTRACT and/or Purchase Order for CONTRACTOR ITEMS, without first obtaining approval from the COMPANY to award such SUBCONTRACT or Purchase Order.

The COMPANY shall have the right to refuse to approve, without justifying such refusal, any proposed SUBCONTRACTOR and/or proposed Vendor:

- a) who is not listed in Exhibit J,
- b) for whom the proposed SUBCONTRACT or Purchase Order does not comply with the requirements of this CONTRACT,
- c) in respect of which the CONTRACTOR has not complied with the requirements of sub-article 11.2.1,
- d) for whom the respective SUBCONTRACT or Purchase Order does not comply with the requirements of sub-article 11.3 and the required pass down requirements,
- e) who does not comply with the pre-qualification requirements stipulated in this CONTRACT.

Approval by the COMPANY of any SUBCONTRACTOR and/or approval of a Vendor shall not create any contractual relationship of any kind whatsoever between the COMPANY and the SUBCONTRACTOR and/or Vendor, nor shall any such approval relieve the EPC CONTRACTOR of any of his obligations, responsibilities and liabilities under this CONTRACT or otherwise.

11.3 Pass Down Requirements

11.3.1 Generally

The EPC CONTRACTOR shall use his best endeavors to ensure that all SUBCONTRACTS and Purchase Orders for CONTRACTOR ITEMS are placed

under conditions compatible with all relevant conditions of this CONTRACT including those listed in Exhibit G Annex-2 (Procurement and Material Control).

11.3.2 MIWRA and Liability and Insurance Agreements

The EPC CONTRACTOR shall obtain from each potential SUBCONTRACTOR and from VENDORS who will be involved in WORKSITE:

- a) a signed “Mutual Indemnity and Waiver of Recourse Agreement” as per ANNEX-2/B, and
- b) a signed “Liability and Insurance Agreement from SUBCONTRACTOR” as per ANNEX-3,

and issue copy to the COMPANY with the request for approval of the proposed SUBCONTRACTOR / VENDOR.

11.3.3 Economic Sanctions and Trade Embargoes

The EPC CONTRACTOR shall ensure that the EPC CONTRACTOR and all potential SUBCONTRACTORS and/or VENDORS shall not be the target of, or owned or subject to control by, any country or person that is subject to economic sanctions or trade embargoes imposed by the U.S. government; debarred or excluded or declared ineligible to participate in U.S. government contracts, or contracts, grants, or other programs financed in whole or part by the U.S. government; or listed by the U.S. Departments of Commerce or State as an entity which U.S. Persons may not engage in export or re-export related transactions.

11.3.4 Pass Down Plan for SUBCONTRACTORS and VENDORS

The EPC CONTRACTOR shall submit a Pass Down Plan for APPROVAL to the COMPANY no later than thirty (30) days after the EFFECTIVE DATE.

11.4 Performance of the EPC WORK by SUBCONTRACTORS and/or VENDORS

The EPC CONTRACTOR shall manage, monitor, control, supervise, inspect and expedite the performance of the EPC WORK by each SUBCONTRACTOR and VENDOR and shall ensure that any and all EPC WORK performed by such SUBCONTRACTOR and/or VENDOR is performed/or and supplied in full compliance with the requirement of this CONTRACT and the applicable SUBCONTRACT and/or Purchase Order.

11.5 Default on the Part of SUBCONTRACTOR and/or VENDORS

The EPC CONTRACTOR shall at his own risk, cost, and expense immediately initiate actions to remedy any and all omissions, errors, non-conformities, defects, deficiencies, defaults, delays etc., (“non-conformances”) in EPC WORK performed by each SUBCONTRACTOR and each VENDOR as the case may be, for which the CONTRACTOR is not entitled to an Extension of Time pursuant to article 15.

Remedial actions shall include immediate rectification/mitigation of the non-conformances including all required and/or necessary repair, replacement, re-doing of the affected EPC WORK and acceleration actions including increasing the working hours and/or the number of PERSONNEL, additional, CONSTRUCTION EQUIPMENT and the utilization of additional resources, and/or facilities.

Without restriction and/or limitation of the COMPANY’s rights under article 48, the COMPANY shall also have the right to request the immediate removal of a

SUBCONTRACTOR and/or VENDOR from further involvement in the PROJECT subject to providing seven (7) days prior notification to the EPC CONTRACTOR, specifying the reasons for such “request to remove.”

Reasons for removal include any of those listed in sub-articles 48.1 and/or other default by the SUBCONTRACTOR and/or VENDOR under the terms and requirements of the applicable SUBCONTRACT or Purchase Order.

Upon receipt of such a “request to remove” the EPC CONTRACTOR shall at its own, risk, cost and expense immediately remove such SUBCONTRACTOR and/or VENDOR in accordance with the COMPANY’s “request to remove” and shall replace the SUBCONTRACTOR/VENDOR with a substitute at no extra cost to the COMPANY and without extension of the COMPLETION DATES.

Each substitute SUBCONTRACTOR and substitute /VENDOR shall be subject to prior approval by the COMPANY.

11.6 Costs, Expenses and Delays

Except as stated otherwise in this CONTRACT:

- a) the EPC CONTRACTOR is solely responsible towards the COMPANY for any and all consequences, delays and all direct and indirect costs and expenses arising from and/or in connection with SUBCONTRACTS and Purchase Orders for CONTRACTOR ITEMS.
- b) the EPC CONTRACTOR undertakes to make no CLAIMS against the COMPANY and/or COMPANY INDEMNIFIED PARTIES whatsoever, now and/or in the future, or requests for CHANGE ORDER for adjustments to the CONTRACT PRICE and/or Extension of Time due to subcontracting unless expressly provided for in this CONTRACT.

The indemnity in this sub-article shall include for all consequences, delays and all direct and indirect costs and expenses arising from and/or in connection with the EPC CONTRACTOR’s inability to propose any SUBCONTRACTOR and/or VENDOR acceptable to the COMPANY in accordance with the terms and requirements of this CONTRACT and/or removal and/or substitution of SUBCONTRACTORS and/or VENDORS in accordance with sub-article 11.5.

- c) Without restriction and/or limitation to articles 36 to 44, the EPC CONTRACTOR shall protect, save, indemnify, defend and hold harmless the COMPANY from all and any CLAIMS resulting from or otherwise connected with the EPC CONTRACTOR employing each SUBCONTRACTOR and each VENDOR and/or from third parties affected by the EPC WORK performed by the EPC CONTRACTOR, SUBCONTRACTOR and/or VENDOR as the case may be.

Article 12 Awareness of EPC WORK Conditions

12.1 Acquaintance with EPC WORK Conditions

Subject to sub-article 12.2, the EPC CONTRACTOR hereby declares and warrants, that prior to entering into this CONTRACT he has fully acquainted himself as to all local, regional, national and WORKSITE conditions and any other conditions of whatsoever nature which could affect the performance of the EPC WORK and/or his obligations under this CONTRACT, including:

- a) the nature and location of WORKSITES and WORK Locations including means of access and all conditions with regard thereto,
- b) as applicable, the atmospheric, meteorological, bathymetric, geotechnical, geophysical, topographic, marine, oceanographic, hydrological, geological, ocean floor, subsurface and soil conditions, seabed status and the like,
- c) CONSTRUCTION EQUIPMENT, PERSONNEL, CONTRACTOR ITEMS, COMPANY ITEMS (if any) and facilities, resources and all other things required and/or needed for the performance of the EPC WORK and the remedying of defects and/or deficiencies,
- d) Local conditions and/or other conditions at WORKSITES that affect or may affect the performance of the EPC WORK and CONTRACT obligations,
- e) the availability of PERSONNEL and CONSTRUCTION EQUIPMENT, parts, consumables, procurement items, fuel, water, electric power and other utilities and the like,
- f) APPLICABLE LAWS, local customs, social practices and the like,
- g) EPC and T&I Interface obligations and requirements, and
- h) any and all other conditions of whatsoever nature that may affect the performance of the EPC WORK and the obligations of the EPC CONTRACTOR under this CONTRACT.

12.2 Responsibility of EPC CONTRACTOR with respect to EPC WORK Conditions

12.2.1 Subject to the provisions of sub-article 12.2.2, the EPC CONTRACTOR hereby accepts all responsibilities for having properly evaluated all costs and contingencies for successfully performing the EPC WORK and satisfying all of obligations and requirements of this CONTRACT, including those related to EPC and T&I Interfaces and shall bear all and any consequences resulting from his improper evaluation.

The EPC CONTRACTOR undertakes to make no CLAIMS whatsoever and to make no requests for CHANGE ORDERS for relief, adjustments of the CONTRACT PRICE and/or Extension of Time based on his failure to sufficiently acquaint himself with the abovementioned conditions or on his reliance on COMPANY PROVIDED INFORMATION.

It being understood that the COMPANY shall have no responsibility or liability in respect of documents and any other information provided by the COMPANY and/or on its behalf except as is stated in sub-article 13.5 (Responsibility for RELY UPON INFORMATION), sub-article 14.2 (Additional Documents) and sub-article 14.15 (EPC and T&I Interfaces).

12.2.2 Provided always that:

- a) if the existing COMPANY facilities at a SITE are different from those on which the Initial CONTRACT PRICE for a PLATFORM are established, and/or
- b) if at the time of Post-Engineering survey of an existing host Wellhead Platform specified in Exhibit A, the existing host Wellhead Platform is

- different from at the time of Pre-Engineering Survey specified in Exhibit A, and/or
- c) if the T&I CONTRACTOR should encounter ground conditions below the seabed at new Wellhead Platform locations which is different from the borehole logs and the test results of the soil samples from the bore holes provided in the COMPANY PROVIDED INFORMATION for such location,

and which an experienced contractor could not reasonably have been expected to foresee following an examination of the EPC CONTRACT DOCUMENTS and other documents existing at time of Tender (whether from COMPANY or elsewhere), and which substantially modifies the scope of the EPC WORK and/or the performance thereof, the EPC CONTRACTOR shall immediately notify the COMPANY and shall be entitled to request a CHANGE ORDER pursuant to article 22 for the consequences of such differences.

It being understood that thereafter, the EPC CONTRACTOR shall be deemed to have full knowledge of such SITE conditions referred to in sub-article 12.2.2 a), b) and/or c) and shall have no further entitlement to any CHANGE ORDER in respect of same.

Article 13 Correctness and Sufficiency of EPC CONTRACT DOCUMENTS

13.1 Acquaintance with EPC CONTRACT DOCUMENTS

The EPC CONTRACTOR hereby declares and warrants that, prior to entering into this CONTRACT, he has carefully reviewed and examined the AGREEMENT, ANNEXES, the EXHIBITS and any Annexes and Attachments thereto as well as all of the documents included and/or referenced therein, and has obtained a full understanding and knowledge of the, scope, nature, type, quality, quantity, purpose of the EPC WORK and all obligations under this CONTRACT and as can be inferred therefrom.

13.2 Correctness and Sufficiency of the EPC CONTRACT DOCUMENTS

Subject to the provisions of sub-article 13.5, the EPC CONTRACTOR hereby further declares and warrants that he is fully satisfied as to the adequacy, sufficiency, correctness and completeness of the AGREEMENT, the ANNEXES and the EXHIBITS and related documents and that they are in all respects fit and sufficient for their intended purpose and do not contain any CONFLICTS.

With the exception of any documents to be supplied by the COMPANY after the EFFECTIVE DATE in accordance with the provision of sub-article 14.2, the COMPANY shall have no obligation to provide the EPC CONTRACTOR with any other documents under this CONTRACT and the EPC CONTRACTOR furthermore declares that he needs no other documents from the COMPANY in order to perform and complete the EPC WORK in full compliance with this CONTRACT.

For clarity, the EPC CONTRACTOR shall request, receive and utilize EPC and T&I Interface documents and information provided by the T&I CONTRACTOR, as per the requirements of sub-article 14.15, Exhibit A Annex-10 and the other terms and requirements of this CONTRACT.

13.3 Responsibility for EPC CONTRACT DOCUMENTS

Subject to the provisions of sub-article 13.5, the EPC CONTRACTOR hereby accepts all responsibilities for having properly evaluated all costs and contingencies for successfully performing and completing the EPC WORK and for fulfilling all his obligations under this CONTRACT and shall bear all and any consequences resulting from his improper evaluation.

In particular, the EPC CONTRACTOR declares that he has read, carefully reviewed and examined the DESIGN DOSSIER and all other documents and information with regard thereto and has fully verified the EPC CONTRACT DOCUMENTS including the DESIGN DOSSIER and accepts and takes full responsibility for such documents to the extent specified in this present article 13.

The EPC CONTRACTOR hereby undertakes to make no CLAIMS whatsoever or requests for CHANGE ORDERS, including for price adjustments and/or Extension of Time in respect of the EPC CONTRACT DOCUMENTS because of his failure to sufficiently acquaint himself with the EPC CONTRACT DOCUMENTS and by reason of the EPC CONTRACTOR's undertakings within this present article 13 and the Certificate of Endorsement of the DESIGN DOSSIER as per the ANNEX 5/A.

13.4 Responsibility for Endorsement of the DESIGN DOSSIER

The EPC CONTRACTOR warrants that prior to the EFFECTIVE DATE that he has fully reviewed, examined and verified all aspects of the contents of the DESIGN DOSSIER, and with the exception of the RELY UPON INFORMATION, the EPC CONTRACTOR has fully endorsed, without exception, the contents, adequacy sufficiency, cohesion, nature, type, quality, quantity, completeness and degree of detail of the DESIGN DOSSIER, and hereby acknowledges and agrees the DESIGN DOSSIER is fit for the purpose intended as per the terms and requirements of this CONTRACT.

To his effect, the EPC CONTRACTOR shall have signed and submitted a Certificate of Endorsement of the DESIGN DOSSIER to the COMPANY prior to the EFFECTIVE DATE in accordance with and in the form, which is attached as ANNEX-5/A hereto to acknowledge and confirm the EPC CONTRACTOR's endorsement of the DESIGN DOSSIER.

If the EPC CONTRACTOR does not submit the signed Certificate of Endorsement of the DESIGN DOSSIER to the COMPANY, as aforesaid, or if the EPC CONTRACTOR subsequently challenges the validity of the submitted Certificate of Endorsement of the DESIGN DOSSIER then such failure and/or challenge shall be disregarded and the EPC CONTRACTOR shall be deemed to have endorsed the DESIGN DOSSIER (RELY UPON INFORMATION excepted) in accordance with this present article 13 and as per ANNEX-5/A (Certificate of Endorsement of the DESIGN DOSSIER) hereto.

Accordingly, the EPC CONTRACTOR hereby waives all rights to recourse of whatsoever nature against the COMPANY arising from or in connection with and/or use by the EPC CONTRACTOR of the parts of the DESIGN DOSSIER endorsed by him.

Furthermore, the EPC CONTRACTOR warrants that he shall make no CLAIM with respect to the contents, adequacy sufficiency, cohesion, nature, type, quality, quantity, completeness and degree of detail of the parts of the DESIGN DOSSIER endorsed by him,

nor for any CONFLICTS contained within the DESIGN DOSSIER and/or between the contents of the DESIGN DOSSIER.

13.5 Responsibility for RELY UPON INFORMATION

Notwithstanding the other provisions of this article 13, the RELY UPON INFORMATION listed and described in Exhibit E Annex-8 shall not be endorsed by EPC CONTRACTOR.

However, the EPC CONTRACTOR shall remain responsible for:

- a) the verification, prior to the EFFECTIVE DATE, of the adequacy, sufficiency and coherence of all of the all of the contents of the DESIGN DOSSIER and documents and other information referenced therein with respect to the correct, proper and timely performance of the EPC WORK, and
- b) the interpretation of the documents and information contained in the DESIGN DOSSIER and for its correct, proper and timely utilization in the performance of the EPC WORK.

Article 14 Performance of the EPC WORK

14.1 General Requirements

The EPC CONTRACTOR shall perform and complete the EPC WORK in accordance with this CONTRACT and shall not deviate from the CONTRACT DOCUMENTS nor from APPROVED EPC CONTRACTOR DOCUMENTS nor from APPROVED T&I CONTRACTOR DOCUMENTS, without prior approval from the COMPANY.

14.1.1 NOTICES TO PROCEED

The COMPANY shall instruct the EPC CONTRACTOR to perform the EPC WORK on a PHASE by PHASE basis by means of the issue of NOTICES TO PROCEED which shall generally be in the format of ANNEX-10.

Unless instructed by the COMPANY the EPC CONTRACTOR shall not commit to any expenditure for a PHASE prior to receipt of the relevant NOTICE TO PROCEED.

14.1.2 Standards of Workmanship

The EPC CONTRACTOR shall carry out the EPC WORK in accordance with the terms and requirements of this CONTRACT, and shall exercise all reasonable skill, care, diligence and good judgement in the performance thereof and shall complete the EPC WORK in a professional manner in accordance with sound engineering practice and the highest standards of workmanship known for similar kinds of work in the oil and gas industry.

14.1.3 Design Objectives

The PLANT components and related items shall be designed to fully ensure:

- a) the PLANT and where applicable the EPC WORK is designed in full conformity with the requirements of this CONTRACT,
- b) operational safety of the PLANT with respect to protection of PERSONNEL and property,
- c) the protection of the PLANT environment,

- d) the optimization of the conditions for the PLANT operability, efficiency and maintenance, and
- e) compliance with the PLANT performance warranties required by this CONTRACT.

14.1.4 System of Units

Unless expressly otherwise specified in this CONTRACT or unless otherwise required or necessary the EPC CONTRACTOR shall use the metric system under the International System (SI) of Units but shall use inches for diameters of pipes and pipe accessories.

14.1.5 Standards and Codes

Unless expressly otherwise specified, wherever reference is made in this CONTRACT to standards and codes in accordance with which the EPC WORK is to be performed, the edition or revision of the standards or codes current on the EFFECTIVE DATE shall apply. Unless otherwise mentioned, such reference is solely for implementation of the technical portions of such standards and codes.

14.2 Additional Documents

14.2.1 Issuance of Additional Documents

At any time during the performance of the EPC WORK, the COMPANY shall have the right to issue to the EPC CONTRACTOR additional documents or revised documents to supplement or replace EPC CONTRACT DOCUMENTS.

14.2.2 Checking Additional Documents

The EPC CONTRACTOR shall immediately check, at his own expense, all such additional or revised documents and shall use best endeavors to promptly and, in any case within a period not exceeding seven (7) days from receipt of such documents, or such other period as the COMPANY may agree on a specific case by case basis, notify the COMPANY of CONFLICTS therein or resulting therefrom.

In such event the EPC CONTRACTOR shall obtain the COMPANY's clarification as specified in sub-article 6.4 prior to carrying out any EPC WORK to which such documents relate.

Subject to the provisions of article 22, the EPC CONTRACTOR may be entitled to request a CHANGE ORDER, but any failure to notify the COMPANY within the above mentioned period shall debar the EPC CONTRACTOR from any additional rights under this CONTRACT even if such documents do contain CONFLICTS.

14.2.3 COMPANY PROVIDED INFORMATION

Except as is stated in sub-article 12.2.2 c) and except for RELY UPON INFORMATION, the EPC CONTRACTOR is fully responsible for the interpretation and use of all COMPANY PROVIDED INFORMATION and the EPC CONTRACTOR hereby accepts all responsibilities to properly evaluate and use such COMPANY PROVIDED INFORMATION and to bear any and all consequences resulting from his improper evaluation and/or use thereof.

14.3 COMPANY ITEMS

14.3.1 General

The COMPANY shall provide the EPC CONTRACTOR with the COMPANY ITEMS, if any, on the dates, at the places and in accordance with the conditions specified in the Exhibit I or, at the COMPANY's sole choice and decision, at subsequent later dates at which they are actually needed by the EPC CONTRACTOR for the performance of the EPC WORK.

14.3.2 Inspection of COMPANY ITEMS

Upon delivery of any COMPANY ITEMS, the EPC CONTRACTOR shall immediately receive and perform a joint visual inspection with COMPANY nominated inspector in order to verify conformity with the requirements of this CONTRACT and to check upon the quantities and condition of items received. The EPC CONTRACTOR shall give the COMPANY adequate notice of such inspection.

14.3.3 Recording of Receipt of COMPANY ITEMS

At the time of delivery and following inspection as per sub-article 14.3.2 above, the EPC CONTRACTOR shall immediately record and confirm receipt of COMPANY ITEMS and shall immediately notify the COMPANY of any shortfall in delivered quantities, as well as visually apparent defects or damages.

Failure of the EPC CONTRACTOR to notify the COMPANY at the time of receipt of shortfall in delivered quantities, apparent defects or damages, shall be deemed conclusive evidence that such COMPANY ITEMS were free from any such shortfall in delivered quantities, apparent defects and damages at delivery.

In such event, the EPC CONTRACTOR shall be responsible and liable for such COMPANY ITEMS as if the shortfall in delivered quantities, apparent defects or damages, were caused by EPC CONTRACTOR.

14.3.4 Custody and Protection of COMPANY ITEMS

Upon delivery the EPC CONTRACTOR shall be responsible for and the liability for the care, custody and preservation of COMPANY ITEMS.

The EPC CONTRACTOR shall receive, inspect, transport, implement proper material identification, packaging, storage and control, store, use, preserve, maintain COMPANY ITEMS in accordance with the terms and requirements of this CONTRACT, best professional practices, SUPPLIER recommendations and requirements, including, use storage, protection against weather hazards, water, humidity, sand, fire, theft, vandalism and any other matter whatsoever.

The EPC CONTRACTOR shall be fully responsible and liable for the consequences of any failure to comply with the foregoing.

COMPANY ITEMS missing or damaged while in EPC CONTRACTOR's care and custody shall be promptly replaced or repaired either by the EPC CONTRACTOR or at COMPANY's sole decision by others, at the EPC CONTRACTOR's sole costs and expense unless and to the extent the cost of replacement of the missing COMPANY ITEMS are compensated under policies of insurance to be placed by the COMPANY as per article 43.

14.3.5 Transportation of the COMPANY ITEMS

The COMPANY shall be responsible for the delivery of the COMPANY ITEMS as per the specified delivery conditions to the delivery point(s) designated in Exhibit I.

The EPC CONTRACTOR shall be responsible for taking delivery, selection of the means of conveyance, loading, protection, maintenance, preservation, the safe transportation to and for unloading of the COMPANY ITEMS at the applicable WORKSITE.

Taking delivery, means of conveyance, protection, preservation, safe transportation, unloading, care and custody shall, subject to the provisions of articles 36 - 44, shall be at the EPC CONTRACTOR's own risk, responsibility and liability.

14.3.6 Installation of the COMPANY ITEMS

The EPC CONTRACTOR shall carry out all operations necessary to ensure the correct, proper and timely use and incorporation of the COMPANY ITEMS (if any) in the PLANT components, including the satisfactory checking of all interfaces with the equipment, materials and fabricated items supplied or made by the EPC CONTRACTOR, and any related engineering, materials supply, fabrication and/or construction activities.

The EPC CONTRACTOR shall immediately notify the COMPANY in the case any defects become apparent in the COMPANY ITEMS during the performance of the EPC WORK.

14.3.7 Detailed and Complete Reconciliation of all COMPANY ITEMS

At the times specified in this CONTRACT and if none is specified then no later than every three (3) months during the performance of the EPC WORK, the EPC CONTRACTOR shall prepare and submit fully detailed, comprehensive and complete reconciliation reports for COMPANY ITEMS.

Each reconciliation report shall distinguish between those COMPANY ITEMS that are imported and those COMPANY ITEMS are obtained locally and any further sub-divisions the COMPANY may request. The EPC CONTRACTOR shall propose the format of the reconciliation to the COMPANY for approval and shall notify and invite the COMPANY to participate in the inspections of the COMPANY ITEMS for the reconciliation report.

The cost of any shortfall in the quantities, missing, and damaged COMPANY ITEMS shall be payable by the EPC CONTRACTOR to the COMPANY. Construction / cutting waste shall be identified in the reconciliation reports.

14.3.8 Surplus and Scrap COMPANY ITEMS

Designation of the COMPANY ITEMS as surplus or scrap shall be proposed by the EPC CONTRACTOR on a PHASE by PHASE basis to the COMPANY for approval or as may be requested otherwise.

The COMPANY shall instruct the EPC CONTRACTOR to either:

- a) sell and/or dispose of scrap and/or surplus COMPANY ITEMS, or

- b) transfer surplus COMPANY ITEMS from WORKSITE to a location to be specified by the COMPANY.

Refer to Exhibit G Annex 10 (COMPANY ITEMS Surplus and Scrap Procedure).

Failing which the COMPANY ITEMS shall be deemed transferred to the next and subsequent PHASE.

All of the EPC CONTRACTOR's costs and expenses, management, overhead, and all of the EPC CONTRACTOR's other costs and expenses of whatsoever nature arising from and/or in connection with the sale and disposal of surplus and/or scrap COMPANY ITEMS for a PHASE shall be deemed included within the Initial CONTRACT PRICE for such PHASE except for transport costs for loading, transport and delivery of surplus COMPANY ITEMS to the COMPANY's PSB Supply Base at Songkhla, which shall be compensated by means of a CHANGE ORDER priced on a net cost basis without uplift and/or fee.

14.4 EPC CONTRACTOR DOCUMENTS

14.4.1 Preparation and Submission of EPC CONTRACTOR DOCUMENTS

The EPC CONTRACTOR shall ensure all EPC CONTRACTOR DOCUMENTS are developed and prepared in a correct, proper and timely manner fully in accordance with the terms and requirements of this CONTRACT. Such preparation shall include but is not limited to where required and/or necessary consultation with the T&I CONTRACTOR and utilization / incorporation of applicable T&I Interface documents, information and T&I Interface comments.

The EPC CONTRACTOR shall also provide a copy of required and/or necessary EPC CONTRACTOR DOCUMENTS to the T&I CONTRACTOR at the same time for review and comment.

If the T&I CONTRACTOR does not provide comments within seven (7) working days from receipt of the aforementioned mentioned documents, then subject to Exhibit A Annex-1, the EPC CONTRACTOR may, subject to the provisions of sub-article 14.15, proceed on the basis that the T&I CONTRACTOR has no comments.

The EPC CONTRACTOR shall also provide EPC CONTRACTOR DOCUMENTS to the T&I CONTRACTOR for endorsement in accordance with sub-article 14.15 and Exhibit A Annex-10.

14.4.2 APPROVAL of EPC CONTRACTOR DOCUMENTS

The EPC CONTRACTOR shall submit all EPC CONTRACTOR DOCUMENTS required to be submitted in accordance with the requirements of Exhibit A Annex-1 (Procedure and Minimum List for EPC CONTRACTOR DOCUMENTS) and the other terms and conditions of this CONTRACT.

If the COMPANY does not provide its APPROVAL or comments for a properly prepared and correctly submitted EPC CONTRACTOR DOCUMENT within the applicable period stated in Exhibit A Annex-1, the EPC CONTRACTOR DOCUMENT shall be deemed to have been APPROVED by the COMPANY at the expiry of such period and the EPC CONTRACTOR may proceed with the EPC

WORK, at his own risk, liability and expense but without limitation, waiver and/or restriction of COMPANY rights under this CONTRACT and otherwise.

14.4.3 EPC CONTRACTOR DOCUMENTS not subject to APPROVAL PROCEDURE

Unless otherwise specified in Exhibit A Annex-1, Correspondence (letters, Fabrication Yard Memoranda, SITE Memoranda, EPC and T&I CONTRACTOR Interface communications, etc.) shall not be subject to the Exhibit A Annex-1 APPROVAL procedure but shall be submitted via the PROJECT electronic data management system (EDMS) for information and if applicable / response.

14.4.4 Responsibility for EPC CONTRACTOR DOCUMENTS

APPROVAL of any EPC CONTRACTOR DOCUMENTS shall not relieve the EPC CONTRACTOR of any of his obligations, responsibilities and liabilities under this CONTRACT.

14.4.5 Deviations

The EPC CONTRACTOR shall not deviate from the requirements and terms of APPROVED EPC CONTRACTOR DOCUMENTS, APPROVED T&I CONTRACTOR DOCUMENTS nor from additional documents supplied by the COMPANY pursuant to sub-article 14.2 (if any), without prior approval of the COMPANY.

Any and all deviations from the EPC CONTRACTOR DOCUMENTS, the T&I CONTRACTOR DOCUMENTS shall be proposed by the EPC CONTRACTOR in advance as per the Exhibit H Technical Queries Process for approval by the COMPANY.

14.4.6 EPC FINAL DOCUMENTATION

The EPC CONTRACTOR shall prepare and shall submit EPC FINAL DOCUMENTATION on a progressive basis in such form, content and at such times and in the manner stipulated Exhibit A Annex-1 and the other requirements of this CONTRACT.

14.5 EPC CONTRACTOR ITEMS

14.5.1 Procurement and Supply

The EPC CONTRACTOR shall procure and supply all required and necessary EPC CONTRACTOR ITEMS and shall perform all required and necessary EPC WORK for and in connection therewith.

All EPC CONTRACTOR ITEMS shall:

- a) be new and shall be in full conformity and compliance with the type, quality and quantity required by this CONTRACT,
- b) be of sound design, specification, materials and workmanship,
- c) be capable of the degree of performance specified in this CONTRACT,
- d) be fit for the intended purpose specified in this CONTRACT either expressly or by implication, and if not so specified, be fit for their ordinary purpose as per the requirements of this CONTRACT.

Subject to the other terms of this CONTRACT, if at any time should any defects and/or deficiencies become apparent in any of the EPC CONTRACTOR ITEMS,

the EPC CONTRACTOR shall propose the method of repair, replacement and/or rework to the COMPANY for approval.

The EPC CONTRACTOR shall rectify such defect(s) and/or deficiencies(s) in accordance with such approval within a timescale stipulated by the COMPANY at no cost to the COMPANY.

Any and all actions of the COMPANY (such as but not limited to approval, inspection and acceptance) shall not relieve the EPC CONTRACTOR of his obligations, responsibilities and liabilities with regard to CONTRACTOR ITEMS.

14.5.2 Expediting

The EPC CONTRACTOR shall monitor, track and expedite all aspects (including; engineering, materials, manufacturing, assembly / fabrication, testing, packaging, preservation, transportation and delivery) of any and all EPC CONTRACTOR ITEMS as per the terms and requirements of this CONTRACT.

If the EPC CONTRACTOR should encounter delay in any of the foregoing, he shall immediately initiate all required and necessary actions to remedy and/or mitigate such delay(s). The EPC CONTRACTOR shall simultaneously inform the COMPANY of the actions taken or to be undertaken.

14.5.3 Identification

At all PHASES of the EPC WORK, the EPC CONTRACTOR shall ensure the proper identification of all CONTRACTOR ITEMS with the corresponding records and maintenance of such identification markings. The EPC CONTRACTOR shall provide the COMPANY with a copy of all related certificates and documentation upon delivery of such items at the WORKSITE.

14.5.4 Transportation and Delivery of EPC CONTRACTOR ITEMS

The EPC CONTRACTOR shall be responsible for the selection of the means of conveyance for the EPC CONTRACTOR ITEMS and from the delivery point for the EPC CONTRACTOR ITEMS to be transported by the EPC CONTRACTOR. Transportation shall be carried out at EPC CONTRACTOR's own risk.

EPC CONTRACTOR ITEMS shall be properly packed and secured in accordance with the terms and requirements of this CONTRACT and transported without loss or damage in a timely manner to the applicable EPC WORK Locations as required and necessary for the timely performance of the EPC WORK as per the WORK TIME SCHEDULE.

Unless specified to the contrary in this CONTRACT, all containment, packing cases, boxes, tins, wrappings and other packaging materials supplied by the EPC CONTRACTOR shall be considered as non-returnable and their cost as having been included in the applicable Initial CONTRACT PRICE as well as charges for preparation of packing, boxing, crating, freight and other related services.

14.5.5 Storage, Protection, Maintenance

EPC CONTRACTOR ITEMS shall be properly stored, maintained and preserved in accordance with the terms and requirements of this CONTRACT, VENDOR and/or SUBCONTRACTOR recommendations and requirements, best

professional practices and shall be protected against weather hazards, water, humidity, temperature, fire, theft, vandalism and all other risks and hazards.

The EPC CONTRACTOR shall use every means to prevent damage or loss whatsoever to the EPC CONTRACTOR ITEMS.

14.5.6 Detailed and Complete Reconciliation of EPC CONTRACTOR ITEMS

Without limitation or restriction of the obligation and liabilities of the EPC CONTRACTOR under this CONTRACT, the EPC CONTRACTOR shall during the performance of the EPC WORK and for the period of this CONTRACT, prepare and maintain a fully detailed, comprehensive and complete substantiated reconciliations of EPC CONTRACTOR ITEMS (received, used, surplus and scrap) and shall distinguish between Material Group 1 EPC CONTRACTOR ITEMS, Material Group 2 EPC CONTRACTOR ITEMS and those EPC CONTRACTOR ITEMS that are imported from those purchased in the Country of the SITE. The EPC CONTRACTOR shall make such reconciliations available to the COMPANY as and when requested to do so.

14.5.7 Use of Surplus Material Group 1 EPC CONTRACTOR ITEMS

Where feasible, surplus Material Group 1 CONTRACTOR ITEMS from a PHASE shall be utilized in a subsequent PHASE or PHASES. The EPC CONTRACTOR shall carefully store and preserve such surplus Material Group 1 CONTRACTOR ITEMS and shall comply with instructions from COMPANY with regard thereto. Costs and expenses of complying with the foregoing are deemed included within the CONTRACT PRICE and no additional compensation shall be due from the COMPANY to the EPC CONTRACTOR in this regard.

14.5.8 Disposal of Surplus and Scrap Material Group 1 EPC CONTRACTOR ITEMS

After completion of applicable EPC WORK activities, the EPC CONTRACTOR shall propose, and the COMPANY shall instruct the EPC CONTRACTOR to either sell or otherwise dispose of surplus and scrap Material Group 1 EPC CONTRACTOR ITEMS.

The EPC CONTRACTOR shall comply with the COMPANY's instructions and procedural requirements with regard to such sale / disposal of and shall obtain written approval from the COMPANY to the sale / disposal procedure, price and conditions before selling or disposing of any surplus and/or scrap Material Group 1 EPC CONTRACTOR ITEMS.

The full amount of the sale price, without deduction, shall be payable by the EPC CONTRACTOR to the COMPANY and this CONTRACT PRICE shall be adjusted accordingly by means of a CHANGE ORDER.

If the COMPANY should instruct EPC CONTRACTOR to transport surplus Material Group 1 EPC CONTRACTOR ITEMS from a WORKSITE to the COMPANY's PSB Warehouse/Supply Base in Songkhla, the EPC CONTRACTOR shall be compensated for the actual net cost of loading and transport from such WORKSITE to the COMPANY's Warehouse / Supply Base, without mark-up for management costs, profit or fee.

14.5.9 Disposal of Surplus and Scrap Material Group 2 EPC CONTRACTOR ITEMS

On completion of each EPC WORK activity and in any event prior to completion of the EPC WORK for each PHASE, the EPC CONTRACTOR shall dispose and/or remove from WORKSITES, all surplus and scrap Material Group 2 CONTRACTOR ITEMS that are no longer required for the EPC WORK, or not required for incorporation into the PLANT and which are not to be delivered to the T&I CONTRACTOR and/or the COMPANY.

14.6 Onshore Construction Operations

The EPC CONTRACTOR shall perform Onshore Construction Operations for EPC WORK in a proper, correct and timely manner in full compliance with the terms and requirements of this CONTRACT.

14.7 SITE Surveys

The EPC CONTRACTOR shall perform Pre-Engineering survey and Post Engineering surveys of existing host Wellhead Platforms in a timely manner in accordance with Exhibit A and the other terms and requirements of this CONTRACT.

14.8 Load-out Operations including Sea Fastening.

Subject to sub-article 14.15, Exhibit A Annex-10 and the other terms and requirements of this CONTRACT, the EPC CONTRACTOR shall perform Load Out Operations of new Wellhead Platforms Topsides, Jackets and Appurtenances.

Handover of the Topsides, Jackets and Appurtenances from the EPC CONTRACTOR to the T&I CONTRACTOR shall take place at the Anchorage Point in accordance with sub-article 19.1.1, Exhibit C and the other terms and requirements of this CONTRACT.

The T&I CONTRACTOR is responsible for and shall perform all other Load Out Operations for and in connection with the T&I WORK, including Brownfield Modifications (OPTION) in a correct, proper and timely manner in accordance with the terms and requirements of this CONTRACT.

14.9 Transportation and Installation at the SITE

14.9.1 Marine Transportation

The T&I CONTRACTOR shall receive and perform marine transportation of the major PLANT components (Topsides and Jackets and Appurtenances and if required fabricated PLANT components and EPC CONTRACTOR ITEMS for Brownfield WORK.

14.9.2 Land Transportation

The EPC CONTRACTOR shall perform all required and/or necessary land transportation for and in connection with the EPC WORKS.

14.9.3 Offshore Installation

The T&I CONTRACTOR is responsible for and shall perform all Offshore Installation Operations for each PLATFORM and the PLANT.

For clarity rectification of defects and deficiencies in the EPC WORK and related EPC PLANT components and/or completion of EPC WORK at a SITE, by the

EPC CONTRACTOR shall not be considered as T&I CONTRACTOR Offshore Installation Operations.

14.9.4 Not used (PLANT Setting Out)

14.10 Pre-commissioning and Commissioning

The EPC CONTRACTOR shall perform pre-commissioning and also commissioning (to the extent set out in Exhibit A, Exhibit A Annex-5 and the other terms and requirements of this CONTRACT.

The EPC CONTRACTOR shall ensure the timely presence at WORKSITES of all required and/or necessary specialist, SUBCONTRACTOR, VENDOR and SUPPLIER Representatives and/or PERSONNEL.

14.11 Technical Assistance during Commissioning and Start-up

The EPC CONTRACTOR shall, if and when requested by the COMPANY, provide EPC CONTRACTOR's PERSONNEL to the COMPANY, as technical assistance for COMPANY offshore commissioning and start-up operations of the PLANT.

The EPC CONTRACTOR shall be compensated for the provision of such PERSONNEL in the manner stipulated Exhibit B and the other terms and requirements of this CONTRACT.

Such technical assistance shall only be required if requested by COMPANY and as such shall not delay the issue of a PROVISIONAL ACCEPTANCE CERTIFICATE.

14.12 Spare Parts for Offshore Commissioning and Start-up

The EPC CONTRACTOR shall supply and deliver special tools, spare parts and consumables for offshore commissioning and start-up operations to be provided by the EPC CONTRACTOR to the extent described in Exhibit A, Exhibit A Annex-8 and the other applicable terms and conditions of this CONTRACT.

14.13 Provision of Services and Facilities to the COMPANY

The EPC CONTRACTOR shall provide services and facilities for the COMPANY's PERSONNEL at onshore EPC WORKSITES, EPC WORKSHOPS and other EPC WORK Locations as the COMPANY may instruct pursuant to the Call-Off Procedure described in Exhibit A, Exhibit A Annex-7.

The EPC CONTRACTOR shall be compensated for provision of such services and facilities in accordance with Exhibit B and the other terms of this CONTRACT.

14.14 OPTIONS

The EPC CONTRACTOR shall perform OPTIONS (if any) only if instructed by the COMPANY to do so. The COMPANY shall have the right but not as an obligation to commit to or exercise any of the OPTIONS. If the COMPANY does not exercise its right to have an OPTION performed, no remuneration, compensation or indemnity shall be due to EPC CONTRACTOR in respect of such an OPTION.

14.15 EPC and T&I Interfaces

14.15.1 The EPC CONTRACTOR

The EPC CONTRACTOR shall perform all required and/or necessary EPC & T&I Interface Actions to be performed by the EPC CONTRACTOR in an expeditious and timely in accordance with the terms and requirements of this CONTRACT.

14.15.2 Default of EPC and T&I Interface Obligations by the T&I CONTRACTOR

If the T&I CONTRACTOR:

- a) fails to correctly perform a designated T&I action/activity stipulated in an applicable EPC & T&I Register, or
- b) performs a designated T&I action/activity Interface Action later than stipulated in an applicable EPC & T&I Register, or
- c) changes previously provided T&I CONTRACTOR interface document and/or information,
- d) changes one or more previously provided APPROVED T&I CONTRACTOR DOCUMENTS
- e) requests, causes or if changes to APPROVED for Construction EPC CONTRACTOR DOCUMENTS are attributable to the T&I CONTRACTOR, his SUBCONTRACTORS and/or VENDOR,

the EPC CONTRACTOR shall immediately inform the COMPANY and shall comply with the COMPANY's instructions with regard thereto.

The COMPANY shall compensate the EPC CONTRACTOR by means of a CHANGE ORDER for resulting additional EPC WORK (if any) performed by the EPC CONTRACTOR upon instruction from the COMPANY.

The CHANGE ORDER shall be priced in accordance with sub-article 22.3, and other terms and requirements of the EPC CONTRACT and shall be solely for the redoing of EPC WORK caused by and/or as a result of the T&I CONTRACTOR's fault as described in this sub-article 14.15.2.

14.15.3 Default of EPC and T&I Interface Obligations by the EPC CONTRACTOR

The EPC CONTRACTOR shall be liable for compensation to be paid by the COMPANY to the T&I CONTRACTOR for resulting additional T&I WORK if the EPC CONTRACTOR:

- a) fails to correctly perform a designated EPC action/activity stipulated in an applicable EPC & T&I Register, or
- b) performs a designated EPC action/activity Interface Action later than stipulated in an applicable EPC & T&I Register, or
- c) changes previously provided EPC CONTRACTOR interface document and/or information, or
- d) changes one or more previously provided APPROVED EPC CONTRACTOR DOCUMENTS, or
- e) requests, causes or if changes to APPROVED for Construction T&I CONTRACTOR DOCUMENTS are attributable to the EPC CONTRACTOR, his SUBCONTRACTOR and/or VENDOR,

Upon the occurrence of any or all the sub-article 14.15.3 a), b), c), d), and/or e) events, and the COMPANY shall compensate the T&I CONTRACTOR by means of a CHANGE ORDER for resulting additional T&I WORK so caused as a result of the EPC CONTRACTOR's fault.

Such a CHANGE ORDER shall be prepared and priced under the terms of the T&I CONTRACT and the EPC Initial CONTRACT PRICE shall be reduced by means of a negative CHANGE ORDER to compensate the COMPANY for the aforementioned. compensation amount to the T&I CONTRACTOR.

14.15.4 COMPANY's Decision

If there is any difference, disagreement and/or dispute concerning the content and pricing any such CHANGE ORDER referred to in sub-article 14.5.2 and/or 14.5.3, and/or related Extension of Time, the decision of the COMPANY with regard to the same shall be final and binding on the PARTIES until and if such difference, disagreement and/or dispute is finally settled as per sub-article 54.

14.15.5 Waiver of Rights to CLAIM

The EPC CONTRACTOR hereby confirms that except for CHANGE ORDER(S) for compensation for additional work and/or Extension of Time, as stipulated in sub-article 14.15.2, he shall not make any other CLAIM whatsoever for and/or in connection with any act, error, omission, fault and/or neglect of the T&I CONTRACTOR with regard to EPC & T&I Interface Actions to be performed by the T&I CONTRACTOR. In addition, the EPC CONTRACTOR shall not CLAIM directly to the T&I CONTRACTOR.

Article 15 WORK TIME SCHEDULE and Progress Control

15.1 WORK TIME SCHEDULE

The EPC CONTRACTOR hereby acknowledges and agrees that time is of the utmost importance and the timely, expeditious correct, and sequential completion of the EPC WORK, PLANT components and related items and the EPC WORK for each PHASE and the respective parts thereof on or before the applicable COMPLETION DATES and/or Key Dates is an essential condition of this CONTRACT.

The EPC CONTRACTOR hereby agrees that the WORK TIME SCHEDULE for each PHASE shall only be subject to modification in accordance with the provisions of this article 15 and the other terms and requirements of this CONTRACT.

The EPC CONTRACTOR hereby guarantees the timely, expeditious correct, and sequential performance and completion of the EPC WORK as per the approved EPC Detailed Work Time Schedule (latest version) and the applicable WORK TIME SCHEDULE including required COMPLETION DATES failing which the COMPANY shall have the remedies specified in this CONTRACT and otherwise including those under article 48, sub-articles 34.1 and 34.2.

15.2 EPC Detailed Work Time Schedules

The EPC CONTRACTOR shall prepare EPC Detailed Work Time Schedule(s) on a PHASE by PHASE basis and where applicable on an installation year basis, in accordance with the requirements of Exhibit C and the other terms and requirements of this CONTRACT. All EPC Detailed Work Time Schedules shall be subject to prior approval by the COMPANY.

15.3 Progress Monitoring and Control

The EPC CONTRACTOR shall perform planning, monitoring, progress control and progress reporting in compliance with the requirements of Exhibit A, Exhibit B, Exhibit C, Exhibit G Annex-5 and the other applicable terms and requirements of this CONTRACT.

15.4 Notification of Events Which Adversely Affect Progress of the EPC WORK

Unless otherwise agreed by the COMPANY, the EPC CONTRACTOR shall notify the COMPANY no later than seventy-two (72) hours after the first occurrence of each event that adversely affects and/or will affect the progress of the EPC WORK.

Such notification shall provide:

- a) Details of the event,
- b) Explanation of the cause
- c) Explanation of the anticipated effect on the performance of the EPC WORK
- d) Details of sub-article 15.6.7 and/or sub-article 15.7 corrective/mitigating actions undertaken and proposed.

The EPC CONTRACTOR shall thereafter provide the COMPANY with regular updates and all other relevant information with regard to sub-article 15.4.

The foregoing is without restriction and limitation of the EPC CONTRACTOR's obligations under sub-articles 15.6, 15.7 and the other terms and requirements of this CONTRACT.

15.5 Allowable Extension of Time

Subject to compliance with sub-articles 15.6, 15.7 and the other terms and requirements of this CONTRACT, the EPC CONTRACTOR shall be entitled to a CHANGE ORDER for an extension of a required COMPLETION DATE and/or required Key Date for delay caused solely by each and any of the following:

- a) clarification by the COMPANY pursuant to article 6 that is made later than the time limit stated in sub-article 6.4,
- b) provision of COMPANY PROVIDED INFORMATION later than is stated in Exhibit C or, the date and/or date actually needed by the EPC CONTRACTOR, whichever is the latest,
- c) later delivery of COMPANY ITEMS (if any) than is stated in Exhibit I, when such are expressly due within a specified period after the EFFECTIVE DATE,
- d) subject to sub-article 14.3.3, shortfall in delivered quantities, defects or damages in COMPANY ITEMS (if any) and provided that the EPC CONTRACTOR has not contributed in any way to such defect or damage and has not delayed the report of its discovery,
- e) suspension of the EPC WORK in accordance with the provisions of sub-article 49.1 and subject to sub-article 49.2.2 take-over of uncompleted parts of the PLANT,
- f) subject to sub-article 16.4 and the other terms and requirements of this CONTRACT, unnecessary re-inspection or re-testing at the COMPANY's request,
- g) FORCE MAJEURE in accordance with the provisions of sub-article 50.1,
- h) in case of damage or loss caused by any accident occurring on or between the WORKSITE, necessitating repair or replacement of any part of the RESULT OF

THE WORK, and provided the EPC CONTRACTOR can evidence that he has fully complied with the CONTRACT and the EPC CONTRACTOR and/or any SUBCONTRACTOR and/or any VENDOR have not contributed to such loss or damage,

- i) additional EPC WORK pursuant to sub-article 14.15.2 (EPC and T&I Interfaces) and/or delay to the performance of the EPC WORK because of the EPC WORK and/or caused by or the fault of the EPC CONTRACTOR,
- j) rescue and salvage operations as provided for in sub-article 37.9.1,
- k) acts or omission of the COMPANY, its PERSONNEL or the COMPANY OTHER CONTRACTORS subject to the exceptions stated in sub-article 22.2 and elsewhere in this CONTRACT, and/or
- l) other Extension of Time expressly provided for under this CONTRACT.

Always provided that the EPC CONTRACTOR can demonstrate with supporting evidence that a required COMPLETION DATE will be and/or is delayed solely due to one or more of the above reasons affecting the critical path of the WORK TIME SCHEDULE, as further identified in the approved EPC Detailed Work Time Schedule.

15.6 CLAIMS for Extension of Time

15.6.1 Generally

Each extension of time to a required COMPLETION DATE, a required Key Date and modifications to an approved EPC Detailed Work Time Schedule shall be made in accordance with the provisions of this article 15 and the other terms and requirements of this CONTRACT.

15.6.2 Notification of CLAIM for Extension of Time

The EPC CONTRACTOR shall notify the COMPANY of his intention to claim an extension of time to required COMPLETION DATE and/or required Key Date at the earliest opportunity and in any event no later than ten (10) working days after the first occurrence of the event for which he intends to CLAIM a time extension as aforesaid.

15.6.3 Change Order Proposal for extension of time

In addition to the notification requirements of sub-article 15.6.2 the EPC CONTRACTOR shall prepare and submit a Change Order Proposal for each extension of time which shall be prepared and submitted in accordance with the requirements of article 15, sub-article 22.2.4 b), Exhibit G Annex-4 and the other terms and requirements of this CONTRACT.

15.6.4 Failure to Comply with sub-articles 15.6.2 and/or 15.6.3

Unless otherwise agreed to by the COMPANY:

- a) if the EPC CONTRACTOR fails to notify the COMPANY within the time limit stated in sub-article 15.6.2 the COMPANY shall have the right to reject the related CLAIM for extension of time and the EPC CONTRACTOR shall not be entitled to any CLAIM based on the occurrence of the event,
- b) if the EPC CONTRACTOR fails to submit a Change Order Proposal within the time limit stated in sub-article 15.6.3 or such other period as the

COMPANY may agree then the COMPANY shall have the right to reject the Change Order Proposal and the EPC CONTRACTOR shall not be entitled to any CLAIMS based on the occurrence of the event(s) that are the subject matter of the Change Order Proposal.

15.6.5 Calculation of Extension of Time.

Extensions of time to a required COMPLETION DATES and/or a required Key Dates shall be calculated as the delay caused by events specified in sub-article 15.5 to the critical path of the applicable WORK TIME SCHEDULE as identified in the applicable approved EPC Detailed Work Time Schedule after the results of efforts to overcome and/or minimize the delay and the results of Recovery Actions, if any, as per sub-article 15.6.7 are taken into account.

In the case of an overlapping delay i.e. where more than one event causes a concurrent delay to the aforesaid critical path and the cause of at least one of those events, but not all of them, is not events specified in sub-article 15.5, then to the extent and period that such delays are concurrent, the EPC CONTRACTOR shall not be entitled to an extension of time for the period of such concurrent delay.

15.6.6 Evaluation of Extension of Time CLAIMS

Each extension of time shall be evaluated by the COMPANY by reference to the applicable Change Order Proposal, other documents available to it plus further documents and/or clarification the COMPANY may request the EPC CONTRACTOR to provide.

The PARTIES shall endeavor to mutually agree each extension of time (if any) failing which the COMPANY may elect to determine any such extension of time after due representation from the EPC CONTRACTOR.

In such event the COMPANY's determination shall be binding on the PARTIES until and if such difference, disagreement and/or dispute is finally settled as per sub-article 54.

15.6.7 Obligation to Overcome and Minimize Delay

In all cases where the EPC CONTRACTOR is entitled to an extension of time for a reason stated in sub-article 15.5, the EPC CONTRACTOR shall;

- a) use all reasonable endeavors to overcome or minimize the actual or anticipated delay,
- b) submit a Recovery Plan and if requested an updated EPC Detailed Work Time Schedule to the COMPANY for review and approval.
- c) comply with the COMPANY's requirements with regard to items 15.6.7 a) and b) and if instructed by the COMPANY implement any or all of the Recovery Actions listed in sub- article 15.7.

If the implementation of Recovery Actions as per sub-article 15.6.7 c) causes the EPC CONTRACTOR to incur additional expenses he would not have otherwise incurred the EPC CONTRACTOR shall be entitled to request a CHANGE ORDER pursuant to article 22.

The preceding paragraph shall not apply for periods of overlapping delay caused by reasons for which the EPC CONTRACTOR is not entitled to an extension of time pursuant to sub-article 15.5.

15.6.8 Extension of Time for Events Occurring After Required COMPLETION DATES

The CONTRACTOR shall not CLAIM and shall not be entitled to an extension of time for events that occur after a required COMPLETION DATE and which delay the achievement of such COMPLETION DATE except by reason of:

- a) later than required clarification by the COMPANY under sub-article 6.4,
- b) subject to sub-article 14.3.3, shortfall in delivered quantities, defects or damages in COMPANY ITEMS (if any), and provided that the EPC CONTRACTOR has not contributed in any way to such defect or damage and has not delayed the report of its discovery,
- c) suspension of EPC WORK in accordance with the provisions of sub-article 49.1 and subject to sub-article 49.2.2 take-over of uncompleted parts of the PLANT,
- d) Subject to sub-article 16.4 and the other terms and requirements of this CONTRACT, unnecessary re-inspection or re-testing at the COMPANY's request,
- e) FORCE MAJEURE in accordance with the provisions of sub-article 50.1,
- f) acts or omission of the COMPANY, its PERSONNEL or the COMPANY OTHER CONTRACTORS subject to the exceptions stated in article 22.

The COMPANY shall not be bound to bear any additional cost as a result of later achievement of any such COMPLETION DATE unless solely and directly due to an act and/or omission of the COMPANY and the COMPANY OTHER CONTRACTORS.

15.7 Events for which the EPC CONTRACTOR is not entitled to an extension of time

In case of anticipated and/or actual delay to the progress of the WORK for which the EPC CONTRACTOR is not entitled to an extension of time he shall, at his own risk, cost, and expense initiate and implement all required and/or necessary Recovery Actions to overcome and if not possible to overcome then to minimize actual or anticipated delay.

Without limitation, such Recovery Actions may include, as appropriate:

- a) increasing the working hours,
- b) increasing the number of the EPC CONTRACTOR's PERSONNEL
- c) mobilizing / employing additional resources,
- d) mobilizing / using additional CONSTRUCTION EQUIPMENT,
- e) expediting / accelerating delivery of CONTRACTOR ITEMS
- f) rescheduling and/or resequencing of the EPC WORK,
- g) any other appropriate recovery action required and/or necessary.

In all cases of anticipated and/or actual delay as aforesaid the EPC CONTRACTOR shall:

- a) submit a Recovery Plan explaining how the EPC CONTRACTOR proposes to overcome and/or mitigate the delay and to achieve the required Key Dates and/or required COMPLETION DATES,

- b) propose Recovery Actions the EPC CONTRACTOR will implement to the COMPANY for approval, and/or
- c) if requested, submit an updated EPC Detailed Work Time Schedule to the COMPANY for approval.

Article 16 Quality Management

16.1 The EPC CONTRACTOR's Obligations

The EPC CONTRACTOR shall ensure that all required and necessary quality management and related activities (including those for SUBCONTRACTORS, VENDORS and to the extent applicable SUPPLIERS and third parties) in connection with:

- a) the EPC WORK,
- b) the EPC CONTRACTOR DOCUMENTS,
- c) the CONTRACTOR ITEMS,
- d) the CONSTRUCTION EQUIPMENT,
- e) and all other related matters and activities,

are performed in accordance with the requirements of APPLICABLE LAWS, Exhibit A, Exhibit H and the other terms and requirements of this CONTRACT.

16.2 Not used (Independent Engineering Review and Certification)

16.3 Marine Warranty Surveyor

The T&I CONTRACTOR shall engage the services of an independent Marine Warranty Surveyor, who shall perform Marine Warranty Surveyor WORK for and in connection with the EPC WORK and the T&I WORK.

The Marine Warranty Surveyor activities for and in connection with the EPC WORK and Marine Warranty Surveyor Activities for the T&I WORK are described in:

- a) Exhibit A,
- b) Exhibit A Annex-4 and
- c) the other terms and requirements of this CONTRACT.

The Marine Warranty Surveyor shall be paid by the T&I CONTRACTOR for the aforesaid Marine Warranty Surveyor WORK that is satisfactorily performed.

Compliance with Marine Warranty Surveyor Requirements shall not limit, restrict nor relieve the EPC CONTRACTOR of his responsibilities and/or liabilities under the terms of this CONTRACT and APPLICABLE LAWS.

16.4 Audits, Inspections and Tests

The EPC CONTRACTOR shall give adequate and required notice and shall perform / arrange for all required and necessary audits, inspections and tests of the EPC WORK, PLANT components and related items, EPC CONTRACTOR DOCUMENTS, the CONTRACTOR ITEMS, the COMPANY ITEMS, CONSTRUCTION EQUIPMENT and the RESULT OF THE WORK at all stages of execution by the EPC CONTRACTOR, SUBCONTRACTORS, VENDORS and to the extent applicable by SUPPLIERS and/or third parties.

The COMPANY and/or PERSONNEL designated by the COMPANY shall have the right to attend and witness any and all such audits, inspections and tests and to collect evidence and to receive copy reports and test results.

The COMPANY shall also have the right to perform or have performed and/or instruct audits, inspection and/or testing at any time to verify if the EPC WORK, CONTRACTOR DOCUMENTS, the RESULT OF THE WORK and the PLANT components and related items are in accordance with the terms and requirements of this CONTRACT and/or APPLICABLE LAWS.

The costs and expenses of all audits, inspections and tests are included in the CONTRACT PRICE, except for re-inspection and re-testing if:

- a) the EPC CONTRACTOR has already performed inspection and testing in accordance with the terms of this CONTRACT, and
- b) provided the EPC CONTRACTOR has given adequate / required notice prior of audit, inspection testing and/or cover-up or putting out of view, and
- c) the parts of the EPC WORK and/or the PLANT components and related items instructed by the COMPANY to be re-inspected / re-tested are found to be in conformity with the terms and requirements of this CONTRACT.

In such event the COMPANY shall bear the direct cost of uncovering and/or testing provided such costs are satisfactorily justified by the EPC CONTRACTOR (including for uncovering, dismantling, re-installation, if any) and the provisions of sub-article 15.5 shall apply for any unavoidable Extension of Time to the applicable required COMPLETION DATE as may have been extended by CHANGE ORDER.

16.5 Independent Third-Party Inspection and Certification

The EPC CONTRACTOR shall engage the services of an Independent Inspection and Certification Agency to inspect, verify, witness, review and certify the particular parts of the EPC WORK and related PLANT components and related items, CONSTRUCTION EQUIPMENT as per the requirements of this CONTRACT and/or APPLICABLE LAWS.

The selection and appointment of the Independent Inspection and Certification Agency shall be subject to prior approval by the COMPANY as per Exhibit A, Exhibit H, Exhibit J, Exhibit G Annex-2 and the other terms and requirements of this CONTRACT.

Article 17 Reports

During the performance of the EPC WORK, at such times as are stipulated in this CONTRACT, the EPC CONTRACTOR shall provide the COMPANY with accurate and complete information and reports with respect to the EPC WORK already performed, the EPC WORK in progress, risks, the EPC WORK scheduled and the events affecting and likely to effect the performance of the EPC WORK, and the timely completion of EPC WORK activities and the PLANT components and related items and any other required and /or necessary report as per the terms and requirements of this CONTRACT.

Article 18 Maintenance Services

18.1 Availability and Prices for Special Tools, Parts and Services for PLANT Operations

Prior to placing any SUBCONTRACT and any Purchase Orders for the supply of CONTRACTOR ITEMS, the EPC CONTRACTOR shall use his best endeavors to provide,

and/or obtain directly from each potential SUBCONTRACTOR and potential VENDOR a firm commitment from such SUBCONTRACTOR and/or VENDOR for the continuous availability on the best terms, prices and conditions for all related special tools, spare parts and maintenance services necessary for such items for the COMPANY's benefit for a duration of ten (10) years after the ex-works delivery of such CONTRACTOR ITEM.

18.2 List of Spare Parts for First Two Years of Operations

Prior to placing any SUBCONTRACT and any Purchase Order for CONTRACTOR ITEMS, the EPC CONTRACTOR shall establish and submit for approval a detailed list of recommended spare parts for the first two (2) years of continuous operation of the PLANT, specifying quantities, unit prices and schedule for delivery based on detailed information and data obtained in writing from the SUBCONTRACTOR and/or VENDOR.

Article 19 INTERIM and PROVISIONAL ACCEPTANCE CERTIFICATES

19.1 INTERIM CERTIFICATES

19.1.1 The COMPANY shall issue INTERIM CERTIFICATES for the EPC WORK and related PLANT components as follows:

a) **MECHANICAL COMPLETION CERTIFICATE**

MECHANICAL COMPLETION CERTIFICATES shall be issued on a PLATFORM by PLATFORM basis separately for each of the following major components of each PLATFORM to document and record when the applicable major component is MECHANICALLY COMPLETE.

- i) New Wellhead Platform Topsides,
- ii) New Wellhead Platform Jacket and Appurtenances.

The above are further described in Exhibit A.

Each MECHANICAL COMPLETION CERTIFICATE shall be generally in the format of ANNEX-6/A hereof.

b) **READY FOR LOAD OUT CERTIFICATES**

READY FOR LOAD OUT CERTIFICATES shall be issued on a PLATFORM by PLATFORM basis separately for each of the major components referred to in sub-article 19.1.1 a) to document and record when each of such major components is READY FOR LOAD OUT.

Each READY FOR LOADOUT CERTIFICATE shall be generally in the format of ANNEX-6/B hereof and shall be signed by the EPC CONTRACTOR, the T&I CONTRACTOR and the COMPANY.

A copy of the Marine Warranty Surveyor's approval to Commence Load Out Operations Certificate shall be attached to each READY FOR LOAD OUT CERTIFICATE.

c) **READY FOR TRANSPORTATION CERTIFICATES**

READY FOR TRANSPORTATION CERTIFICATES shall be issued separately on a PLATFORM by PLATFORM basis for each shipment of the major components referred to in sub-article 19.1.1 a) to document and record when each shipment is READY FOR TRANSPORTATION.

If a shipment includes more than one major component, then a single READY FOR TRANSPORTATION CERTIFICATE shall be issued for such shipment.

Each READY FOR TRANSPORTATION CERTIFICATE shall be generally in the form as per ANNEX-6/C hereof and shall be signed by the EPC CONTRACTOR, the T&I CONTRACTOR and the COMPANY.

A copy of the Marine Warranty Surveyor's approval to Commence Towage Certificate shall be attached to each READY FOR TRANSPORTATION CERTIFICATE.

Liability for care and custody of the applicable major components referred to in sub-article 19.1.1 c) shall transfer from the EPC CONTRACTOR to the T&I CONTRACTOR at the effective date and time of the applicable READY FOR TRANSPORTATION CERTIFICATE.

19.1.2 Procedure for INTERIM CERTIFICATES

The following procedure and requirements shall apply for each INTERIM CERTIFICATE, mentioned in a), b) and c) above:

- a) The EPC CONTRACTOR shall provide not less than fourteen (14) days advance notice, or such longer period if necessary, and/or required by the COMPANY, of the anticipated date of achieving all requirements for the issue such an INTERIM CERTIFICATE.
- b) Notices shall be in the form of Site Memoranda and shall be issued to the COMPANY by the EPC CONTRACTOR together with all required and necessary supporting and back up information, via the Project EDMS.
- c) If required, a Joint Inspection shall be conducted as per the requirements listed in Exhibit A.
- d) Subject to the EPC CONTRACTOR's compliance with sub-article 19.1.2 b), the COMPANY shall either issue the applicable INTERIM CERTIFICATE or shall specify in writing reasons in reasonable detail any aspect that does not appear to conform to the terms and requirements of this CONTRACT.
- e) The EPC CONTRACTOR shall promptly perform any and all required corrective EPC WORK and/or replacement and/or outstanding EPC WORK, at his own risk, cost and expense and with no Extension of Time.
- f) The foregoing procedure as per 19.1.2 a), b), c) and d) shall be repeated until all required and/or necessary corrective EPC WORK and/or replacement and/or outstanding EPC WORK, is completed and the INTERIM CERTIFICATE can be issued.
- g) Dates and times for re-inspection shall be proposed by the CONTRACTOR and shall be subject to availability of the T&I CONTRACTOR (where applicable) and approval by the COMPANY.

19.1.3 Particular Conditions for INTERIM CERTIFICATES

The issue of an INTERIM CERTIFICATE shall not be used as conclusive evidence that the EPC WORK has been performed in accordance with the terms and requirements of this CONTRACT nor shall the issue of an INTERIM CERTIFICATE restrict the COMPANY's rights under sub-article 16.4 (Audits, inspections and tests) and the other terms and requirements of this CONTRACT.

For each MECHANICAL COMPLETION CERTIFICATE, the COMPANY may at its sole discretion and choice, but not as an obligation and after consideration of the number and importance of Outstanding EPC Punch List Items and EPC WORK Items Outstanding, if any, issue the MECHANICAL COMPLETION CERTIFICATE subject to requirement that the EPC CONTRACTOR shall complete the Outstanding EPC Punch List Items and EPC WORK Items within a fixed period of time and subject conditions stated in the MECHANICAL COMPLETION CERTIFICATE.

In the event of any difference or disagreement and/or dispute as to the state of readiness of a commence of READY FOR LOAD OUT and/or be READY FOR TRANSPORTATION the provided the applicable Marine Warranty Certificate has been issued, the COMPANY's decision shall be final and binding and the EPC CONTRACTOR shall comply with such decision notwithstanding there are punch list items and/or minor WORKS outstanding.

19.2 PROVISIONAL ACCEPTANCE CERTIFICATES

The following procedure shall be followed for each PROVISIONAL ACCEPTANCE CERTIFICATE which shall be issued on a PLATFORM by PLATFORM basis:

- 19.2.1 After all INTERIM CERTIFICATEs are obtained by the EPC CONTRACTOR for a PHASE, when the EPC CONTRACTOR considers that all EPC WORK for a PLATFORM is completed in accordance with the terms and requirements of this CONTRACT as modified by CHANGE ORDERS, he shall notify the COMPANY accordingly and, in such notification, request the COMPANY to issue the corresponding PROVISIONAL ACCEPTANCE CERTIFICATE.
- 19.2.2 Each such notice shall be made formally in writing by letter and shall contain all required and/or necessary supporting documents.
- 19.2.3 Within thirty (30) days after receipt of a valid notice issued pursuant to sub-article 19.2.1, the COMPANY shall issue to the EPC CONTRACTOR either:
 - a) the PROVISIONAL ACCEPTANCE CERTIFICATE, or
 - b) a written notice specifying in reasonable detail any respect in which the EPC WORK and/or the related applicable PLANT components and/or related items do not conform to the requirements of this CONTRACT, in which case the EPC CONTRACTOR shall promptly perform such Outstanding EPC Punch List Items and, if any, outstanding EPC WORK Items.
- 19.2.4 The foregoing procedure shall be repeated, if necessary, until all the applicable EPC WORK is completed, and the applicable PROVISIONAL ACCEPTANCE CERTIFICATE shall then be issued.

Each PROVISIONAL ACCEPTANCE CERTIFICATE shall be generally in the format of ANNEX-7 hereto and shall state the effective date on which PROVISIONAL ACCEPTANCE occurred.

- 19.2.5 For clarity, defects and deficiencies appearing in the WARRANTY PERIOD shall not be considered as EPC WORK for the purposes of this sub-article 19.2 but shall be rectified and/or replaced in accordance with the requirements of article 20 subject to the other terms and requirements of this CONTRACT.

Article 20 **Warranties**

20.1 General

The EPC CONTRACTOR guarantees that the EPC WORK and the PLANT components and related items shall be constructed and performed in accordance with the requirements of this CONTRACT.

Subject to the warranty exceptions and exclusions in sub-article 20.2 the EPC CONTRACTOR hereby extends to the COMPANY full design, material, workmanship and performance warranties as set out in this CONTRACT, against any and all defective or faulty PLANT components and related items and EPC WORK.

The EPC CONTRACTOR further guarantees that the EPC CONTRACTOR ITEMS shall be fit for the purpose and use for which they are intended according to this CONTRACT.

20.2 Warranty Exceptions and Exclusions

Notwithstanding the generality of sub-article 20.1 here above:

- a) subject to the provisions of sub-article 13.5 and the other applicable terms of this CONTRACT the EPC CONTRACTOR shall not be held liable for and the consequences of any defects and/or deficiencies in the RELY UPON INFORMATION
- b) subject to the provisions of sub-article 14.3 the EPC CONTRACTOR shall not be held liable for and the consequences of latent defects in the COMPANY ITEMS,
- c) warranty for Material Group 1 EPC CONTRACTOR ITEMS (except for defective workmanship by the EPC CONTRACTOR and/or SUBCONTRACTOR and/or VENDOR) shall be limited to that provided by the VENDOR of the applicable Material Group 1 EPC CONTRACTOR ITEM as documented in the Purchase Order.
- d) Material warranties shall not apply to normal wear and tear, nor to damage proven to be caused by a third party, nor to proven misuse by the COMPANY, unless such damage or misuse is due to acts, omissions or faulty instructions of the EPC CONTRACTOR and/or SUBCONTRACTOR and/or VENDOR,

In all cases the EPC CONTRACTOR shall responsible for the co-ordination, communication and follow up VENDOR to rectify the defect and/or deficiency, and in any and all events the EPC CONTRACTOR shall provide evidence that he has not contributed to any such defect and/or deficiency.

20.3 Warranty Obligations

20.3.1 Repair and/or Replacement of Defects and Deficiencies

Subject to the provisions of sub-articles 20.2, when, during the WARRANTY PERIOD, any defects and/or deficiencies in the EPC WORK and/or the PLANT components and related items attributable to the EPC CONTRACTOR and/or the EPC CONTRACTOR ITEMS are observed, the EPC CONTRACTOR shall, upon receipt of COMPANY's written notice, repair and/or replace and make good all related damage to the PLANT components and related items and/or the EPC WORK resulting from such defects and/or deficiencies.

Such repair and/or replacement shall be performed at a time and within the period requested by the COMPANY. Such request will have regard to the urgency of the case and the repairs(s) and/or replacement shall be performed in such a manner so as to minimize interruption in the use / operation of the PLANT and cause a minimum of disruption to COMPANY's operations on the SITE.

Such repairs and/or replacement shall be subject to approval by the COMPANY and shall be at EPC CONTRACTOR's sole cost, expense and risk including any and all costs and expenses with regard to investigation, redesign, search, dismantling, removal from the SITE, transportation, repair, replacement, re-installation and re-testing.

20.3.2 Repairs and/or Replacement of Similar Items of Equipment

If, at any time during the WARRANTY PERIOD, repairs and/or replacements are made pursuant to article 20 on any EPC CONTRACTOR ITEMS for which similar EPC CONTRACTOR ITEMS exist in the PLANT and which are submitted to similar operating conditions, the EPC CONTRACTOR shall when instructed by the COMPANY, and at his own expense, inspect all such items and shall repair or replace them unless the EPC CONTRACTOR can demonstrate that such items are not likely to present the same defect and deficiency when submitted to the operating conditions set forth in this CONTRACT.

20.3.3 Repairs and/or Replacement by Others

In case of the EPC CONTRACTOR's failure to diligently and satisfactorily carry out repair and/or replacement as directed by the COMPANY, and/or in case of emergency or urgency, the COMPANY shall have the right to have repair, rework or replacement performed by other contractor(s).

Such recourse shall not relieve the EPC CONTRACTOR from his warranty obligations under this CONTRACT and the costs and expenses of such interventions shall be charged to the EPC CONTRACTOR.

However, the EPC CONTRACTOR shall not guarantee the repairs and/or replacements performed by such third parties.

20.3.4 Warranties to be provided by SUBCONTRACTOR and VENDOR

The EPC CONTRACTOR shall ensure that warranties and guarantees obtained from any SUBCONTRACTOR and/or VENDOR for the benefit of the EPC CONTRACTOR shall also be for the benefit of the COMPANY and shall be enforceable directly by the COMPANY. It being understood always that this provision shall not be construed as a restriction and/or limitation of EPC CONTRACTOR's obligations or warranties or liabilities under the EPC CONTRACT.

20.3.5 Effect of the CONTRACT during Warranty Period

All appropriate CONTRACT conditions shall apply during the WARRANTY PERIOD and in particular while the EPC CONTRACTOR fulfils his obligations to repair and/or replacement under the present provisions.

20.4 WARRANTY PERIOD

20.4.1 Initial WARRANTY PERIOD for a PHASE

Without prejudice to any other warranties and guarantees set forth in this CONTRACT and subject to the exceptions in sub-article 20.2, the EPC CONTRACTOR shall make good and indemnify the COMPANY against any defects and/or deficiencies in the EPC WORK and/or in the PLANT components and related items attributable to the EPC CONTRACTOR, SUBCONTRACTOR and/or VENDOR for an initial WARRANTY PERIOD, on a PHASE by PHASE basis starting:

- a) for each major PLANT Component (new Wellhead Platform Topside and Jacket as per sub-clause 19.1.1 a) from the effective date and time of the applicable READY FOR TRANSPORTATION CERTIFICATE,
- b) for fabricated piles and associated items from the effective date and time of the applicable READY FOR TRANSPORTATION CERTIFICATE,
- c) for fabricated Brownfield Modification components and related items:
 - i) if the Brownfield WORK is performed by the T&I CONTRACTOR from the effective date and time of the applicable Ready for Towage Certificate issued by the Marine Warranty Surveyor, or
 - ii) or from the effective date and time of Handover to the COMPANY,
- d) for fabricated Hook-Up Flow Lines components and related items from the effective date and time such are received by the COMPANY at the COMPANY's PSB Supply Base in Songkhla,
- e) for Spare Parts, Special Tools and Material Handling Equipment from the effective date and time such are received by the COMPANY at the COMPANY's PSB Supply Base in Songkhla,

and ending eighteen (18) months after the effective date of the last Handover of any of the forgoing for the relevant PHASE.

20.4.2 Extension of the WARRANTY PERIOD

If the EPC CONTRACTOR should repair and/or replace any of the items listed in sub-article 20.4.1 a), b), c), or d) or any part thereof because of defects and/or deficiencies in the EPC WORK and/or the foregoing attributable to the EPC CONTRACTOR, SUBCONTRACTOR and/or VENDOR, the provisions of this sub-article 20.4.2 shall apply to the portion of the PLANT so repaired replaced or renewed until eighteen (18) months from the date of the COMPANY's acceptance of such repaired replaced or renewed EPC WORK.

20.4.3 Warranty Extensions for PLANT Stoppages

The WARRANTY PERIOD for any of the items listed in sub-article 20.4.1 a), b), c), or d) shall also be adjusted and extended on a PHASE by PHASE basis by a duration equivalent to that during which operations are ceased to allow repairs and/or replacements performed under the foregoing warranty obligations.

20.4.4 Warranties in the Event of Termination and/or Taken Over

Should this CONTRACT be terminated before the Handover is achieved for the related EPC WORK for a PHASE for which a NOTICE TO PROCEED has been issued or if the COMPANY exercises take-over rights before the last Handover for a PHASE on completed parts of the PLANT components and related items and/or the EPC WORK as set out in this CONTRACT for such PHASE then the WARRANTY PERIOD for completed parts of the PLANT components and related items and/or the EPC WORK taken over shall start from the date of such termination or take-over and shall be valid for eighteen (18) months as extended for any rework and/or time of PLANT stoppages to allow rework on such completed parts of the PLANT components and related items and/or the EPC WORK as provided for under sub-articles 20.4.2 and 20.4.3.

20.4.5 Limit on Duration of WARRANTY PERIODS

The WARRANTY PERIOD for a PHASE as may have been extended for repairs and/or replacements and/or operational stoppages, shall be limited to a maximum duration of twenty-four (24) months after the effective date of the last PROVISIONAL ACCEPTANCE CERTIFICATE for such PHASE.

The expiry of the WARRANTY PERIOD as aforesaid shall not affect any residual period of warranty stipulated with respect to painting warranties and other warranties that survive beyond the effective date of the FINAL ACCEPTANCE CERTIFICATE.

20.5 Further Assistance of the EPC CONTRACTOR

After expiry of a WARRANTY PERIOD, the EPC CONTRACTOR shall nonetheless continue to assist the COMPANY for a period of two (2) years for the enforcement by the COMPANY against VENDOR of remedies available to the COMPANY at law under latent defect liability.

Article 21 FINAL ACCEPTANCE CERTIFICATES

21.1 Procedure for Issue of FINAL ACCEPTANCE CERTIFICATES

FINAL ACCEPTANCE CERTIFICATES shall be issued on a PHASE by PHASE basis.

The COMPANY shall issue each FINAL ACCEPTANCE CERTIFICATE for a PHASE within sixty (60) days of a request from the EPC CONTRACTOR for the COMPANY to do so, provided that:

- a) the last PROVISIONAL ACCEPTANCE CERTIFICATE for the PHASE is issued by the COMPANY, and
- b) the CONTRACTOR has submitted and acquired the approval from the COMPANY of the FINAL DOCUMENTATION for the PHASE, and
- c) the WARRANTY PERIOD for the PHASE has expired, and

- d) if required by the COMPANY, a last inspection of the PLANT components and related items comprising the PHASE has been satisfactorily conducted, and
- e) the EPC CONTRACTOR has duly complied with all his obligations under this CONTRACT and otherwise for such PHASE, and
- f) the Final Assessment Procedure as per sub-article 32.6.1 and 32.6.2 applicable for the EPC WORK for the PHASE has been satisfactorily completed, and
- g) the FINAL ACCOUNT CERTIFICATE for the PHASE is submitted by the EPC CONTRACTOR and is agreed by the PARTIES.

For clarity, the COMPANY shall not be obliged to deliver the FINAL ACCEPTANCE CERTIFICATE for a PHASE until all the foregoing conditions are complied with by the EPC CONTRACTOR.

21.2 Effective Date of FINAL ACCEPTANCE CERTIFICATES

The FINAL ACCEPTANCE CERTIFICATE for each PHASE shall state the date on which the conditions altogether in sub-article 21.1 have been fulfilled for the PHASE and shall be effective from such date. FINAL ACCEPTANCE CERTIFICATES shall be in the format as per ANNEX-9 hereto.

21.3 Continuing Obligations of EPC CONTRACTOR

FINAL ACCEPTANCE CERTIFICATE shall not release the EPC CONTRACTOR from the obligations resulting from this CONTRACT which expressly or by their nature extend beyond and survive such FINAL ACCEPTANCE.

Article 22 CHANGE ORDERS

Subject to the CONTRACTOR's rights and obligations under the CONTRACT, the COMPANY shall have the right at any time to modify (by addition, deletion, substitution or any other alteration) in full or in part any requirement of this CONTRACT pertaining to the EPC WORK, the performance of the EPC WORK, the PLANT, the PLANT components and related items, including :

- a) the scope of the EPC WORK
- b) requirements pertaining to CONTRACTOR ITEMS,
- c) requirements pertaining to COMPANY ITEMS (if any),
- d) requirements pertaining to WORKSITES and/or WORK Locations,
- e) requirements pertaining to CONSTRUCTION EQUIPMENT,
- f) COMPLETION DATES and/or Key Dates,
- g) the sequence and/or timing of EPC WORK and the latest APPROVED version of any Detailed Work Time Schedule,
- h) any other requirements of this CONTRACT.

The foregoing being singularly referred as "modification" and collectively referred to as "modifications", as the context may require. The foregoing is without restriction and/or limitation of the COMPANY's other rights under this CONTRACT and at law.

For clarity, any and all instructions by the COMPANY with regard to compliance by the EPC CONTRACTOR and/or any SUBCONTRACTOR or VENDOR with the terms and/or requirements of this CONTRACT as may have been modified by CHANGE ORDER, and/or which are issued as per sub-article 15.7 or with regard to EPC and T&I Interfaces and related actions and/or with regard to the exercise of COMPANY's rights under this CONTRACT or at law then such instructions shall not be considered as a modification

and/or act or omission of the COMPANY, its PERSONNEL or the COMPANY OTHER CONTRACTORS.

22.1 COMPANY Initiated CHANGE ORDERS

The COMPANY may either:

- a) request the EPC CONTRACTOR for a Change Order Proposal which shall be prepared, submitted, reviewed, clarified and resolved as per the requirements of Exhibit G Annex-4 (Change Order Procedure) and the other applicable terms and requirements of this CONTRACT, or
- b) instruct the EPC CONTRACTOR to proceed with a modification by means of a Work Instruction in which case the EPC CONTRACTOR's rights to a CHANGE ORDER shall be as stated in sub-article 8.4.

The EPC CONTRACTOR shall not proceed with a COMPANY initiated modification unless in possession of a CHANGE ORDER signed by the COMPANY and/or Work Instruction signed by the COMPANY.

22.2 EPC CONTRACTOR initiated CHANGE ORDER

22.2.1 Upon the occurrence of an event which affects any or all of the EPC WORK, the performance of the EPC WORK, the PLANT components and related items and/or a required COMPLETION DATE as may have been extended by CHANGE ORDER and provided the event is not the subject of a COMPANY initiated CHANGE ORDER and further provided that the EPC CONTRACTOR can demonstrate that:

- a) the event is solely due to an act and/or omission by the COMPANY, its PERSONNEL or COMPANY OTHER CONTRACTORS, and
- b) it could not have been foreseen by an experienced contractor, and
- c) it would modify the scope of the EPC WORK and/or the performance of the EPC WORK and/or the CONTRACT PRICE and/or delay the achievement of a required COMPLETION DATE and/or Key date, or
- d) if the EPC CONTRACTOR is otherwise entitled to a CHANGE ORDER under the terms of this CONTRACT,

the EPC CONTRACTOR may request a CHANGE ORDER subject to and in accordance with articles 15, 22 and Exhibit G Annex-4, (Change Order Procedure) and the other applicable terms and requirements of this CONTRACT.

22.2.2 In the event of FORCE MAJEURE as provided for in sub-article 15.5 g), the EPC CONTRACTOR may similarly request a CHANGE ORDER but in such a case the EPC CONTRACTOR shall only be entitled to an Extension of Time.

22.2.3 In the event of damage or loss to the RESULT OF THE WORK caused by the act and/or omission by any THIRD PARTY (such term as defined in article 36) and occurring on or between the WORKSITE as provided in sub-article 15.5 h), the EPC CONTRACTOR, subject to the provisions of articles 36 to 44, may also similarly request a CHANGE ORDER, but in such a case shall only be entitled to an Extension of Time unless the provisions of articles 36 to 44 also allow financial compensation to the EPC CONTRACTOR.

22.2.4 For each and every request for a CHANGE ORDER made pursuant to any of, sub-articles 22.2, the EPC CONTRACTOR shall:

- a) notify the COMPANY of each request for a CHANGE ORDER at the earliest opportunity and in any event no later than ten (10) working days from the first occurrence of the event giving rise to each request, and
- b) prepare and submit a fully developed and comprehensive Change Order Proposal no later than forty-five (45) days from the date of a single occurrence event and in the case of continuing events no later forty-five days (45) days from the end of the continuing event.

All notifications of requests for CHANGE ORDER and Change Order Proposals shall be prepared, submitted, reviewed clarified and resolved in accordance with the requirements of Exhibit G Annex-4 and the other applicable terms and requirements of this CONTRACT.

If the EPC CONTRACTOR fails to notify the COMPANY of a request for a CHANGE ORDER within the time limit stated in sub-article 22.2.4 a) the COMPANY shall have the right to reject such request and the EPC CONTRACTOR shall not be entitled to any CLAIM based on the occurrence of the event.

Likewise if the EPC CONTRACTOR fails to submit a Change Order Proposal within the time limit stated in sub-article 22.2.4 b) or such other period as the COMPANY may agree then the COMPANY shall have the right to reject the Change Order Proposal and the EPC CONTRACTOR shall not be entitled to any CLAIMS based on the occurrence of such incident(s) and/or event(s) that are the subject matter of the Change Order Proposal.

The foregoing is without limitation or restriction to the EPC CONTRACTOR's obligations under sub-article 15.4 (Notification of incidents and/or events affecting the progress of the EPC WORK).

- 22.2.5 Unless otherwise agreed to by the COMPANY REPRESENTATIVE, the EPC CONTRACTOR shall not be entitled to any additional payment prior to receipt of a CHANGE ORDER signed by the COMPANY REPRESENTATIVE.

22.3 Adjustments due to CHANGE ORDER

22.3.1 Price Adjustment

Effects on the CONTRACT PRICE shall be evaluated by the EPC CONTRACTOR in accordance with the requirements of this CONTRACT.

The EPC CONTRACTOR shall give preference in priority as follows:

- a) to a lump sum price adjustment based on the CONTRACT PRICE lump sum breakdowns set out in Exhibit B and calculated by analogy and interpolation.
- b) When the above procedure is not applicable, unit rates, for separate parts of the EPC WORK as set out in Exhibit B, or mutually agreed detailed unit prices calculated there from by analogy or interpolation shall be used.
- c) In such a case, the variations of quantities involved shall be determined by difference between the new quantities and the previous corresponding quantities, evidenced by supporting documents agreed by both PARTIES.

- d) The EPC CONTRACTOR shall provide the COMPANY with copies and the opportunity and access to check said quantities comparisons prepared by the EPC CONTRACTOR.
- e) When remuneration on a lump sum or unit rate basis is not applicable, time rates (daily and hourly rates) shall be considered.
- f) In such a case, the EPC CONTRACTOR shall have the obligation to submit for approval any expense to be incurred in relation to the considered change and for each day of the performance of the change all and any measurement sheets with all the components involved.
- g) When remuneration on a time rates (daily and hourly rates) is not applicable the evaluation shall be based on a reimbursable “cost plus fee” basis, or cost only basis, in the manner as set out in Exhibit B, it being understood that reimbursements shall be made on presentation of satisfactory justification with appropriate supporting documents.

Notwithstanding the order of priority stated above in this sub-article 22.3.1, the COMPANY shall have the right to specify the method of evaluation for a CHANGE ORDER, or the parts thereof, by selecting either of the following methods; lump sum price adjustment, unit rates, time rates, cost or cost plus fee, in full or part for a CHANGE ORDER and/or the respective parts thereof as the COMPANY may at its sole discretion and decision consider appropriate.

Payment conditions shall be specific for each CHANGE ORDER and determined by reference to the CONTRACT conditions.

22.3.2 WORK TIME SCHEDULE Adjustment

The adjustment of the WORK TIME SCHEDULE and/or the COMPLETION DATE associated to any CHANGE ORDER shall be calculated in accordance with the provisions of article 15.

22.3.3 No CLAIMS for CHANGE ORDER

Each CHANGE ORDER shall be deemed to take into account the full and final effects of the considered Modifications required COMPLETION DATES as may have been modified by CHANGE ORDER and the CONTRACT PRICE.

The EPC CONTRACTOR hereby agrees to make no further CLAIMS for any other consequences of CHANGE ORDER whether directly or indirectly resulting therefrom at the time of the CHANGE ORDER or thereafter.

22.4 Differences and Disputes Concerning CHANGE ORDER

If there is any dispute (including any controversy, CLAIM or difference) concerning a Work Instruction and/or CHANGE ORDER, and irrespective of if the EPC CONTRACTOR has notified such a dispute pursuant to article 54 or not, the EPC CONTRACTOR shall immediately proceed with the EPC WORK as directed in writing by the COMPANY. The timely and proper performance of the EPC WORK in the manner as directed by the COMPANY shall not be interrupted, stopped, delayed or slowed due to any dispute between the PARTIES.

22.5 CHANGE ORDER as part of the CONTRACT

Each CHANGE ORDER shall not vitiate or invalidate this CONTRACT, and, unless otherwise specified in CHANGE ORDER, all provisions of this CONTRACT shall apply to CHANGE ORDER.

Article 23 APPLICABLE LAWS

23.1 Compliance with APPLICABLE LAWS

23.1.1 During the performance of this CONTRACT, including WARRANTY PERIODS and without prejudice to the provisions of article 51 the EPC CONTRACTOR shall observe, be bound by and comply in all respects with all APPLICABLE LAWS which are or may become applicable during the performance of the CONTRACT.

23.1.2 The EPC CONTRACTOR shall give all notices and furnish any bonds, deposits and securities required by official authorities to permit the performance of the EPC WORK.

23.1.3 The EPC CONTRACTOR shall not take or permit to be taken any action on behalf of the COMPANY, in respect of this CONTRACT or the matters which are subject of this CONTRACT that would expose the COMPANY to any liability or penalty as a result of failure to comply with such APPLICABLE LAWS.

23.1.4 The EPC CONTRACTOR shall indemnify, defend and hold harmless the COMPANY against all and any CLAIMS, arising out of or in connection with any non-compliance with APPLICABLE LAWS by the CONTRACTOR INDEMNIFIED PARTIES and the CONTRACTOR GROUP. The indemnity obligation shall survive the termination or expiration of the CONTRACT.

23.1.5 The COMPANY may be considered as a government agency under anti-corruption laws of Thailand, the EPC CONTRACTOR where applicable shall comply with such laws. It is the sole responsibility of the EPC CONTRACTOR to familiarize himself and fully comply with the laws.

23.1.6 The EPC CONTRACTOR shall ensure that SUBCONTRACTOR and his/their PERSONNEL and VENDOR and his/their PERSONNEL shall be bound by, and comply with, the obligations set in this sub-article 23.1.

23.1.7 In the event that the EPC CONTRACTOR breaches any of his obligations under this sub-article 23.1, the COMPANY shall, in addition to its other rights under the CONTRACT and at laws, have the right to terminate the CONTRACT pursuant to the provisions of article 48.

23.2 Compliance with COMPANY Regulations and Procedures

The EPC CONTRACTOR shall observe and comply with all COMPANY's and EXISTING OPERATORS's requirements, regulations and procedures with regard to the performance of EPC WORK including at WORKSITES and SITES.

23.3 Obtaining Authorizations by the COMPANY

The COMPANY shall be responsible for obtaining all permits and authorizations from all local, state or national GOVERNMENT authorities or public services undertakings that can only be obtained by the COMPANY, including permits and authorizations which are

necessary for the execution of the EPC WORK at the SITE, including SITE access and of the right to construct and operate the PLANT on the SITE.

The EPC CONTRACTOR shall, however, remain responsible for providing the COMPANY with any necessary documentation required by the COMPANY in support of timely applications for such permits and authorizations.

23.4 Obtaining Authorizations by the EPC CONTRACTOR

The EPC CONTRACTOR shall be responsible for obtaining and maintaining at his own cost all licenses, visas, permits, clearances, certifications, governmental or administrative authorizations necessary for the performance of his obligations hereunder unless expressly stated elsewhere in the CONTRACT as being obtained by the COMPANY.

On COMPANY's request, the EPC CONTRACTOR shall produce all relevant documents and certificates. The COMPANY shall have no liability whatsoever in respect thereof. However, should it be necessary for EPC CONTRACTOR's applications, the COMPANY shall provide such certificates as it is empowered to issue, it being understood that the EPC CONTRACTOR shall remain liable to inform the COMPANY with sufficient advance notice of each and every such requirement.

The COMPANY shall not have any obligation to procure, or to assist in the procurement, or to bear any cost or expense relating to entry visas, resident and work permits and any applicable licenses for EPC CONTRACTOR's PERSONNEL.

23.5 Modification of the APPLICABLE LAWS

23.5.1 Subject to the exceptions set out in sub-article 23.5.2, the COMPANY shall compensate the EPC CONTRACTOR in respect of an increase, if any, in the cost of performing the EPC WORK which shall arise out of any new law and/or regulation, or amendment (including a change in the interpretation or application thereof) to any APPLICABLE LAWS, of the GOVERNMENT of the country in which the SITE is located, that are enacted and become effective after the EFFECTIVE DATE and which the EPC CONTRACTOR could not have reasonably been aware of prior to the EFFECTIVE DATE ("Change of Law").

Provided such increase in the cost of performing the EPC WORK is properly supported by documentation satisfactory to the COMPANY and the EPC CONTRACTOR shall have requested COMPANY's approval before making any related commitment. Any decrease arising from Change of Law shall conversely result in a corresponding decrease in the CONTRACT PRICE.

In addition to the above, EPC CONTRACTOR shall be entitled to a request a CHANGE ORDER for an extension of the WORK TIME SCHEDULE, including the COMPLETION DATE(S) where appropriate, to the extent that such modification of law and/or regulation causes unavoidable delay to a required COMPLETION DATE.

23.5.2 Notwithstanding the provision of sub-article 23.5.1, the EPC CONTRACTOR shall bear the effects of any changes in taxes assessed against profits, dividends, corporate income, personal income of employees, Customs Duties and Import Taxes on the personal effects of employees, and the effects of any fluctuations or decisions of any authority regarding exchange rates, as well as any expenses (including taxes) resulting from sub-contracting and expenses resulting from any

EPC CONTRACTOR's commitment for which approval should have been sought under sub-article 23.5.1.

23.6 Customs Regulations and Procedures

23.6.1 Responsibility for Customs Clearance

Subject to sub-articles 23.6.2 and 23.6.3 the EPC CONTRACTOR is responsible for obtaining timely customs clearance and for compliance with all requirements and procedures of GOVERNMENT, Customs Authorities, APPLICABLE LAWS and the terms and requirements of this CONTRACT, for the importation, exportation, or re-exportation of:

- a) RESULT OF THE WORK,
- b) CONTRACTOR ITEMS,
- c) CONSTRUCTION EQUIPMENT including MARINE SPREAD,
- d) COMPANY ITEMS under CONTRACTOR's custody,
- e) PLANT components, any part thereof and related items,
- f) Personal effects, belongings, equipment, tools of PERSONNEL
- g) anything else belonging to or rented by VENDORS and /or SUBCONTRACTORS and VENDORS
- h) in general, anything required and/or necessary for repair and/or replacement of loss and/or damage and/or the repair or replacement of defects and deficiencies in the PLANT.
- i) anything else required and/or necessary for the performance of the EPC WORK so far as it is the CONTRACTOR's obligation to provide.

Items a) to i) are referred to singularly and collectively as "Imported Items".

23.6.2 Customs Clearance (Not in the Country of the Location of the SITE)

The EPC CONTRACTOR shall be fully responsible for any and all Customs Clearance operations for importation, re-export and export for in connection with the performance of the EPC WORK in countries which the SITE is not located.

The EPC CONTRACTOR shall prepare and issue all documents required for importation, temporary importation, exportation and/or re-exportation of Imported Items and shall submit such documents in due time to the relevant Customs Authorities and others as applicable and shall do all things whatsoever required and/or necessary to obtain timely Customs Clearance. All related costs and expenses shall be borne by the EPC CONTRACTOR.

23.6.3 Customs Clearance (Country of the SITE)

The EPC CONTRACTOR is responsible for obtaining timely customs clearance and for compliance with all requirements and procedures of GOVERNMENT, Customs Authorities, APPLICABLE LAWS and the terms and requirements of this CONTRACT, for the importation, exportation, re-exportation of Imported Items into and from the country of the SITE.

- a) If the EPC CONTRACTOR has the import duty/VAT exemption under PETROLEUM ACT (as amended) and is thus able to import, re-export and export Imparted Items into / from the Kingdom of Thailand free of Thai Customs Duties and Import Taxes, the EPC CONTRACTOR shall import,

re-export and export Imparted Items under the name of the EPC CONTRACTOR.

- b) However, if the EPC CONTRACTOR has no import duty/VAT exemption under PETROLEUM ACT (as amended) he shall remain fully responsible as aforesaid but shall import, re-export, export Imported Items in accordance with Exhibit G Annex-3 requirements.

The CONTRACTOR shall under its own responsibility, risk, cost and expense, do all things necessary and shall prepare, issue and submit all documents required in the name of the COMPANY, in due time to the COMPANY to obtain the benefit of the exception of Custom Duties and Import Taxes levied in the Kingdom of Thailand.

The COMPANY shall provide assistance only for the submission of documents to GOVERNMENT and/or Customs Authorities in the Kingdom of Thailand.

The CONTRACTOR shall ensure all applications and documents are submitted expeditiously and sufficiently in advance to ensure customs clearance is obtained in a timely manner and well before dates needed for the performance of the EPC WORK.

The COMPANY shall not be liable for any delay, costs or expenses or impacts arising from and/or in connection with the foregoing.

The CONTRACTOR shall properly plan and incorporate required and/or necessary time periods for Customs Clearance Process, Customs Authority and GOVERNMENTAL approvals in the applicable EPC Detailed Work Time Schedule and WORK TIME SCHEDULE.

The EPC CONTRACTOR shall indemnify, defend and hold harmless the COMPANY from the consequences of any errors or omissions in documents prepared and/or submitted by the EPC CONTRACTOR, resulting in failure of GOVERNMENT and/or Customs Authorities to provide timely authorization(s) and/or carry out inspection(s) as a result of such error or omission.

23.6.4 Co-ordination and Interface with Customs

The EPC CONTRACTOR shall co-ordinate and liaise with GOVERNMENT and Customs Authorities in order to implement the importation / exportation procedure in the most efficient manner. Under his own responsibility and as far as applicable, the EPC CONTRACTOR shall request Customs inspection with sufficient advance notice.

The EPC CONTRACTOR shall assist Customs Authorities in such inspection and shall transmit inspection reports to Customs Authorities responsible for issue of Customs clearance documents.

23.7 Import/Export License requirements

The EPC CONTRACTOR shall be responsible for identifying if any import/export license is required in any places where the EPC WORK is to be performed for any parts the EPC WORK, CONTRACTOR ITEMS, CONSTRUCTION EQUIPMENT and/ COMPANY

ITEMS (if any) under EPC CONTRACTOR's care, custody and control. If compulsory, the EPC CONTRACTOR shall obtain such import/export license from the relevant authorities in a timely manner.

Article 24 Safety, Security, Health and Environment (SSHE) Requirements for EPC WORK

The EPC CONTRACTOR shall, at all locations where EPC WORK is performed, at his own cost and expense, ensure SSHE management is implemented in a timely and pro-active and effective manner in accordance with the requirements of Exhibit A, Exhibit K, Exhibit L, APPLICABLE LAWS, IOGP rules and guidelines and the other terms and requirements of this CONTRACT. The respective rights and obligations of the PARTIES with regard to SSHE management and SSHE management activities shall be as stated in this CONTRACT.

Article 25 CONTRACTOR's PERSONNEL

25.1 The EPC CONTRACTOR's Responsibilities

25.1.1 The EPC CONTRACTOR shall provide sufficient competent, experienced and suitably qualified and where required certified, PERSONNEL at all times to ensure the timely and correct performance and completion of the EPC WORK in accordance with this CONTRACT and the WORK TIME SCHEDULE as may have been modified by CHANGE ORDER.

25.1.2 The EPC CONTRACTOR shall ensure, at his sole cost that all EPC CONTRACTOR's PERSONNEL at all times during the performance of this CONTRACT:

- a) are suitably qualified, trained, experienced, certified to the extent required and are competent for the tasks that they are required to perform,
- b) are medically fit for the tasks that they are required to perform;
- c) read, write and speak fluent English,
- d) will exercise due skill, care and diligence in performing the EPC WORK,
- e) will not behave in such a way as to prejudice the interests or reputation of the COMPANY GROUP, and
- f) will cooperate with COMPANY or COMPANY's other contractor to secure optimal working efficiency.

The requirement in sub-article 25.1.2 c) shall only apply to Supervisor and above.

25.1.3 The EPC CONTRACTOR shall provide the COMPANY with documentary evidence of compliance with the requirements of sub-article 25.1.2 upon request.

25.2 KEY PERSONNEL

25.2.1 Generally

EPC CONTRACTOR KEY PERSONNEL shall be permanent staff and full-time employees of EPC CONTRACTOR and shall be qualified, trained, experienced, certified to the extent required and competent in the field and position for which they are intended.

Likewise, SUBCONTRACTOR KEY PERSONNEL shall be permanent staff and full-time employees of the SUBCONTRACTOR and shall be fully qualified and experienced in the field and position for which they are intended.

25.2.2 Approval of KEY PERSONNEL

The persons identified as KEY PERSONNEL in Exhibit K are approved by the COMPANY as KEY PERSONNEL. However, if no name is stated against a KEY PERSONNEL position in Exhibit K the EPC CONTRACTOR shall nominate suitably qualified, trained, experienced, certified to the extent required and competent PERSONNEL and shall submit a fully detailed curriculum vitae for approval by the COMPANY.

If and when approved by the COMPANY such PERSONNEL shall be deemed KEY PERSONNEL for the applicable position listed in Exhibit K.

25.2.3 Removal and/or Replacement of KEY PERSONNEL

The EPC CONTRACTOR shall not remove or change any KEY PERSONNEL except in the following cases:

- a) serious illness or injury or death of such KEY PERSONNEL or their immediate family, or
- b) definitive resignation or termination employment of for misconduct, if not followed by any hiring back by the EPC CONTRACTOR or any of his AFFILIATES or SUBCONTRACTOR, or
- c) Removal and/or removal and replacement of KEY PERSONNEL pursuant to sub-article 25.4, or
- d) at the request of the EPC CONTRACTOR provided that the EPC CONTRACTOR shall request permission from the COMPANY to replace the KEY PERSONNEL not less than thirty (30) days before the date of proposed substitution, the COMPANY approves the replacement and there is a sufficient handover period, such handover period shall be subject to prior approval by the COMPANY.

For removal and/or replacement as per sub-article 25.2.3 a), b) and/or d) the EPC CONTRACTOR shall provide full justification and substantiation and the names and resumes of proposed substitute KEY PERSONNEL for approval and shall organize a sufficient transition period between outgoing and incoming KEY PERSONNEL, such period shall be subject approval by the COMPANY.

The COMPANY reserves the right to interview proposed replacement KEY PERSONNEL.

25.3 Prevention of Disorderly Conduct

At all times during the performance of the EPC WORK, the EPC CONTRACTOR shall take all necessary precautions to prevent any unlawful or disorderly conduct by or amongst his PERSONNEL and/or the PERSONNEL of SUBCONTRACTOR.

25.4 Replacement of the PERSONNEL at the COMPANY's Request

25.4.1 The COMPANY may, acting reasonably, object to the EPC CONTRACTOR's engagement of any person as EPC CONTRACTOR's PERSONNEL and/or SUBCONTRACTOR's PERSONNEL and may direct the EPC CONTRACTOR to discontinue (or vary) the use of that person in performing this CONTRACT.

25.4.2 The EPC CONTRACTOR shall promptly comply with COMPANY's direction at his sole cost and provide a suitable replacement for that person within twenty-four (24) hours (or such longer period as the COMPANY may agree).

25.4.3 If the EPC CONTRACTOR's PERSONNEL and/or SUBCONTRACTOR's PERSONNEL:

- a) becomes ill or injured, and/or
- b) commits serious misconduct, serious error, negligence, and/or
- c) does not comply with the APPLICABLE LAWS or the COMPANY's rules and regulations relating to safety, security, health and environment, and/or
- d) commits any acts that jeopardize the relations between the COMPANY and government,

then the EPC CONTRACTOR shall immediately replace, at his sole cost and expense, such PERSONNEL whether requested by the COMPANY or not.

25.4.4 Replacement PERSONNEL shall have the required competencies, experience and qualifications and where required be certified.

25.4.5 All costs and expenses related to such replacement shall be for EPC CONTRACTOR's account.

25.5 Demobilization of PERSONNEL

The EPC CONTRACTOR shall demobilize from any WORKSITE (including SITE), PERSONNEL involved in the performance of the EPC WORK, including PERSONNEL of SUBCONTRACTOR, only in accordance with approved organization charts and demobilization schedules. Such demobilization schedules shall take account of the actual progress of the EPC WORK.

25.6 PERSONNEL of COMPANY OTHER CONTRACTORS

The EPC CONTRACTOR shall not engage PERSONNEL of the COMPANY OTHER CONTRACTORS working on the SITE without prior approval from the COMPANY and shall obtain a similar commitment from SUBCONTRACTOR.

25.7 Compliance with APPLICABLE LAWS

The EPC CONTRACTOR shall ensure that the EPC CONTRACTOR's PERSONNEL, SUBCONTRACTOR's PERSONNEL, VENDOR's PERSONNEL and where applicable SUPPLIER PERSONNEL comply with all APPLICABLE LAWS including immigration laws and where required are in possession of a valid work permit at all times during the performance of the EPC WORK. When requested, details of such work permits shall be submitted to the COMPANY prior to such PERSONNEL being engaged in the EPC WORK.

Article 26 CONSTRUCTION EQUIPMENT

26.1 Standards of the CONSTRUCTION EQUIPMENT

26.1.1 Generally

The EPC CONTRACTOR shall provide all EPC CONSTRUCTION EQUIPMENT required and necessary for the performance of the EPC WORK and shall utilize such T&I CONSTRUCTION EQUIPMENT as is described in Exhibit

A Annex-10 (EPC and T&I Interfaces) for Load Out and Ready for Transport Operations.

26.1.2 Requirements for EPC CONSTRUCTION EQUIPMENT

EPC CONSTRUCTION EQUIPMENT shall be fit for the use and purpose it is intended, shall be maintained at all times in good operating condition with appropriate and uninterrupted valid certification for the duration of the applicable EPC WORK activities in accordance with APPLICABLE LAWS and the terms and requirements of this CONTRACT.

Upon COMPANY's request, the EPC CONTRACTOR shall provide the COMPANY with the technical characteristics/ details of EPC CONSTRUCTION EQUIPMENT and the operating and maintenance conditions of items of the EPC CONSTRUCTION EQUIPMENT, as well as the names of the owners of same and copies of certification.

26.1.3 Mobilization and Demobilization of EPC CONSTRUCTION EQUIPMENT

The EPC CONTRACTOR shall mobilize and maintain the EPC CONSTRUCTION EQUIPMENT in good working condition with experienced, qualified and where applicable certified PERSONNEL, together with the necessary consumables and maintenance parts for the proper and safe operation of the EPC CONSTRUCTION EQUIPMENT and to ensure required and/or necessary availability, without mechanical and/or other breakdown for performance of EPC WORK.

The EPC CONTRACTOR shall not use any EPC CONSTRUCTION EQUIPMENT outside the limits of the manufacturer's specification and/or limitations imposed by a Certification Agency or by APPLICABLE LAWS.

The EPC CONTRACTOR shall ensure that EPC CONSTRUCTION EQUIPMENT, during its use under this CONTRACT, shall not need major repair, replacement or overhaul. The EPC CONTRACTOR shall immediately repair and/or replace defective EPC CONSTRUCTION EQUIPMENT and shall be responsibility for all and any delays due the breakdown, loss of use, repair and/or replacement of EPC CONSTRUCTION EQUIPMENT.

EPC CONSTRUCTION EQUIPMENT shall not be demobilized until the EPC WORK activities for which the EPC CONSTRUCTION EQUIPMENT was mobilized is completed.

26.2 Certification for Cranes, Lifting Equipment and Pressure Vessels

At all times during the performance of the EPC WORK, the EPC CONTRACTOR shall comply with APPLICABLE LAWS and shall ensure certification and other requirements for EPC CONSTRUCTION EQUIPMENT (cranes, lifting equipment and pressure vessels, etc.) are complied with. Certification for EPC CONSTRUCTION EQUIPMENT shall be valid for minimum period of three (3) months following the last planned date of operation and if the COMPANY so requests, the EPC CONTRACTOR shall provide all relevant documents and certificates as proof thereof.

26.3 COMPANY's Right to Inspect EPC CONSTRUCTION EQUIPMENT

The COMPANY shall have the right to inspect any EPC CONSTRUCTION EQUIPMENT and require replacement of any EPC CONSTRUCTION EQUIPMENT found unsafe or defective in any other respect, it being understood that any failure of the COMPANY REPRESENTATIVE to inspect or reject any defective EPC CONSTRUCTION EQUIPMENT shall not relieve the EPC CONTRACTOR of any of his obligations under this CONTRACT.

At all times prior to and during the performance of the EPC WORK, the EPC CONTRACTOR shall allow the COMPANY REPRESENTATIVE and/or its delegates to have free and safe access to any EPC CONSTRUCTION EQUIPMENT for inspection, or for the purposes of safety, security, health and environmental aspects.

26.4 Not Used

26.5 Not used

Article 27 EPC WORK Locations

27.1 EPC WORK Locations

The EPC CONTRACTOR undertakes to perform the EPC WORK only at such WORKSITES, WORKSHOPS and WORK Locations as the COMPANY shall approve.

27.2 EPC CONTRACTOR DOCUMENTS, Standards and Codes at EPC WORK Locations

The EPC CONTRACTOR shall provide the COMPANY REPRESENTATIVE (or his delegates), WORKSITES, WORKSHOPS and WORK Locations with access to the latest issue of all relevant standards, codes and norms referred to in this CONTRACT, the EPC CONTRACTOR DOCUMENTS, and a complete set of updated relevant EPC CONTRACTOR DOCUMENTS.

27.3 EPC CONTRACTOR REPRESENTATIVE

The EPC CONTRACTOR REPRESENTATIVE and/or his delegate, with appropriate delegated powers, shall be present at Engineering Offices, where and when the EPC WORK is being performed. Attendance at WORKSHOPS and other EPC WORK Locations shall be on a visiting basis unless necessary and/or required to be on a full time basis.

27.4 Access to the WORK

At all times during working hours and during all phases of the EPC WORK the EPC CONTRACTOR shall allow the COMPANY REPRESENTATIVE, and/or his delegates, free unrestricted, safe access to Engineering Offices, WORKSITES, WORKSHOPS and EPC WORK Locations, including engineering office, WORKSHOP and WORKSITE to allow the COMPANY to inspect the adequacy and sufficiency of EPC WORK Locations and/or the quality and progress of the EPC WORK and/or inspect compliance with the terms and requirements of this CONTRACT, and shall ensure similar access to premises of SUBCONTRACTOR and/or VENDOR where any EPC WORK is being or shall be performed. Provided however that such COMPANY's PERSONNEL, and/or the COMPANY OTHER CONTRACTORS shall comply with the EPC CONTRACTOR's WORKSITE and SSHE regulations as notified by the EPC CONTRACTOR.

27.5 Access to Computer Programs and Models

The EPC CONTRACTOR shall, at all times during all phases of the EPC WORK, ensure the COMPANY REPRESENTATIVE or his delegates, have free and full access during working hours to all the computer programs and models utilized for the performance of the EPC WORK.

Article 28 Access to SITE, Temporary Facilities and Cleaning Up.

28.1 Access to SITE

28.1.1 Access to a SITE by any member of the CONTRACTOR GROUP for the performance of EPC WORK and/or for rework, repair or replacement of defects and deficiencies pursuant to sub-article 20.3 (Warranty Obligations), shall be by and subject to prior arrangement with the COMPANY and shall be subject to availability and approved by COMPANY including where applicable EXISTING OPERATORS.

28.1.2 Provided always and in any event the EPC CONTRACTOR, the performance of EPC WORK at the SITE, and/or for repair and/or replacement of loss and/or damage and/or rectification of defects and deficiencies, members of the CONTRACTOR GROUP and their respective PERSONNEL, CONTRACTOR ITEMS and EPC CONSTRUCTION EQUIPMENT shall at all times (including during transportation to and from the SITE and while at a SITE) fully comply with the terms and requirements of this CONTRACT, the COMPANY's rules and regulations, requirements of the EXISTING OPERATOR and APPLICABLE LAWS. In the event of CONFLICT between the foregoing the most stringent shall apply.

28.2 Not used

28.3 Co-operation at SITE

28.3.1 Notwithstanding sub-clause 28.1 the EPC CONTRACTOR and members of the CONTRACTOR GROUP when travelling to, from and while at the SITE shall co-operate with the COMPANY, the EXISTING OPERATOR and COMPANY OTHER CONTRACTORS and comply with all applicable rules, regulations and requirements.

28.3.2 The EPC CONTRACTOR shall ensure that all EPC WORK and/or rework, repair or replacement of defects and deficiencies pursuant to sub-article 20.3 (Warranty Obligations) is performed a safe and expeditious manner while minimizing inconvenience / interruption to the COMPANY, EXISTING OPERATOR and COMPANY OTHER CONTRACTORS.

28.3.3 The EPC CONTRACTOR shall take all required and/or necessary measures to avoid and/or minimize any inconvenience which may cause to the COMPANY, the EXISTING OPERATOR, COMPANY OTHER CONTRACTORS and third parties (if any).

28.3.4 The EPC CONTRACTOR shall protect the PLANT components and related items, the Existing Facilities and/or any other items on the SITE belonging to the COMPANY, COMPANY OTHER CONTRACTORS, the EXISTING

OPERATORS from possible and/or actual damage resulting from EPC CONTRACTOR's operations at a SITE.

28.4 Temporary facilities on the SITE

Prior to erecting or using on the SITE any temporary facilities including offices, workshops, stores, sanitary installations, shelters, scaffoldings and the like, the EPC CONTRACTOR shall submit a proposal to the COMPANY for approval. Such proposal shall comply with the terms and requirements of this CONTRACT and shall ensure that inconvenience to the COMPANY, COMPANY Operations at the SITE and EXISTING OPERATOR Operations is minimized.

28.5 Cleaning up of the WORKSITES and EPC WORK Locations

28.5.1 Throughout the performance EPC WORK the EPC CONTRACTOR shall keep EPC WORKSITES and other EPC WORK Locations and their access, egress and surroundings tidy, clean and free from waste, debris, rubbish, surplus and scrap CONTRACTOR ITEMS, surplus and scrap COMPANY ITEMS, if any, obstructions resulting from the performance of the EPC WORK and where and if applicable the T&I WORK.

28.5.2 Upon completion of EPC WORK the EPC CONTRACTOR and except as may be provided otherwise in this CONTRACT the EPC CONTRACTOR shall ensure that WORKSITES and other WORK Locations are cleared and left in clean and safe condition in accordance with the terms and requirements of this CONTRACT and APPLICABLE LAWS.

28.5.3 If the EPC CONTRACTOR fails to satisfy the above requirements, the COMPANY shall, at any time following appropriate notification to the EPC CONTRACTOR, have the right to demand that the EPC complies with the requirements of this sub-clause 28.5 and/or perform (or have performed) clean-up operations at EPC CONTRACTOR's expense except as provided for under article 39 (SPECIAL RISKS).

28.6 Exceptions

The CONSTRAINTS and obligations resulting from the foregoing circumstances described in this article 28 are considered included in the WORK TIME SCHEDULE and the CONTRACT PRICE and in EPC Detailed Work Time Schedule except for CONTRACT PRICE adjustment for APPROVED Operational Standby as Extension of Time (if any) as per sub-article 15.5 and Exhibit B.

Article 29 Origin of Products and Services

Notwithstanding the requirements of Exhibit J, to the extent practical and lawful, the CONTRACTOR shall ensure the EPC CONTRACTOR, his SUBCONTRACTOR and his VENDOR at all times give preference to local resources (including labor, materials, products, services, and equipment) that are available from within Thailand, or are rendered by Thai nationals provided that such local resources are available under comparable conditions with regard to quality, quantity, suitability, price (including transportation and taxes) and delivery conditions as similar products and services of foreign origin.

Article 30 CONTRACT PRICE

30.1 CONTRACT PRICE

In consideration for the correct and proper performance and satisfactory completion of EPC WORK on a PHASE by PHASE basis the COMPANY agrees to pay the final CONTRACT PRICE for each PHASE calculated as stipulated herein, in Exhibit B and the other terms and requirements of this CONTRACT.

The EPC CONTRACTOR hereby agrees to accept the said CONTRACT PRICE as full and final compensation for the complete performance of the EPC WORK for such PHASES in full compliance with this CONTRACT.

30.2 Fixed CONTRACT PRICE

Except as may be expressly provided otherwise in Exhibit B or in any CHANGE ORDER, all rates, sums and prices stated in this CONTRACT shall be fixed and firm and not subject to any revision nor cost escalation nor any adjustment due to currency fluctuations.

30.3 Rates, Sums and Prices

Except as may be expressly stated in Exhibit B, all rates, sums and prices set out in Exhibit B or specified in CHANGE ORDER shall be deemed to be all-inclusive for the EPC WORK relative thereto completed in accordance with all CONTRACT requirements and are deemed to include:

- a) salaries, wages, allowances including overtime, bonuses, premiums and other incentive payments, holidays with pay, sick pay, graduated pensions, severance pay, contributions made to superannuation and pension funds or other retirement benefit schemes, contributions to compulsory and complementary medical and sickness schemes, welfare facilities, redundancy payment contributions, industrial training levy, personnel rotation expenses and shift premiums, and in general all burdens, contributions, insurance, taxes and payments, emoluments and expenses which EPC CONTRACTOR incurs and/or effects in respect of his PERSONNEL under applicable laws or regulations including those under statute or by agreement with national or local trade unions or under company employment policies,
- b) overheads, profits, contingencies, depreciation, head office charges, managerial and administrative expenses, all preliminaries and contract administration, financing costs and Bank expenses including Bank guarantees, transfer charges, all taxes and duties as set out in this CONTRACT, insurance premiums and deductibles, compliance with procedures, regulations and all applicable laws, cleaning up of WORKSITE, all downtime and time lost (except as expressly allowed under this CONTRACT) including breakdowns, repair time, waiting on weather or for approvals or authorizations to be obtained by EPC CONTRACTOR for the performance of the EPC WORK, co-operation with COMPANY OTHER CONTRACTORS on WORKSITE and any and all direct or indirect costs and expenses due to subcontracting, including contingencies,
- c) co-ordination and interface with the COMPANY, SUBCONTRACTOR, VENDOR, SUPPLIER, the T&I CONTRACTOR, GOVERNMENT and customs authorities, certifying entities, the COMPANY OTHER CONTRACTORS and their subcontractors and suppliers and third parties,
- d) offices and furnishings, secretarial and clerical services, materials and equipment including for drafting, office supplies and consumable, lighting, electricity, heating and air conditioning, telephone, fax, mail, electronic mail and courier services, printing and reproduction costs, computer and computer-associated costs, office and lodging accommodation, sanitary and messing facilities,

- e) services for the COMPANY use under this CONTRACT and as set out in EXHIBITS,
- f) compliance with safety requirements and regulations, supply of safety equipment, protective clothing and other protective items, safety and first aid training, medical care and facilities, fire-fighting equipment, emergency evacuations, all preventive measures,
- g) supply, handling and storage of all CONTRACTOR ITEMS and all materials, means, equipment, including EPC CONSTRUCTION EQUIPMENT owned or hired, tools and the like for the performance of the EPC WORK,
- h) facilities and shops including for fabrication, storage and testing, camps, shelters, temporary works, scaffoldings and the like,
- i) all consumables (air, gases, greases, oils, fuels, welding consumables and the like) and utilities (lighting, power, electricity, water),
- j) maintenance, care taking, protection, safekeeping, security measures,
- k) inspections, samples and tests, certification, documentation, controls including quality control and verifications,
- l) all costs and expenses whatsoever related to subcontracting and Purchase Orders including all enquiries, supply, expediting and transport costs and expenses of whatsoever nature,
- m) receipt, handling, inspection, storage, protection and installation of the COMPANY ITEMS, if any,
- n) spare parts for commissioning and start-up operations,
- o) labor, supervision, engineering, administrative and managerial PERSONNEL, mobilization and demobilization costs and expenses for personnel and equipment, living and hotel accommodation, meals, travel time and expenses, fares and transportation, visa fees, authorizations, approvals, permits and licenses (including for travels and missions), preparation of documents for and cost of importation and customs clearance, port charges and fees, unless expressly specified in this CONTRACT as being supplied by the COMPANY or on a reimbursable basis,
- p) all EPC CONTRACTOR's obligations, liabilities, duties, risks under the terms and requirements of this CONTRACT, including the ones resulting from subcontracting, or as can be inferred there from, and/or relating to, or otherwise connected to the performance of the EPC WORK,

and everything else of whatsoever nature required and/or necessary for the complete and full performance of the EPC WORK, in full compliance with this CONTRACT, except if specifically stated in this CONTRACT as being supplied by the COMPANY.

Article 31 Taxes and Customs Duties

31.1 Responsibility of the EPC CONTRACTOR

31.1.1 Except for VAT as is stated in sub-article 31.1.2, for Customs Duties and Import Taxes as is stated in sub-article 31.3.2 the EPC CONTRACTOR shall assume full responsibility and liability for payment of all customs duties, import and export taxes ("Customs Duties and Import Taxes") with regard to the import, re-export, export of Imported Items and all other taxes, duties, levies, charges, fiscal contributions, other charges and imposts of any nature whatsoever including, employment taxes and contributions imposed by law, taxes imposed by trade

union contracts, contributions for unemployment and redundancy, old age benefits, welfare funds, pensions, annuities and disability allowances, withholding taxes, personal income taxes, stamp duties imposed by the government of Thailand and other governments and/or authorities, property taxes, capital gain taxes, added value taxes, turnover taxes and/or corporate taxes (including penalties and interest thereon) for which the EPC CONTRACTOR is liable and/or that are from time to time imposed on or assessed against the EPC CONTRACTOR by:

- a) any GOVERNMENT and/or any fiscal or other authority thereof; and/or
- b) any fiscal or other authority whatsoever,

in each case in respect of or arising out of:

- c) the EPC CONTRACTOR or its SUBCONTRACTORS' PERSONNEL (whether or not such taxes, levies, charges and contributions are measured by wages, salaries, benefits, expenses and/or other remunerations);
- d) the performance of the CONTRACT;
- e) non-compliance with the CONTRACT by the EPC CONTRACTOR;
- f) the income, profits, dividends, turnover and gains of the EPC CONTRACTOR arising directly or indirectly out of the performance of the CONTRACT; and/or
- g) ensuring that any SUBCONTRACTOR or any other person employed or providing services on or in connection with the CONTRACT shall comply with this article 31.

31.1.2 Value Added Tax Levied in the Kingdom of Thailand

All prices and rates set out in Exhibit B do not include for Thai Value Added Taxes ("VAT") which is due and payable by the COMPANY with regard to the EPC CONTRACTOR's valid invoices (issued as per article 32) to the COMPANY for EPC WORK performed.

31.1.3 Other Obligations

The EPC CONTRACTOR shall indemnify, defend and hold the COMPANY harmless from and against any and all CLAIMS arising out of, related to or in connection with the payment of Customs Duties and Export Taxes with regard to the import, re-export, export of Imported Items and all other taxes, duties, levies, charges, fiscal contributions, other charges and imposts (including penalties and interest thereon, which by the terms of this sub-article 31.1 the EPC CONTRACTOR, SUBCONTRACTOR, VENDOR and their AFFILIATES, and all their employees are liable for or which may be imposed on him or assessed against him (including any applicable reporting or procedural requirements), and shall reimburse promptly to the COMPANY any sum which the latter may have to pay as a result of any default of an act or a non-payment by the EPC CONTRACTOR, his SUBCONTRACTORS, his VENDORS, their AFFILIATES, and/or their employees, servants or agents.

Except for VAT as per sub-article 31.1.2 and Exhibit B, the EPC CONTRACTOR hereby represents and warrants that he has taken into account in establishing the sums, rates and prices set out in Exhibit B and elsewhere in this CONTRACT for all the said sub-article 31.1 items for which the EPC CONTRACTOR and

members of the CONTRACTOR GROUP are and/or will be liable and/or which may be imposed as provided in this sub-article 31.1 and those which may be imposed on him by GOVERNMENT and APPLICABLE LAWS.

31.2 Statutory Deductions

31.2.1 Where under the provisions of any APPLICABLE LAWS, the COMPANY is required to deduct or withhold any amount, whether as tax or howsoever called, the COMPANY shall deduct the specified amount or rate from any amount payable to the EPC CONTRACTOR. The COMPANY shall pay over or deal with any amount so deducted in accordance with APPLICABLE LAWS. The COMPANY shall within three months of such deduction hand over to the EPC CONTRACTOR receipts evidencing payment of such deduction or withholding if so requested by the EPC CONTRACTOR.

31.2.2 If the EPC CONTRACTOR claims to be exempted from any statutory deductions pursuant to APPLICABLE LAWS, he shall inform the COMPANY and provide required and necessary documentation to support his case, including certificate of exemption from the relevant authority. The COMPANY may act on the information given at its discretion and shall not be liable to the EPC CONTRACTOR or any other person or body in the event that the COMPANY applies the statutory deduction according to the APPLICABLE LAWS.

31.3 Customs Duties and Import Taxes

31.3.1 Counties Other Than the Country of the SITE

The EPC CONTRACTOR shall bear at its sole risk, cost, expense and liability any and all Customs Duties and Import Taxes levied for and in connection with Imported Items, the EPC WORK and the performance thereof levied and/or paid by members of the CONTRACTOR GROUP in countries other than the country of the location of the SITE. The COMPANY shall not reimburse Customs Duties and Import Taxes except as is provided in sub-article 31.3.2.

31.3.2 Country of the SITE

Notwithstanding the provisions of sub-article 23.6.3 and 31.1.1 the EPC CONTRACTOR shall bear at its sole risk, cost, expense and liability any and all Customs Duties and Import Taxes levied for and in connection with the importation, re-export and export of Imported Items into and from the Kingdom of Thailand.

Notwithstanding the forgoing, the COMPANY shall reimburse the EPC CONTRACTOR the net amount of Customs Duties and Imported Taxes actually paid by the EPC CONTRACTOR for the import, re-export, export as the case may be, for RESULT OF THE WORK, EPC PLANT components, CONTRACTOR ITEMS and COMPANY ITEMS in the care and custody of the CONTRACTOR, provided the EPC CONTRACTOR was formally demanded by GOVERNMENT or Customs Authority in writing to pay such Customs Duties and Import taxes, the EPC CONTRACTOR notified the COMPANY in a timely manner and complied with instructions from the COMPANY. If the EPC CONTRACTOR fails to notify and/or comply with the COMPANY instruction, the EPC CONTRACTOR shall have no right to compensation pursuant to this sub-article.

For clarity Customs Duties and Import Taxes means customs duties, import and export taxes only and does not include, brokerage and brokerage fees, agents and agents fee, handling and handling fees, demurrage and demurrage fees, inspection and inspection fees, penalties, fines and anything else that is not a customs duty, import or export tax.

31.3.3 Penalties and Fines

The EPC CONTRACTOR shall have full and sole responsibility for the payment of any and all penalties, fines, fees and the like, imposed on the COMPANY, the EPC CONTRACTOR and/or SUBCONTRACTORS, VENDORS and/or their PERSONNEL for failure to pay in due time customs duties and similar charges or to comply with APPLICABLE LAWS with regard to importation, exportation and/or re-exportation of any or all of the Imported Items. If any such penalties and/or fines are levied on the COMPANY, the CONTRACTOR shall pay such amounts of such fines to the COMPANY.

31.3.4 Refunds and Rebates

The EPC CONTRACTOR shall apply for any refund of customs duties and charges for which he is entitled to claim reimbursement from the relevant authorities. The EPC CONTRACTOR shall also apply for any and all rebates and remission of customs duties and charges to which he is (or may become) entitled. Upon receipt, the EPC CONTRACTOR shall immediately reimburse the COMPANY accordingly for the full amounts of such reimbursements.

The EPC CONTRACTOR shall, however, apply for any exemption to which he is entitled in respect of customs duties and charges, in order to avoid the COMPANY being involved in the financing of such duties and charges.

31.3.5 Reimbursement Procedure

The EPC CONTRACTOR shall submit invoices for, and shall receive payment in respect of, all amounts properly due in respect of reimbursable customs duties in accordance with the provisions of article 32.

31.3.6 Other Obligations

The EPC CONTRACTOR shall be liable for all the costs and consequences of his failure to comply with his obligations with regard to the imported, re-export and/or export of Imported Items and/or any non-compliance with the requirements of article 31.

Article 32 Invoicing and Payment

Invoicing and payment procedures set out hereinafter shall apply to all amounts becoming due under the CONTRACT including those resulting from CHANGE ORDER.

If the EPC CONTRACTOR is an association of companies or other form of juristic persons, the sole agent designated in sub-article 9.2 shall submit a single invoice on behalf of the Consortium or Joint Venture irrespective of which member or members have actually performed the EPC WORK invoiced. *[Note to TENDERERS this paragraph will only be included in the CONTRACT if the EPC CONTRACTOR is an association of Companies]*

32.1 Invoicing

The EPC CONTRACTOR shall, on a monthly basis, promptly submit invoices for the lump sum, cost reimbursable and unit rate part of the CONTRACT PRICE for the EPC WORK actually performed during the period in accordance with the approved EPC WORK progress figures as described in sub-article 15.3 and the provisions of Exhibit B.

In accordance with the provisions of Exhibit B, the EPC CONTRACTOR shall also submit on a monthly basis the invoices corresponding to signed CHANGE ORDERS for which the corresponding EPC WORK has been performed and APPROVED.

All valid invoices shall:

- a) bear the reference "Contract No. THC19-5245"
- b) clearly indicate the part of the EPC WORK for which payment is requested as per the Schedule of Invoicing or Monthly Progress Report and attach copies of the INTERIM CERTIFICATES if relevant to the achievement of a milestone,
- c) be established without Thai VAT i.e. that which is levied and payable in the Kingdom of Thailand (which shall be invoiced separately, if applicable),
- d) be established in accordance with invoicing procedures under this CONTRACT,
- e) be supported by all necessary documents for and to enable COMPANY's review,
- f) clearly indicate the name, address, SWIFT or BIC of the CONTRACTOR's Bank and his account name and number,
- g) clearly indicate all credits for sums due by EPC CONTRACTOR including reimbursement of advance payments, if any,
- h) be in the name of EPC CONTRACTOR, and
- i) be sent in one (1) original (clearly stamped "ORIGINAL") and three (3) copies, including attachments, to:

For EPC WORK performed in relation to ARTHIT Concession to:

PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED,
555/1, Energy Complex Building A, Floors 6, 19 – 36,
Vibhavadi Rangsit Road,
Chatuchak, Bangkok 10900, Thailand.
Attention: Accounting Department (Invoice Billing)

For EPC WORK performed in relation to Block G8/50 to:

PTTEP INTERNATIONAL LIMITED,
555/1, Energy Complex Building A, Floors 6, 19 – 36,
Vibhavadi Rangsit Road,
Chatuchak, Bangkok 10900, Thailand.
Attention: Accounting Department (Invoice Billing)

For EPC WORK performed in relation to Block G1/61 to:

PTTEP ENERGY DEVELOPMENT COMPANY LIMITED,
555/1, Energy Complex Building A, Floors 6, 19 – 36,
Vibhavadi Rangsit Road,
Chatuchak, Bangkok 10900, Thailand.
Attention: Accounting Department (Invoice Billing)

For EPC WORK performed in relation to Block G2/61 to:

PTTEP ENERGY DEVELOPMENT COMPANY LIMITED,
555/1, Energy Complex Building A, Floors 6, 19 – 36,
Vibhavadi Rangsit Road,
Chatuchak, Bangkok 10900, Thailand.
Attention: Accounting Department (Invoice Billing)

A PDF copy (indexed, searchable and OCR readable and PDF printed from native file) shall also be submitted via PROJECT Electronic Document Management System (EDMS).

Further Conditions for Invoicing

All invoices shall be prepared and submitted in accordance with the requirements of Exhibit G (Invoicing and Cost Control) and such other requirements as the COMPANY may require from time to time.

The CONTRACTOR represents and warrants that all documents including invoices, vouchers, financial settlements, billings and reports submitted to the COMPANY by the CONTRACTOR in support of any costs shall truly reflect the facts about the activities and transactions to which they pertain and that in any recording or reporting made for whatever purpose by the COMPANY, the COMPANY shall be entitled to rely upon all such documents and the data therein as being complete and accurate.

The CONTRACTOR further agrees to promptly notify the COMPANY upon discovery of any instance where the CONTRACTOR has failed to comply with the above provision. The CONTRACTOR shall place similar requirements on SUBCONTRACTOR and VENDOR.

The COMPANY requires a period of up to sixty (60) days for review and verification each invoice for CHANGE ORDERS for sub-article 44.7 Repair Work. Thus, subject to sub-article 32.2 the terms of sub-article 32.3 shall apply from the end of the sixty-day period or earlier if the COMPANY should confirm the applicable invoice relating to a CHANGE ORDER for sub-article 44.7 Repair Work is approved.

32.2 Disputed Invoices

If the COMPANY disputes all or part of any invoice or should the COMPANY discover an error in an invoice, it shall inform the CONTRACTOR and explain reasons for rejection.

The COMPANY and the CONTRACTOR shall discuss and identify actions required to allow the COMPANY to pay the undisputed part.

The CONTRACTOR shall comply with COMPANY instructions / directions with regard thereto. All consequences in connection with and/or arising from a disputed invoice including the payment of the undisputed part shall be borne by the CONTRACTOR.

32.3 Terms of Payment

32.3.1 Valid invoices received by the COMPANY in its office from the 1st to the 15th of each month shall be subject to approval Process and if not disputed as per sub-article 32.2 will be paid within the 15th of the following month, and all properly established invoices received by the COMPANY in its office from the 16th to the end of the month, and if not disputed as per sub-article 32.2 will be paid on or before the end of the following month.

If the last day for payment falls on a Saturday, Sunday, public holiday or Bank holiday, the payment shall be made on the next working day.

Subject to sub-article 9.2 the COMPANY will make all such payments to the Bank account designated on such invoices, subject to APPLICABLE LAWS. Payment shall be deemed made as of the date of transfer from COMPANY's Bank.

32.3.2 Payments made under, or in connection with, the CONTRACT shall be subject to applicable banking and currency control regulations of the relevant government. Should any conversion of currencies be required for such payments, the basis for such conversions shall be the average of closing buying rates "Sight Bill" and selling rates, announced by the Bank of Thailand two (2) working days before the payment date; and

subject to the foregoing, payment for reimbursements of costs and expenses under the CONTRACT shall be made in the currency originally paid by the EPC CONTRACTOR unless otherwise agreed.

32.4 Delayed Payment of EPC CONTRACTOR's Invoices

Any undisputed valid invoice due and payable by the COMPANY to the EPC CONTRACTOR under this CONTRACT which is not paid by the expiry of the time for payment (the due date) specified in the present article shall bear interest thereon from the due date until the date of transfer of such amount from COMPANY's Bank, calculated at the average rate (for the period of delayed payment) of the one-year US Dollar London Inter Bank Offered Rate "LIBOR" (as published by the British Bankers Association or any other person which takes over the administration of LIBOR). In the event that LIBOR is discontinued or the methodology, formula or other means of determination has materially changed, either (A) a benchmark rate that the PARTIES mutually agree, or (B) failing such agreement, a benchmark rate which can be used for the calculation of interest and is formally designated, nominated or recommended as the replacement for LIBOR by the British Bankers Association or any successor administration of LIBOR; and if LIBOR is a negative number it shall be deemed to be zero.

32.5 Sums due by the EPC CONTRACTOR

At any time during the performance of this CONTRACT, the COMPANY shall have the right, after notifying the EPC CONTRACTOR, to deduct from any sums due to the CONTRACTOR, all and any sums due to the COMPANY by the EPC CONTRACTOR for whatever reason, including:

- a) overpayments made to the EPC CONTRACTOR,
- b) materials sold or services furnished to the EPC CONTRACTOR,
- c) additional COMPANY costs resulting from EPC CONTRACTOR's failure to perform any part of the EPC WORK, in accordance with the provisions of the CONTRACT related to suspension, and/or termination due to EPC CONTRACTOR's default,
- d) CLAIMS and/or proceedings of third parties against the COMPANY in relation to EPC CONTRACTOR's performance of the CONTRACT and resulting in payment or commitment to pay by the COMPANY according to judgment of the court or APPLICABLE LAWS (unless EPC CONTRACTOR's liability has been expressly waived under the CONTRACT),

- e) any withholding or assessment of any nature resulting from the location of payment designated on EPC CONTRACTOR's invoices (and which shall be for the sole account of the EPC CONTRACTOR), or
- f) any amounts deemed necessary to indemnify and/or protect the COMPANY against any lien created in connection with EPC CONTRACTOR's performance of this CONTRACT unless the EPC CONTRACTOR immediately shows appropriate evidence proving that such lien is not valid.

Should sums due by the EPC CONTRACTOR exceed the sums due by the COMPANY, the EPC CONTRACTOR shall immediately pay the difference to the COMPANY, failing which the COMPANY shall be entitled to charge the interest under article 32.4 (which shall apply mutatis mutandis), and shall have the right to call the Performance Bank Guarantee without prejudice to its other rights under this CONTRACT or at law.

32.6 Final Assessments and Final Invoices

32.6.1 Final Assessment

Final Assessments shall be prepared and submitted on a PHASE by PHASE basis.

No later than fourteen days (14) days after the date of issue of the last PROVISIONAL ACCEPTANCE CERTIFICATE for a PHASE the EPC CONTRACTOR shall submit a detailed itemized Final Assessment for the PHASE to the COMPANY comprising; a breakdown of the CONTRACT PRICE, invoices and payments summary plus itemized details of all outstanding items, differences, disputes and CLAIMS arising from and/or in connection with the PHASE.

The Final Assessment for a PHASE shall also show the balance due the EPC CONTRACTOR or in favor of the COMPANY and shall be in such format as the COMPANY may require.

32.6.2 Final Assessment by the COMPANY

If the EPC CONTRACTOR fails to submit a Final Assessment for a PHASE in accordance the requirements of sub-article 32.6.1 then the COMPANY shall be solely entitled to determine the amounts due to the EPC CONTRACTOR and/or in favor of the COMPANY for such PHASE.

32.6.3 FINAL ACCOUNT CERTIFICATES

FINAL ACCOUNT CERTIFICATES shall be concluded on a PHASE by PHASE basis, utilizing the form set out in ANNEX-8 hereto, after the following:

- a) the PARTIES have agreed the final CONTRACT PRICE for the PHASE,
- b) the EPC CONTRACTOR has satisfied all related CLAIMS and has cleared all liens in connection with the EPC WORK and the PLANT for such PHASE,
- c) the EPC CONTRACTOR has paid and satisfied in full all and any outstanding obligations in arising from and in connection of the EPC WORK, the PLANT and under the terms and requirements of this CONTRACT and otherwise for such PHASE.

32.6.4 Final Invoice

The EPC CONTRACTOR shall submit the Final Invoice for a PHASE after the FINAL ACCOUNT CERTIFICATE and FINAL ACCEPTANCE CERTIFICATES for such PHASE have been agreed and signed by the PARTIES.

The Final Invoice for a PHASE shall conclude accounts between the PARTIES for that PHASE and no further invoice submitted for or behalf of the EPC CONTRACTOR for such PHASE shall be accepted by the COMPANY.

32.7 Improper Payment

Payment of any invoice shall not limit or restrict the right of the COMPANY to contest any sum(s) improperly paid to the EPC CONTRACTOR.

Any CLAIM so exercised, and recognized as well founded, shall result in an immediate reimbursement by the EPC CONTRACTOR.

32.8 Not used

Article 33 Performance Bank Guarantees and Parent Company Guarantee.

The EPC CONTRACTOR hereby agrees to provide i) irrevocable Performance Bank Guarantees payable on first demand of the COMPANY to guarantee the due performance of EPC CONTRACTOR's obligations under this CONTRACT, and ii) a Parent Company Guarantee.

33.1 Performance Bank Guarantees

33.1.1 Form of Performance Bank Guarantees

The EPC CONTRACTOR undertakes to provide, subject to the other requirements of this article 33, a Performance Bank Guarantee per PHASE issued by Thai Bank or branch office in Thailand of international Bank approved by the COMPANY in the specific form set out in ANNEX-1/A.

33.1.2 Amount of Performance Bank Guarantees

The amount of the Performance Bank Guarantee for the first PHASE shall be equal to ten percent (10%) of the estimated Initial CONTRACT PRICE of the first PHASE. The estimated Initial CONTRACT PRICE for the first PHASE shall be evaluated by COMPANY and the EPC CONTRACTOR shall be informed of such amount on or immediately after the EFFECTIVE DATE.

Performance Bank Guarantees for subsequent PHASES shall be provided by the EPC CONTRACTOR to the COMPANY no later than thirty (30) days after the issuance of the NOTICE TO PROCEED for the applicable PHASE.

Performance Bank Guarantee amounts for subsequent PHASES shall be equal to ten percent (10 %) of the Initial CONTRACT PRICE for the relevant PHASE.

33.1.3 Duration of Performance Bank Guarantees

The Performance Bank Guarantee for each PHASE shall as a minimum be valid up to the date of expiry of the WARRANTY PERIOD for the relevant PHASE and unless there are outstanding CLAIMS shall lapse automatically at such time.

If there are outstanding CLAIMS for a PHASE or the FINAL ACCEPTANCE CERTIFICATE for the PHASE has not been issued, the EPC CONTRACTOR shall, not later than thirty (30) days prior to the expiration of the existing Performance Bank Guarantee, either cause the Bank to provide the COMPANY with a new Performance Bank Guarantee in the same format and for the same amount as the previous one but valid as a minimum from the date of expiry of the existing Performance Bank Guarantee to the date of issuance of the FINAL ACCEPTANCE CERTIFICATE for the PHASE or the EPC CONTRACTOR shall cause the Bank to provide an extension of the existing Performance Bank Guarantee in the same format and for the same amount as the previous one but valid as a minimum from the date of expiry of the existing Performance Bank Guarantee to the date of issuance of the FINAL ACCEPTANCE CERTIFICATE for the PHASE.

33.1.4 Rights of the COMPANY in case of Unsatisfactory Performance Bank Guarantee

If the EPC CONTRACTOR fails to provide a satisfactory Performance Bank Guarantee in accordance with the provisions of this article within thirty (30) days from the EFFECTIVE DATE, the COMPANY shall not be obliged to make any payments to EPC CONTRACTOR for the relevant PHASE until EPC CONTRACTOR has provided a satisfactory Performance Bank Guarantee for the PHASE and the COMPANY shall have the right at any time, without prior notification and without any liability whatsoever, to suspend and/or terminate the CONTRACT or part thereof under sub-articles 48.3 and 48.4 respectively.

Should, at any time and for any reason, a Performance Bank Guarantee prove not to be enforceable, the COMPANY shall be entitled to suspend any and all payments to the EPC CONTRACTOR until the EPC CONTRACTOR has provided the COMPANY with a new, enforceable and satisfactory Performance Bank Guarantee.

33.1.5 Adjustment of the Initial Amount of Performance Bank Guarantee

The amount of the Performance Bank Guarantee for a PHASE shall be increased / decreased proportionately in the event that the CONTRACT PRICE for such PHASE shall be increased or decreased by more than ten per cent (10%) of the Initial CONTRACT PRICE for such PHASE.

Further proportionate adjustments in the amount of the Performance Bank Guarantee shall be made in respect of increases of more than ten per cent (10%) in the value of the CONTRACT PRICE for a PHASE compared with the value at the date of the previous adjustment.

Adjustments to Performance Bank Guarantee amounts shall be made by means of a formal written amendment to the Performance Bank Guarantee which shall be prepared and issued by the GUARANTOR or by a replacement Performance Bank Guarantee. All such written amendments and replacement Performance Bank Guarantees shall be subject to prior written approval by the COMPANY.

Adjustments to amount of a Performance Bank Guarantee and replacement Performance Bank Guarantees shall not take effect until the COMPANY REPRESENTATIVE has approved the aforementioned amendment or replacement. Such approval shall not be unreasonably withheld.

The EPC CONTRACTOR shall be solely responsible for arranging amendments to the amount of a Performance Bank Guarantee as aforesaid in a timely manner and shall bear all costs and expenses in this respect.

If the EPC CONTRACTOR fails to ensure that the amount of a Performance Bank Guarantee is adjusted as aforesaid, the COMPANY may subject to fourteen (14) day notice, withhold payment of an amount equal to the adjustment amount until either the Performance Bank Guarantee is amended as aforesaid or the FINAL ACCEPTANCE CERTIFICATE for the applicable PHASE is issued, whichever is the later.

The EPC CONTRACTOR shall provide the Bank at any time with supporting documents, with copy to the COMPANY, in order to ascertain the exact amount of a Performance Bank Guarantee with regard to any CLAIM. If the EPC CONTRACTOR fails to do so the COMPANY may provide the Bank with such supporting documents.

33.1.6 Amount of Performance Bank Guarantee during WARRANTY PERIODS

After the issuance of the last PROVISIONAL ACCEPTANCE CERTIFICATE for a PHASE, the amount of the applicable Performance Bank Guarantee shall be adjusted to five per cent (5 %) of the estimated final CONTRACT PRICE for the PHASE and shall thereafter be maintained in such amount up to the date of issue of the FINAL ACCEPTANCE CERTIFICATE for the PHASE.

The estimated final CONTRACT PRICE for a PHASE shall be established based on the applicable Final Assessment for such PHASE pursuant to sub-article 32.6 and subject to approval by the COMPANY.

33.2 Parent Company Guarantee

33.2.1 Form of Parent Company Guarantee

The EPC CONTRACTOR shall provide a Parent Company Guarantee from the ultimate parent company of the EPC CONTRACTOR in the specific form set out in ANNEX-1/C.

33.2.2 Rights of COMPANY in case of Unsatisfactory Parent Company Guarantee

Should the EPC CONTRACTOR fail, within fourteen (14) days from EFFECTIVE DATE or within such longer period as the COMPANY may agree, to provide a satisfactory Parent Company Guarantee in accordance with the provisions of sub-article 33.2.1, the COMPANY shall not be obliged to make any payments to the EPC CONTRACTOR until the EPC CONTRACTOR has provided such satisfactory Parent Company Guarantee and the COMPANY shall have the right at any time, without prior notification and without any liability whatsoever, to suspend and/or terminate this CONTRACT under the provisions of sub-articles 48.3 and 48.4 respectively.

Should, at any time and for any reason, the Parent Company Guarantee prove not to be enforceable, the COMPANY shall be entitled to suspend any and all payments to the EPC CONTRACTOR until the EPC CONTRACTOR has provided the COMPANY with a new and satisfactory Parent Company Guarantee.

33.3 Not used

33.4 Demands

- 33.4.1 Subject to the provisions of article 48, the COMPANY shall have the right at any time to demand the payment of all or any part of a Performance Bank Guarantee under the form set forth in ANNEX-1/B and/or to enforce the Parent Company Guarantee.
- 33.4.2 Not used
- 33.4.3 If the COMPANY receives any payment from the Bank under the terms of a Performance Bank Guarantee, and if it is later established that the EPC CONTRACTOR was not in breach of his obligations as indicated by the COMPANY in its notice to the EPC CONTRACTOR, then the COMPANY shall reimburse such payment to the EPC CONTRACTOR, and, provided that the EPC CONTRACTOR can substantiate that he provided the COMPANY sufficiently in advance of the date of issue of the demand for payment with information that should have prevented the COMPANY from exercising its right to make such demand, the COMPANY shall reimburse the EPC CONTRACTOR the additional Bank charges or interest charges which the EPC CONTRACTOR has paid as a direct result of COMPANY's demand on a Performance Bank Guarantee, but the COMPANY shall have no other liability to the EPC CONTRACTOR in respect thereof.

Article 34 Liquidated Damages

The EPC CONTRACTOR acknowledges and agrees that time is essence of this CONTRACT and without prejudice to any other right(s) the COMPANY may have under this CONTRACT or at law, the PARTIES hereby agree that liquidated damages shall be applied on a PHASE by PHASE basis in accordance with this present article 34, Exhibit B and the other terms and requirements of this CONTRACT, as follows:

34.1 Liquidated Damages for Late Completion of the EPC WORK

Without prejudice to any provision of this CONTRACT and/or COMPANY's rights, if the EPC CONTRACTOR fails to complete EPC WORK and a specified major PLANT component on or before the applicable required COMPLETION DATE, the COMPANY shall, without any prior formal notice or demand/or any proof of loss, have the right to apply and the EPC CONTRACTOR shall pay liquidated damages for late completion of the EPC WORK and the specified major PLANT component to the COMPANY. The amount of such liquidated damages for late completion of the EPC WORK and the specified major PLANT component shall be calculated in accordance with Section 8.1 of Exhibit B and shall be subject to the limitation in sub-article 58.2 and Exhibit B.

34.2 Liquidated Damages for Longer Duration of Layover Period

Without prejudice to any provision of this CONTRACT and/or COMPANY's rights if the duration of a Layover Period (as defined in Exhibit C) is longer than Exhibit C requirements, the COMPANY shall, without any prior formal notice or demand/or any proof of loss, have the right to apply and the EPC CONTRACTOR shall pay liquidated damages for such longer duration of Layover Period to the COMPANY. The amount of such liquidated damages for longer duration Layover Period shall be calculated in accordance with Section 8.2 of Exhibit B and shall be subject to the limitation in sub-article 58.2 and Exhibit B.

34.3 Liquidated Damages for Unauthorized Removal or Substitution of KEY PERSONNEL

Without prejudice to any provision of this CONTRACT and/or COMPANY's rights, if any KEY PERSONNEL are removed or substituted in violation of sub-article 25.2.3, the COMPANY shall, without any prior formal notice or demand/or any proof of loss, have the right to apply and the EPC CONTRACTOR shall pay liquidated damages to the COMPANY for such unauthorized removal and/or substitution. The amount of such liquidated damages for such unauthorized removal and/or substitution shall be calculated in accordance with Section 8.3 of Exhibit B and shall be subject to the limitation in sub-article 58.2 and in Exhibit B.

34.4 Not Used

34.5 Liquidated Damages for Substitution, Removal, Addition of Major SUBCONTRACTOR and/or Related WORKSITE/WORK Location

Without prejudice to any provision of this CONTRACT whatsoever and/or COMPANY's rights, if a major SUBCONTRACTOR (from those stated in Exhibit K) or one as may be subsequently approved by the COMPANY, is substituted, removed or added or if a major SUBCONTRACTOR's WORKSITE or WORK Location (from those stated in Exhibit K (if any) is substituted, removed or added the COMPANY shall, without any prior formal notice or demand/or any proof of loss, have the right to apply and the EPC CONTRACTOR shall pay liquidated damages to the COMPANY for such default. The amount of such liquidated damages for substitution, removal or addition of each major SUBCONTRACTOR and/or substitution, removal or addition of each major SUBCONTRACTOR's WORKSITE or WORK Location shall be calculated in accordance with Section 8.5 of Exhibit B and shall be subject to the limitation in sub-article 58.2 and in Exhibit B.

For clarity, change of fabrication yard location as per in Exhibit K, Annex-6 and Exhibit B shall not be considered as substitution, removal, addition of major SUBCONTRACTOR related WORKSITE/WORK Location.

34.6 Liquidated Damages for Substitution, Removal and/or Addition of an EPC CONTRACTOR's WORKSITE and/or EPC CONTRACTOR's Engineering Office

Without prejudice to any provision of this CONTRACT and/or COMPANY's rights, if the EPC CONTRACTOR substitutes removes and/or adds an EPC CONTRACTOR's WORKSITE and/or EPC CONTRACTOR's Engineering Office identified as such in Exhibit K or one as may be subsequently approved by the COMPANY, the COMPANY shall, without any prior formal notice or demand/or any proof of loss, have the right to apply and the EPC CONTRACTOR shall pay liquidated damages to the COMPANY for such default. The amount of such liquidated damages for change of WORKSITE shall be calculated in accordance with Section 8.6 of Exhibit B and shall be subject to the limitation in Exhibit B and in sub-article 58.2.

For clarity, change of fabrication yard location as per in Exhibit K, Annex-6 and Exhibit B shall not be considered as substitution or change of and EPC WORKSITE and/or Engineering Office.

34.7 Estimate of the COMPANY's Loss and Damage

Notwithstanding the provisions of Section 383 of the Thai Civil and Commercial Code, the PARTIES hereby agree that monetary amount of liquidated damages as compensation for

the specific defaults described in sub-articles 34.1, 34.2, 34.3, 34.5, and 34.6 and as per Exhibit B are mutually agreed by the PARTIES to be fair and reasonable and shall apply respectively for the events described in sub-articles 34.1, 34.2, 34.3, 34.5, and 34.6, provided the amounts of any such liquidated damages are calculated in accordance with the terms and requirements of this CONTRACT.

Furthermore, the PARTIES mutually agree with regard to amounts of liquidated damages calculated as aforesaid that they will not seek adjustment of the liquidated damage amounts (neither increase nor decrease).

The payment of liquidated damages shall not relieve the EPC CONTRACTOR from his obligation to complete the EPC WORK, nor from any other duties, obligations or liabilities which he may have under this CONTRACT and APPLICABLE LAWS.

34.8 Reservation of COMPANY Rights

The COMPANY reserves its right to call upon such liquidated damages amounts from the applicable Performance Bank Guarantee and/or other guarantee, to demand such amount from the EPC CONTRACTOR and/or to deduct such amount from the payment(s) made and/or to be made to the EPC CONTRACTOR; the COMPANY hereby reserves all rights under this CONTRACT and at law with regard to recovery of liquidated damages.

Article 35 Accounting and Audit

Payments made by the COMPANY shall not be construed as waiver of COMPANY's right to object to any paid invoices.

The EPC CONTRACTOR shall safely keep and cause SUBCONTRACTOR and VENDOR to keep in accordance with generally accepted accounting practice, accurate detailed records compliance with this CONTRACT, safety record and accounts pertaining to the performance of the EPC WORK, including PERSONNEL records, correspondence, receipts, vouchers, memoranda, computerized data and such other information necessary for an accurate audit and verification of any reimbursable costs, and/or other purposes for the duration of this CONTRACT and for a period of five (5) years following the date of issue of the last FINAL ACCEPTANCE CERTIFICATE under this CONTRACT or from the date of termination of this CONTRACT, whichever is applicable.

The COMPANY shall have the right during such period to audit (or have audited) and to copy any records and accounts for verification of any sum payable under this CONTRACT.

In the case of termination of this CONTRACT under the provisions of articles 48, 49 or 50, such right shall extend to any documentation related to costs to be reimbursed by the COMPANY to the EPC CONTRACTOR following such termination.

Notwithstanding sub-article 32.6, if as a result of any review or audit it is established that an invoice submitted under this CONTRACT is erroneous, the EPC CONTRACTOR shall promptly adjust such error(s) and send to the COMPANY the corresponding invoice or credit note.

In addition to the COMPANY's foregoing rights and within the same limits, the COMPANY shall have the right to be a party with this EPC CONTRACTOR in the joint inspection and audit of SUBCONTRACTORS and/or VENDORS in respect of the EPC WORK.

The COMPANY shall determine the selection of SUBCONTRACTOR and/or VENDOR to be inspected and audited.

The EPC CONTRACTOR shall ensure that the foregoing provisions are included in all contracts to be entered into with SUBCONTRACTORS and VENDORS.

Article 36 Additional Definitions

Notwithstanding any other definitions, including those within sub-article 2.1, and when appearing in upper case letters, the following expressions and derivatives thereof shall, within articles 36 to 44, have the meanings hereby assigned to them.

- a) The term THIRD PARTY means any party other than either any of the COMPANY INDEMNIFIED PARTIES or any of the EPC CONTRACTOR INDEMNIFIED PARTIES.
- b) The term PLANT means PLANT and RESULT OF THE WORK.

Article 37 Liabilities between the EPC CONTRACTOR and the COMPANY

37.1 Care of the PLANT components and COMPANY ITEMS

37.1.1 EPC CONTRACTOR’s Responsibility up to Handover

- a) Liability for Loss and/or Damage

Notwithstanding any title consideration, the EPC CONTRACTOR shall, from the commencement of the applicable EPC WORK take full responsibility for the care of PLANT components and also the COMPANY ITEMS (if any) upon and after delivery to the EPC CONTRACTOR, until Handover as follows:

<u>Item</u>	<u>Description</u>	<u>Handover</u>
1	Major PLANT components e.g. Topsides, Jackets as referred to in sub-article 19.1.1 a)	Until the effective date and time of the applicable READY FOR TRANSPORTATION CERTIFICATE.
2	Fabricated piles and associated items	Until the effective date and time of the applicable READY FOR TRANSPORTATION CERTIFICATE.
3	Fabricated items and related CONTRACTOR ITEMS for Brownfield Modifications	Either, as applicable, a) the effective date and time of Handover to the COMPANY as per the requirements of Exhibit A, or b) the effective date and time HANDOVER to the T&I CONTRACTOR as per the requirements of Exhibit A if the T&I CONTRACTOR will perform the Brownfield Modification installation WORK for a PLATFORM at a SITE.

<u>Item</u>	<u>Description</u>	<u>Handover</u>
4	Hook up flow line fabricated items	The effective date and time of Handover to the COMPANY as per the requirements of Exhibit A
5	Spare Parts, Special Tools and Material Handling Equipment.	The effective date and time of Handover to the COMPANY as per the requirements of Exhibit A
6	COMPANY ITEMS (if any)	The effective date and time of Handover to the COMPANY as per Exhibit A and/or effective date and time of sale or disposal as per the requirements of sub-article 14.3
7	TYPE 1 CONTRACTOR ITEMS	The effective date and time of Handover to the COMPANY as per Exhibit A and/or effective date and time of sale or disposal as per the requirements of sub-article 14.5

Should any damage or loss occur to the aforesaid PLANT components 1 to 5 or any part thereof and/or the aforesaid COMPANY ITEMS, from any cause (but not including EXCEPTED RISKS) the EPC CONTRACTOR shall at his own risk, cost and expense repair or replace the same so that at such effective date of the aforesaid Handover the aforesaid parts of the PLANT or any part thereof and/or the aforesaid COMPANY ITEMS shall be in good order and condition and in conformity in every respect with the requirements of the CONTRACT.

b) **Repair Work by the COMPANY OTHER CONTRACTORS**

However, repair and/or replacement of loss and/or damage to sub-article 37.1.1 a) items 1) to 5) or any part thereof and/or the COMPANY ITEMS (if any) instead of being performed by the EPC CONTRACTOR, may be entrusted to another contractor (such action being at the sole option and decision of the COMPANY) without any compensation to the EPC CONTRACTOR but in such a case, the EPC CONTRACTOR shall not guarantee that part of the PLANT so repaired.

c) **Loss and/or Damage Not Caused by CONTRACTOR INDEMNIFIED PARTIES**

Notwithstanding the foregoing, the COMPANY shall however assume full cost of repair and/or replacement of loss and/or damage when the EPC CONTRACTOR can evidence that none of the CONTRACTOR INDEMNIFIED PARTIES has contributed, directly or indirectly, to loss or damage having occurred on or between WORKSITE.

d) **TYPE 1 CONTRACTOR ITEMS and COMPANY ITEMS**

It being understood that as per the requirements of sub-article 14.5.7 that surplus Material Group 1 CONTRACTOR ITEMS from a PHASE shall be utilized under the care of the EPC CONTRACTOR in a subsequent PHASE or PHASES. Likewise, for COMPANY ITEMS (if any).

37.1.2 Responsibility after Handover until FINAL ACCEPTANCE

a) Liability of the EPC CONTRACTOR for Loss and/or Damage

The EPC CONTRACTOR shall also be liable respectively for any loss and/or damage occasioned by the CONTRACTOR INDEMNIFIED PARTIES to sub-article 37.1.1 a) items 1) to 5) handed over and for any COMPANY ITEMS not handed over, to the effective date of the FINAL ACCEPTANCE CERTIFICATE for the applicable PHASE.

The EPC CONTRACTOR shall promptly, if and to the extent requested by the COMPANY repair and/or replace any loss and/or damage so caused by CONTRACTOR INDEMNIFIED PARTIES without any extra cost to the COMPANY.

When performing repair and/or replacement of loss and/or damage as aforesaid the EPC CONTRACTOR shall have care and custody of the part of the PLANT affected by such repair and/or replacement.

b) Repair Work Performed by COMPANY OTHER CONTRACTORS

However, the repair and/or replacement of loss and/or damage referred to in sub-article 37.1.2 a) may, at the option of the COMPANY, be entrusted to another contractor without any compensation to the CONTRACTOR but in such a case, the CONTRACTOR shall not guarantee that part of the PLANT so repaired.

c) Waiver and Exception

Nevertheless, and notwithstanding sub-articles 37.1.2 a) and 37.1.2 b) the COMPANY waives all rights of recourse against the CONTRACTOR INDEMNIFIED PARTIES for:

- i) any loss and/or damage to the PLANT, PLANT components and/or parts thereof attributable to the CONTRACTOR INDEMNIFIED PARTIES and occurring during the WARRANTY PERIOD which exceeds the period of coverage for the applicable PHASE of the Construction All Risk Insurance referred to in sub-article 43.2, or
- (ii) any loss and/or damage to the PLANT, any PLANT component and related items and/or parts thereof which have been Handed Over as per sub-article 37.1.1 a) and is attributable to the CONTRACTOR INDEMNIFIED PARTIES performing EPC WORK on uncompleted parts of the PLANT, major PLANT components and related items and/or parts thereof during the period between the effective date of such Handover and the effective date of the FINAL ACCEPTANCE CERTIFICATE for the applicable PHASE, to the extent such loss and/or damage is no longer covered by the Construction All Risk Insurance described in sub-article 43.2;

with the exception of the costs of repair and/or replacement of the defective part of the PLANT and of the amounts of the deductibles mentioned in sub-article 44.2 which costs and amounts shall be borne by the EPC CONTRACTOR.

In such cases, the EPC CONTRACTOR shall also promptly so far as may be requested by the COMPANY repair and/or replace the part of the PLANT so damaged and the EPC CONTRACTOR shall be paid by the COMPANY for such repair and/or replacement, in accordance with sub-article 44.6 or 44.7.

37.1.3 Benefit of Insurance placed by the COMPANY

The principles set forth in sub-article 37.1 shall not deprive the CONTRACTOR INDEMNIFIED PARTIES of the benefit of insurance to be placed by the COMPANY as per sub-article 43.2 to the extent provided by articles 43 and 44.

37.2 EXCEPTED RISKS

Notwithstanding anything to the contrary in this CONTRACT, if the PLANT and COMPANY ITEMS sustains destruction or damages on or between WORKSITES which is the consequence whether direct or indirect of war hostilities (whether declared or not), invasion, act of foreign enemies, rebellion, revolution, insurrection or military or usurped power or civil war, or strike, riot, commotion, disorder, otherwise than among PERSONNEL of the CONTRACTOR INDEMNIFIED PARTIES (these risks being comprehensively referred to as "EXCEPTED RISKS"), the EPC CONTRACTOR shall nevertheless be entitled to payment for any such PLANT so destroyed or damaged.

In such case, the EPC CONTRACTOR shall be entitled to be paid by the COMPANY by the means of a CHANGE ORDER for repair and/or replacement of loss and/or damage so far as it may be requested by the COMPANY, the price for which shall to be evaluated in accordance with the requirements of this CONTRACT including but limited to the requirements of sub-article 22.3, Exhibit B and the other applicable terms of this CONTRACT.

37.3 Damage / loss of COMPANY Property (except PLANT and COMPANY ITEMS)

The COMPANY waives all rights of recourse against the EPC CONTRACTOR and shall indemnify, defend and hold harmless the CONTRACTOR INDEMNIFIED PARTIES from and against any and all CLAIMS in respect of damage to or loss of:

- a) any property of the COMPANY INDEMNIFIED PARTIES on the WORKSITE other than the PLANT and COMPANY ITEMS;
- b) any property of the EXISTING G1/61 OPERATOR GROUP on SITE; and
- c) any property of the EXISTING G2/61 OPERATOR GROUP on SITE

including loss of use thereof, arising from, related to or in connection with the performance of this CONTRACT, howsoever caused, including the negligence of any of the CONTRACTOR INDEMNIFIED PARTIES or any of their respective PERSONNEL in the performance of this CONTRACT.

However, when such damage or loss is caused by any of the CONTRACTOR INDEMNIFIED PARTIES, the EPC CONTRACTOR shall bear the first five hundred thousand US Dollars (USD 500,000) of damages per occurrence but, when the risks of damages to said existing property are covered by the insurance to be placed by the COMPANY pursuant to article 43 hereafter, the EPC CONTRACTOR shall bear the corresponding deductibles up to five hundred thousand US Dollars (USD 500,000) per occurrence.

The COMPANY shall endeavor to obtain Mutual Indemnity and Waiver of Recourse Agreements from the COMPANY OTHER CONTRACTORS and shall upon request from the EPC CONTRACTOR advise EPC CONTRACTOR of any of the COMPANY OTHER CONTRACTORS that did not sign a Mutual Indemnity and Waiver of Recourse Agreement.

37.4 Damage to or Loss of CONTRACTOR INDEMNIFIED PARTIES Property

The EPC CONTRACTOR waives all rights of recourse against the COMPANY and shall indemnify, defend and hold harmless the COMPANY from and against any and all CLAIMS in respect of damage to or loss of property of the CONTRACTOR INDEMNIFIED PARTIES whether owned, hired, leased or otherwise provided by the CONTRACTOR INDEMNIFIED PARTIES, including loss of use thereof, arising from, related to or in connection with the performance of this CONTRACT, howsoever caused, including the negligence of the COMPANY INDEMNIFIED PARTIES or any of their respective PERSONNEL.

37.5 Personnel Injury/Disease/Death and Personal Property Loss or Damage

The COMPANY waives all rights of recourse against the EPC CONTRACTOR and shall indemnify, defend and hold the EPC CONTRACTOR harmless from and against any and all claims arising from, in connection with or related to loss of or damage to property of

- a) COMPANY GROUP's PERSONNEL and injuries to or disease or death of COMPANY GROUP's PERSONNEL;
- b) the EXISTING G1/61 OPERATOR GROUP's PERSONNEL and injuries to or disease or death of the EXISTING G1/61 OPERATOR GROUP's PERSONNEL; and
- c) the EXISTING G2/61 OPERATOR GROUP's PERSONNEL and injuries to or disease or death of the EXISTING G2/61 OPERATOR GROUP's PERSONNEL

regardless of the cause of or reason for said damage, loss, injuries, disease or death and even if caused by negligence of the CONTRACTOR INDEMNIFIED PARTIES or their respective PERSONNEL.

The EPC CONTRACTOR waives all rights of recourse against the COMPANY and shall indemnify, defend and hold the COMPANY harmless from and against any and all CLAIMS arising from, in connection with or related to loss of or damage to property of CONTRACTOR GROUP's PERSONNEL and injuries to or disease or death of CONTRACTOR GROUP's PERSONNEL, regardless of the cause of or reason for said damage, loss, injuries, disease or death and even if caused by negligence of the COMPANY INDEMNIFIED PARTIES or their respective PERSONNEL.

37.6 CONSEQUENTIAL LOSS

- a) The COMPANY shall indemnify, defend and hold harmless the EPC CONTRACTOR from and against any and all CLAIMS in respect of CONSEQUENTIAL LOSS which is suffered by the COMPANY INDEMNIFIED PARTIES, the EXISTING OPERATOR G1/61 GROUP and/or the EXISTING OPERATOR G2/61 GROUP as a result of, or in any way connected with, the performance or non-performance of the EPC CONTRACT, regardless of cause, including negligence, breach of duty or other fault of any member of the CONTRACTOR INDEMNIFIED PARTIES; and

- b) The EPC CONTRACTOR shall indemnify, defend and hold harmless the COMPANY from and against any and all CLAIMS in respect of CONSEQUENTIAL LOSS which is suffered by the CONTRACTOR INDEMNIFIED PARTIES as a result of, or in any way connected with, the performance or non-performance of this CONTRACT, regardless of cause, including negligence, breach of duty or other fault of any member of the COMPANY INDEMNIFIED PARTIES.

For an avoidance of doubt, any liquidated damages or other compensation provisions stipulated in this CONTRACT for delay, non-performance, mis-performance, default, warranty obligations or otherwise as per this CONTRACT, and CHANGE ORDERS shall not be considered as CONSEQUENTIAL LOSS.

37.7 Mutual Indemnity and Waiver of Recourse Agreements

Between the EPC CONTRACTOR, his SUBCONTRACTOR and the COMPANY OTHER CONTRACTORS

- a) The EPC CONTRACTOR shall sign a counterpart of the “Mutual Indemnity and Waiver of Recourse Agreement” (Version for the EPC CONTRACTOR) attached hereto (ANNEX-2/A)
- b) The EPC CONTRACTOR shall, unless otherwise approved, obtain from his SUBCONTRACTOR working on any WORKSITE, the signature of like counterpart of the “Mutual Indemnity and Waiver of Recourse Agreement” (Version for the EPC CONTRACTOR’s SUBCONTRACTOR) attached hereto (ANNEX-2/B).
- c) The COMPANY shall use its reasonable endeavors to obtain from the COMPANY OTHER CONTRACTORS and their subcontractors working on a SITE and/or WORKSITE the signature of like counterparts of Mutual Indemnity and Waiver of Recourse Agreement.
- d) Every SUBCONTRACT between the EPC CONTRACTOR and his SUBCONTRACTOR shall provide that the provisions of articles 36 to 44 shall apply between the COMPANY and such SUBCONTRACTOR in the same manner as they apply between the COMPANY and the EPC CONTRACTOR.
- e) With reference to article 11, at the time of the EPC CONTRACTOR asking for the consent of the COMPANY to contract to each SUBCONTRACTOR, the EPC CONTRACTOR shall obtain from the SUBCONTRACTOR working on or between the SITE and/or WORKSITE a waiver of corresponding rights of recourse against the COMPANY as per ANNEX-2/B (Mutual Indemnity and Waiver of Recourse Agreement) and ANNEX-3 (Liability and Insurance Agreement from SUBCONTRACTORS) and shall indemnify and hold harmless the COMPANY against any and all consequences of his failure to obtain such waivers.
- f) The EPC CONTRACTOR at such time shall notify the COMPANY of the refusal of such potential SUBCONTRACTOR to sign a counterpart of said Mutual Indemnity and Waiver of Recourse Agreement and/or Liability and Insurance Agreement.

- g) Conversely, the SUBCONTRACTOR shall have the benefit of same indemnities and waivers of recourse from the COMPANY as the EPC CONTRACTOR.

37.8 GENERAL AVERAGE

- 37.8.1 When shipments are made on dedicated transportation and towage units carrying only the property of the COMPANY INDEMNIFIED PARTIES, the EPC CONTRACTOR on behalf of interests concerned with transportation units, and the COMPANY on behalf of interests concerned with cargo, waive any rights of claiming contribution to GENERAL AVERAGE expenses and/or sacrifices against the other PARTY; this waiver is not to be construed as applicable to awards claimed by salvors and related costs which shall be apportioned in proportion to salvaged values or as determined by salvage arbitrators.
- 37.8.2 In all other circumstances, including transportation by scheduled liner services, GENERAL AVERAGE shall be adjusted according to the latest edition of the York-Antwerp rules, as determined and from time to time revised by the Comité Maritime International, at EFFECTIVE DATE.

37.9 Liabilities for Salvage Operations performed by the EPC CONTRACTOR

- 37.9.1 Where shipments are made on dedicated transportation and towing units, carrying only the property of the COMPANY and/or COMPANY OTHER CONTRACTORS:
- a) Within their capabilities, transportation and towage units shall carry out rescue and salvage operations to the benefit of the PERSONNEL and material means of the COMPANY INDEMNIFIED PARTIES. Such rescue and salvage operations shall be considered as normal operations of transportation and towage units.
 - b) It is expressly agreed that any material means of the COMPANY INDEMNIFIED PARTIES which are salvaged or towed by transportation and/or towage units shall not be subject to salvage CLAIMS by the CONTRACTOR INDEMNIFIED PARTIES.
 - c) However, the COMPANY INDEMNIFIED PARTIES shall be responsible for the payments to be made under any legal rights to the Master and Crew in relation to such operations.
 - d) The COMPANY shall also pay the EPC CONTRACTOR at the rates of Exhibit B for the time spent by transportation and/or towage units in performing such operations; this latter provision however shall not be construed as applicable to a transportation or a towage operation already commenced by units of the EPC CONTRACTOR under normal conditions and which has subsequently allegedly developed into a salvage situation. If the CONTRACTOR INDEMNIFIED PARTIES get the benefit of similar rescue services from the COMPANY INDEMNIFIED PARTIES, the EPC CONTRACTOR will reimburse such expenses incurred by the COMPANY under similar provisions.
 - e) Transportation and/or towage units shall be entitled at all times to deviate for the purpose of saving life. The Master of vessel shall promptly inform the COMPANY of such deviation.

- f) All salvage proceeds arising out of the saving of third party which is not connected with the COMPANY INDEMNIFIED PARTIES activities shall be divided equally between the COMPANY and the CONTRACTOR INDEMNIFIED PARTIES involved in the salvage operations, after deducting Master's and Crew's share, repair costs sustained by the transportation and/or towage units for the amount mentioned in the award and after reimbursing the COMPANY for one hundred percent (100%) of the operational rates and fuel consumed during salvage of property. Subject as aforesaid, all loss of time incurred in saving or attempting to save life and/or in unsuccessful attempts at salvage shall be borne equally at cost, one half by the COMPANY and the other half by the CONTRACTOR INDEMNIFIED PARTIES involved in the salvage operations.
- g) If salvage operations affect the critical path of the WORK TIME SCHEDULE, as identified in the APPROVED Detailed Work Time Schedule, the EPC CONTRACTOR shall be entitled to request an Extension of Time according to sub-article 15.5.

37.9.2 In all other circumstances, including transportation by scheduled liner services, all affairs and CLAIMS arising and resulting from the salvage operations shall be settled in accordance with the latest edition of the International Convention on Salvage, 1989.

37.9.3 Labor Claims

All PERSONNEL of the CONTRACTOR INDEMNIFIED PARTIES are under exclusive direction and control of the CONTRACTOR INDEMNIFIED PARTIES. Accordingly, the EPC CONTRACTOR shall be solely liable for, and shall indemnify, defend and hold harmless each member of the COMPANY GROUP from and against, all CLAIMS that relate to employment or labor disputes in connection with the PERSONNEL of CONTRACTOR INDEMNIFIED PARTIES.

Article 38 **Liabilities towards THIRD PARTIES**

38.1 **Damage, Loss, Injury or Death caused by CONTRACTOR INDEMNIFIED PARTIES**

Except as otherwise provided for in article 39, the EPC CONTRACTOR shall indemnify, defend and hold harmless the COMPANY INDEMNIFIED PARTIES from and against any and all CLAIMS, whatsoever arising from and in connection with damage to, or loss of the THIRD PARTY property, and injury to or death of any THIRD PARTY, caused by any of the CONTRACTOR INDEMNIFIED PARTIES or their property or properties under their care, custody or control, and arising out of or in relation to the performance of this CONTRACT.

38.2 **Damage, Loss, Injury or Death caused by the COMPANY INDEMNIFIED PARTIES**

The COMPANY shall indemnify, defend and hold harmless the CONTRACTOR INDEMNIFIED PARTIES from and against any and all claims, in respect of:

- a) damage to, or loss of THIRD PARTY property and injury to or death of any THIRD PARTY, caused by the COMPANY INDEMNIFIED PARTIES and arising out of or in relation to the performance of this CONTRACT, and

- b) the right of the COMPANY to construct on, over, in or through any land/or water.

Article 39 **SPECIAL RISKS**

39.1 **Definition**

SPECIAL RISKS mean:

- a) Reservoir seepage,
- b) Fire, explosion, cratering or blowout in or of a well,
- c) The escape of oil and/or gas from a reservoir, well or pipeline or other existing facilities located on or around the offshore SITE.

In case such an event occurs to a reservoir, well, or a pipeline or other existing facility including the PLANT, owned or operated by the COMPANY or the EXISTING G1/61 OPERATOR or the EXISTING G2/61 OPERATOR near or adjacent to the SITE.

39.2 **Damage to the COMPANY and the THIRD PARTY**

Notwithstanding sub-article 38.1 above, the COMPANY waives all rights of recourse against the EPC CONTRACTOR and shall hold harmless and indemnify the CONTRACTOR INDEMNIFIED PARTIES from and against any and all claims attributable to any SPECIAL RISKS arising out of the performance of this CONTRACT, howsoever caused, including the negligence of any of the CONTRACTOR INDEMNIFIED PARTIES or any of their PERSONNEL in the performance of the CONTRACT; provided, however, that in the event that any such damage is caused by the CONTRACTOR INDEMNIFIED PARTIES as aforesaid the EPC CONTRACTOR shall be liable for the initial five hundred thousand US Dollars (USD 500,000) of loss, expense and/or damages per occurrence.

39.3 **Damage to the EPC CONTRACTOR INDEMNIFIED PARTIES**

The foregoing indemnity under sub-article 39.2 shall not apply to

- d) personal injuries, diseases or deaths suffered by PERSONNEL of CONTRACTOR INDEMNIFIED PARTIES and
- e) damage caused to property of CONTRACTOR INDEMNIFIED PARTIES including hired or leased equipment, vessel or craft.

Article 40 **Special Provisions**

40.1 The provisions set out in articles 36 to 44 shall apply notwithstanding any limit of liability, if any, stipulated in this CONTRACT.

40.2 The benefit of the waivers of recourse and of the indemnities and hold harmless provisions provided by one PARTY to the other PARTY in this CONTRACT shall be extended to the insurers and/or underwriters of the other PARTY.

40.3 If member of the COMPANY INDEMNIFIED PARTIES is subject to any CLAIMS for which the EPC CONTRACTOR is liable under the CONTRACT, then the EPC CONTRACTOR shall indemnify, defend and hold harmless that member of the COMPANY INDEMNIFIED PARTIES.

40.4 The EPC CONTRACTOR shall be responsible for the defense of any CLAIMS brought against any member of the COMPANY INDEMNIFIED PARTIES in respect of which the EPC CONTRACTOR is liable under the CONTRACT and shall satisfy any judgment

against any member of the COMPANY INDEMNIFIED PARTIES resulting therefrom. However, the COMPANY shall be entitled to but not obliged to participate in the defense of any CLAIMS to which it or any member of the COMPANY INDEMNIFIED PARTIES is a party without relieving the EPC CONTRACTOR of his responsibility for the defense of that CLAIMS. Upon receiving a notice of any CLAIM brought against it or any member of the COMPANY INDEMNIFIED PARTIES, the COMPANY shall promptly deliver the full particulars of that CLAIMS to the EPC CONTRACTOR and shall render all reasonable assistance that the EPC CONTRACTOR requests in the defense of the CLAIMS.

- 40.5 The EPC CONTRACTOR shall not, without the written consent of the COMPANY, settle any CLAIMS or suit or consent to the entry of any judgment with respect thereto that may materially and adversely affect the reputation of the COMPANY INDEMNIFIED PARTIES or the COMPANY INDEMNIFIED PARTIES are or would be commercially prejudiced in the COMPANY INDEMNIFIED PARTIES's reasonable opinion (other than as a result of money damages covered by the indemnity).
- 40.6 The provisions of sub-articles 40.3 and 40.4 shall apply vice versa in case of a CLAIMS against the CONTRACTOR INDEMNIFIED PARTIES in respect of which the COMPANY is liable under the provisions of articles 37, 38 and 39.
- 40.7 To the extent permitted by laws, all exclusions and indemnities given under articles 37, 38 and 39 and elsewhere in this CONTRACT (save for those which specifically state otherwise) shall apply irrespective of cause and notwithstanding the negligence, breach of duty (whether statutory or otherwise) or other failure of any nature of the indemnified party or any other entity and shall apply irrespective of any CLAIM under contract or otherwise at law.

Article 41 Insurances to be placed by the EPC CONTRACTOR

The EPC CONTRACTOR, at his own cost and expense, shall obtain and maintain and cause his SUBCONTRACTOR to obtain and maintain in full force and effect throughout the duration of this CONTRACT on a PHASE by PHASE basis, and any extensions thereof, until:

- a) the date on which all EPC CONTRACTOR ITEMS, EPC CONSTRUCTION EQUIPMENT and other things used by the CONTRACTOR INDEMNIFIED PARTIES have been removed from the SITES, or
- b) the date on which all PERSONNEL of the CONTRACTOR INDEMNIFIED PARTIES have finally departed there from at the end of the applicable WARRANTY PERIOD as provided in article 20,

whichever is the later date, or such other date as stated hereinafter, the following insurances for specified amounts or their equivalent in another currency acceptable to the COMPANY.

It being understood that the specified risks may be covered by insurance policies in a different way from those indicated below provided such is approved by the COMPANY and that all the specified risks are properly covered.

The insurance amounts indicated here below are minimum requirements and not limits of liability, and they are not to be construed as the COMPANY's consent to substitute its financial liability in excess of the amounts set forth except as otherwise agreed in this CONTRACT.

41.1 Workmen's Compensation Insurance

Workmen's compensation insurance to comply fully with the limits and provisions of the APPLICABLE LAWS and agreements made with the CONTRACTOR's PERSONNEL.

41.2 Employer's Liability Insurance

Employer's Liability Insurance into include coverage for legal expenses anywhere in the world, with a limit of not less than ten million US Dollars (USD 10,000,000.00) per occurrence or, the limit required by the APPLICABLE LAWS, whichever is higher.

Such insurance shall be endorsed to the effect that CLAIMS formulated by the CONTRACTOR PERSONNEL against the COMPANY shall be treated as CLAIMS against the CONTRACTOR and compensated by such insurance.

41.3 Comprehensive General Third Party Liability Insurance

Comprehensive General Third Party Liability Insurance, including Pollution Insurance, with a limit of not less than fifteen million US Dollars (USD 15,000,000.00) combined single limit any one occurrence.

If not otherwise covered, this insurance must include, with a separate limit and for same amount, a coverage for operations in respect of raising and removal of sunken objects or craft, wreckage or debris in connection with the performance of this CONTRACT.

41.4 Protection and Indemnity Insurance (If Applicable)

Protection and Indemnity Insurance, including oil pollution liability, with a member of the International Group of Protection and Indemnity Clubs or the equivalent, in respect of each vessel or water craft owned and/or employed in operations under this CONTRACT by the CONTRACTOR in an amount at least equal to the greater of:

- a) the full value of each such vessel,
- b) the full amount required by APPLICABLE LAWS limiting ship owner's liability, or
- c) the sum of ten million US Dollars (USD 10,000,000.00), but with respect to construction and pipe lay vessels in the amount of fifteen million US Dollars (USD 15,000,000.00).

This cover may exclude liability to the employees and crew members of insured vessels or water craft of the EPC CONTRACTOR provided that the insurance described in sub-article 41.2 above is warranted to fully cover the EPC CONTRACTOR's liability to his employees and such crew members.

For vessels chartered by the EPC CONTRACTOR and if not covered by Comprehensive General Third Party Liability Insurance as provided in sub-article 41.3 above, the EPC CONTRACTOR shall obtain Charterer's Liability Insurance on similar conditions to those available from members of the International Group of Protection and Indemnity Clubs or the equivalent and for an amount at least equal to the greater of the above described limits.

Where such vessels are engaged in towing operation, the insurance shall include full towage liability cover.

41.5 Automobile Public Liability Insurance

Automobile Public Liability Insurance to cover all automobiles and automotive equipment employed, if any, by the EPC CONTRACTOR (whether as owner or hirer or otherwise) in

operations under this CONTRACT for not less than the amount required by the APPLICABLE LAWS or one million US Dollars (USD 1,000,000.00) combined single limit per occurrence, whichever is higher.

In case that the Automobile Public Liability Insurance cannot cover automotive equipment, the EPC CONTRACTOR shall ensure that liability resulting from such automotive equipment be covered under sub-article 41.3.

41.6 Aircraft Liability Insurance (If Applicable)

Aircraft Liability Insurance (If Applicable) covering all aircraft including helicopters owned and/or employed, if any, in operations under this CONTRACT by the EPC CONTRACTOR, for no less than five million United States Dollars (USD 5,000,000.00) in respect of general liability and as required by the applicable laws and/or International Conventions or one hundred thousand US Dollars (USD 100,000.00) per seat whichever is the higher, in respect of passengers.

For all aircraft chartered by the EPC CONTRACTOR for use in connection with this CONTRACT, the EPC CONTRACTOR shall obtain Charterer's Liability Insurance if not already covered by Comprehensive General Third Party Liability Insurance defined under sub-article 41.3 above.

41.7 Hull and Machinery (If Applicable)

Hull and Machinery, on the latest American Institute Hull clauses, Institute Time clauses or equivalent and possibly Increased Value Insurance covering all marine vessels or water craft owned and/or operated by or for the EPC CONTRACTOR, to the full value of each such vessel and including full collision liability cover.

This insurance shall be arranged with a deductible of not more than five hundred thousand US Dollars (USD 500,000.00) for each accident or as otherwise agreed by the COMPANY.

41.8 All Risk Insurance EPC CONSTRUCTION EQUIPMENT

to cover the full value of all EPC CONSTRUCTION EQUIPMENT used by the EPC CONTRACTOR for the performance of the EPC WORK. The EPC CONTRACTOR may at his option insure such EPC CONSTRUCTION EQUIPMENT under the Hull and Machinery Insurance outlined in sub-article 41.7.

The above insurance shall be arranged subject to a deductible of not more than one hundred thousand US Dollars (USD 100,000.00) for each accident or as otherwise agreed by the COMPANY.

41.9 All Risk Insurance CONTRACTOR ITEMS

All Risk Insurance to cover the full value of all CONTRACTOR ITEMS from the EFFECTIVE DATE up to and including safe delivery and unloading at the WORKSITE on a PHASE by PHASE basis.

This insurance shall be arranged subject to a deductible of not more than one hundred thousand US Dollars (USD 100,000.00) for each accident or as agreed by the COMPANY.

Article 42 Special Provisions with respect to EPC CONTRACTOR's Insurances

42.1 Deductibles under the EPC CONTRACTOR's Insurances

All the deductibles applicable to the foregoing insurances to be placed by the EPC CONTRACTOR under article 41 with or without the specific consent of the COMPANY shall be for the sole account of the EPC CONTRACTOR.

42.2 Waiver of Insurers Rights of Subrogation

Except for Workmen's Compensation Insurance all EPC CONTRACTOR's insurances referred to in article 41 shall contain provisions whereby the insurers waive their rights of subrogation against the COMPANY INDEMNIFIED PARTIES, other parties bound by the "Mutual Indemnity and Waiver of Recourse Agreement" referred to in sub-article 37.7, and their respective insurers in accordance with the liabilities assumed by the EPC CONTRACTOR under the provision of articles 37 and 38.

42.3 COMPANY as Additional Assured or Co-insured

- a) The Comprehensive General Third Party Liability Insurance referred to in sub-article 41.3 shall be endorsed with the COMPANY as "additional assured" insofar as the COMPANY is held liable to pay for CLAIMS which according to the CONTRACT have to be borne by the CONTRACTOR INDEMNIFIED PARTIES.
- b) The Protection and Indemnity Insurance, the Automobile Public Liability Insurance and the Aircraft Liability Insurance shall be endorsed with COMPANY as "co-insured" or "protective co assured" or "additional assured" insofar as the COMPANY is held liable to pay for CLAIMS which according to this CONTRACT have to be borne by the CONTRACTOR INDEMNIFIED PARTIES.
- c) The Comprehensive General Third Party Liability Insurance, the Protection and Indemnity Insurance, the Automobile Public Liability Insurance and the Aircraft Liability Insurance shall be primary insurance for all additional assured and co-insured parties and other insurance carried by the COMPANY shall not be called upon by EPC CONTRACTOR's underwriters and/or insurers to contribute or participate on the basis of contributing, concurrent, double insurance or otherwise, except as otherwise agreed in this CONTRACT.

42.4 Cross Liability

The Comprehensive General Third Party Liability Insurance referred to in sub-article 41.3 shall contain a cross liability clause so that the COMPANY and the EPC CONTRACTOR are regarded as third parties to each other and shall be valid anywhere in the world.

- a) The EPC CONTRACTOR, as soon as he is aware of any circumstances which may give rise to a claim under the insurances placed by the EPC CONTRACTOR shall give written notice of such circumstances to his underwriters and/or insurers in accordance with the requirements of such insurance policies with copy to the COMPANY.
- b) The notification shall make reference to COMPANY's interest in respect of CLAIMS against it arising out of liabilities accepted by the EPC CONTRACTOR and his SUBCONTRACTOR under this CONTRACT except for Employer's liability insurance.

42.5 Other Provisions

Insurances placed by the EPC CONTRACTOR shall contain the following statements (or words to similar effect):

- a) For all insurances except Workman's Compensation Insurance.

"This policy is endorsed to the effect that insurers waive all rights of subrogation against (name of COMPANY) and its co-venturers in the operations provided for under its contract with (name of EPC CONTRACTOR) dated and against such other contractors of (name of COMPANY) who have signed the "Mutual Indemnity and Waiver of Recourse Agreement" provided for in sub-article 37.7 of said contract and in accordance with the liabilities assumed by the EPC CONTRACTOR under the provisions of articles 37 and 38 of said contract. This waiver of subrogation rights extends to the benefit of the insurers of the above mentioned parties."

- b) For insurances where COMPANY is required to be an "additional assured."

"This policy is primary insurance for all additional assured / co insured parties (delete as appropriate) and other insurance carried by (name of COMPANY) and its associates shall not be called upon to contribute or participate on the basis of contributing, concurrent, double insurance or otherwise."

- c) The Employers Liability Insurance shall contain the endorsement:

"This policy is endorsed to the effect that claims for which (name of the EPC CONTRACTOR) is liable under the contract with (name of the COMPANY) dated formulated by the personnel of (name of the EPC CONTRACTOR) against (name of the COMPANY), its affiliates, and/or other contractors and SUBCONTRACTORS of (name of the COMPANY) shall be treated as claims against (name of the EPC CONTRACTOR) and compensated by such insurances."

- d) For insurances where the COMPANY is required to be a "co- assured" or "additional assured" or "protective co-assured"

"This policy is endorsed to the effect that (name of the COMPANY) and its affiliates in the operations provided for under its contract with (name of the CONTRACTOR) dated are "co-insured" or "additional-assured" or "protective co-assured" in respects of claims and/or damages and/or losses arising out of liabilities accepted by (name of the CONTRACTOR) and his SUBCONTRACTORS under said contract."

42.6 COMPANY's Right to Examine the EPC CONTRACTOR's Insurances

The EPC CONTRACTOR warrants and represents that all his insurances pertaining to this CONTRACT comply with the provisions of article 41 and of this article 42.

Before commencing the EPC WORK for a PHASE the EPC CONTRACTOR shall provide copy insurance certificates for all the insurances the EPC CONTRACTOR is to obtain as per the terms of this CONTRACT.

The EPC CONTRACTOR shall, if requested, permit the COMPANY to examine original insurance policies and/or insurance certificates issued in compliance with the requirements hereunder. Should the EPC CONTRACTOR at any time neglect or refuse to provide any of the above or if any of the insurances described in article 41 or should such insurance be cancelled or terminated or substantially reduced, the COMPANY shall have the right, but

not the obligation to procure the same and the cost thereof shall be deducted from any sums due or thereafter becoming due to the EPC CONTRACTOR.

Any additional cost involved for the COMPANY in procuring such insurance, or loss due to the fact that the EPC CONTRACTOR neglected or refused to provide the insurance or that the insurance is cancelled or terminated or substantially reduced, shall be for EPC CONTRACTOR's account.

42.7 COMPANY Rights not Limited by Insurances

The provision of insurance certificates to the COMPANY or any examination of original policies under the provisions of sub-article 42.6 shall not limit the COMPANY's rights there under and shall not be a defense to any CLAIMS by the COMPANY against the EPC CONTRACTOR.

42.8 EPC CONTRACTOR Compliance with Insurance Conditions / Warranties

The EPC CONTRACTOR shall comply at all times with all conditions and warranties included in all insurance described under article 41.

42.9 SUBCONTRACTOR Working on the WORKSITE

The provisions of articles 36 - 44, applicable to the EPC CONTRACTOR, shall be applicable to SUBCONTRACTOR. The EPC CONTRACTOR shall be liable towards the COMPANY INDEMNIFIED PARTIES for any absence or insufficiency of the insurances of SUBCONTRACTOR.

42.10 Cancellation or Reduction of EPC CONTRACTOR Insurances

The CONTRACTOR shall represent and warrant that the insurance policies provided under this CONTRACT shall not lapse nor shall the guarantee hereunder be substantially reduced without two (2) months prior written notice to the COMPANY and without prejudice to the provisions of sub-article 42.6.

Article 43 Insurance to be placed by the COMPANY

43.1 General

The COMPANY, at no cost or expense to the EPC CONTRACTOR, shall place or cause to be placed and maintain or cause to be maintained, the following insurance on a PHASE by PHASE basis.

43.2 Construction All Risk Insurance

Construction All Risk Insurance, covering the PLANT components referred to in sub-article 37.1 a) 1 to 5 and applicable COMPANY ITEMS under, or in course of construction, including whilst in transit between any WORKSITES on board either airborne, waterborne or land conveyance and including loading and unloading from such conveyance, in the amount of replacement value thereof, against all risks of physical loss or damage, including the cost of debris removal until the effective date of the last PROVISIONAL ACCEPTANCE CERTIFICATE for each PHASE and covering further during the WARRANTY PERIOD for such PHASE, but for no more than twelve (12) months after the effective date of the last PROVISIONAL ACCEPTANCE CERTIFICATE for the PHASE:

- a) damage caused to the PLANT components referred to in sub-article 37.1 a) 1 to 5 by CONTRACTOR INDEMNIFIED PARTIES and applicable COMPANY during maintenance visits and,
- b) damage to the PLANT resulting from faulty design, workmanship and materials subject to the provisions of sub-article 44.3.

For the Construction All Risk Insurance to be obtained as above the COMPANY will use Welcar 2001 Offshore Construction Policy Form or other suitable Policy Form, suitably amended after negotiation with Insurer. The COMPANY will not provide EPC CONTRACTOR with a copy.

43.3 COMPANY's Insurance for CONTRACTOR ITEMS and the COMPANY ITEMS

For all CONTRACTOR ITEMS supplied by the EPC CONTRACTOR, the insurance mentioned in sub-article 43.2 shall become effective as of safe delivery once unloading ex-conveyance at the WORKSITE is completed. For all COMPANY ITEMS, such insurance shall be effective during transportation to the WORKSITE.

43.4 Warranty Clause of the COMPANY Insurance Coverage

The Construction All Risk Policy mentioned in sub-article 43.2 may contain a warranty clause to which the EPC CONTRACTOR shall strictly comply, providing for specific Warranty Surveyors and specific warranty requirement. The COMPANY shall inform the EPC CONTRACTOR in due time of the specific content of any such warranty clause. The EPC CONTRACTOR shall liaise and coordinate with the selected Warranty Surveyor(s). The EPC CONTRACTOR shall moreover keep the COMPANY informed of any difficulties that may arise in relation to the warranty requirements of the Warranty Surveyor(s).

Article 44 Special Provisions with respect to Policies to be placed by COMPANY

44.1 CONTRACTOR INDEMNIFIED PARTIES as Additional Assureds

Subject to the provisions of sub-article 44.3, the COMPANY shall cause the CONTRACTOR INDEMNIFIED PARTIES to be included as additional assured and covered to the extent provided hereunder by the insurance described in sub-article 43.2 above and shall cause the Insurers thereof to waive any and all rights of subrogation against such parties and their insurers.

44.2 Deductibles and Losses to be borne by the EPC CONTRACTOR

The abovementioned insurance is subject to deductibles which shall be borne by the EPC CONTRACTOR when the CONTRACTOR INDEMNIFIED PARTIES is liable as per sub-article 37.1, up to:

- a) any one accident or occurrence in respect of transportation risks (other than by barge): five hundred thousand US Dollars (USD 500,000),
- b) any one accident or occurrence in respect of procurement and all other onshore risks including onshore fabrication: five hundred thousand US Dollars (USD 500,000),
- c) any one accident or occurrence in respect of storage onshore: one hundred fifty thousand US Dollars (USD 150,000),
- d) any one accident or occurrence in respect of all marine transit including loading and unloading, local towage and trans-ocean towage, float over and heavy lift

- operations and movements to the final offshore SITE, offshore installation, including subsequent maintenance: one million US Dollars (USD 1,000,000),
- e) any one accident or occurrence in respect of installation of surface facilities and during their WARRANTY PERIOD: one million United States Dollars (USD 1,000,000),
 - f) any one accident or occurrence in respect of installation of all subsea equipment, including pipelines, subsequent maintenance, and during their WARRANTY PERIOD: one million US Dollars (USD 1,000,000),
 - g) any one accident or occurrence in respect of stand by charges up to seventy two (72) hours,
 - h) any one accident or occurrence in respect of all other losses, all other operations/work not otherwise specified above including existence and subsequent maintenance: five hundred thousand US Dollars (USD 500,000), or
 - i) In respect of defective parts per occurrence and per part: five hundred thousand US Dollars (USD 500,000).

In addition, the EPC CONTRACTOR shall bear the full loss or cost of making good damage when the CONTRACTOR INDEMNIFIED PARTIES is liable as per sub-article 37.1 in case of losses not recoverable from the insurance provided by the COMPANY as per sub-article 43.2 due to the standard exclusions, conditions, limits and sub-limits or in case of non-compliance with the warranty clause referred to in sub-article 43.3.

44.3 Restrictions of the COMPANY's Insurance

The insurance mentioned in sub-article 43.2 shall not provide coverage to the benefit of the CONTRACTOR INDEMNIFIED PARTIES for cost of repairing or replacing the defective part of the PLANT to the extent of his obligation under article 20 in case of faulty conception, design, workmanship or material attributable to the CONTRACTOR INDEMNIFIED PARTIES.

44.4 COMPANY's Insurance not a Limitation of EPC CONTRACTOR's Liabilities

The placing by the COMPANY of the insurance mentioned in sub-article 43.2 shall by no means be construed as a limitation of EPC CONTRACTOR's liabilities, except as otherwise agreed in this CONTRACT.

44.5 EPC CONTRACTOR's Third Party Liability on the SITE

In addition, the policy provided for in sub-article 43.2 shall incorporate comprehensive general third party liability insurance which may be invoked to the benefit of the CONTRACTOR INDEMNIFIED PARTY until the effective date of the last PROVISIONAL ACCEPTANCE CERTIFICATE of the final PHASE required by the COMPANY under this CONTRACT, but solely on the SITE and excluding collision liability and only after EPC CONTRACTOR's own policies have been called upon to the full extent of the indemnity they shall provide for as stipulated in article 41, which policies shall always be underlying insurance to policies placed by the COMPANY, subject however to the stipulations of sub-article 38.1.

In case the EPC CONTRACTOR fails to carry out comprehensive general third party liability Insurance as per the terms and conditions mentioned under sub-articles 41.3, 41.4, 41.5 and 41.6, the EPC CONTRACTOR shall have the benefit of the comprehensive general third party liability coverage of the policy mentioned in sub-article 43.2 only in excess of

the minimum amounts of insurance required under sub-articles 41.3, 41.4, 41.5 and 41.6 subject however to the stipulations of sub-article 38.1.

44.6 Insurance Claims

The EPC CONTRACTOR shall promptly and accurately report to the COMPANY all events, damages or losses occurring during the performance of the EPC WORK which are likely to give rise to an insurance claim under the insurance mentioned in sub-article 43.2.

The EPC CONTRACTOR shall process insurance claims as per the Insurance Claims Procedure enclosed in Exhibit G and shall extend his full cooperation to the COMPANY to prepare and submit COMPANY'S insurance claims.

Notwithstanding the foregoing, the COMPANY may elect at its sole discretion to let the EPC CONTRACTOR submit and substantiate his claims directly against Insurers and be paid by them.

44.7 Compensation for Repair Work

With regard to repair and/or replacement of loss and/or damage performed by the EPC CONTRACTOR pursuant to sub-article 37 ("Repair Work") and except for insurance claims paid directly by insurers as per sub-article 44.6, the EPC CONTRACTOR shall be compensated for valid insurance claim(s) made under the COMPANY'S article 43 Construction All Risk Insurance Policy by means of a CHANGE ORDER.

Any such CHANGE ORDER shall be evaluated in accordance with the terms and requirements of sub-article 22.3, Exhibit B and the other terms and requirements of this CONTRACT. Any such CHANGE ORDER shall be subject to the deductibles and provisions of sub-article 44.2 except as is provided in sub-articles 37.1.1 c) and 37.1.2 c).

In respect of any such CHANGE ORDER the EPC CONTRACTOR will only be paid by the COMPANY after the COMPANY has been paid by its Insurers, including payment on account (if any) granted by COMPANY'S Insurers at EPC CONTRACTOR'S request.

Any and all delays in obtaining response and/or decisions from the Insurers concerning validity of any and all insurance CLAIM in full or in part, under the article 43 Construction All Risk Insurance policy, and/or payment under the said policy shall not be reason for the EPC CONTRACTOR to delay the performance of the related repair and/or replacement of the applicable loss and/or damage.

For clarity this sub-article 44.7 shall not apply when the EPC CONTRACTOR shall submit and/or substantiates his claims directly against Insurers and be paid by them.

Subject to the foregoing, payment of the EPC CONTRACTOR'S invoices in connection with any CHANGE ORDER for satisfactorily completed Repair Work shall be made in accordance with sub-article 32 including the additional period stated therein for review and checking of such invoices and substantiation by the COMPANY

However, if the EPC CONTRACTOR is liable for such damage or loss as per sub-article 37.1, any such CHANGE ORDER evaluation shall be subject to a five percent (5%) reduction. The COMPANY shall compensate the EPC CONTRACTOR only when the insurance claim has been paid by the COMPANY'S Insurers, including any payment on account granted by COMPANY'S Insurers at the EPC CONTRACTOR'S request. This provision shall not apply when the COMPANY has elected to let the EPC CONTRACTOR submit and substantiate his claims directly against Insurers and be paid by them.

44.8 Waiver of Insurers Rights of Subrogation

Without prejudice to the provisions of sub-article 44.1 with respect to the Construction All Risk Insurance as described under sub-article 43.2, any insurance policies maintained by the COMPANY shall contain provisions that Insurers shall waive their rights of subrogation against the CONTRACTOR INDEMNIFIED PARTIES and their respective insurers to the extent of the indemnities given by the COMPANY to the CONTRACTOR INDEMNIFIED PARTIES within articles 37 to 44.

Article 45 INTELLECTUAL PROPERTY RIGHTS and Patent Infringement

45.1 INTELLECTUAL PROPERTY RIGHTS

45.1.1 INTELLECTUAL PROPERTY RIGHTS existing prior to the EFFECTIVE DATE

Subject to the provisions of sub-article 45.1.4, the COMPANY and the EPC CONTRACTOR shall retain any right, title or interest in their respective INTELLECTUAL PROPERTY RIGHTS developed, acquired or obtained prior to the EFFECTIVE DATE with respect to the EPC WORK, the PLANT and/or this CONTRACT.

45.1.2 EPC CONTRACTOR-Owned INTELLECTUAL PROPERTY RIGHTS

Any right, title or interest in INTELLECTUAL PROPERTY RIGHTS developed, acquired or obtained after the EFFECTIVE DATE in connection with the EPC WORK, the PLANT and/or this CONTRACT shall belong to the EPC CONTRACTOR only if it is derived wholly or mainly from technical concepts or technical information provided by the EPC CONTRACTOR and which have not been specifically produced, prepared, developed and/or furnished for the EPC WORK and/or the PLANT.

45.1.3 COMPANY-Owned INTELLECTUAL PROPERTY RIGHTS

Any right, title or interest in INTELLECTUAL PROPERTY RIGHTS developed, acquired or obtained in connection with the EPC WORK, the PLANT and/or this CONTRACT shall belong to the COMPANY or any person designated by the COMPANY at its sole discretion:

- a) if it is based wholly or mainly on technical concepts or technical information provided by the COMPANY, or
- b) if it has been developed, acquired, or obtained after the EFFECTIVE DATE and is based wholly or mainly upon technical concepts or technical information of both the COMPANY and the EPC CONTRACTOR, which are produced, prepared, developed and/or furnished pertaining to the EPC WORK and/or the PLANT in relation to or as a RESULT OF THE WORK.

The EPC CONTRACTOR shall notify the COMPANY as soon as such right, title or interest is made or obtained. The COMPANY shall at its own discretion file applications for patents relating to any and all inventions arising out of or in connection with the EPC WORK and/or the PLANT and shall bear alone all expenses related to the filing, defense and maintenance of any patent under this sub-article 45.1.3.

45.1.4 COMPANY RIGHTS with respect to EPC CONTRACTOR-Owned INTELLECTUAL PROPERTY RIGHTS

For the purpose of the EPC WORK and the operation and maintenance of the PLANT, together with the right to export, sell and use in any country the products of the PLANT, the EPC CONTRACTOR shall grant, or have granted, to the COMPANY, the CO-VENTURERS, its/their AFFILIATES, successors and assignees, an irrevocable world-wide royalty free and non-exclusive license to use, or have used, any INTELLECTUAL PROPERTY RIGHTS in EPC CONTRACTOR's possession upon the EFFECTIVE DATE as well as any EPC CONTRACTOR owned INTELLECTUAL PROPERTY RIGHTS developed, acquired or obtained under the provision of sub-article 45.1.2.

The EPC CONTRACTOR shall obtain from his CO-VENTURER, if any, and from his AFFILIATES and SUBCONTRACTOR, the same undertaking.

45.1.5 EXISTING OPERATORS Owned INTELLECTUAL PROPERTY RIGHTS

All INTELLECTUAL PROPERTY RIGHTS and all other rights in relation to the EXISTING OPERATORS' information are owned exclusively by the EXISTING OPERATORS. If EPC CONTRACTOR learns, discovers, develops, or creates any intellectual property or other rights arising out of information owned by the EXISTING OPERATORS, those rights are the exclusive property of the EXISTING OPERATORS and constitute information of the EXISTING OPERATORS.

45.2 Patent Infringement

For the purpose of these provisions, the COMPANY shall include the CO-VENTURERS and their AFFILIATES, successors and assignees.

45.2.1 Patent Infringement Indemnification

The EPC CONTRACTOR shall indemnify, defend and hold harmless the COMPANY against any CLAIMS which may be brought against the COMPANY at any time from any source of infringement of any patents allegedly relating to:

- a) the use, design, composition, mode of fabrication, or other particulars of any one or more of the elements of the PLANT, or any combination thereof, or any part thereof, furnished by the EPC CONTRACTOR and/or SUBCONTRACTOR, and/or
- b) the use of any raw materials, composition of matter, fabrication procedure, heat treatment or other things entering into the construction of the PLANT, or any part thereof furnished or used by the EPC CONTRACTOR and/or SUBCONTRACTOR, and/or
- c) the use of any construction methods, tools, machines, or the construction devices used by the EPC CONTRACTOR and/or SUBCONTRACTOR in the performance of the EPC WORK, and/or
- d) the export, sale and use in any country of the products of the PLANT.

45.2.2 EPC CONTRACTOR's Defense of the COMPANY

Unless otherwise instructed by the COMPANY, the EPC CONTRACTOR shall defend the COMPANY against such CLAIMS on COMPANY's behalf.

In the event that such defense is conducted by the EPC CONTRACTOR, the COMPANY shall have the right to be represented by a counsel of its own choice and shall co-operate fully in the defense of any such CLAIMS and shall provide all evidence in its control.

Whether such defense is conducted by the COMPANY or the EPC CONTRACTOR, the EPC CONTRACTOR shall pay all costs and expenses including those of experts and/or counsels fees, and the EPC CONTRACTOR shall also hold harmless the COMPANY from all expenses incurred, or damages or other sums awarded or assessed against the COMPANY in any such CLAIMS.

45.2.3 Elimination of Source of Infringement

In connection with any CLAIMS referred to above the EPC CONTRACTOR shall be entitled at his own cost and expense to:

- a) acquire immunity from any patent infringement CLAIMS, and/or
- b) acquire license under the patents on which such CLAIMS is based, for the design, construction, operation, maintenance or use of the PLANT by the COMPANY, and/or
- c) make such alterations as may be required to eliminate the alleged infringement, subject to prior approval; it being agreed that any refusal made by the COMPANY shall not impair or affect in any way its rights under article 46 and that any approval shall not imply acceptance by the COMPANY of alterations that could themselves prove to be infringements at any time.

45.2.4 Notice of Potential Infringement Suits

If the EPC CONTRACTOR has, or acquires, knowledge of any patent under which a suit for infringement could reasonably be brought because of the use by the COMPANY of any COMPANY ITEMS and/or processes provided, designed or expressly specified by the COMPANY to be incorporated by the EPC CONTRACTOR in the EPC WORK, and/or the PLANT, the EPC CONTRACTOR shall promptly give notice to the COMPANY of such knowledge.

45.3 Compliance with article 45

The EPC CONTRACTOR shall take all necessary appropriate actions to ensure that his PERSONNEL, AFFILIATES and SUBCONTRACTOR adhere to and comply with the provisions of article 45.

Article 46 Title on Documents and Items

46.1 Title on COMPANY Supplied Documents and the COMPANY ITEMS

- a) Property Rights on COMPANY supplied Documents

All COMPANY supplied documents shall remain the property of the COMPANY and shall be returned to the COMPANY by the EPC CONTRACTOR as soon as they are no longer necessary for the performance of the EPC WORK and at the latest, at the time of delivery of the FINAL DOCUMENTATION and in any case prior to issuance of the PROVISIONAL ACCEPTANCE CERTIFICATE.

b) **Property Rights on the COMPANY ITEMS**

The COMPANY ITEMS (even if combined with the CONTRACTOR ITEMS) shall remain at all times the property of the COMPANY and shall be delivered back to the COMPANY (with said associated CONTRACTOR ITEMS) immediately upon request, regardless of whether the COMPANY has paid or not for related EPC WORK performed by the EPC CONTRACTOR, it being understood that the COMPANY shall have the obligation to pay sums remaining due to the EPC CONTRACTOR in accordance with the provisions of this CONTRACT.

46.2 **Title on the EPC CONTRACTOR DOCUMENTS**

- a) All EPC CONTRACTOR DOCUMENTS which are specific to EPC CONTRACTOR's normal operations and have not been specially developed in connection with the EPC WORK, shall remain the property of the EPC CONTRACTOR.
- b) All EPC CONTRACTOR DOCUMENTS, with the exception of the EPC CONTRACTOR DOCUMENTS described in sub-article 46.2 a) shall, as of commencement of the EPC WORK thereon, become COMPANY's property and shall be delivered to the COMPANY immediately upon request.
- c) However, the EPC CONTRACTOR shall retain record copies of such documents until the expiry of all of his obligations under this CONTRACT subject to provisions of sub-articles 45.1 and 45.2 and article 47, concerning respectively INTELLECTUAL PROPERTY RIGHTS, Patent Infringement Indemnification and Confidentiality.

The above provisions shall apply mutatis mutandis to the EPC CONTRACTOR DOCUMENTS issued by SUBCONTRACTOR.

46.3 **Title on the CONTRACTOR ITEMS**

The CONTRACTOR warrants that all CONTRACTOR ITEMS are free of any liens and encumbrances and legal charges.

Without prejudice to any related payment obligations by the COMPANY to the EPC CONTRACTOR, all CONTRACTOR ITEMS shall become the property of the COMPANY through the EPC CONTRACTOR as soon as such are ordered by the EPC CONTRACTOR or SUBCONTRACTOR and become identifiable as being related to the CONTRACT, irrespective of the phase of progress (such as in the course of manufacturing, fabrication, transportation, installation) and notwithstanding any payment consideration (such as non-payment, late payment, disputes on chargeable or invoiced sums or amounts of retention made by the COMPANY under the CONTRACT). Notwithstanding the above, the risk of the CONTRACTOR ITEMS shall be in accordance with the provisions of sub-article 37.1.

The EPC CONTRACTOR, as a condition for receiving payments under the CONTRACT, shall execute all documents and take all actions required by the COMPANY to vest such property rights in the COMPANY.

The EPC CONTRACTOR shall identify (by marking or any other relevant means of identification) any and all elements of COMPANY's property as per the foregoing provisions, in order to prevent any dispute with third parties. For such purpose, the CONTRACTOR shall identify same in his own premises or in those of SUBCONTRACTOR and shall store same separately, mark or stamp them with COMPANY's name, the CONTRACT reference and any other identification markings required under the CONTRACT.

Notwithstanding the foregoing and subject to the provisions of sub-article 14.5.7 and 14.5.8 with regard to Material Group 1 CONTRACTOR ITEMS, ownership of surplus and scrap CONTRACTOR ITEMS that are not required for the EPC WORK (including scrap and surplus) and which are not required for incorporation into the PLANT or are to be supplied to the COMPANY as ship loose items shall unless otherwise required by the COMPANY shall automatically revert to the EPC CONTRACTOR upon completion of the applicable operations.

The COMPANY shall have the right to refuse, at its sole option, title to any of the same which may be:

- a) not in conformance with the CONTRACT requirements, and/or
- b) vitiated for any reason (such as patent infringement), and/or
- c) incomplete and which could not be completed by another contractor at a reasonable cost, and/or
- d) not required by the COMPANY in the case of termination of this CONTRACT.

For any rejected items under a) and b) here above, the COMPANY shall have the option of:

- a) instructing the EPC CONTRACTOR to replace said items at his own cost, risk and expense, or
- b) withdrawing the related items from the scope of EPC WORK, in which case any sums already paid with respect to such rejected items shall be immediately reimbursed by the EPC CONTRACTOR to the COMPANY.

46.4 Title on the RESULT OF THE WORK and the PLANT

The RESULT OF THE WORK and the PLANT shall remain at all times the property of the COMPANY subject always to the right of the COMPANY to refuse title in accordance with the provisions of sub-article 46.3.

46.5 Title to Discoveries on the SITE

The EPC CONTRACTOR shall have no rights, title or interests whatsoever on, or concerning discovery of minerals and hydrocarbons (and similar substances), fossils, coins, articles of value, antiques, relics, structures and other things of geological or archaeological interest discovered on the SITE.

The EPC CONTRACTOR shall immediately upon discovery of any; minerals and hydrocarbons (and similar substances), fossils, coins, articles of value, antiques, relics, structures and other things of geological or archaeological interest, inform the COMPANY of such discovery and shall comply with COMPANY instructions arising from and in connection with such discovery. The EPC CONTRACTOR shall be entitled to request a

CHANGE ORDER if such instructions lead to additional cost and/or an Extension of Time if as a direct consequence a COMPLETION DATE is delayed. For clarity sunken items as per Exhibit A are not discoveries at the SITE.

The EPC CONTRACTOR shall take all necessary precautions to ensure that his PERSONNEL and that of SUBCONTRACTOR and other persons involved on the SITE do nothing to remove or damage such discoveries and do not retain, encumber or reserve title to such items.

Article 47 Confidentiality

47.1 Confidentiality of the CONFIDENTIAL INFORMATION

47.1.1 The EPC CONTRACTOR shall treat the CONFIDENTIAL INFORMATION as confidential and shall not disclose the CONFIDENTIAL INFORMATION to any person without the prior written consent of the COMPANY.

47.1.2 The EPC CONTRACTOR shall only use, reproduce or copy the CONFIDENTIAL INFORMATION solely for the purpose of facilitating the performance of this CONTRACT.

47.1.3 The obligations under sub-articles 47.1.1 and 47.1.2 do not apply to the CONFIDENTIAL INFORMATION that:

- a) is or becomes available to the public domain through no fault of the EPC CONTRACTOR;
- b) was in the possession of the EPC CONTRACTOR prior to EFFECTIVE DATE of this CONTRACT and that was not subject to any obligation of confidentiality; or
- c) was received from a third party whose possession of such CONFIDENTIAL INFORMATION is lawful and who is under no obligation of confidentiality.

47.1.4 The EPC CONTRACTOR may, without the prior written consent of the COMPANY, disclose the CONFIDENTIAL INFORMATION:

- a) to the SUBCONTRACTOR, VENDOR and the EPC CONTRACTOR's PERSONNEL that reasonably require it for the performance of this CONTRACT, provided the EPC CONTRACTOR shall ensure that the recipients of the CONFIDENTIAL INFORMATION take all necessary measures to protect the confidentiality of the CONFIDENTIAL INFORMATION and comply with this article 47; or
- b) in order to comply with APPLICABLE LAWS provided that the EPC CONTRACTOR shall promptly inform the COMPANY accordingly.

47.2 Confidentiality of EPC CONTRACTOR Information

All information provided by the EPC CONTRACTOR to the COMPANY that the EPC CONTRACTOR wishes to remain confidential shall be clearly marked as being confidential. The COMPANY is nevertheless entitled to use and disclose such information to third parties to the extent necessary for the execution and maintenance of the COMPANY's operations in connection with which the EPC WORK are to be performed or if required by APPLICABLE LAWS.

47.3 Waiver and Hold Harmless

The EPC CONTRACTOR agrees that, in the event of the CONTRACTOR GROUP's breach, or threatened breach of, the confidentiality provisions of the CONTRACT, the COMPANY would be irreparably and immediately harmed and that monetary damages recoverable under this CONTRACT would be inadequate. Accordingly, in addition to any other remedy to which the COMPANY may be entitled at law or in equity, and notwithstanding any other provision in this CONTRACT:

- a) the COMPANY is entitled to an injunction (without the posting of any bond and without proof of actual damages) to prevent breach, or threatened breach of, or to compel specific performance of, this article 47;
- b) the EPC CONTRACTOR shall not oppose the granting of an injunction; and
- c) the EPC CONTRACTOR will reimburse the COMPANY for all costs, including reasonable legal fees, incurred by the COMPANY.

47.4 Confidentiality Obligations

The obligations of the EPC CONTRACTOR under this article 47 survive the termination and expiration of this CONTRACT.

Article 48 Defective Performance: Suspension - Termination - Take-over

48.1 Default of the EPC CONTRACTOR

If the EPC CONTRACTOR should perform the EPC WORK in a manner that is not in conformity with this CONTRACT or is in breach of the terms and/or requirements of this CONTRACT, including:

- a) failing to provide sufficient number or properly skilled PERSONNEL,
- b) failing to supply the sufficient or proper CONTRACTOR ITEMS and/or the EPC CONSTRUCTION EQUIPMENT,
- c) failing in any respect to carry out the EPC WORK in an efficient, workmanlike, skillful and careful manner in accordance with the terms and requirements of this CONTRACT.
- d) failing to commence the EPC WORK in accordance with the WORK TIME SCHEDULE,
- e) failing to make adequate and timely progress of the EPC WORK, in order to meet the requirements of the WORK TIME SCHEDULE and the Detailed Work Time Schedule, including failure to achieve milestones set forth within Exhibit C, other than for reasons set out in sub-article 15.5 (Extension of Time),
- f) abandoning the EPC WORK or any part of the EPC WORK, at any time,
- g) hindering in any way the monitoring of the performance of this CONTRACT or EPC WORK by the COMPANY REPRESENTATIVE,
- h) assigning or subcontracting this CONTRACT or part thereof in contrary to the provisions of articles 10 and 11 respectively,
- i) failing to comply with the SSHE requirements in Exhibit L,
- j) failing to comply with the provisions of article 52 (Conflict of Interest),
- k) failing to provide, or provide in a timely manner required, and /or
- l) breach of obligations under sub-article 23.1 (Compliance with the APPLICABLE LAWS).

The COMPANY shall have the right to notify the EPC CONTRACTOR at any time of such default(s) and to require the EPC CONTRACTOR to take such remedial actions to rectify and/or mitigate such defaults and/or the impact thereof within such time limit(s) as the COMPANY may direct.

The EPC CONTRACTOR shall immediately implement, at no cost to the COMPANY, all required and necessary actions to remedy and/or mitigate such defaults including re-performance of EPC WORK, within the limits as the COMPANY may direct.

If the COMPANY considers actions proposed and/or implemented by the EPC CONTRACTOR to be inadequate or insufficient, the COMPANY shall have the right to require the EPC CONTRACTOR to take specific remedial actions at no extra cost to the COMPANY. The foregoing right is without restriction and/or limitation and is in addition to the COMPANY rights under article 15.

The EPC CONTRACTOR shall keep the COMPANY fully informed on a regular basis at time intervals stipulated by the COMPANY of actions proposed, implemented, the effects thereof and anything else requested by the COMPANY.

48.2 Rights of the COMPANY in case of the EPC CONTRACTOR's Continued Default

If the EPC CONTRACTOR fails to remedy any or all defaults listed at sub-article 48.1 a) to l) within an applicable time limit directed by the COMPANY, the COMPANY shall have the right at any time and at its sole option and decision to:

- a) continue to require the EPC CONTRACTOR to remedy the defects and deficiencies in full or in part, and/or
- b) suspend performance of any part or parts of the EPC WORK wholly or in part in accordance with sub-article 48.3, pending the remedying of the defects and deficiencies, and/or
- c) take over from the EPC CONTRACTOR, any or all parts of the EPC WORK affected by such default or deficiency and to remedy the defects and deficiencies and complete such parts of the EPC WORK, at the cost of the EPC CONTRACTOR, by whatever method the COMPANY deems expedient, including the use of any third parties, and/or
- d) call upon the Performance Bank Guarantee in accordance with sub-article 33.1 and to call upon the parent company guarantee (if any), and/or
- e) terminate this CONTRACT in full or in part, in accordance with sub-article 48.4.

The EPC CONTRACTOR shall not be entitled to any additional compensation nor Extension of Time(s), for any all matters arising from and/or in connection with the remedying of defects and deficiencies nor for the consequences of the COMPANY instructions issued pursuant to sub-article 48.2 a), b), c), d) and e).

The initial CONTRACT PRICE shall be adjusted (reduced) for costs and expenses incurred by the COMPANY for and/or in connection and those arising from actions taken by the COMPANY as per sub-article 48.2 c).

48.3 Suspension of the EPC WORK for Default of the EPC CONTRACTOR

If the performance of the EPC WORK or any part thereof, is suspended by notice issued pursuant to sub-article 48.2 b), the EPC CONTRACTOR shall immediately suspend EPC WORK as aforesaid.

Such suspension shall not relieve the EPC CONTRACTOR from any of his obligations and liabilities under this CONTRACT.

The EPC CONTRACTOR shall ensure that all parts of the PLANT affected by such suspension shall be protected and preserved also that the RESULT OF THE WORK, CONTRACTOR ITEMS, COMPANY ITEMS, EPC CONSTRUCTION EQUIPMENT and all other things, affected by such suspension are stored, protected and preserved until the defaults have been rectified or such other earlier date the COMPANY may agree.

All costs and expenses arising from and in connection with the suspension of EPC WORK, including standby, mobilization and demobilization, storage, protection and preservation, shall be borne by the EPC CONTRACTOR.

48.4 Termination of CONTRACT for Default of EPC CONTRACTOR

48.4.1 Conditions for Termination for Default

- a) If the EPC CONTRACTOR does not rectify a default within the time limits stipulated by the COMPANY pursuant to COMPANY's rights under sub-article 48.1, the COMPANY may at its sole option and decision terminate the CONTRACT in full or in part by written notice to the EPC CONTRACTOR.
- b) The COMPANY shall also have the right to terminate this CONTRACT, without further notice:
 - i) if the EPC CONTRACTOR does not provide a satisfactory Performance Bank Guarantees as per sub-article 33.1, or
 - ii) if the EPC CONTRACTOR does not provide a satisfactory Parent Company Guarantee as per sub-article 33.2, or
 - iii) if it appears that during the periods specified above, the EPC CONTRACTOR has taken actions (such as withdrawing the EPC CONSTRUCTION EQUIPMENT or manpower) or committed new defaults likely to adversely affect COMPANY's interests, or
 - iv) if, in COMPANY's opinion, EPC CONTRACTOR's breach of this CONTRACT or default appears to be incapable of being remedied or being repaired within a reasonable period of time.
- c) Subject to implementation of applicable laws or any similar or equivalent procedure under APPLICABLE LAWS, the COMPANY shall also have the right to immediately terminate this CONTRACT by written notice to the EPC CONTRACTOR whenever the EPC CONTRACTOR (or any company or juristic person composing the EPC CONTRACTOR when the EPC CONTRACTOR is an association of companies):
 - i) becomes Bankrupt or insolvent,
 - ii) has a receiving order made against him,
 - iii) has a resolution for its voluntary winding up passed,

- iv) makes an arrangement or composition with (or assignment in favour of) his creditors,
- v) agrees to carry out this CONTRACT under a committee of inspection of his creditors,
- vi) has a provisional liquidator, receiver, administrator or manager of its business or undertaking appointed,
- vii) goes into liquidation, or
- viii) has an execution/restraining order levied on his goods.

48.4.2 Completion of the EPC WORK by the COMPANY

In the event of termination under the provisions of sub-article 48.4.1, the EPC CONTRACTOR shall not be entitled to compensation or indemnity, and furthermore, the COMPANY shall have the right, at its sole option, to complete (or to have completed) any and all outstanding EPC WORK at EPC CONTRACTOR's cost and risk by whatever method it deems expedient, including the hiring of third party and take-over of EPC CONTRACTOR's property in accordance with the provisions of sub-article 48.6.

Upon receipt of notice of termination of this CONTRACT, the EPC CONTRACTOR shall immediately deliver to the COMPANY the RESULT OF THE WORK and shall immediately assign to the COMPANY any and all SUBCONTRACTS, Purchase Orders for CONTRACTOR ITEMS, as well as EPC CONSTRUCTION EQUIPMENT that the COMPANY shall elect to take-over, notifying the respective parties accordingly.

48.4.3 Compensation for Termination for Default

The following shall apply:

- a) The COMPANY shall be entitled to immediately suspend all payments to the EPC CONTRACTOR from the date of notification of termination until the EPC WORK has been fully completed.
- b) After completion of the EPC WORK, the COMPANY shall pay the EPC CONTRACTOR as full and final settlement of all payments due under this CONTRACT, the amount resulting from the unpaid balance of the CONTRACT PRICE for the EPC WORK properly and correctly completed by the EPC CONTRACTOR in accordance with the requirements of this CONTRACT upon the date of termination, after deduction of:
 - i) any and all advance payments for the EPC WORK not completed by the EPC CONTRACTOR,
 - ii) the COMPANY's documented additional costs and expenses (including the expenses for completing the EPC WORK, the additional managerial expenses and administrative services and the costs resulting from hiring any third party) due to such termination.
- c) If the result of the foregoing calculation shows a credit due to the COMPANY, the EPC CONTRACTOR shall be liable for and shall promptly pay such amount to the COMPANY.

48.4.4 Partial Termination

All foregoing provisions shall apply mutatis mutandis when the COMPANY withdraws any parts of the scope of the EPC WORK from EPC CONTRACTOR's performance due to EPC CONTRACTOR's default or deficiency under sub-article 48.4.1.

48.5 Take-over of Uncompleted Parts of the PLANT or the RESULT OF THE WORK

If the EPC CONTRACTOR is late in the performance of the EPC WORK and cannot demonstrate, with documented support, that he can satisfactorily complete all the outstanding EPC WORK in accordance with the WORK TIME SCHEDULE, the COMPANY shall have the right to take-over any uncompleted parts of the PLANT or the RESULT OF THE WORK.

Should the COMPANY exercise such a right and require the EPC CONTRACTOR to complete other parts of the outstanding EPC WORK, he will not be entitled to any Extension of Time and/or additional compensation whatsoever resulting from such use.

In such a case, the relevant provisions of this CONTRACT shall remain applicable provided that the COMPANY gives the EPC CONTRACTOR access to the extent feasible to the area where the remaining EPC WORK has to be performed, subject always to compliance with the COMPANY's regulations in force at that time.

48.6 Take-over of EPC CONTRACTOR's Property for Default

48.6.1 Take-over Rights and Compensation

In the event of termination of this CONTRACT under the provisions of sub-article 48.4.1, the COMPANY, for the purpose of completing the EPC WORK, shall have the right to take-over direction of and to use all or any part of the EPC CONSTRUCTION EQUIPMENT, if required, will continue to be operated by EPC CONTRACTOR's PERSONNEL under COMPANY's direction, and properties of any kind whether tangible or intangible (including INTELLECTUAL PROPERTY RIGHTS and premises belonging to the EPC CONTRACTOR) delivered to, provided or utilized by the EPC CONTRACTOR for the performance of the EPC WORK.

The EPC CONTRACTOR shall forthwith create all conditions necessary for the lawful use by the COMPANY of the EPC CONSTRUCTION EQUIPMENT and properties.

Without any duplication with compensation provided for under sub-article 48.4.3, the COMPANY shall compensate such take-over only if the balance of the CONTRACT PRICE upon the date of termination against the amount of the payments already made to the EPC CONTRACTOR under this CONTRACT, increased by all the additional costs and expenses borne by the COMPANY for completing the EPC WORK, as mentioned in sub-article 48.4.3, shows a credit in favor of the EPC CONTRACTOR.

48.6.2 Partial Take-over

All foregoing provisions shall apply mutatis mutandis when the COMPANY takes over any parts of the scope of the EPC WORK from EPC CONTRACTOR's performance due to EPC CONTRACTOR's default.

48.7 Other Rights or Remedies

Suspension, exercising rights under Performance Bank Guarantee, termination of this CONTRACT or take over by the COMPANY in accordance with the provisions of article 48 shall be without prejudice to any rights or remedies that the COMPANY may have under this CONTRACT and/or at law, and without relieving the EPC CONTRACTOR of his obligations whatsoever under this CONTRACT and/or at law.

Article 49 COMPANY's Convenience: Suspension - Take-over - CONTRACT Termination

49.1 Suspension of the EPC WORK for Convenience

49.1.1 Notice of Suspension

Without prejudice to COMPANY's right to suspend the EPC WORK pursuant to sub-article 48.3, the COMPANY shall have the right at any time during the performance of the EPC WORK, and at its own convenience, to suspend, from time to time, the performance of all or any parts of the EPC WORK by issuing to the EPC CONTRACTOR a suspension order or notification designating the parts of the EPC WORK affected, the means to be used for storing, preserving and safeguarding the RESULT OF THE WORK, and the PERSONNEL and the EPC CONSTRUCTION EQUIPMENT which shall remain committed to any WORKSITE and other EPC WORK Locations.

49.1.2 General Provisions concerning Suspension

Unless instructed otherwise by the COMPANY, upon receipt of any such suspension order or notification, the EPC CONTRACTOR shall automatically:

- a) immediately discontinue the performance of the part of the EPC WORK affected by the suspension on the date and to the extent specified in said suspension order or notification, and
- b) place no further Purchase Orders or subcontracts with respect to the suspended EPC WORK, unless specified in said suspension order or notification, and
- c) promptly and upon terms acceptable to the COMPANY, obtain suspension of all Purchase Orders, subcontracts and rental agreements to the extent that they relate to performance of suspended EPC WORK, and
- d) continue to perform non-suspended obligations (including safety requirements and protection of stored parts of the RESULT OF THE WORK and the EPC CONSTRUCTION EQUIPMENT), and
- e) generally act in such a manner as to minimize costs associated with such suspension.

49.1.3 Resuming Suspended EPC WORK

The EPC CONTRACTOR shall promptly resume performance of suspended WORK upon receipt of notice to continue from the COMPANY and to the extent required therein.

49.1.4 Time Extensions for Suspension

Subject to the provisions of article 15, and provided that the EPC CONTRACTOR has contributed in no way to COMPANY's reasons for suspension of the EPC WORK, the EPC CONTRACTOR shall be entitled to request for such suspension periods requested or caused by the COMPANY, time extensions to the WORK TIME SCHEDULE and/or the COMPLETION DATE.

49.1.5 Compensation for Suspension

Provided that the EPC CONTRACTOR has contributed in no way to COMPANY's reasons for the suspension of the EPC WORK, the EPC CONTRACTOR, as full and final compensation for each suspension pursuant to sub-article 49.1.1, shall be reimbursed for any justified and satisfactorily documented unavoidable expenses directly and reasonably incurred and resulting from such suspension, and actually paid within the limits of applicable rates set out in Exhibit B.

49.1.6 Storage of the RESULT OF THE WORK

If further to suspension as provided herein, the COMPANY requires storage of all or part of the RESULT OF THE WORK upon any WORKSITE, excluding the SITE, or any WORKSHOP, for a period exceeding ninety (90) days, the COMPANY shall pay the EPC CONTRACTOR as full compensation for such storage at the relevant storage rates, or pro rata thereof, as set out in Exhibit B, entitlement to payment for storage shall commence after the expiry of the grace period of ninety (90) days free storage.

49.2 Take-over of Parts of the PLANT or RESULT OF THE WORK

At its sole discretion, upon notice to the EPC CONTRACTOR, the COMPANY, shall have the right, at any time, to take-over parts of the PLANT or RESULT OF THE WORK. The COMPANY shall exercise all reasonable efforts to minimize any inconvenience to the EPC CONTRACTOR during any such take-over.

49.2.1 Take-over of Completed Discrete Parts of the PLANT/Partial Acceptance

In the event of COMPANY take-over of discrete parts (as identified by COMPANY) of the PLANT or the RESULT OF THE WORK, provided the EPC CONTRACTOR has satisfactorily performed all testing activities required by the COMPANY, and has provided the COMPANY with all FINAL DOCUMENTATION, related thereto, such that no work remains outstanding in respect of such parts taken over, such take-over shall constitute provisional acceptance of such parts of the PLANT or EPC WORK as provided for in sub-article 19.2 and start the corresponding WARRANTY PERIOD.

49.2.2 Take-over of Uncompleted Parts of the PLANT

Should the COMPANY take over parts of the RESULT OF THE WORK as contemplated in sub-article 49.2.1, and require EPC CONTRACTOR to complete the other parts of outstanding EPC WORK, and providing that EPC CONTRACTOR can demonstrate, with documented support, that at the time of such take-over, EPC CONTRACTOR's progress in the performance of the EPC WORK was such that, should such take-over not have occurred, he could have satisfactorily completed all the outstanding EPC WORK by the COMPLETION

DATE, the EPC CONTRACTOR shall be entitled to an Extension of Time in accordance with sub-article 15 and a CHANGE ORDER in accordance with article 22 in respect of any additional costs incurred by the EPC CONTRACTOR in completing such outstanding EPC WORK.

49.3 Termination of the CONTRACT for Convenience

49.3.1 Notice and Requirements

Without prejudice to COMPANY's rights to terminate this CONTRACT for FORCE MAJEURE or due to EPC CONTRACTOR's default, the COMPANY reserves its right to terminate this CONTRACT in whole or in part without cause at any time at its own convenience by serving prior written notice to the EPC CONTRACTOR.

Upon receipt of a written notice of termination the EPC CONTRACTOR shall immediately comply with the requirements of the COMPANY with regard to:

- a) termination of SUBCONTRACTS and/or Purchase Orders;
- b) assignment of SUBCONTRACTS and/or Purchase Orders;
- c) delivery of RESULT OF THE WORK and any properties; and
- d) all other matters pertaining to the EPC WORK and the performance thereof and as may be required or necessary.

49.3.2 Compensation for Termination for Convenience

If this CONTRACT is terminated by the COMPANY in whole or in part without cause at any time at its own convenience the compensation due to the EPC CONTRACTOR shall be calculated subject to the limitation in sub-article 49.3.4 as follows:

- a) the COMPANY shall pay the EPC CONTRACTOR the unpaid balance for EPC WORK properly and correctly performed before and/ or on the date of termination, such balance shall be determined in good faith by the COMPANY based on approved Progress Reports and other means of evaluating the EPC WORK under this CONTRACT including sub-article 22.3 and Exhibit B, and
- b) the COMPANY shall pay the EPC CONTRACTOR:
 - i) the net substantiated cost of termination (if any) in whole or in part as applicable affected SUBCONTRACTS and affected Purchase Orders, calculated in accordance with the terms and requirements of the approved SUBCONTRACTS and approved Purchase Orders, or
 - ii) the net substantiated cost (if any) of assignment of the applicable SUBCONTRACTS or Purchase Order to the COMPANY, calculated in accordance with the terms and requirements of the approved SUBCONTRACTS and approved Purchase Orders.
- c) the COMPANY shall pay the EPC CONTRACTOR zero point five percent (0.5%) of the difference between the CONTRACT PRICE for each applicable PHASE (including all CHANGE ORDER APPROVED prior to the date of termination but exclusion any OPTIONS not exercised) and the aggregate of the amounts already paid to the EPC CONTRACTOR for such

PHASE prior to the date of termination in addition to amounts payable as per sub-articles 49.3.2 a) and 49.3.2 b) of hereof.

In any event, the amount to be paid for completed EPC WORK including compensation as per the above sub-article 49.3.2 a) to c) for a PHASE shall not exceed the CONTRACT PRICE for such PHASE at the date of termination as aforesaid. The foregoing amount shall be sole remedy of the EPC CONTRACTOR for the termination for COMPANY's convenience.

The EPC CONTRACTOR shall not be entitled to any other compensation except as aforesaid for the deletion of any PLATFORM and/or PHASE from the EPC scope of WORK subject to the provisions of sub-articles 14.1.1 and 49.3.4 before the issue of an applicable NOTICE TO PROCEED and/or for termination by the COMPANY for convenience pursuant to sub-article 49.3.1, nor for delays, stand-by, nor for any and all direct, indirect, and/or consequential costs and expenses, nor for CONSEQUENTIAL LOSS, demobilisation of WORKSITES, WORK Locations, CONSTRUCTION EQUIPMENT and PERSONNEL including termination of employment, nor for loss of profits, loss of overheads and loss of opportunity, howsoever arising.

49.3.3 Substantiation

The EPC CONTRACTOR shall submit all required and/or necessary substantiation for reasonable monetary amounts, other matters and CLAIMS to the COMPANY for review and approval. Such substantiation shall include all documents, information and other things required and/or necessary. The EPC CONTRACTOR shall also provide further clarification, documents and/or information the COMPANY may require.

49.3.4 Limitation of Compensation for Termination for Convenience

The EPC CONTRACTOR shall not be entitled to compensation under this article 49, the other provisions of this CONTRACT and otherwise for PLATFORMS and/or PHASES in respect of which the COMPANY does not issue a NOTICE TO PROCEED or informs the EPC CONTRACTOR such a NOTICE TO PROCEED will not be issued.

49.4 Termination on Account of Long Suspension Attributable to the COMPANY

Should a suspension referred to in sub-article 49.1 above, affect or have affected the major part of the EPC WORK (storage of major PLANT components excluded) and is ordered by the COMPANY for ninety (90) consecutive days or more, the EPC CONTRACTOR shall diligently, and at the latest seven (7) days after receipt of the corresponding notice, advise the COMPANY of his decision to accept such suspension or to terminate this CONTRACT.

If such suspension is ordered for less than ninety (90) consecutive days and shall have lasted beyond sixty (60) consecutive days with a reasonable prospect of a total duration exceeding ninety (90) consecutive days, the EPC CONTRACTOR shall diligently notify the COMPANY of his decision to accept the likely extension of such duration or to terminate this CONTRACT.

Should the EPC CONTRACTOR notify the COMPANY, as here above stipulated, of his decision to terminate this CONTRACT, the COMPANY shall permit EPC CONTRACTOR to cease all EPC WORK at the time the COMPANY shall judge appropriate within the

above mentioned maximum total duration of ninety (90) consecutive days, and the provisions of sub-article 49.3 shall apply.

Article 50 **FORCE MAJEURE**

50.1 Suspension of the EPC WORK for FORCE MAJEURE

If any PARTY hereto is prevented, hindered or delayed from performing all or any of its/his obligations hereunder as a result of FORCE MAJEURE, the PARTY so affected shall promptly notify the other PARTY providing evidence of the occurrence of the said event, particulars of the event (in as much detail as is reasonably available from time to time including any internal or external report on the FORCE MAJEURE event) and shall give prompt notice once the end of the FORCE MAJEURE situation is foreseeable.

Each PARTY shall do everything reasonably possible to minimize the effects of such FORCE MAJEURE shall and maintain all safety, security and protective measures insofar as possible.

The PARTY affected by FORCE MAJEURE and who has given such notice shall be relieved from the performance or punctual performance of its obligations under this CONTRACT for so long as the consequences of the relevant event of FORCE MAJEURE calculated upon the critical path of the WORK TIME SCHEDULE, as set out in the approved Detailed Work Time Schedule, continues and to the extent that such PARTY's performance is actually prevented, hindered or delayed.

Each PARTY shall bear separately all its costs and expenses howsoever arising and direct and indirect financial consequences of such FORCE MAJEURE situation and no extra payment or compensation shall be due to the EPC CONTRACTOR by the COMPANY for the consequences of FORCE MAJEURE and/or due to suspension and/or termination of this CONTRACT in full or in part, nor for of the EPC WORK, in full or in part, because of FORCE MAJEURE.

Time extensions for delays on the critical path of the WORK TIME SCHEDULE, as set out in the Detailed Work Time Schedule, due to FORCE MAJEURE shall be determined in accordance with the applicable provisions of article 15.

50.2 Not used

50.3 Suspension of the EPC WORK and/or Termination of the CONTRACT

50.3.1 Notice and Requirements

If completion of the EPC WORK for a PHASE in whole or in part, is in the opinion of the COMPANY made impossible due to FORCE MAJEURE, or if the EPC WORK in full or in part has been suspended and such suspension has lasted (or in the joint opinion of the PARTIES is anticipated to last) more than one hundred and eighty (180) consecutive days as evidenced by the PARTY invoking such FORCE MAJEURE event and is solely caused by FORCE MAJEURE and there are no other concurrent delays during any such period of suspension attributable to and/or caused by any of the CONTRACTOR INDEMNIFIED PARTIES then either PARTY shall have the right to terminate the performance of the affected EPC WORK for such PHASE(S) by notice to the other PARTY.

In the event of any such termination the EPC CONTRACTOR shall comply with the COMPANY's requirements as per sub-article 49.3.1 a), b) c) and d) for affected EPC WORK for such PHASE(S).

50.3.2 Compensation in the Event of Termination Due to FORCE MAJEURE

If the performance of EPC WORK for a PHASE is terminated in full or in part pursuant to sub-article 50.3.1, the EPC CONTRACTOR shall be paid, as full and final remuneration and compensation for such terminated EPC WORK properly and correctly performed for such applicable PHASE and for complying with the COMPANY's requirements as per the last paragraph of sub-article 50.3.1, calculated as follows:

- a) For EPC WORK not terminated pursuant to sub-article 50.3.1 in accordance with the terms and requirements of this CONTRACT.
- b) For EPC WORK terminated pursuant to sub-article 50.3.1, the unpaid balance for EPC WORK properly and correctly performed before and/ or on the date of termination, such balance shall be determined in good faith by the COMPANY based on approved Progress Reports and other means of evaluating the EPC WORK under this CONTRACT including sub-article 22.3, Exhibit G Annex-5 and Exhibit B.

Notwithstanding the foregoing, compensation under sub-article 50.3.2 a) and b) shall be sole remedy of the EPC CONTRACTOR for the termination in full or in part due to FORCE MAJEURE, no other compensation whatsoever shall be due from the COMPANY to the EPC CONTRACTOR moreover the COMPANY does not indemnify nor shall the COMPANY reimburse the EPC CONTRACTOR for delays, stand-by, nor for any and all direct, indirect, and/or consequential costs and expenses, nor for CONSEQUENTIAL LOSS, demobilisation of WORKSITES, WORK Locations, CONSTRUCTION EQUIPMENT and PERSONNEL including termination nor for loss of profits, loss of overheads and loss of opportunity howsoever arising.

The COMPANY shall determine in good faith the proportion of the EPC WORK completed at the time of termination based on approved Progress Reports and other means of evaluating the EPC WORK under the CONTRACT.

Article 51 **Law Governing CONTRACT**

This CONTRACT shall be governed by and construed in accordance with the laws of Thailand.

Article 52 **Conflict of Interest**

52.1 Business Ethics

- 52.1.1 The PARTIES shall uphold the highest standards of business ethics in the performance of this CONTRACT. Honestly, fairness and integrity shall be paramount principles in the dealings between the PARTIES.
- 52.1.2 Neither PARTY shall knowingly involve itself/himself in any business in connection with, or use information arising from, this CONTRACT, in any manner which conflicts with the interests of the other PARTY.

52.1.3 Each PARTY, with regard to the EPC WORK or other matters which are the subject of this CONTRACT:

- a) warrants that he and the member of the COMPANY INDEMNIFIED PARTIES or the CONTRACTOR INDEMNIFIED PARTIES (as applicable), has not made, offered or authorized; and
- b) agrees that he and the member of the COMPANY INDEMNIFIED PARTIES or the CONTRACTOR INDEMNIFIED PARTIES (as applicable), shall not make, offer or authorize,

any payment, gift, promise or other advantage, whether directly or through any other person or entity, to, or for the use or benefit of, any person holding a legislative, administrative or judicial office, or any person employed by or acting on behalf of a public agency, public enterprise, public international organization or political party, or any political party official or candidate for office, or any other individual or entity, where such payment, gift, promise or advantage would violate the above warranty or agreement or APPLICABLE LAWS.

52.2 Human Rights

In the performance of the CONTRACT, the PARTIES shall comply with:

- a) United Nations Global Compact's ten principles in the areas of human rights, labor, environment and anti-corruption;
- b) Universal Declaration of Human Rights; and
- c) International Labor Organization's Declaration on Fundamental Principles and Rights at Work which covers four fundamental principles and rights at work.

52.3 Audit and Investigation

52.3.1 The EPC CONTRACTOR shall ensure that his PERSONNEL and SUBCONTRACTOR shall fully comply with the obligations set forth in article 52. The EPC CONTRACTOR shall allow the COMPANY to audit or investigate any related information or documentation to ensure the compliance of article 52 by the EPC CONTRACTOR, SUBCONTRACTOR and VENDOR.

52.3.2 The EPC CONTRACTOR shall promptly notify the COMPANY upon learning of any investigation or any legal proceeding initiated against any member of the CONTRACTOR INDEMNIFIED PARTIES by any authorities resulting from the breach of this article 52.

52.4 Conflict of Interest

Without prejudice to the provisions of article 52, the CONTRACTOR shall ensure that any member of CONTRACTOR INDEMNIFIED PARTIES shall not enter into any business arrangement with any director, employee, or agent of the EXISTING G1/61 OPERATOR or its AFFILIATES (other than as a representative of EXISTING G1/61 OPERATOR or its AFFILIATE) without the EXISTING G1/61 OPERATOR's prior written consent.

Article 53 Liens

53.1 Liens on COMPANY's Property

The EPC CONTRACTOR undertakes not to create or do anything (including by act or omission) which could result in the creation of any lien on COMPANY's property, and the

EPC CONTRACTOR hereby declares that he has not created any such lien or done anything as hereinabove before entering this CONTRACT.

The EPC CONTRACTOR expressly and unconditionally waives any right to retain or withhold delivery of the RESULT OF THE WORK and the PLANT in the event of any dispute between the PARTIES, including any right of retention, mechanic's lien, plea of simultaneous performance, or any other similar right arising under APPLICABLE LAWS.

53.2 Waiver and Hold Harmless

The EPC CONTRACTOR shall save, defend, indemnify and hold harmless the COMPANY from and against any and all CLAIMS arising out of, related to or in connection with the discharge of any lien claimed against the COMPANY's property under article 46 if created or caused (by any act, omission or negligence) by the EPC CONTRACTOR or by any SUBCONTRACTOR or their respective PERSONNEL.

If at any time the COMPANY receives notice or information of the recording of any such lien, or any evidence of any such lien or claim, which, if valid, could constitute a legal charge upon the COMPANY's property, it shall forthwith notify the CONTRACTOR who shall promptly refund the COMPANY for all costs incurred, and in the event of the EPC CONTRACTOR not so refunding, the COMPANY shall have the right to call the Performance Bank Guarantee, Parent Company Guarantee and/or deduct from any sums due or becoming due to the EPC CONTRACTOR, such amounts necessary to discharge such lien or CLAIM and connected expenses, unless the EPC CONTRACTOR satisfactorily evidences forthwith that such lien is not valid.

53.3 Liens on the EPC CONSTRUCTION EQUIPMENT

The EPC CONTRACTOR undertakes not to create or do any act, deed or thing which would result in the creation of any lien on the EPC CONSTRUCTION EQUIPMENT preventing (or that could in any way prevent) the EPC CONTRACTOR from performing the EPC WORK diligently and in accordance with this CONTRACT and/or which could hamper the proper exercise by the COMPANY of its rights under take-over provisions for EPC CONTRACTOR's default or pursuant to the HANDOVER provisions of sub-article 19.1.

Article 54 Settlement of Disputes

54.1 General

The PARTIES shall exclusively and finally resolve any dispute (including any controversy, CLAIM or difference) between them using direct negotiations, mediation and arbitration as set out in this article.

54.2 Direct Negotiations

If a dispute arises, a PARTY shall initiate the resolution process by giving notice setting out in writing and in detail the issues in dispute and the value of the CLAIMS to the other PARTY. A meeting between the PARTIES, attended by individuals with decision-making authority, must take place within sixty (60) days from the date the notice was sent in an attempt to resolve the dispute through direct negotiations.

54.3 Mediation

If the dispute cannot be settled by direct negotiations, within thirty (30) days of the final direct negotiation meeting, either PARTY may initiate mediation by giving notice to the

other PARTY. The place of mediation shall be Thailand. The Mediator shall be appointed through mutual agreement of both PARTIES.

54.4 Arbitration

If not resolved by direct negotiation or mediation, all disputes arising out of or in connection with the CONTRACT shall be finally settled under the latest version of the Rules of Arbitration of the International Chamber of Commerce applicable at the time of submission of the dispute to arbitration. There shall be three arbitrators appointed in accordance with the said Rules. The Emergency Arbitrator Provisions shall not apply. The place of Arbitration shall be Bangkok, Thailand and the arbitration proceedings shall be conducted in the English Language. The award of the arbitral tribunal shall be final and binding. Judgement on the award of the tribunal may be entered and enforced by any court of competent jurisdiction.

54.5 Enforcement

The PARTIES waive irrevocably their right to any form of appeal, review or recourse to any court or other judicial authority, to the extent that such waiver may be validly made.

The fact that the dispute resolution proceedings have been initiated shall not modify or suspend in any way the obligations of the PARTIES.

Article 55 Formal Notices and Other Communications

55.1 Form of Notice

All notices or communications of any kind to be given under this CONTRACT shall be:

- a) made in writing in the English language; and
- b) sent to the other PARTY by submission via the PROJECT Electronic Data Management System (EDMS).

If a notice or written communication is received after 16:30 pm in the place of receipt on a day that is a Saturday, Sunday or public holiday in the place of receipt, then the date and time of receipt shall be deemed to be 09:00 am on the next working day in the place of receipt.

55.2 Addresses for Delivery of Notices

- a) The COMPANY:
PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED
Energy Complex Building A, Floors 6th, 19th-36th
555/1 Vibhavadi Rangsit Road
Chatuchak, Bangkok 10900

For the attention of COMPANY REPRESENTATIVE
Mr. Napa Medheethunyapong
Email: napam@pttep.com
Telephone: (662) 537 4000

- b) The EPC CONTRACTOR

.....
.....
.....
.....
.....

For the attention of EPC CONTRACTOR REPRESENTATIVE

.....
Email:
Telephone:

Article 56 **EFFECTIVE DATE**

Notwithstanding the date of signature of this CONTRACT, this CONTRACT shall come into force on, (hereinafter referred to as “**EFFECTIVE DATE**”). The CONTRACT shall continue in full force and effect until all the obligations hereunder of both PARTIES have been completed in accordance with the terms and requirements of this CONTRACT, including the expiry of the WARRANTY PERIOD, unless this CONTRACT is earlier terminated pursuant to articles 48, 49 or 50.

Article 57 **Provisions Surviving CONTRACT**

Termination of this CONTRACT and/or COMPANY’s provisional and/or final acceptance of the EPC WORK or any parts thereof shall not release the PARTIES from obligations which expressly or by their nature survive this CONTRACT or extend beyond CONTRACT termination and any acceptance of the EPC WORK.

Article 58 **Limitation of Liability**

58.1 **General Liability for the EPC WORK**

Save except as provided for in sub-article 58.2 here below, the EPC CONTRACTOR’s liability with respect to his performance, mis-performance and otherwise default of his obligations under this CONTRACT shall be in accordance with the provisions of this CONTRACT.

58.2 **Limitation of Liability in respect of Liquidated and other Specified Damages**

The EPC CONTRACTOR’s total aggregate liability for the items described in sub-article 58.2 (a), (b), (c) and (d) for a PHASE shall not exceed forty percent (40%) of the Initial CONTRACT PRICE for such PHASE.

- a) The EPC CONTRACTOR’s obligations in respect of liquidated damages for:
 - i) Late Completion of the EPC WORK, pursuant to and in accordance with sub-article 34.1 and Exhibit B.
 - ii) Longer than required duration of Layover Periods pursuant to and in accordance with sub-article 34.2 and Exhibit B.
 - iii) Unauthorized change and/or removal of KEY PERSONNEL pursuant to and in accordance with sub-articles 25.2, 34.3 Exhibit B and Exhibit K.
 - iv) unauthorized substitution of Major SUBCONTRACTOR pursuant to and in accordance with sub-article 34.5 and Exhibit B.
 - v) unauthorized change of and/or additional WORKSITE pursuant to and in accordance with sub-article 34.6 and Exhibit B.
- b) Termination for reasons of the EPC CONTRACTOR’s default.
- c) Guarantees and warranties in accordance with sub-articles 20.3 and 20.4.
- d) Repairing or replacing defective parts of the PLANT in accordance with sub-article 37.1 in excess of the maximum aggregate amount of coverage provided by the insurance to be placed by the COMPANY under sub-article 43.2 (if any).

For the period between the EFFECTIVE DATE and the date of issue of the NOTICE TO PROCEED for the first PHASE the EPC CONTRACTOR's total aggregate liability toward the COMPANY under this CONTRACT including negligence (but excluding GROSS NEGLIGENCE) shall not exceed USD 20 million (Twenty million United States Dollars) for the EPC CONTRACTOR's obligations as per sub-articles 50.1 and 58.2.

58.3 Insurance Proceeds

The limitation of the EPC CONTRACTOR's liability in sub-article 58.2 above shall not include, and shall therefore be in excess of, any and all proceeds recoverable by the EPC CONTRACTOR and/or by the COMPANY for and on behalf of the EPC CONTRACTOR from the insurances pursuant to articles 41 and 43 herein.

IN WITNESS WHEREOF, the PARTIES have caused their duly authorized representatives to sign these presents, in two (2) originals, the day and year first above written.

For and on behalf of the EPC CONTRACTOR

For and on behalf of the COMPANY

Signature:

Signature:

Name:

Name: Mr. Napa Medheethunyapong

Title:

Title: Vice President, Wellhead Platform Construction Department.

Witnessed By:

Witnessed By:

Signature:

Signature:

Name:

Name: Mr. Roongroj Khaosut

Title:

Title: Manager, Construction Section, Wellhead Platform Construction Department.

Signature:

Name: Mr. Chindanai Preulsapanich

Title: Officer, Procurement and Contracts Global Supply Chain, Procurement and Contracts Department

ANNEXES 1 to 10

ANNEX 1

FORM OF GUARANTEES

ANNEX 1/A

Performance Bank Guarantee

[To Be On Guarantor's Headed Paper]

Guarantee Reference No:

Contract No: THC19-5245

PHASE:

Contract Title: Bundled Phases 3 Project (EPC Part)

I. We the Undersigned (1) (hereinafter referred to as "GUARANTOR"), established at (2) represented by (3) having taken notice of the CONTRACT No. THC19-5245 (such CONTRACT being composed of an Agreement, Exhibits and related Annexes and Attachments), having an EFFECTIVE DATE of the (4) (hereinafter referred to as "CONTRACT").

Such CONTRACT is made by and between PTT EXPLORATION AND PRODUCTION COMPANY LIMITED, PTTEP ENERGY DEVELOPMENT COMPANY LIMITED and PTTEP INTERNATIONAL LIMITED registered under the laws of Thailand, with registered offices at 555/1 Energy Complex Building A, Floors 6th, 19th-36th, Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand (herein also referred to as PTTEP, PTTEP ED and PTTEPI respectively) (PTTEP, PTTEP ED and PTTEPI are collectively referred to as "COMPANY") and (5) (hereinafter referred to as "EPC CONTRACTOR"), a company registered under the laws of (6) with its registered office at (7) for (8) or if such CONTRACT has not yet been signed, of the respective undertakings of the EPC CONTRACTOR and the COMPANY under the terms of the Letter of Intent to Award (9) dated (10)

II. The GUARANTOR hereby irrevocably guarantees in the event of any default or failure on the part of the EPC CONTRACTOR to abide by its obligations, indemnities and liabilities under the CONTRACT.

III. The GUARANTOR undertakes on behalf of EPC CONTRACTOR to pay the COMPANY any sum or sums not exceeding (11) USD (12) which is equal to ten percent (10%) of the Initial CONTRACT PRICE for the abovementioned PHASE. This guarantee is given at the request of EPC CONTRACTOR to the GUARANTOR in accordance with the CONTRACT.

The amount of this guarantee may be reduced after the issue of the last PROVISIONAL ACCEPTANCE CERTIFICATE for the abovementioned PHASE to five percent (5%) of the CONTRACT PRICE. Such reduction to the Performance Bank Guarantee amounts shall be made either by means of a formal written amendment to the Performance Bank Guarantee which shall be prepared and issued by the GUARANTOR or by a replacement Performance Bank Guarantee.

All such written amendments and replacement Performance Bank Guarantees shall be subject to prior written approval by the COMPANY.

IV. Each demand by the COMPANY for payment under this guarantee shall be made in writing (including by fax) to the following address:

(13) Bank Address for Notices:

Bank Name
Bank Address
Facsimile Number

The GUARANTOR shall promptly notify to the COMPANY any change in the above address.

V. Each demand under paragraph III above shall indicate the breach of EPC CONTRACTOR’s obligations under the CONTRACT or EPC CONTRACTOR’s failure to fulfil any obligations, indemnities or liability arising out of, or in connection with, the CONTRACT.

VI. The GUARANTOR shall make payment hereunder on COMPANY’s demand within fifteen (15) days after the date of receipt of the COMPANY’s demand. The obligation of the GUARANTOR under this guarantee includes a guarantee of payment and not of collection.

The amount of this guarantee as established pursuant to paragraph III above shall be reduced by the amount of any payments made by GUARANTOR to PTTEP, PTTEPI and/or PTTEP ED hereunder.

VII. No alteration in the terms of the CONTRACT made by agreement between the EPC CONTRACTOR and the COMPANY nor any failure by the COMPANY to insist on proper performance of the CONTRACT or to pursue all remedies available to it against the EPC CONTRACTOR shall in any way release the GUARANTOR from all or any part of its liabilities under this guarantee.

VIII. This guarantee shall remain valid from (14) until (15) (hereinafter referred as “EXPIRY DATE”). All claims hereunder should be received by the GUARANTOR within one hundred and twenty (120) days after the EXPIRY DATE and unless such claims are received within one hundred and twenty (120) days after the EXPIRY DATE, all rights of COMPANY under this guarantee shall be forfeited.

IX. This guarantee shall be interpreted in accordance with the laws of the Kingdom of Thailand.

X. The GUARANTOR represents that this Bank guarantee has been established in such forms and with such content that it is fully and freely enforceable against the GUARANTOR in the manner provided in all paragraphs above.

XI. The benefit of this Guarantee may be assigned by either PTTEP or PTTEP ED or PTTEPI.

XII. If any provision (or part thereof) of, or pursuant to, this guarantee, is or become unlawful, void, or unenforceable, the legality, validity or enforceability of any other part of that provision or any other provision shall not be affected but shall continue in full force and effect.

(Date)

(Common Seal and Signature of the GUARANTOR or such other formality as may be required under the law to render the unilateral promise binding on the GUARANTOR.)

- (1) Name of the Bank proposed by EPC CONTRACTOR and approved by the COMPANY
- (2) Address of office of Bank
- (3) GUARANTOR officer's name and title
- (4) EFFECTIVE DATE of CONTRACT No THC19-5245.
- (5) Name of EPC CONTRACTOR
- (6) Country of registration of the EPC CONTRACTOR
- (7) Address of the EPC CONTRACTOR's registered office
- (8) Title or purpose of the CONTRACT
- (9) Reference number of the Letter of Intent to Award
- (10) Date of the Letter of Intent to Award
- (11) USD amount of the Performance Bank Guarantee in figures
- (12) USD amount of the Performance Bank Guarantee in words
- (13) Bank address for notices
- (14) Date the Performance Bank Guarantee is effective from
- (15) Expiry date calculated as $A+B+C$ = expiry date, where:
 - A = required latest COMPLETION DATE for a PHASE calculated as per Exhibit C
 - B = six (6) months, and
 - C = eighteen (18) months.

ANNEX 1/B
Performance Bank Guarantee
Form of Demaand

To:

Guarantee Reference No: dated

Contract No : THC19-5245

Contract Title: Bundled Phases 3 Project (EPC Part)

Dear Sirs,

We refer to the above Performance Bank Guarantee given by you to us (the “Guarantee”). This is the demand as defined in Clause IV of the above Performance Bank Guarantee.

Terms defined in the Guarantee shall have the same meaning in this Demand.

We certify that the EPC CONTRACTOR is in breach of the CONTRACT and hereby demand that you pay to us USD

The monies are to be paid into our Account No: with,
.....

Signed For and on Behalf of

Name

In the capacity of

ANNEX 1/C

Form of Parent Company Guarantee

PTT EXPLORATION AND PRODUCTION COMPANY LIMITED
PTTEP INTERNATIONAL LIMITED
PTTEP ENERGY DEVELOPMENT COMPANY LIMITED,
555/1, Energy Complex Building A,
Floors 6, 19 – 36, Vibhavadi Rangsit Road,
Chatuchak, Bangkok 10900,
Thailand.

Guarantee Ref. No: (1)

Dated: (2)

Contract No: THC19-5245

Contract Title: Bundled Phases 3 Project (EPC Part)

Dear Sirs,

1. With reference to the CONTRACT No THC19-5245 having an EFFECTIVE DATE of the (3) day of 2020 between:

PTT EXPLORATION AND PRODUCTION COMPANY LIMITED (PTTEP), PTTEP INTERNATIONAL LIMITED (PTTEPI) and PTTEP ENERGY DEVELOPMENT COMPANY LIMITED (PTTEP ED), companies registered under the laws of Thailand, with their registered offices at 555/1 Energy Complex Building A, Floors 6th, 19th-36th, Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand, (PTTEP, PTTEPI and PTTEP ED are collectively referred to as “COMPANY”) and

(4) (hereinafter referred to as “EPC CONTRACTOR”) for the above subject and in consideration of the same, we, (5) (hereinafter referred to as “GUARANTOR”) whose registered address is (6) (hereinafter referred to as “GUARANTOR”) as the EPC CONTRACTOR’s ultimate holding company do hereby enter into the following unconditional and irrevocable undertakings with the COMPANY and its associates and CO-VENTURERS.

- 1.1 The EPC CONTRACTOR shall perform all his obligations contained in CONTRACT No. CONTRACT No. THC19-5245, and
- 1.2 If the EPC CONTRACTOR shall in any respect fail to perform the said obligations contained in the said CONTRACT or commits any breach thereof, we shall ourselves, or through a third party (agreed upon by the COMPANY as the case may be) other than the EPC CONTRACTOR, perform on the simple demand by the COMPANY, or take whatever actions may be necessary to achieve performance of the obligations under the CONTRACT of the EPC CONTRACTOR, and shall defend, indemnify and hold harmless the COMPANY, and its associates and CO-VENTURERS, if any, against any loss, damages, costs and

expenses, for which the EPC CONTRACTOR may be liable there under, howsoever arising from the said failure or breach.

2. We shall not be discharged or released from our undertakings hereunder by any waiver or forbearance by the COMPANY whether as to payment, time, performance or otherwise.
3. This guarantee shall be unconditional, irrevocable, without benefit of discussion and shall continue until all EPC CONTRACTOR's obligations under the CONTRACT have been performed, notwithstanding:
 - i) Any alterations or additions to or deletions from the CONTRACT and/or
 - ii) Any modifications in the shareholding relationship between us and the EPC CONTRACTOR and/or
 - iii) Any assignment in accordance with the CONTRACT.
4. The obligations guaranteed by the GUARANTOR and the liabilities assumed by the GUARANTOR under this guarantee shall under no circumstances be greater than those of the EPC CONTRACTOR under the CONTRACT.
5. The execution, delivery and performance of this guarantee have been and remain duly authorized by all necessary corporate action and do not contravene any provision of law or of the GUARANTOR's constitutional documents or any contractual restriction binding on the GUARANTOR or its assets.
6. This guarantee shall be governed by and be construed in accordance with the laws of the Kingdom of Thailand. Any disputes which cannot be resolved amicably arising in connection with the present Guarantee shall be finally settled by arbitration in accordance with the latest version of the Rules of Arbitration of the International Chamber of Commerce, applicable at the time of submission of the dispute to arbitration. The place of Arbitration shall be Bangkok Thailand and the arbitration proceedings shall be conducted in the English Language. The award of the arbitral tribunal shall be final and binding. Judgement on the award of the tribunal may be entered and enforced by any court of competent jurisdiction.

Yours faithfully,

For and on behalf of (5)

Signed:

Name:

Title:

Attach the seal and signature of EPC CONTRACTOR's ultimate holding company and such formalities as may be required under the law or articles of association to render a unilateral promise binding on EPC CONTRACTOR'S ultimate holding company. Each page (other than signature page) to be duly initialed.

- (1) Parent Company Guarantee Reference Number
- (2) Date of Guarantee
- (3) EFFECTIVE DATE of CONTRACT No THC19-5245.
- (4) Name of the EPC CONTRACTOR
- (5) Name of the EPC CONTRACTOR's ultimate holding company
- (6) Address of the EPC CONTRACTOR's ultimate holding company

ANNEX 2

**MUTUAL INDEMNITY AND WAIVER
OF RECOURSE AGREEMENTS**

ANNEX-2/A

Mutual Indemnity and Waiver of Recourse Agreement (Version for EPC CONTRACTOR)

Whereas, PTTEP EXPLORATION AND PRODUCTION COMPANY LIMITED (PTTEP), PTTEP INTERNATIONAL LIMITED (PTTEPI) and PTTEP ENERGY DEVELOPMENT COMPANY LIMITED (PTTEP ED), companies registered under the laws of Thailand, with their registered offices at 555/1 Energy Complex Building A, Floors 6th, 19th-36th, Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand, (PTTEP and PTTEP ED are collectively referred to as "COMPANY") have entered into CONTRACT No. THC19-5245 with (1) (hereinafter referred to as the "Undersigned Party"), a company organized and existing under the laws of (2), having its registered office at (3), regarding the performance of EPC WORK, all in accordance with the terms and requirements of the CONTRACT, (referred to as OPERATIONS);

whereas the COMPANY and the Undersigned Party may have entered into, or shall enter into, contracts or agreements with other contractors for the performance of services in connection with, related to, or in support of the OPERATIONS and certain of said other contractors have signed, or may sign, counterparts of like Mutual Indemnity and Waiver of Recourse Agreements (all the signatories of such Agreements relating to the OPERATIONS being hereafter designated as SIGNATORIES or SIGNATORY);

whereas the SIGNATORIES wish to modify their relationship under the general law and avoid entirely disputes as to their liabilities for damage or injuries to their respective property or employees;

Now, therefore the Undersigned Party, in consideration of the reciprocal covenants of the other SIGNATORIES agrees with them that:

1. The Undersigned Party shall indemnify, hold harmless, and waive all rights of recourse it may have against other SIGNATORIES for damage or loss of property it owns, or has in its possession by virtue of an arrangement made with an entity which is not a SIGNATORY, and for any indirect or consequential losses resulting from such damage or loss even in case of negligence of such other SIGNATORY.
2. The Undersigned Party shall have no liability whatsoever for damage to or loss of property in its possession by virtue of an arrangement made with another SIGNATORY.
3. The Undersigned Party shall indemnify and hold the other SIGNATORIES harmless from and against any loss or liability (including legal expenses) arising out of any claim or cause of action for loss of or damage to property of its PERSONNEL and injuries to or disease or death of its PERSONNEL, regardless of the cause of or reason for said damage, loss, injuries, disease or death and even if caused by negligence.
4. The Undersigned Party undertakes to obtain from its insurers a waiver of rights of subrogation against all other SIGNATORIES in accordance with the provisions of this Agreement governing the mutual liability of the SIGNATORIES with regard to the OPERATIONS.
5. Notwithstanding paragraphs 1 and 2, in the event any property of the Undersigned Party is lost or damaged in the course of transportation by aircraft and a SIGNATORY is the carrier, the Undersigned Party shall be entitled to compensation from such SIGNATORY, within the applicable national law or international conventions.

6. The Undersigned Party shall ensure that those of his SUBCONTRACTORS who are involved in the OPERATIONS become the SIGNATORIES and shall forthwith furnish the COMPANY with the original counterparts of the Agreements executed by its SUBCONTRACTORS. It shall furthermore advise the COMPANY of its SUBCONTRACTORS which have refused to become the SIGNATORIES.
7. The COMPANY shall upon request provide the Undersigned Party with a copy of every counterpart of this Agreement which is executed by another SIGNATORY.
8. This Agreement shall inure to the benefit of and become binding upon the Undersigned Party as to any other SIGNATORIES upon the later of the date of execution of a counterpart hereof by such other SIGNATORY. Conversely, this Agreement shall be binding upon the Undersigned Party only with respect to contractors and SUBCONTRACTORS who have become the SIGNATORIES prior to the occurrence giving rise to a claim.
9. Any contractor, consultant or SUBCONTRACTOR, etc., performing services for the COMPANY or another SIGNATORY in connection with the OPERATIONS who has not entered into a formal contract for the performance of such services may nevertheless become a SIGNATORY by signing a counterpart hereof which shall, as to the subject hereof, govern the relationship between such new SIGNATORY and the other SIGNATORIES and also by extension his relations with the COMPANY.
10. This Agreement may be executed in any number of counterparts as necessary, but all such counterparts shall together constitute one legal instrument.
11. The performance and the interpretation of this Agreement shall be governed by the Laws of Thailand.

Entered into this day of October 2020

For and on behalf of the EPC CONTRACTOR

Signature:

Name:

Title:

Witnessed By:

Signature:

Name:

Title:

For and on behalf of the COMPANY

Signature:

Name: Mr. Napa Medheethunyapong

Title: Vice President, Wellhead Platform
Construction Department.

Witnessed By:

Signature:

Name: Mr. Roongroj Khaosut

Title: Manager, Construction Section,
Wellhead Platform Construction
Department.

Signature:

Name: Mr. Chindanai Preulsapanich

Title: Officer, Procurement and Contracts
Global Supply Chain, Procurement and
Contracts Department

ANNEX-2/B

Mutual Indemnity And Waiver Of Recourse Agreement (Version For Subcontractor)

Whereas, (1) (hereinafter referred to as EPC CONTRACTOR) has entered into CONTRACT No. THC19-5245 dated (2) with PTTEP EXPLORATION AND PRODUCTION COMPANY LIMITED (PTTEP), PTTEP ENERGY DEVELOPMENT COMPANY LIMITED (PTTEP ED) and PTTEP INTERNATIONAL LIMITED (PTTEPI), companies registered under the laws of Thailand, with their registered offices at 555/1 Energy Complex Building A, Floors 6th, 19th-36th, Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand, (PTTEP, PTTEP ED and PTTEPI are collectively referred to as "COMPANY") regarding the performance of EPC WORK, all in accordance with the terms and requirements of CONTRACT No. THC19-5245 for Bundled Phases 3 Project (EPC Part), (referred to as OPERATIONS);

and whereas the EPC CONTRACTOR has subcontracted part of such EPC WORK to (3) (hereinafter referred to as the Undersigned Party);

and whereas the COMPANY, the EPC CONTRACTOR and the Undersigned Party may have entered into contracts or agreements with other contractors for the performance of services in connection with, related to, or in support of the OPERATIONS and certain of said other contractors have signed, or may sign, counterparts of like Mutual Indemnity and Waiver of Recourse Agreements (all the signatories of such Agreements relating to the OPERATIONS being hereafter designated as SIGNATORIES or SIGNATORY);

and whereas the SIGNATORIES wish to modify their relationship under the general law and avoid entirely disputes as to their liabilities for damage or injuries to their respective property or employees.

Now, therefore; the Undersigned Party, in consideration of the reciprocal covenants of the other SIGNATORIES agrees with them that:

1. The Undersigned Party shall indemnify, hold harmless, and waive all rights of recourse it may have against other SIGNATORIES for damage or loss of property it owns, or has in its possession by virtue of an arrangement made with an entity which is not a SIGNATORY, and for any indirect or consequential loss resulting from such damage or loss even in case of negligence of such other SIGNATORY.
2. The Undersigned Party shall have no liability whatsoever for damage to or loss of property in its possession by virtue of an arrangement made with another SIGNATORY.
3. The Undersigned Party shall indemnify and hold the other SIGNATORIES harmless from and against any loss of liability (including legal expenses) arising out of any claims or cause of action for loss of or damage to property of its personnel and injuries to or disease or death of its personnel, regardless of the cause of or reason for said damage, loss, injuries, disease or death and even if caused by negligence.
4. The Undersigned Party undertakes to obtain from its insurers a waiver of rights of subrogation against all other SIGNATORIES in accordance with the provisions of this Agreement governing the mutual liability of the SIGNATORIES with regard to the OPERATIONS.
5. Notwithstanding paragraphs 1 and 2, in the event any property of the Undersigned Party is lost or damaged in the course of transportation by aircraft and a SIGNATORY is the carrier, the

Undersigned Party shall be entitled to compensation from such SIGNATORY, within the limits and within the conditions of such SIGNATORY's insurance in accordance with applicable national law or international conventions.

6. The Undersigned Party shall ensure that those of his SUBCONTRACTORS who are involved in the OPERATIONS become SIGNATORIES and shall forthwith furnish the COMPANY with the original counterparts of this Agreement executed by its SUBCONTRACTORS. It shall furthermore advise the COMPANY of its SUBCONTRACTORS which have refused to become SIGNATORIES.
7. The COMPANY shall upon request provide the Undersigned Party a copy of every counterpart of this Agreement which is executed by another SIGNATORY.
8. This Agreement shall ensure to the benefit of and become binding upon the Undersigned Party as to any other SIGNATORIES upon the later of the date of execution by the Undersigned Party and the date of execution of a counterpart hereof by such other SIGNATORY. Conversely, this Agreement shall be binding upon the Undersigned Party only with respect to contractors and SUBCONTRACTORS who have become SIGNATORIES prior to the occurrence giving rise to a claim.
9. Any contractor, consultant or SUBCONTRACTOR, etc., performing services for the COMPANY or another SIGNATORY in connection with the OPERATIONS who has not entered into a formal contract for the performance of such services may nevertheless become a SIGNATORY by signing a counterpart hereof which shall, as to the subject hereof, govern the relationship between such new SIGNATORY and the other SIGNATORIES and also by extension his relations with the COMPANY
10. This Agreement may be executed in any number of counterparts as necessary, but all such counterparts shall together constitute one legal instrument.
11. The performance and the interpretation of this Agreement shall be governed by the Laws of Thailand.

Entered into thisday of

For the **Undersigned Party**

Witnessed by **the EPC CONTRACTOR**

Signature :

Signature :

Name :

Name :

Title :

Title :

Witnessed by

Signature:

Name:

Title:

- (1) Name of the EPC CONTRACTOR
- (2) EFFECTIVE DATE of CONTRACT No THC19-5245.
- (3) Name of SUBCONTRACTOR

ANNEX-3

**LIABILITY AND INSURANCE AGREEMENT
FROM SUBCONTRACTORS**

ANNEX-3

Form of Liability And Insurance Agreement From SUBCONTRACTOR

Whereas (1)....., has contracted with (2) for EPC WORK to be done or services to be carried out for (2) in connection with (3)

and whereas (1)..... has subcontracted or intends to subcontract such EPC WORK or services or part of same to us the Undersigned (4) established at (5) represented by (6)

We the Undersigned, have taken notice of all obligations placed on SUBCONTRACTOR as per article 11 of CONTRACT No. (7) between (2) and (1), and have especially taken notice of articles 36 – 44 of said CONTRACT, and acknowledge by these presents that we are bound by and undertake to comply with all such obligations.

Entered into thisday of

(Common Seal of signature of the Undersigned or such other formality as may be required under the law to render such undertaking binding on the Undersigned.)

For the **Undersigned Party**

Witnessed by **EPC CONTRACTOR**

Signature :

Signature :

Name :

Name :

Title :

Title :

Witnessed by

Signature:

Name:

Title:

- (1) Reference of the EPC CONTRACTOR
- (2) Reference of the COMPANY
- (3) Reference of the PROJECT
- (4) Reference of the SUBCONTRACTOR
- (5) Address of main office of undersigned SUBCONTRACTOR
- (6) Undersigned officer's name and quality
- (7) Reference of the CONTRACT

ANNEX-4 NOT USED

ANNEX-5
FORM OF CERTIFICATES OF ENDORSEMENT

ANNEX-5/A

CERTIFICATE OF ENDORSEMENT OF THE DESIGN DOSSIER

From: EPC CONTRACTOR'S NAME
EPC CONTRACTOR's address

PTTEP EXPLORATION AND PRODUCTION COMPANY LIMITED
PTTEP INTERNATIONAL LIMITED
PTTEP ENERGY DEVELOPMENT COMPANY LIMITED,
555/1, Energy Complex Building A,
Floors 6, 19 – 36, Vibhavadi Rangsit Road,
Chatuchak, Bangkok 10900,
Thailand.

Date:

Reference:

Subject: Contract No. THC19-5245 Bundled Phases 3 Project (EPC Part)

We,, hereby declare as follows:

- 1 The capitalized words herein shall have the same meaning as ascribed to them in CONTRACT No. THC19-5245.
- 2 We have read, carefully reviewed and examined the DESIGN DOSSIER and all other documents, related and with regard thereto and we are satisfied with the adequacy, sufficiency, cohesion, nature, type, quality, quantity, degree of detail and completeness of the DESIGN DOSSIER.
- 3 Accordingly, we hereby confirm that the DESIGN DOSSIER is fit for its purpose as per the terms and requirements of the CONTRACT, notwithstanding any error, omission, deficiency, inaccuracy, contradiction, ambiguity, discrepancy or mis-description of whatsoever nature that may exist.
- 4 We hereby confirm, with the exception of RELY UPON INFORMATION, we hereby endorse and accept without amendment, reservation or exception vis-à-vis COMPANY, full technical and commercial responsibility associated with the DESIGN DOSSIER as if we had prepared the DESIGN DOSSIER ourselves.
- 5 We also hereby confirm that the DESIGN DOSSIER is adequate and suitable as a basis for the timely, correct and proper performance of the EPC WORK.
- 6 Subject to sub-article 13.5 of the AGREEMENT, we hereby waive all rights of recourse, for whatsoever reason, in respect thereof against COMPANY and shall make no CLAIMS with respect to the adequacy sufficiency, cohesion, nature, type, quality, quantity, degree of detail and

completeness of the DESIGN DOSSIER nor for any error, omission, deficiency, inaccuracy, contradiction, ambiguity, discrepancy or mis-description of whatsoever nature contained therein, nor for the use of the DESIGN DOSSIER in the performance of the EPC WORK.

For and on behalf of EPC CONTRACTOR

Signature:.....

Name:

Title:

Attachment-1 Authorization to Sign this Certificate if Design Endorsement on behalf of the EPC CONTRACTOR

ANNEX-5/B

**CERTIFICATE OF ENDORSEMENT OF EPC AND T&I INTERACE ACTIVITY
(by EPC CONTRACTOR)**

From: EPC CONTRACTOR'S NAME
EPC CONTRACTOR's address

PTTEP EXPLORATION AND PRODUCTION COMPANY LIMITED ^{Note-1}
PTTEP INTERNATIONAL LIMITED ^{Note-1}
PTTEP ENERGY DEVELOPMENT COMPANY LIMITED, ^{Note-1}
555/1, Energy Complex Building A,
Floors 6, 19 – 36, Vibhavadi Rangsit Road,
Chatuchak, Bangkok 10900,
Thailand.

Date:

Reference:

PHASE:

PLATFORM:

Contract No. THC19-5245 Bundled Phases 3 Project (EPC Part)

We, the EPC CONTRACTOR hereby declare and confirm as follows:

- 1 Capitalized words herein shall have the same meaning ascribed to them in the above CONTRACT.
- 2 We have carefully read reviewed and examined the insert the title of the EPC and T&I Interface Package the EPC CONTRACTOR shall endorse, all as listed and further described in Attachment-1 hereto and hereinafter referred to as the EPC and T&I Interface Package.
- 3 We are satisfied with the adequacy, sufficiency, cohesion, nature, type, quality, quantity, degree of detail and completeness of the above mentioned EPC and T&I Interface Package insofar it, in full and/or in part relates to the T&I WORK and the performance thereof.
- 4 We hereby confirm that the contents of the above mentioned EPC and T&I Interface Package in so far as it relates to the performance of the EPC WORK is fit for the purposes it intended as per the terms of CONTRACT No. THC19-5245 notwithstanding any error, omission, deficiency, inaccuracy, contradiction, ambiguity, discrepancy or mis-description of whatsoever nature that may exist.
- 5 We hereby endorse and accept without amendment, reservation or exception vis-à-vis COMPANY, full technical and commercial responsibility associated with the contents of the above mentioned EPC and T&I Interface Package insofar as it relates to and/or is used in the EPC WORK and the performance thereof, as if we had prepared the EPC and T&I Interface Package ourselves.

- 6 We also hereby confirm that the above referenced EPC and T&I Interface Package is an adequate and suitable as a basis for the timely, correct and proper performance of the EPC WORK.
- 7 Accordingly, and pursuant to sub-article 14.15 of the AGREEMENT, we hereby waive all rights of recourse against COMPANY and/or the T&I CONTRACTOR and shall not make any CLAIM whatsoever against COMPANY and/or the EPC CONTRACTOR with respect to the adequacy sufficiency, cohesion, nature, type, quality, quantity, degree of detail and completeness of the referenced EPC and T&I Interface Package nor shall we make any CLAIM against the COMPANY and/or the T&I CONTRACTOR for any error, omission, deficiency, inaccuracy, contradiction, ambiguity, discrepancy or mis-description of whatsoever nature contained in the above referenced EPC and T&I Interface Package, nor shall we CLAIM for the use of the referenced EPC and T&I Interface Package in the performance of the EPC WORK.
- 8 The above waiver of rights by us and undertaking not to CLAIM (clause 7 above) shall also apply to SUBCONTRACTORS and VENDOR of the EPC CONTRACTOR.

For and on behalf of EPC CONTRACTOR

Signature:

Name:

Title:

Attachment-1 List of contents of the above referenced EPC and T&I Interface Package

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ANNEX-6
INTERIM CERTIFICATES

ANNEX-6A
MECHANICAL COMPLETION CERTIFICATE

Date: [REDACTED]

Reference: [REDACTED]

PHASE: [REDACTED]

PLATFORM: [REDACTED]

Contract No. THC19-5245 Bundled Phases 3 Project (EPC Part)

Effective Date of this Certificate: [REDACTED]

Subject: MECHANICAL COMPLETION CERTIFICATE

1. Pursuant to sub-article 19.1.1 (a) of the AGREEMENT it is hereby certified that the major component of the above mentioned PLATFORM is MECHANICALLY COMPLETE with the exception of Open Punch List Items and Minor Outstanding EPC WORK Items that are listed and described and detailed in Attachments 1 and 2 hereto, if any.

[insert title and description of the major complement of the PLATFORM that has achieved MECHANICAL COMPLETION sub-article 19.1.1 and Exhibit A)

2. The issuance of this MECHANICAL COMPLETION CERTIFICATE shall not relieve the EPC CONTRACTOR from his obligations under the EPC CONTRACT and APPLICABLE LAWS.
3. This MECHANICAL COMPLETION CERTIFICATE is issued without prejudice to the COMPANY rights under the EPC CONTRACT and at law and shall not constitute a waiver of any rights and the COMPANY has under the EPC CONTRACT and APPLICABLE LAWS, and the COMPANY hereby reserves the right to exercise any and all such rights and remedies, including to apply liquidated damages.
4. The EPC CONTRACTOR hereby confirms and agrees he shall rectify and complete any and all Open Punch List Items and Minor Outstanding EPC WORK Items that are listed in Attachments 1 and 2 hereto, subject to the conditions stated therein, in accordance with the terms and requirements of the EPC CONTRACT and as the COMPANY may instruct.

For and on behalf of the EPC CONTRACTOR

For and on behalf of the COMPANY

Signature : [REDACTED]

Signature : [REDACTED]

Name : [REDACTED]

Name : [REDACTED]

Title : [REDACTED]

Title : [REDACTED]

Attachment-1 List, Descriptions and Details of Open Punch List Items

Attachment-2 List, Descriptions and Details of Outstanding EPC WORK Items.

ANNEX-6/B
READY FOR LOAD OUT CERTIFICATE

ANNEX 6/B

READY FOR LOAD OUT CERTIFICATE
(for Jackets and Appurtenances and/or Topsides Only)

Date: [.....]

Reference: [.....]

PHASE: [.....]

PLATFORM: [.....]

Contract No. THC19-5245 Bundled Phases 3 Project (EPC Part)

Effective Date of this Certificate: [.....]

1. Pursuant to sub-article 19.1.1 b) of the AGREEMENT, the EPC CONTRACTOR hereby confirms without exception that the following:

[.....insert description and details]]

are in a state of readiness to commence the load out operations of the same and the related load out procedures and related EPC CONSTRUCTION EQUIPMENT have been approved by the Marine Warranty Surveyor. The T&I CONTRACTOR has inspected the above mentioned components and hereby confirms they are in a state of readiness to commence the load out operations.

2. Accordingly the COMPANY hereby confirms its APPROVAL and the EPC CONTRACTOR shall perform the load out and sea fastening of the above mentioned components accordingly, notwithstanding Punch List Items are outstanding.

3. Issuance of this READY FOR LOAD OUT CERTIFICATE shall not relieve the EPC CONTRACTOR from his obligations under the EPC CONTRACT nor the T&I CONTRACTOR from his obligations under the T&I CONTRACT.

4. This READY FOR LOAD OUT CERTIFICATE is issued without prejudice to the COMPANY's rights under the EPC CONTRACT and at law and shall not constitute a waiver of any other rights and remedies the COMPANY has under the EPC CONTRACT, the T&I CONTRACT and APPLICABLE LAWS. The COMPANY hereby reserves the right to exercise any and all such rights and remedies, including to apply liquidated damages.

5. The EPC CONTRACTOR hereby confirms and agrees he shall rectify and complete the outstanding EPC WORK and the EPC Punch List Items in a timely manner as per the terms of the EPC CONTRACT and as otherwise may be instructed by the COMPANY.

For and on behalf of the EPC CONTRACTOR

For and on behalf of the COMPANY

Signature : [.....]

Signature : [.....]

Name : [.....]

Name : [.....]

Title : [.....]

Title : [.....]

For and on behalf of the T&I CONTRACTOR

Signature : [.....]

Name : [.....]

Title: : [.....]

Attachments: Marine Warranty Surveyor Certificate.
List and Details of Punch List Items

ANNEX-6/C
READY FOR TRANSPORTATION CERTIFICATE
(for Jackets and Appurtenances and/or Topsides Only)

Date: [REDACTED]

Reference: [REDACTED]

PHASE: [REDACTED]

PLATFORM: [REDACTED]

Contract No. THC19-5245 Bundled Phases 3 Project (EPC Part)

Effective Date of this Certificate: [REDACTED]

1. Pursuant to sub-article 19.1.1 c) of the AGREEMENT, the EPC CONTRACTOR and the T&I CONTRACTOR hereby confirm without exception that the following:

[insert description
.....
.....]

are in a state of readiness for transportation to the SITE and that transportation MARINE SPREAD, the sea fastening, and all the related documents with regard to sea fastening and transportation have been approved by the Marine Warranty Surveyor.

2. EPC CONTRACTOR hereby warrants that the above referenced PLANT components including sea fastening are ready in all respects for sail away and towage.
3. The T&I CONTRACTOR hereby warrants and confirms that all necessary and appropriate preparations for marine transportation are completed and the MARINE SPREAD is ready in all respects for sail away and towage.
4. The COMPANY hereby confirms its APPROVAL accordingly
5. Issuance of this READY FOR TRANSPORTATION CERTIFICATE shall not relieve the EPC CONTRACTOR from his obligations and liabilities under the EPC CONTRACT and/or APPLICABLE LAWS.
6. Issuance of this READY FOR TRANSPORTATION CERTIFICATE shall not relieve nor the T&I CONTRACTOR from his obligations and liabilities under the T&I CONTRACT and/or APPLICABLE LAWS.
7. This READY FOR TRANSPORTATION CERTIFICATE is issued without prejudice to the COMPANY rights under the EPC CONTRACT, the T&I CONTRACT and at law, and shall not be deemed to constitute a waiver of any other rights and remedies the COMPANY has under the EPC CONTRACT, the T&I CONTRACT and APPLICABLE LAWS. The COMPANY hereby reserves the right to exercise any and all such rights and remedies, including to apply liquidated damages.

8. The EPC CONTRACTOR hereby confirms and agrees he shall rectify and complete the outstanding EPC WORK and the EPC Punch List Items in a timely manner as per the terms of the EPC CONTRACT and as otherwise may be required by the COMPANY.

For and on behalf of the EPC CONTRACTOR

Signature :
Name :
Title :

For and on behalf of the COMPANY

Signature :
Name :
Title :

For and on behalf of the T&I CONTRACTOR

Signature :
Name :
Title: :

Attachments: Marine Warranty Surveyor Certificate.
List and Details of Punch List Items.

.

ANNEX-7
PROVISIONAL ACCEPTANCE CERTIFICATE

PROVISIONAL ACCEPTANCE CERTIFICATE

Date: [REDACTED]

Reference: [REDACTED]

PHASE: [REDACTED]

PLATFORM: [REDACTED]

Contract No. THC19-5245 Bundled Phases 3 Project (EPC Part)

Effective Date of this Certificate: [REDACTED]

1. Pursuant to sub-article 19.2 of the AGREEMENT, it is hereby certified that following PLANT or part thereof described below is completed except for the minor outstanding EPC WORK Items listed in Attachment-1 hereto.

[insert description of the PLANT or part thereof which is completed]

2. Issuance of this PROVISIONAL ACCEPTANCE CERTIFICATE shall not relieve the EPC CONTRACTOR from his obligations under the EPC CONTRACT and APPLICABLE LAWS, including warranty obligations and other provisions of the EPC CONTRACT which expressly or by their nature survive this the issue of this certificate.
3. This PROVISIONAL ACCEPTANCE CERTIFICATE is issued without prejudice to the COMPANY rights under the EPC CONTRACT and at law, and shall not be deemed to constitute a waiver of any rights and remedies the COMPANY has under the EPC CONTRACT and APPLICABLE LAWS. The COMPANY hereby reserves the right to exercise any and all such rights and remedies, including to apply liquidated damages.
4. The EPC CONTRACTOR hereby confirms and agrees he shall complete all the outstanding EPC WORK in a timely manner as per the terms of the EPC CONTRACT no later than the respective dates stated in Attachment-1 hereto or as otherwise may be instructed by the COMPANY.

It being understood and agreed that should the EPC CONTRACTOR fail to complete the outstanding EPC WORK Items as aforesaid, this PROVISIONAL ACCEPTANCE CERTIFICATE shall become no longer valid, the requirements of sub-article 19.2 shall apply in full and the Effective Date of the PROVISIONAL ACCEPTANCE CERTIFICATE for the above mentioned PLANT or part thereof shall be revised accordingly.

For and on behalf of the EPC CONTRACTOR

For and on behalf of the COMPANY

Signature : [REDACTED]

Signature : [REDACTED]

Name : [REDACTED]

Name : [REDACTED]

Title : [REDACTED]

Title : [REDACTED]

Attachment-1 List and Details of Outstanding EPC WORK Items.

ANNEX 8
FORM OF FINAL ACCOUNT CERTIFICATE

FINAL ACCOUNT CERTIFICATE

CONTRACT No: THC19-5245

Title: Bundled Phases 3 Project (EPC Part)

PHASE:

Effective Date of this Certificate:

1. The EPC/T&I CONTRACTOR hereby confirms and presents that the final value of the EPC WORK under the EPC CONTRACT is USD (United States Dollars), as per details attached.
2. The EPC CONTRACTOR hereby affirms and acknowledges that the above amount is the full and final amount claimed by the EPC CONTRACTOR under the EPC CONTRACT.
Accordingly the EPC CONTRACTOR hereby waives any and all existing and future CLAIMS with respect to any further sums arising from and/or in connection with the EPC CONTRACT.
3. The EPC CONTRACTOR hereby declares there are no liens on COMPANY Property and to have duly paid his PERSONNEL, SUBCONTRACTORS and VENDORS and where applicable third parties and that no CLAIM from any of them or from any third party remains unsatisfied or is foreseeable and hereby commits himself to pay, and save, defend, indemnify and hold harmless the COMPANY, its shareholders, CO-VENTURERS, and AFFILIATES and the owners of the SITE, for any and all such CLAIMS and liens that may exist and/or could however so arise in the future from and/or in connection with the performance of the EPC WORK.
4. Issuance of this FINAL ACCOUNT CERTIFICATE shall not release the EPC CONTRACTOR from his warranty obligations and other provisions of the CONTRACT which expressly or by their nature survive the said certificate.
5. This FINAL ACCOUNT CERTIFICATE is issued without prejudice to the COMPANY rights under the EPC CONTRACT and at law and shall not constitute a waiver of any rights and the COMPANY has under the EPC CONTRACT and APPLICABLE LAWS. The COMPANY hereby reserves the right to exercise any and all such rights and remedies, including to apply liquidated damages.

For and on behalf of the EPC CONTRACTOR

For and on behalf of the COMPANY

Signature :

Signature :

Name :

Name :

Title :

Title :

Attachment Detailed Statement of the Final Amount

ANNEX-9
FINAL ACCEPTANCE CERTIFICATE

Form of FINAL ACCEPTANCE CERTIFICATE

CONTRACT No: THC19-5245

Title: Bundled Phases 3 Project (EPC Part)

PHASE:

Effective Date of this Certificate:

Whereas the EPC WORK for the above mentioned PHASE was provisionally accepted as per the PROVISIONAL ACCEPTANCE CERTIFICATES listed in Attachment-1 hereto.

Whereas the EPC CONTRACTOR has completed the outstanding EPC WORK items listed in the attached PROVISIONAL ACCEPTANCE CERTIFICATES.

Whereas the EPC CONTRACTOR has rectified all known defects and deficiencies in the PLANT comprising the above PHASE and the final WARRANTY PERIOD for such PHASE has ended.

Whereas the FINAL ACCOUNT CERTIFICATE for the abovementioned PHASE has been submitted by the EPC CONTRACTOR, APPROVED by the COMPANY and signed by the PARTIES.

Now it is hereby agreed as follows:

- 1 Pursuant to article 21 of the AGREEMENT it is hereby certified and agreed, by the issuance of this FINAL ACCEPTANCE CERTIFICATE, that EPC CONTRACTOR has duly completed his obligations under the EPC CONTRACT except for those that survive this Certificate.
- 2 Issuance of this FINAL ACCEPTANCE CERTIFICATE shall not relieve the EPC CONTRACTOR from any obligations which expressly or by their nature survive this certificate.
- 3 This FINAL ACCEPTANCE CERTIFICATE is issued without prejudice to the COMPANY rights under the EPC CONTRACT and at law, and shall not be deemed to constitute a waiver of any other rights and remedies that the COMPANY has under the EPC CONTRACT, APPLICABLE LAWS. The COMPANY hereby reserves the right to exercise any and all such rights and remedies, including to apply liquidated damages.

For and on behalf of the EPC CONTRACTOR

For and on behalf of the COMPANY

Signature :

Signature :

Name :

Name :

Title :

Title :

ANNEX 10
Form of NOTICE TO PROCEED

NOTICE TO PROCEED

CONTRACT No: THC19-5245

Title: Bundled Phases 3 Project (EPC Part)

PHASE:

Effective Date of this NOTICE TO PROCEED is

1. The EPC CONTRACTOR is hereby instructed to immediately proceed with the EPC WORK for the abovementioned PHASE in accordance with the requirements of this NOTICE TO PROCEED and the attached Statement of Requirements.
2. The EPC WORK for the abovementioned PHASE shall be performed in a timely manner in strict conformity with the requirements of this NOTICE TO PROCEED, the attached Statement of Requirements otherwise in accordance with the terms of the abovementioned EPC CONTRACT.
3. [insert name of PHASE] comprises the following PLATFORMS:

PLATFORM	Wellhead Platform	Pipeline		Tie-in to
		Approx. Length	Size	

all as further described in the attached Statement of Requirements.

4. The required sequence of PLATFORMS is:
 First PLATFORM =
 Second PLATFORM =
 Third PLATFORM =
 Fourth PLATFORM =

(Note: the actual number of PLATFORMS will be stated in the NOTICE TO PROCEED.)

5. The EPC CONTRACTOR shall immediately commence and proceed with the EPC WORK under this NOTICE TO PROCEED.

For and on behalf of the COMPANY

Napa Medheethunyapong
COMPANY REPRESENTATIVE

Attachment: Statement of Requirements (..... pages)

Exhibit A

Scope of WORK

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Annexes to Exhibit A

- Annex-1 Procedure and Minimum List for EPC CONTRACTOR DOCUMENTS
- Annex-2 List of Software
- Annex-3 Certifying Authority Scope of Work Scope of Work
- Annex-4 Marine Warranty Surveyor Scope of Work
- Annex-5 Pre-Commissioning / Commissioning Responsibilities
- Annex-6 Preservation and Protection
- Annex-7 Services and Facilities to COMPANY
- Annex-8 Minimum List of Spare Parts/ Special Tools and SPIR Form
- Annex-9 Maintenance and Inspection Database
- Annex-10 Interface Matrix
- Annex-11 Topside Relocation
- Annex-12 Material Group for Procurement
- Annex-13 New FSO pipeline, PLEM and Tie-ins (Not Used)
- Annex-14 Telecom and Control System Modification

1.0 Introduction

1.1 Purpose of Exhibit A

This Exhibit A is a guide to the PLANT and the WORK. It shall be read together with the AGREEMENT and Exhibits B, C, E, G, H, I, J, K and L. Anything stated in one but not another shall be considered as a requirement of all.

1.2 Acronyms and Definitions

The following acronyms and words appearing in this Exhibit A and its Annexes shall have the meaning assigned to them below or otherwise should the context require.

ALARP	As low as reasonably practical
CA	Certifying Authority
CIQ	Customs Immigration Quarantine
EDMS	Electronic Document Management System
EPC	Engineering, Procurement, Construction, Onshore Pre-commissioning, Onshore Commissioning and Loadout
EPC CONTRACTOR	CONTRACTOR of Contract No. THC19-5245
FAT	Factory Acceptance Tests
GMI	General marine instructions
GTI	Geotechnical Information
GSI	Geophysical Information
GWHP	Gas Wellhead Platform
HAZID	Hazard Identification Studies
KOM	Kick-Off Meeting
MAE	Major Accident Events
MDDR	Master Documents and Deliverables Register
MS	Management system
MTO	Material take off
MWS	Marine Warranty Surveyor
NDT	Non-Destructive Testing
NTP	Notice to Proceed
OWHP	Oil Wellhead Platform
O&M	Operating and Maintenance
PEGS	PTTEP Engineering General Specification
PO	Purchase Order
POB	Personnel On Board
PSR	Procurement Status Report
PTR	PROJECT Technical Review
QA/QC	Quality Assurance and Quality Control
RFQ	Request for Quotation
ROS	Required on WORKSITE
SAT	Site Acceptance Test
SCADA	Supervisory Control and Data Acquisition
SCE	Safety Critical Element
SSHE	Safety, security, health and environment

SIMOPS	Simultaneous operations
SPIR	Spare Parts and Interchange ability Record
T&I	Transportation and Installation
T&I CONTRACTOR	CONTRACTOR of Contract No. THC19-5246
TBE	Technical Bid Evaluation

Capitalized words in this Exhibit A and its Annexes (but not in the Section titles) shall have the meaning ascribed to them in Section 2.1 of the AGREEMENT.

1.3 Disclaimer

The descriptions described in this Exhibit A are provided for information and shall not be read and or construed so as to limit or restrict the obligations and responsibilities of the EPC CONTRACTOR nor the extent, type and quality of the WORK to be performed and PLANT to be provided, all as per the requirements of the CONTRACT and APPLICABLE LAWS

2.0 PROJECT Description

2.1 General Overview

Bundled 3 EPC of Wellhead Platforms, Associated Pipelines, and Brownfield Modifications of Arthit, G1/61 and G2/61 Field Development located in the Gulf of Thailand (GoT). The PROJECT comprises of topside, jacket, appurtenances, piled foundations, associated pipelines, tie-ins and brownfield modifications.

2.2 Arthit Field

Arthit Field is located in the GoT and comprises concession block numbers 14A, 15A and 16A, it lies approximately 35 km northeast of the existing Greater Bongkot North Field, approximately 625 km from Rayong Province and approximately 250 km northeast of the town of Songkhla.

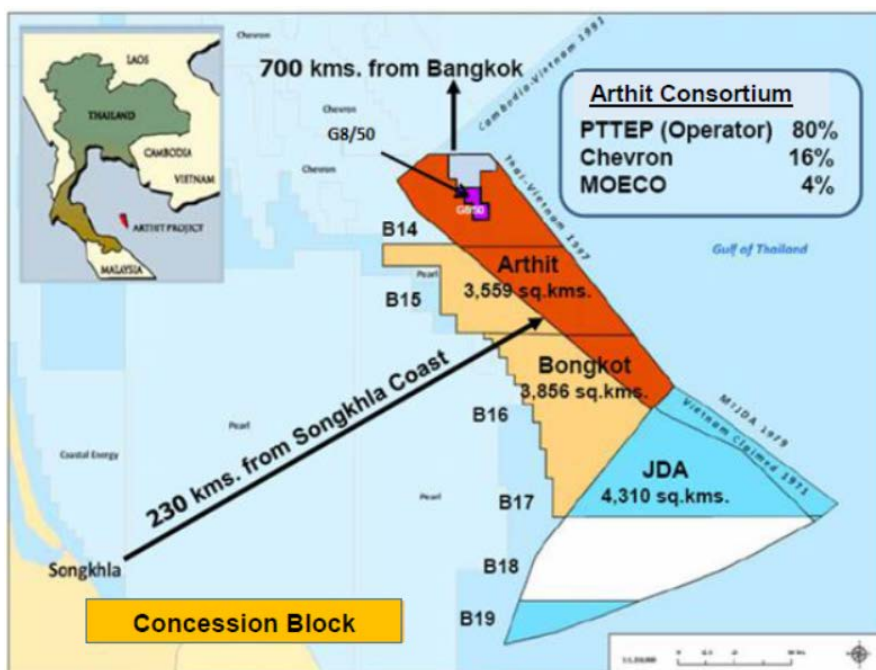


Figure 1: Arthit Field

2.3 G1/61 and G2/61 Field

Block G1/61 is located in the Pattani Basin which is approximately 270 km long and 100 km wide, oriented in the north-south direction. The Pattani Basin has the highest total production rate of gas, oil and condensate in the Gulf of Thailand. Block G2/61 is located in the North Malay Basin which is the Southeastern extent of the Pattani Basin. The North Malay Basin is a large sedimentary basin that contains Cenozoic sediments, with a layer thickness of 9 kilometers. The North Malay Basin covers an area of approximately 18,000 square kilometers.

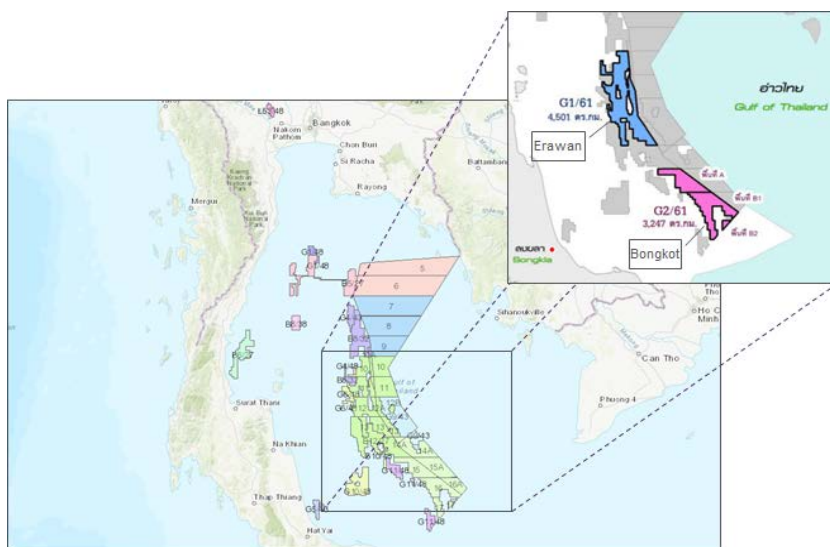


Figure 2: G1/61 and G2/61 Field

2.4 Bundled Phase 3 Development Project

The main objective of Bundled Phase 3 Development is to maintain the gas potential of Arthit, G1/61 and G2/61 Field from year 2022 onwards.

The WORK shall include project management, detailed engineering, procurement, fabrication, construction, transportation and installation of Wellhead Platforms, associated pipelines, tie-ins and brownfield modification WORK. The WORK also includes the provision of Topsides Relocation, subsea Wye or PLEM when required.

The brownfield modification and tie-in WORK involve the installation of subsea tie in spools, new risers, riser guards, subsea clamp(s), deck extension, pig receiver and associated piping, instrumentation and electrical WORK.

WORK shall be separated into each Work Package in accordance with Section 3.0

2.5 Minimum Order of Wellhead Platforms

The number of Wellhead Platforms per PHASE will be instructed by COMPANY to the EPC and T&I CONTRACTOR in the applicable NOTICE TO PROCEED.

NOTICE TO PROCEED may contain all or partial of development phase of each G1/61, G2/61 and Arthit field for each installation year. However, COMPANY shall ensure to issue NOTICE TO PROCEED to EPC and T&I CONTRACTOR to execute the WORK continuously for each offshore installation year in accordance with the COMPLETION DATE in Exhibit C. COMPANY may instruct EPC and T&I CONTRACTOR to perform more than this minimum quantity mention in below table if require,

Minimum Order of Wellhead Platforms

Installation Year	Number of Wellhead Platforms
2022	4
2023 - 2026	6

Remarks: the Number of Wellhead Platforms is counted as 0.5 in case COMPANY instruct EPC CONTRACTOR to perform existing Topside Relocation WORK (under Work Package 4) refer to section 3.1 of this Exhibit A.

3.0 General Description of the PLANT

3.1 General Overview

The WORK includes project management, detailed engineering, procurement, fabrication, load-out, sea fastening, transportation and offshore installation of Wellhead Platform, Associated Pipeline, Tie-ins and Brownfield Modification WORKS.

The PLANT shall comprise of following Work Packages which shall read in conjunction Scope Allocation between EPC and T&I CONTRACTOR in order to understand the outline scope of each party and detailed interfacing matrix refer to Exhibit A, Annex 10:

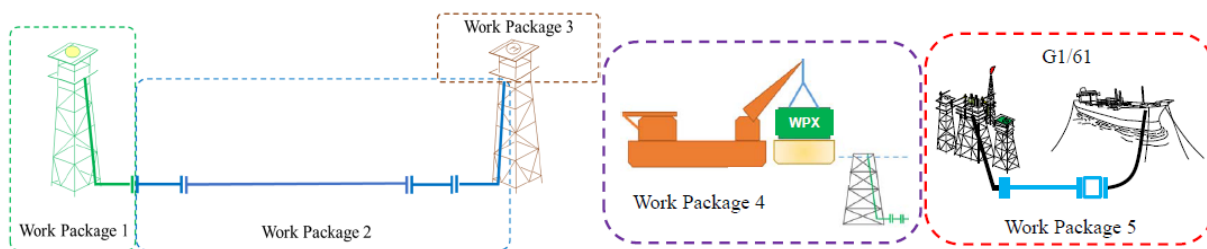


Figure 3: Work Packages

WPK	Activity	Engineering	Procurement	Onshore Construction	Transportation & Installation
1	Wellhead Platform	EPC	EPC ⁽²⁾	EPC	T&I
2	Associated Pipeline and Tie-ins	T&I	T&I	T&I	T&I
3	Existing Topside Brownfield Modification	EPC	EPC	EPC ⁽¹⁾	T&I ⁽¹⁾
4 ⁽¹⁾	Existing Topside Relocation	T&I			T&I
	Existing Topside Verification, New Jacket and Navigation Aids Platform	EPC	EPC ⁽²⁾	EPC	
5	New FSO pipeline, PLEM and tie-ins	T&I	T&I	T&I	T&I

Note

(1) Optional Scope of WORK

(2) T&I CONTRACTOR shall supply all ASME B31.8/B31.4 pipeline, Riser, Bends, Field Joint Coating, subsea flanges, blind flanges and fittings

3.1.1 Work Package 1 – Wellhead Platform

This work package is including but not limited to; topside, jacket, piles, boatlanding, pre-installed risers and appurtenances.

There are 2 designs of Wellhead Platform which shall refer to Section 3.4 for more information.

- a) Gas Wellhead Platform (GWHP)
- b) Oil Wellhead Platform (OWHP)

3.1.2 Work Package 2 – Associated Pipeline and Tie-ins

This work package is including but not limited to; pipelines, coatings, anodes, pigging, hydro testing, subsea tie-ins spools (with flange protector) connect between New Wellhead Platform and Existing Wellhead Platform, PLEM or Wye and etc.

Optional scope of WORK

- Post-install riser, subsea clamps and riser guard
- Subsea PLEM and WYE
- Pipeline Crossing Sleepers
- Pipeline As-Built Survey

For Optional Scope of WORK, COMPANY may choose not to instruct the EPC and T&I CONTRACTOR to perform the Optional Scope of WORK in full, part or none at its sole discretion.

3.1.3 Work Package 3 – Existing Topside Brownfield Modification

Base scope of WORK for Topside Brownfield Modification shall include project management, detailed engineering and procurement WORK on the existing Wellhead Platform and Central Processing Platform. Procurement items as listed in Exhibit A Annex 12 shall be delivered to COMPANY at PTTEP Songkhla base via DAP (Delivery At Place) INCOTERMS 2010 with agreed time frame in accordance with Exhibit C. For onshore construction, transportation and offshore installation are Optional Scope of WORK. COMPANY may choose not to instruct the EPC and T&I CONTRACTOR to perform the Optional Scope of WORK in full, part or none at its sole discretion. The Options of Brownfield Modification are separated in 3 Options in different scope of WORK which refer to below table.

Option	Offshore Telecommunication Test Link Control system, PLC and SCADA modification	Pig Receiver & Facilities and Topside Riser Hook Up	Deck Extension
1	X		
2	X	X	
3	X	X	X

The location of existing Wellhead Platform and details of Topside Brownfield Modification shall be instructed by COMPANY on a PHASE by PHASE basis by the issuance of NOTICE TO PROCEED for each PLATFORM within a PHASE.

The Scope of WORK covers all WORKS to be carried out by the EPC and T&I CONTRACTOR for, and in relation to the connection to existing Wellhead Platform, which

includes modification WORK on Central Processing PLATFORM and existing Wellhead Platform.

The EPC and T&I CONTRACTOR shall be aware that Topside Brownfield Modification WORKS shall be performed while PLATFORMS are producing hydrocarbon fluids. The EPC and T&I CONTRACTOR shall therefore take under consideration the following constraints for the preparation of related procedures, and for execution of the WORK.

COMPANY safety procedures/ policies and regulations have to be strictly complied with, in particular; EPC and T&I CONTRACTOR shall obtain from COMPANY all required work permits.

Refer to Section 9.10 of this Exhibit A, Exhibit A, Annex-14 and Exhibit E, Annex 6 for more detailed and requirement for Topside Brownfield Modification scope of WORK.

3.1.4 Work Package 4 – Existing Topside Relocation

Base scope of WORK for Existing Topside Relocation will split into 2 main scope of WORK which compose of

- i) Relocate existing Topside from existing location to the new location
- ii) Verified Existing Topside, New Jacket and Navigation Aids Platform

Detailed scope of WORK shall refer to Exhibit A, Annex 11.

3.1.5 Work Package 5 – New FSO pipeline, PLEM and Tie-ins

Base scope of WORK for this package shall include but not limited to; pipeline (pipe in pipe), flexible pipe, coatings, anodes, pigging, hydro testing, New FSO PLEM, subsea tie-in spools (with flange protector) at Central Processing Platform and New FSO PLEM side. Detailed scope of WORK refers to Exhibit A, Annex 13.

3.2 **Production of Gas and Well Fluids**

Key aspects of design of Gas wellhead platform are summarized below.

Description	Gas	Condensate	Water
Generic Gas Wellhead Platform			
Platform	80MMSCFD	3,200STBPD	4,000STBPD
Well	12MMSCFD	480STBPD	600STBPD
Booster Compressor	8MMSCFD	750STBPD	1,750STBPD
Generic Oil Wellhead Platform			
Platform	40MMSCFD	6,000STBPD	9,000STBPD

Description	Gas	Condensate	Water
Well	10MMSCFD	1,534STBPD	2,300STBPD

Table 1: Gas and Oil Production Rate

For details and further information refer to Exhibit E DESIGN DOSSIER.

3.3 Not Used

3.4 Overview of Wellhead Platform Topsides and Jackets

3.4.1 Gas and Oil Wellhead Platform

The Bundled 3 wellhead platform design is to standardize the facilities to accommodate gas production well in Arthit, G1/61 and G2/62 field and oil production well in G1/61 field respectively. The development aims to minimize the platform cost while ensuring maximum benefit can be obtained from the exploration/ production of reservoirs

3.4.2 Wellhead Platform Key Feature

Topside of Gas and Oil Wellhead Platform shall be designed as a not normally manned operated platform of a conventional design and to be installed on the Jacket at the SITE by single lift operation.

For Oil Wellhead Platform, there are 2 types named Oil Wellhead Platform A and Oil Wellhead Platform B that the provided facilities on each type are different in order to serve the different operation requirement. EPC and T&I CONTRACTOR shall refer to Exhibit E, Annex 2 for Layout A and B respectively.

In summary key characteristics of the new wellhead platform topside are:

Key Feature	Generic Gas Wellhead Platform	Generic Oil Wellhead Platform
Platform Design		
Platform Type	Fixed Platform with 4 legs Jacket	
Design Life	15 years	
Water Depth	60m to 80m	
Soil Condition	Weak and Moderate Soil	
Standard Orientation	<u>North:</u> Vent boom & Pipeline corridor <u>North-East:</u> Pipeline corridor <u>South:</u> 1 st Jack-up Rig approach <u>South-East:</u> 2 nd Jack-up Rig approach <u>West:</u> Boat landing & Tender Assist Drilling Rig approach	
Operation – Not normally manned	<u>Frequency:</u> 1-2 times per month for schedule maintenance, process upset and platform restart <u>Access:</u> Boat landing & Personnel transfer basket	
Operation - POB Max	16 persons (Remark: Drilling crew are not considered since the team will have their own evacuation means)	
Wells Slots	24 conductor-less wells with 1219 mm center to center	

Key Feature	Generic Gas Wellhead Platform	Generic Oil Wellhead Platform
Wellhead Pressure Rating	NP well: 344barg (5,000psig)	
Drilling	Jack-up and Tender Assist Drilling Rig	
Well Services Operation	Slick line, Braided line, E-line, Coiled tubing, Hydraulic work over and Pulling unit	
Production Rate	Refer to section 3.2	Refer to section 3.2
Platform Facilities		
Wellhead Control Panel	Yes	Yes
Well Flowline	3"	3"
Production Manifold	8" DSS & 10" CS	8" DSS & 10" CS
Test Manifold	4"	4"
Booster Compressor Manifold	6"	Not applicable
Gas Lift Compressor Suction Manifold	Not applicable	6"
Test Separator	3-Phase	2-Phase
Booster Compressor Package	Yes	Not applicable
Gas Lift System	Not applicable	Yes
Sea Water Injection Mobile System (SWIMS)	Not applicable	Yes ⁽¹⁾
Production Export Riser	10", 12" or 16"	10", 12" or 16"
Production Launcher and Facilities	10", 12" or 16"	10", 12" or 16"
Production Import Riser	Yes	Yes
Production Receivers and Receiving Facilities	Yes	Yes
Gas Lift Import/Export Riser ⁽²⁾	Not applicable	Yes
Gas Lift Receiver/Launcher and its Facilities ⁽²⁾	Not applicable	Yes
Produced Water Import/Export Riser ⁽²⁾	Not applicable	Yes
Produced Water Receiver/Launcher and its Facilities ⁽²⁾	Not applicable	Yes
Utility/Instrument Gas System	Yes	Yes
Chemical Injection System	Yes	Yes
Chemical Storage Tank	One (1) storage tank and provisional space for one (1) storage tank	Four (4) storage tanks
Pedestal Crane	Yes	Yes
Closed Drain System	Yes	Yes

Key Feature	Generic Gas Wellhead Platform	Generic Oil Wellhead Platform
HP/LP Vent System	Yes	Yes
Power System	100% Solar Power	Gas Engine Generator and Diesel Engine Generator (Back-up)
Batteries Back-up Autonomous Time	5days	5days
Control System	PLC based SCADA	PLC based SCADA
Process Control and Safety Instrument System	Yes	Yes
Fire and Gas System	Fusible plug loop and Gas detectors	Fusible plug loop and Gas detectors
ESD Station	Yes	Yes
E&I Room	Yes	Yes
Safety Equipment	Yes	Yes
Diesel Generator	Provisional Space and Port connection	Yes
Toilet (Amenities Cubicle)	Yes	Yes
Boat Landing	Yes	Yes

Note:

- (1) Oil Wellhead Platform shall design to accommodate SWIMS unit only. Supply of SWIMS unit is not including in EPC or T&I CONTRACTOR scope of WORK.
- (2) Features applicable for Oil Wellhead Platform B.

3.5 Generic Wellhead Platform (Base scope) and Optional Items

The Generic Wellhead Platform is designed to accommodate several Optional Items which may be instructed by COMPANY in the relevant NOTICE TO PROCEED for each PHASE, or otherwise. CONTRACTOR shall refer to section 3.4 for the generic items of GWHP together with below table for clearly identify the Base Scopes and Optional Scopes as the basis for CONTRACTOR prepare pricing proposal in accordance with Exhibit B.

Gas Wellhead Platform (GWHP)

Item	Base Scopes (Refer to EXHIBIT B Annex 1)	Optional Scopes (Refer to EXHIBIT B Annex 2)
Jacket Primary Steel base weight (MT.)	475	Adjustment of Jacket weight to suit Water Depth at particular location.
Pile Weight (MT.)	700	Adjustment of Pile as per condition at particular location
Pile Sections	5 Pile Sections	Adjustment of Pile Length as per condition at particular location

Item	Base Scopes (Refer to EXHIBIT B Annex 1)	Optional Scopes (Refer to EXHIBIT B Annex 2)
		Note: COMPANY shall accept the additional pile section resulted from the increasing of total pile length from geotechnical information only. The other reasons to increase the section of pile, such as limitation of equipment including unsuitable hammer and etc.), shall be CONTRACTOR's responsibility.
Mudmat	Type: Separated Steel Mudmat Size: 7.7m x 7.7m x 4nos	Adjustment of Mudmat as per condition at particular location <u>Optional</u> FRP Mudmat
Number of Anode for Jacket	101 nos total Anode for Jacket	Adjustment of Quantity of Anode for Jacket as per condition at particular location
Boatlanding	Boatlanding Type A (Conventional with 2 layers)	Deletion of Boatlanding Type A Change to Boatlanding Type B (Optimize design with 1 leg 1 layer)
Wellhead Design Pressure Rating	NP well: 344barg (5,000psig)	IP well: 448barg (6,500psig) HP well: 690barg (10,000psig) Adjustment for IP/HP wells, including, but not limited to, as follows: <u>Wellhead Control Panel</u> - Addition of HPU for IP/HP well - Adjustment of WHCP components for NP/IP/HP well <u>Manifolds</u> - Adjustment of Piping, Valves and Instrumentations for IP/HP well

Item	Base Scopes (Refer to EXHIBIT B Annex 1)	Optional Scopes (Refer to EXHIBIT B Annex 2)
		<u>Flowlines</u> - Adjustment of flowline (including Choke Valve, Piping and Instrumentation) and Production Tubing for IP/HP well
Platform Design Pressure (Barg.)	Test Separator = 81 Export System = 91 (note 3)	Test Separator = 91 Export System = 91 (note 4)
Telecom Link with CPP	WiMax	4G LTE
RACON & AIS system	Excluded	One (1) system of RACON & AIS
Production Export Riser and facilities (note 1, 2)	16" SMLS Production Export Riser and facilities	10" and 12" SMLS Production Export Riser and facilities
Platform Isolation at Export Line	<u>16" ESDV and its component at export line</u>	<u>Double check valves at upstream of Pig Launcher</u> Deletion of 16" ESDV and its component at export line Additional one (1) Check Valve (VCS-F16) at upstream of pig launcher
Export Pipeline	16" ERW Pipeline	8"-10" ERW Pipeline 12" ERW Pipeline
WYE	Excluded	Addition of WYE as per Exhibit B Annex 2
PLEM	Excluded	Addition of PLEM as per Exhibit B Annex 2
Production Import Riser (note 1)	16" SMLS Production Import Riser	Deletion of 16" SMLS Production Import Riser 8"-10" SMLS Production Import Riser 12" SMLS Production Import Riser
Production Receiving facilities (note 2)	16" Production Receiving facilities	Deletion of 16" Production Receiving facilities 8"-10" Production Receiving facilities

Item	Base Scopes (Refer to EXHIBIT B Annex 1)	Optional Scopes (Refer to EXHIBIT B Annex 2)
		12” Production Receiving facilities
Booster Compressor package	One (1) Booster Compressor package and associated piping and instrumentation	Deletion of the base scope of one (1) Booster Compressor package and associated piping and instrumentation
ACBV of Booster Compressor	24 Well Slots	Deletion ACSV per well and install blind flange instead
Chemical Storage Tanks	One (1) Chemical Storage Tank and provisional space for one (1) tote storage tank	Additional of one (1) Chemical Storage Tank
Acoustic Gas Detectors	Two (2) Acoustic Gas Detectors at wellbay and production manifold area	Deletion of the base scope of two (2) Acoustic Gas Detectors
Not to Exceed (NTE) of Topside	850 MT	N/A
Not to Exceed (NTE) of Jacket	850 MT	N/A

Note:

- (1) Riser is from hanger clamp to riser bottom flange, including, but not limited to, the following: coated riser pipes & bends, clamps and subsea blind flanges. Riser length shall be in line with the base case of 80m jacket water depth.
- (2) Export / Receiving facilities is from pig launcher / receiver to top of riser (hanger clamp), including, but not limited to, the following: pig launcher / receiver, line pipes & bends, ball valve, barred tee, ESDV (if required), pipe supports and offshore hook-up works
- (3) PSV set point and PAHH to be adjusted to match with pipeline design pressure and design temperature.
- (4) PAH and PAHH set point will be revised according to design pressure change. Calculation, datasheets and any related documents and drawings to be revised based on new set point of PAHH.

Oil Wellhead Platform (OWHP)

Base scope of Oil Wellhead Platform shall be Topside A, the optional scopes shall specify the items that COMPANY may instruct to add or delete the facilities in order to accommodate the requirement for Oil Wellhead Platform A or B.

Item	Base Scopes (Refer to EXHIBIT B Annex 1)	Optional Scopes (Refer to EXHIBIT B)
Jacket Depth	475	Adjustment of Jacket weight to suit Water Depth at particular location.

Item	Base Scopes (Refer to EXHIBIT B Annex 1)	Optional Scopes (Refer to EXHIBIT B)
Pile Length	700	Adjustment of Pile as per condition at particular location
Pile Sections	5 Pile Sections	Adjustment of Pile Length as per condition at particular location Note: COMPANY shall accept the additional pile section resulted from the increasing of total pile length from geotechnical information only. The other reasons to increase the section of pile, such as limitation of equipment including unsuitable hammer and etc.), shall be CONTRACTOR's responsibility.
Mudmat	Type: Separated Steel Mudmat Size: 7.7m x 7.7m x 4nos	Adjustment of Mudmat as per condition at particular location <u>Optional</u> FRP Mudmat
Number of Anode for Jacket	101 nos total Anode for Jacket	Adjustment of Quantity of Anode for Jacket as per condition at particular location
Boatlanding	Boatlanding Type A (Conventional with 2 layers)	Deletion of Boatlanding Type A Change to Boatlanding Type B (Optimize design with 1 leg 1 layer)
Wellhead Design Pressure Rating	NP well: 344barg (5,000psig)	
Telecom Link with CPP	4G LTE	WiMax
RACON & AIS system	Excluded	One (1) system of RACON & AIS
Production Export Riser and facilities (note 1, 2)	16" SMLS Production Export Riser and facilities	10" and 12" SMLS Production Export Riser and facilities

Item	Base Scopes (Refer to EXHIBIT B Annex 1)	Optional Scopes (Refer to EXHIBIT B)
Platform Isolation at Export Line	Double check valves at upstream of Pig Launcher	Deletion of Double check valves at upstream of Pig Launcher Additional 16" ESDV and its component at export line and 4" ESDV and its component at export line
Export Pipeline	16" ERW Pipeline	8"-10" ERW Pipeline 12" ERW Pipeline
WYE	Excluded	Addition of WYE as per Exhibit B Annex 2
PLEM	Excluded	Addition of PLEM as per Exhibit B Annex 2
Production Import Riser (note 1)	16" SMLS Production Import Riser	Deletion of 16" SMLS Production Import Riser 8"-10" SMLS Production Import Riser 12" SMLS Production Import Riser
Production Receiving facilities (note 2)	16" Production Receiving facilities	Deletion of 16" Production Receiving facilities 8"-10" Production Receiving facilities 12" Production Receiving facilities
Generic Oil Wellhead Topsides (note 3)	Lump sum price for Generic Oil Wellhead Topsides A	Lump sum price Generic Oil Wellhead Topsides B
Gas Lift Compressor package	One (1) Gas Lift Compressor package and associated piping and instrumentation	Deletion of the one (1) Gas Lift Compressor package and associated piping and instrumentation
ACBV of Gas Lift Compressor	24 Well Slots	Deletion ACBV per well
Tote Tanks	Two (2) Chemical Storage Tanks One (1) Demulsifier Storage Tank One (1) PPD Storage Tank	

Item	Base Scopes (Refer to EXHIBIT B Annex 1)	Optional Scopes (Refer to EXHIBIT B)
Gas Lift KO Drum	One (1) Gas Lift KO Drum and associated piping and instrumentation	Deletion of the one (1) Gas Lift KO Drum and associated piping and instrumentation for Topside A Add One (1) Gas Lift KO Drum for Topside B and associated piping and instrumentation
Gas Lift Import/Export Riser and facilities (note 1, 2)	Excluded	8" SMLS Gas Lift Import/Export Riser and facilities
Gas Lift Import/Export Pipeline	Excluded	8" ERW Pipeline
Water Injection Import/Export Riser and facilities (note 1, 2)	Excluded	10" SMLS Water Injection Import/Export Riser and facilities
Water Injection Import/Export Pipeline	Excluded	10" ERW Pipeline
Not to Exceed (NTE) of Topside	850 MT	N/A
Not to Exceed (NTE) of Jacket	850 MT	N/A

Note:

1. Riser is from hanger clamp to riser bottom flange, including, but not limited to, the following: coated riser pipes & bends, clamps and subsea blind flanges. Riser length shall be in line with the base case of 80m jacket water depth
2. Export / Receiving facilities is from pig launcher / receiver to top of riser (hanger clamp), including, but not limited to, the following: pig launcher / receiver, line pipes & bends, ball valve, barred tee, ESDV (if required), pipe supports and offshore hook-up works
3. There are two (2) designs of Topsides for Generic Oil Wellhead Platform. The base scope, namely Generic Oil Wellhead Topsides A and the optional scope, namely Generic Oil Wellhead Topsides B is referred to EXHIBIT E, Annex 2.
4. Procurement at cost plus service fee items shall refer to Exhibit A, Annex 12
5. The adjustment for optional scope of WORK shall be based on the same basis from base scope q'ty or base reference.

4.0 COMPANY Responsibilities

4.1 Generally

The COMPANY shall only provide such services, facilities and other things that are stated in writing in the CONTRACT to be provided by the COMPANY.

The EPC and T&I CONTRACTOR shall provide and do all other things of whatsoever nature that are required and or necessary for the WORK and the successful completion of the PLANT in accordance with the CONTRACT and APPLICABLE LAWS, irrespective of if such things are expressly stated in the CONTRACT or not.

4.2 COMPANY ITEMS

No COMPANY ITEMS supplied to EPC CONTRACTOR.

4.3 COMPANY PROVIDED INFORMATION

The COMPANY has performed GTI and GSI investigations and reports. These are included as COMPANY PROVIDED INFORMATION in Exhibit E Annex-5.

4.4 Services and Facilities to be Provided by the COMPANY

The COMPANY shall only be obliged provide services and facilities for EPC or T&I CONTRACTOR PERSONNEL and/or CONTRACTOR CONSTRUCTION EQUIPMENTS (offshore transportation and accommodation) for pre-engineering and post engineering surveys, as stated in Exhibit A Section 9.10.2.

COMPANY may provide services and facilities for EPC or T&I CONTRACTOR (offshore transportation and accommodation) for the other activities subject to availability of its facilities. Any cost and expense incurred from COMPANY provided such services shall be compensated by EPC or T&I CONTRACTOR.

5.0 General Requirements

5.1 Fitness for Purpose

The EPC and T&I CONTRACTOR shall perform all WORK and anything else of whatsoever nature so that the PLANT when completed shall be in accordance with the requirements of the CONTRACT, be of the required quality, free from defects, accessible, operable, reliable, and fit for the purpose for which it is intended as per the CONTRACT requirements and shall comply with APPLICABLE LAWS.

5.2 DESIGN DOSSIER

5.2.1 General Requirements

The term DESIGN DOSSIER is a defined term as per sub-article 2.1 of the AGREEMENT, it describes minimum basic principles and requirements for the WORK and the PLANT.

The DESIGN DOSSIER (except for RELY UPON INFORMATION listed in Exhibit E Annex-8) is provided without any warranty from the COMPANY. The EPC CONTRACTOR has endorsed the DESIGN DOSSIER, sub-article 13.4 of the AGREEMENT and Annex-5 (Design Endorsement Certificate) of the AGREEMENT refer.

The EPC CONTRACTOR shall utilize the DESIGN DOSSIER, updated as per Exhibit A Section 9.4 (Verification and Updating of Data and Information) as a starting point for the WORK, subject to the other terms and requirements of the CONTRACT.

5.3 Standardization

Selection of EPC or T&I CONTRACTOR ITEMS shall be standardized:

- a) so as to avoid of risk of incidents due to mixed systems and non-interchangeable components,
- b) to allow optimization of stock inventory and maintenance
- c) and allow interchangeability of equipment, components and materials special tools and spare parts between the PLANT and
- d) to be standardize the existing facilities.

For clarity, standardize also means making things of the same type the same basic features. Standardization shall be applied for WORK, such as engineering, construction, procurement, installation, commission and relevant part as specified including vendor packages (make/model selection, refer to Exhibit J), design layout, material handling study, PLANT operation & maintenance, spare part management, etc.

5.4 EPC and T&I CONTRACTOR DOCUMENTS

5.4.1 General Requirements

All EPC CONTRACTOR DOCUMENTS shall be prepared, submitted and updated in full compliance with the requirements of:

- a) This Exhibit A and Exhibit A Annex-1
- b) 10008-STD-6-GEN-002-R01 Coding Protocol for Project Document and Drawing
- c) 10008-STD-6-GEN-004-R00 Minimum Requirements for Contractor's Documentation
- d) 10008-STD-6-GEN-008-R00 Coding Protocol for Facility Equipment Numbering
- e) 10008-STD-6-DWG-001-R00 AutoCAD Standard and Procedures
- f) PEGS-0710-DWG-002-R00 Standard Symbols and Legend for P&ID

- g) Exhibit G Co-ordination Procedure Requirements
- h) the other applicable terms and requirements of the CONTRACT

Unless otherwise agreed by the PARTIES, all EPC and T&I CONTRACTOR DOCUMENTS shall be submitted via PROJECT EDMS. Technical EPC and T&I CONTRACTOR DOCUMENTS shall be prepared and submitted in accordance with the Exhibit A Annex-1 APPROVAL Process.

5.4.2 English Language

All EPC and T&I CONTRACTOR DOCUMENTS shall be in the English language unless a particular drawing or document needs to be in Thai or another language in which case the EPC and T&I CONTRACTOR shall provide a translation from an APPROVED certified translator.

5.4.3 Ownership and Use of EPC CONTRACTOR DOCUMENTS

Subject to AGREEMENT sub-article 46.2 (title on EPC and T&I CONTRACTOR DOCUMENTS) and AGREEMENT article 45 (INTELLECTUAL PROPERTY RIGHTS and Patent Infringement) all EPC and T&I CONTRACTOR DOCUMENTS except those are specific to EPC or T&I CONTRACTOR's normal operations and have not been specially developed in connection with the WORK, shall, as of commencement of the WORK thereon, including native files, become COMPANY's property and shall be delivered to the COMPANY immediately.

5.5 **Master Documents and Deliverables Register**

The EPC and T&I CONTRACTOR shall prepare and submit a fully developed MDDR no later than thirty (30) days after the EFFECTIVE DATE for APPROVAL.

The MDDR shall comprise a comprehensive list of proposed and actual Technical Documents together with document number, document title, planned and actual submission dates, return dates, APPROVAL status / code, and sub-divided by Work Category and Work Package. The minimum EPC and T&I CONTRACTOR document shall refer to Exhibit A, Annex1. The MDDR shall also identify early FINAL DOCUMENTATION required for issuance of HANDOVER CERTIFICATES and any other necessary information.

Any changes to the MDDR shall be subject to COMPANY APPROVAL.

5.6 **Close Out of Basic Engineering Open Action or Transfer to Next Phase Items**

The EPC and T&I CONTRACTOR shall perform all WORK as required to close out the Basic Engineering Open Action or Transfer to Next Phase Items from DESIGN DOSSIER, including but not limited to those listed in Exhibit E Annex-3 and Annex-4, for example; HAZID close out report, HAZOP close out report, SIL close out report, PTR#2 close out report for OWHP, PTR#3 close out report for GWHP, Hold Register, and etc. Close out shall be subject to the Exhibit A Annex-1 submission and APPROVAL process.

The EPC and T&I CONTRACTOR shall track progress of the close out Action Items in Technical Actions Database and submit Actions Close out Report for APPROVAL. Each closed out item shall be supported by signed worksheets supplemented with evidence of what action has been taken and COMPANY APPROVAL.

5.7 **PROJECT Kick Off Meetings, Technical and Progress Reviews**

5.7.1 Kick-off Meetings

An overall PROJECT Kick-Off Meeting to be held in COMPANY office in Bangkok or other locations as maybe agreed no later than fourteen (14) days after the EFFECTIVE DATE. Attendees shall be COMPANY, EPC CONTRACTOR Representatives, T&I CONTRACTOR Representatives and related PERSONNEL.

Separate Kick-off meetings shall be convened for each of the following disciplines:

- a) Project management and project controls
- b) Quality management
- c) SSHE management
- d) Engineering and design
- e) Procurement and supply activities
- f) Each item of packaged equipment and tagged items
- g) Onshore construction, fabrication, pre-commissioning, commissioning
- h) Load-out operation
- i) Interface management
- j) Brownfield modification
- k) MARINE SPREAD
- l) Load-out and Offshore Transportation
- m) Offshore installation (wellhead platform)
- n) Offshore installation (pipelines and tie-ins)
- o) Brownfield modifications and tie-ins

The purpose of each Kick-off meeting is for the EPC CONTRACTOR and/or T&I CONTRACTOR to present and explain at an early stage and before commencement of the applicable WORK, his understanding of the WORK, the proposed approach, compliance with technical, contractual and other requirements, applicable procedures, resources, preparedness and readiness.

The EPC and T&I CONTRACTOR shall submit a copy of each kick-off meeting presentation to the COMPANY for information no later than five (5) working days before the date of the applicable kick-off meeting.

The EPC and T&I CONTRACTOR shall prepare and submit minutes of kick off meetings to the COMPANY for review, comment and approval, no later than 48 hours after each meeting.

5.7.2 PROJECT Technical Review 3 (PTR3)

PTR3 shall be done by COMPANY's PTR 3 Team as per Project Technical Review Guideline SSHE-106-GDL-703 towards the end of the detailed engineering design.

The EPC and T&I CONTRACTOR's duties obligations and responsibilities in relation with PTR 3 are to:

- a) Provide the PTR 3 deliverables listed Project Technical Review Guideline SSHE-106-GDL-703 for review by the COMPANY (number of copies and type to be advised).
- b) Attend the opening and closing sessions of the PTR 3 review meeting.
- c) Respond promptly to questions raised by PTR team and Provide technical clarification / explanation, if and to the extent required.
- d) Implement PTR 3 EPC and T&I CONTRACTOR Action Items promptly including all related required and necessary WORK. The CHANGE ORDER process shall be followed for PTR 3 Action Items that are not part of the required or necessary WORK as per CONTRACT requirements i.e. preferential.

- e) Track progress of the close out of EPC and T&I CONTRACTOR PTR 3 Action Items in Technical Actions Database and submit PTR 3 Actions Close out Report for APPROVAL. Each action item closed out shall be supported by signed worksheets supplemented with evidences of what action has been taken and COMPANY APPROVAL.

5.7.3 PROJECT Technical Review 4 (PTR4)

The COMPANY may conduct PTR 4 in accordance with the requirements of Project Technical Review Guideline SSHE-106-GDL-703 at the start of the pre-commissioning / commissioning stage.

This notwithstanding the EPC and T&I CONTRACTOR shall as part of the WORK support the PTR 4 process, provide PTR 4 deliverables that are EPC and T&I CONTRACTOR DOCUMENTS (number of copies and type to be advised) and shall make available EPC and T&I CONTRACTOR PERSONNEL to respond promptly via telephone link to questions raised by PTR team.

5.7.4 Other Technical, Readiness, Progress Reviews / Audits

From time to time during the period of the performance of the WORK, the COMPANY may request and the EPC and T&I CONTRACTOR shall arrange and attend any other technical and or progress reviews. Those are required to verify the progress and or compliance with technical and other requirements of the CONTRACT.

The EPC and T&I CONTRACTOR shall allow full and unrestricted access for COMPANY PERSONNEL for such reviews and shall make all requested information, EPC and T&I CONTRACTOR DOCUMENTS and EPC and T&I CONTRACTOR PERSONNEL available.

The EPC and T&I CONTRACTOR shall also nominate a person to act as an audit coordinator in each audit, who shall be responsible for administering, agreeing and following-up corrective actions in a timely manner until close out completion of all items in a timely manner.

5.7.5 Tracking and Close Out of Technical, Readiness and Progress Review Actions

The EPC and T&I CONTRACTOR shall track the status of EPC and T&I CONTRACTOR, VENDOR, SUPPLIER and EPC and T&I CONTRACTOR action items by means of a Technical Actions Tracking Register which shall include PTR, technical and other action items as well as target close out dates and status.

The format and content of the Technical Action Tracking Register shall be proposed by the EPC and T&I CONTRACTOR for APPROVAL. The EPC and T&I CONTRACTOR shall update the Technical Action Tracking Register during the performance of the WORK and shall submit the updated register every two weeks to the COMPANY for information.

5.8 **Care and Custody of EPC CONTRACTOR ITEMS, T&I CONTRACTOR ITEMS and Results of the WORK**

The EPC and T&I CONTRACTOR shall inventory, maintain and protect all EPC CONTRACTOR ITEMS, T&I CONTRACTOR ITEMS and from the time of receipt until acceptance of the completed WORK, onshore and/or offshore as applicable. The EPC and T&I CONTRACTOR shall be responsible for any losses, deterioration or damage that may occur until the COMPANY has accepted the PLANT.

Transportation, handling, preservation, storage and installation of EPC and T&I CONTRACTOR ITEMS and COMPANY ITEMS shall be done in conformance with VENDORS recommendations and requirements. In particular, fragile and/or sensitive equipment such as instruments and etc., shall be stored in totally enclosed and air-conditioned rooms.

5.9 WORK Descriptions

Notwithstanding any omission from and/or defective description of the WORK, work activities and operations and/or of the PLANT in the CONTRACT DOCUMENTS, all operations, activities and everything required and necessary for the timely and correct performance of the WORK and the correct and timely completion of the PLANT in accordance with the CONTRACT shall be deemed to be included within the Initial CONTRACT PRICE.

5.10 Deviations, Alternatives and Substitutions.

The EPC and T&I CONTRACTOR shall not deviate from, not substitute and shall not provide an alternative to any of the CONTRACT requirements and or obligations of the EPC and T&I CONTRACTOR unless such proposed deviation or substitution, or alternative has been formally requested by the EPC and T&I CONTRACTOR and approved in writing by the COMPANY as per Technical Query (TQ) process Exhibit G Annex-9 (Control of Deviations and Non-Conformances) and Exhibit H Section 1.7 (Control of Deviations, Non-Conformances and Corrective Actions).

5.11 Access for COMPANY PERSONNEL

In addition to the specific requirements in Exhibit H, the EPC and T&I CONTRACTOR shall provide safe secure access for COMPANY PERSONNEL at all places, activities and documents and drawings concerned with the onshore fabrication WORK including but not limited to routine surveillance, inspections, tests, quality audits, pre-commissioning, commissioning, acceptance tests including FAT, SAT, reviews, audits, etc.

The EPC and T&I CONTRACTOR shall thoroughly clean the WORK to be inspected of all excess and waste materials, such as abrasive, slag, welding electrodes and the like, and shall advance notify COMPANY with sufficient time prior to inspection according to Section 1.8.8 of Exhibit H.

5.12 Planning, Scheduling and CONSTRAINTS

The WORK, the WORK TIME SCHEDULE and the APPROVED Detailed Work Time Schedules shall and are deemed to include for all of the EPC and T&I CONTRACTOR's obligations, risks and CONSTRAINTS, contingencies, and anything else necessary for the timely and correct performance of the WORK and the timely and correct completion of the PLANT in accordance with the requirements of AGREEMENT article 15 (WORK TIME SCHEDULE and Progress Control), this Exhibit A, Exhibit C, Exhibit G Annex-5 and the other terms of the CONTRACT.

6.0 PROJECT Management

6.1 General Requirements

The EPC CONTRACTOR shall effectively plan, schedule, monitor, control, co-ordinate all interfaces with T&I CONTRACTOR or external parties, manage the performance and implementation of the WORK and CONSTRAINTS for the duration of the CONTRACT in accordance with the requirements of the CONTRACT and APPLICABLE LAWS.

The EPC CONTRACTOR shall ensure that his management strategy implemented for the PROJECT includes for all risks and the principles of continuous improvement and learning from within the EPC CONTRACTOR's own organization and industry best practices.

6.1.1 EPC CONTRACTOR REPRESENTATIVE

- a) The EPC CONTRACTOR shall appoint and maintain a EPC CONTRACTOR REPRESENTATIVE as the main focal point with the COMPANY for all matters in connection with and arising from the CONTRACT, WORK and PLANT. Articles 9 (EPC CONTRACTOR REPRESENTATIVE) and sub-article 55.2 (address of EPC CONTRACTOR REPRESENTATIVE) refer.
- b) The EPC CONTRACTOR shall appoint a Deputy Contractor Representative at each WORKSITE and for each Major SUBCONTRACTOR.
- c) The EPC CONTRACTOR shall appoint a Deputy Contractor Representative at SITE for the activities such as Wellhead Platform Installation, punch walk prior hand over Wellhead Platform to COMPANY, verify the return transportation barge condition, etc. The frequency and duration to work on T&I accommodation barge/vessel shall be adjusted as necessary during the actual situation during execution.

6.1.2 Overall Project Execution Plan

The EPC CONTRACTOR shall prepare and submit a fully developed PROJECT Execution Plan no later than thirty (30) days after the EFFECTIVE DATE for APPROVAL.

The PROJECT Execution Plan shall, describe and provide details of the WORK to be performed, the PROJECT objectives, key success factors, the EPC CONTRACTOR's Organization, the proposed execution strategy (high level) for all phases of the WORK including subcontractors, Interfacing Matrix, activities / tasks, project certification plan, applicable principles and requirements and a list of other procedures and plans the EPC CONTRACTOR will produce for the WORK.

6.1.3 WORK Locations

The EPC CONTRACTOR shall, as a minimum, provide and maintain the WORK Locations that are described in Exhibit K.

The EPC CONTRACTOR shall prepare and submit, as part of Project Execution Plan, comprehensive and fully developed details and plans for each of the locations listed below and to be utilized for the performance of the WORK.

- a) Project Management Office (Main Project Office)
- b) Engineering Office
- c) Procurement Services & Supply Office
- d) Onshore Construction Yards (Fabrication Yards) and Load Out Port

The details and plans for each location shall describe and explain the WORK to be performed at each location, the planned duration, layouts, and proposed arrangements including, but not limited to, the facilities for PERSONNEL the CONSTRUCTION EQUIPMENT, EPC CONTRACTOR ITEMS, COMPANY ITEMS and the performance of the WORK at the locations.

6.1.4 Organization and Resources at WORK Locations

The EPC CONTRACTOR shall as a minimum and subject to the other terms and provisions of the CONTRACT provide at each WORK Location; the Management Organizations as per Exhibit K and all required and necessary qualified and experienced; EPC CONTRACTOR PERSONNEL, SUBCONTRACTOR PERSONNEL, VENDOR and SUPPLIER Representatives, CONSTRUCTION EQUIPMENT and all other things whatsoever.

6.1.5 Load Out Operation

During Load Out operation, the EPC CONTRACTOR shall establish effective communication between EPC CONTRACTOR, T&I CONTRACTOR, Marine Warranty Surveyor, Project Management Offices, Engineering office(s), WORKSITES and Transportation Barge which shall be available twenty-four (24) hours per day throughout the duration of the WORK.

6.1.6 Security at WORKSITE Locations

The security for above locations shall be the sole responsibility of EPC CONTRACTOR. The EPC CONTRACTOR shall provide 24 hours security coverage (week-ends and Public Holidays included) to cover all locations, where the WORK is performed and/or documentation and/or electronic data and/or other items in any way connected with the WORK are kept. Security coverage shall be carried out day and night by a dedicated team of at least two or more experienced security officers per locations.

6.1.7 Meetings

Coordination meetings shall be arranged during PROJECT execution to allow PARTIES to discuss, technical/ progress, interface and to review, address all PROJECT matters, update PROJECT status, etc. Details of the meeting is referred to Exhibit G Annex-1 (Communication).

6.1.7.1 Weekly/ Monthly Project Management Meeting

The EPC CONTRACTOR shall arrange and conduct a Weekly/Monthly Project Management Meeting to be attended by COMPANY, EPC and T&I CONTRACTOR REPRESENTATIVES, Project Manager, Project Controls Leads, Project Safety Managers and other concerned PERSONNEL. The purpose of the meeting is monitor and review progress of project management, interface management, project controls and safety management activities e.g. engineering, procurement, fabrication, QA/QC, SSHE and etc., to identify and discuss areas of concern and align on remedial actions required.

6.1.7.2 Weekly Engineering and Procurement Meetings

The EPC CONTRACTOR shall arrange and conduct weekly engineering and weekly procurement meetings attended by EPC CONTRACTOR, T&I CONTRACTOR and COMPANY PERSONNEL.

The purpose of such meetings is to monitor and review progress of Engineering and Procurement activities and to identify and discuss technical and other concerns and delays for VENDOR and subcontracted WORK.

The EPC CONTRACTOR shall propose remedial and mitigation actions and solutions for technical, other concerns and delays to the COMPANY for consideration and APPROVAL. In addition, if the technical and other concerns and delays are not resolved expeditiously and in a timely manner and/or not be effective, the EPC CONTRACTOR shall arrange review and clarification meetings with VENDORS and or SUBCONTRACTORS, as the case may be, for such technical and other concerns and delays and shall invite the COMPANY to participate. All costs and expenses for attendance at such meetings shall be borne by the EPC CONTRACTOR.

The EPC CONTRACTOR shall provide the COMPANY with copies of related correspondence and a copy of the related minutes of meetings.

6.1.7.3 Other Meetings

In addition to regular project meeting, meetings may be held at EPC CONTRACTOR'S or COMPANY'S request on specific matters i.e. QA/QC meeting, Interface meeting with VENDOR/SUPPLIER, interface meeting with T&I CONTRACTOR or ad-hoc meeting as and when required.

6.2 **PROJECT Controls**

The EPC CONTRACTOR shall effectively implement in a timely manner detailed project control activity applicable to all phases of the WORK, covering all aspects of planning, scheduling, progress monitoring and progress reporting for:

- a) Project Management & Services
- b) Engineering
- c) Procurement Services and Supply
- d) Onshore Construction
- e) Pre-commissioning/ Commissioning
- f) Load out
- g) Interface management with T&I CONTRACTOR
- h) All other aspect of the WORKS
- i) administration and PROJECT reports including but not limited to:
- j) correspondence
- k) minutes of meetings,
- l) daily progress updates,
- m) weekly progress reports,
- n) monthly progress reports,
- o) other periodic and ad hoc reports
- p) MDDR and reporting progress and status of EPC CONTRACTOR DOCUMENTS
- q) management of change (MOC)
- r) technical queries/ deviation
- s) services and facilities for COMPANY PERSONNEL
- t) cost control and cost reporting
- u) accrual payment and look ahead progress
- v) invoicing and payments
- w) CHANGE ORDERS related issues
- x) ad hoc reports and all other required and necessary PROJECT Control activities

All the above activities shall be comprehensibly explained and described in the PROJECT Execution Plan and or applicable plans and procedures.

6.3 PROJECT Risk Management

The EPC CONTRACTOR shall develop to cover all aspects including interface management risk between EPC and T&I CONTRACTOR and implement a PROJECT Risk Management System generally in accordance with COMPANY Specification.

The purpose of the PROJECT Risk Management System is to identify issues, threats and risks, assess impact, criticality and severity and also appropriate / necessary corrective actions and mitigations for all phases of the WORK including SSHE.

The EPC CONTRACTOR shall develop, maintain and update a PROJECT Risk Register and a PROJECT Risk Register Database on a monthly basis and submit for COMPANY Review.

The EPC CONTRACTOR shall institute corrective action and monitor and report effectiveness for corrective actions and slippages against Detailed Work Time Schedule activities.

A fully developed PROJECT Risk Management Procedure shall be submitted for APPROVAL no later than thirty (30) days after the EFFECTIVE DATE.

The EPC CONTRACTOR shall provide adequate resources and training to ensure that PROJECT Risk Management and reporting is effectively implemented. Risk control shall be an agenda point in PROJECT meetings with the PROJECT Risk Register reviewed and updated on a regular basis by the EPC CONTRACTOR.

6.4 Communications

6.4.1 PROJECT Correspondence and Document Control Procedure

The EPC CONTRACTOR shall prepare and submit a comprehensive PROJECT Correspondence and Document Control Procedure for Technical Documents and Correspondence no later than fourteen (14) days after the EFFECTIVE DATE for APPROVAL.

The PROJECT Correspondence and Document Control Procedure shall fully and in all respects comply with the requirements of the CONTRACT and it shall set forth an orderly, clear and effective manner the basis for numbering, communication, submission, APPROVAL process, monitoring, controlling and the reporting of communications and EPC CONTRACTOR DOCUMENTS between the PARTIES under the CONTRACT.

The EPC CONTRACTOR may use his own Company procedure, altered, adapted and upgraded as may be required and necessary.

Refer also to AGREEMENT sub-article 14.4 (EPC CONTRACTOR DOCUMENTS, Exhibit A Section 5.4 (EPC CONTRACTOR DOCUMENTS), Exhibit A Section 6.5 (Co-ordination and interface management), Exhibit A Annex-1 (Procedure and Minimum List for CONTRACTOR DOCUMENTS), Exhibit G Annex-1 (Communications) and the other applicable terms and requirements of the CONTRACT.

Correspondence and Technical EPC CONTRACTOR DOCUMENTS shall have the meanings ascribed to hem in Exhibit A Annex-1 (Procedure and Minimum List for CONTRACTOR DOCUMENTS).

6.4.2 Electronic Data Management System (EDMS)

Submission of all EPC CONTRACTOR DOCUMENTS, COMPANY responses and correspondence between the PARTIES shall be done using COMPANY's EDMS.

Training courses for EPC CONTRACTOR's document controllers in the use of EDMS will be provided by the COMPANY on a free of charge basis. All other costs and expenses whatever for EPC CONTRACTOR's document controllers to attend the EDMS training (such as, but not limited to, transportation, accommodation, air fares, etc.) shall be borne by the EPC CONTRACTOR.

6.4.3 ICT and Software

The EPC CONTRACTOR shall provide and maintain a complete technical ICT infrastructure for the performance of the WORK and shall ensure this includes adequate bandwidth, redundancy, security and disaster recovery planning so that there is no circumstance under which project delays can occur due to data loss or systems down-time. EPC CONTRACTOR shall also manage the interfacing with COMPANY ICT as and when required for the ICT system set up.

The EPC CONTRACTOR shall ensure and if requested demonstrate that data integrity between current and backup databases are maintained correctly at all times.

The EPC CONTRACTOR shall also provide and utilize the software types listed in Exhibit A Annex-2, these and all other software utilized for the WORK shall be officially licensed, be of the latest version and industry standard. Validation records shall be provided to COMPANY on request.

6.4.4 Emails

All emails shall be considered as a verbal communication and subject to the applicable CONTRACT terms for verbal communications. Unless an email is confirmed in writing by letter within 48 hours of receipt then the subject matter and content of such email will not be binding on either party and will not be considered as formal correspondence under the CONTRACT and may not be used by either party as supporting documentation in future correspondence relating to the subject matter of the e-mail.

6.5 **Co-ordination and Interface Management**

The EPC CONTRACTOR shall effectively manage and co-ordinate in a timely manner interfaces arising from and or in connection with the WORK.

The EPC CONTRACTOR shall prepare and submit a comprehensive Interface Management Plan describing how and in what manner the above interfaces (internal, external and with third parties) requirements shall be effectively implemented, managed, monitored and progress and status reported. Detail of PROJECT Interface Management shall be comprehensibly explained and described in the PROJECT Execution Plan.

The EPC CONTRACTOR shall implement all actions required and or necessary so that the WORK shall be performed in a correct and timely manner in accordance with this Exhibit A, Exhibit A-Annex 10, Exhibit C and the terms of the CONTRACT.

In the event that some activities missing from the interface matrix, but such activities are logically determined or specified the responsible party who shall responsible for such activities. COMPANY shall reasonably and reserve its right to final call for the responsible party to include such activities in his scope of WORK.

6.5.1 Internal Interfaces

Internal interfaces are those under the direct control of the EPC CONTRACTOR, for example;

- a) VENDORS / SUPPLIERS
- b) SUBCONTRACTORS
- c) EPC CONTRACTOR's associates and affiliates

Internal interfaces are those within the EPC CONTRACTOR's own Project Organization. The EPC CONTRACTOR shall, throughout the entire duration of the CONTRACT, effectively and in a timely manner manage and co-ordinate all internal interfaces between and with all work groups and all EPC CONTRACTOR PERSONNEL involved in the performance of the WORK.

6.5.2 External Interfaces

External interfaces are those where it is necessary to exchange information, responsibilities, and actions require with agree time frame with the any of the following parties for and/or in connection with the performance of the WORK:

- a) T&I CONTRACTOR
- b) Other contractors
- c) COMPANY
- d) MWS

The responsibilities of the interfaces between EPC and T&I CONTRACTOR are defined in the Annex 10 of Exhibit A and Exhibit C as the guideline for further development detailed interface management during execution.

Identifying, specifying and resolving all interface matters, such as the type of information needed by and from parties shall be an integral part of EPC and T&I CONTRACTOR scope of WORK. EPC and T&I CONTRACTOR shall prepare the design, planning, scheduling or other work required for progressing the resolution of such interface matters.

EPC CONTRACTOR shall be responsible for the management and co-ordination of all external interfaces associated with the WORK. These interfaces cover detailed engineering, procurement, onshore construction, pre-commissioning until load out operation completion. Transportation and installation shall be responsible by T&I CONTRACTOR. However, interfaces activities include those areas where EPC CONTRACTOR take as Performer who shall follow up and request the information or material from T&I CONTRACTOR, as Consultant who shall provide the information or supply the material to T&I CONTRACTOR as the timeline specified in Exhibit C or exchange information during execution with T&I CONTRACTOR or other parties for carrying out the WORK. Fail to take actions as the requirement mentioned in Exhibit A, Annex 10 and Exhibit C, the default party shall bear the cost or expense in accordance with the obligation of Sub Article 14.15 of the AGREEMENT.

EPC CONTRACTOR shall ensure timely issue of drawings and documents as requested by T&I CONTRACTOR including COMPANY's other Contractors and be responsible for the review of all engineering work associated with the interface to ensure that the final design is in accordance with his own engineering WORK. EPC CONTRACTOR will be required to attend regular interface meetings and implement a comprehensive interface action tracking and closure procedure.

EPC CONTRACTOR shall allow T&I CONTRACTOR representative to access EPC CONTRACTOR's WORKSITE to perform part of his WORK in accordance with the requirement in the CONTRACT.

6.5.3 Third Parties

Third parties are those necessary for exchange information with the any of the following parties for and/or with authorization/ APPROVAL for and/or in connection with the performance of the WORK:

- a) GOVERNMENT
- b) Anyone else other than external and internal interfaces listed above.

Generally, EPC CONTRACTOR shall manage the contact with Third Party(s) and GOVERNMENT as and when applicable to complete the WORK. On a case by case basis, COMPANY, which may at its sole option, direct the EPC CONTRACTOR, to have direct contact with the interfacing party on conditions as set down by COMPANY and/or via COMPANY.

6.5.4 Interface with T&I CONTRACTOR

The interface scope of WORK between EPC CONTRACTOR and T&I CONTRACTOR is according to Exhibit A Annex-10: Interface and Responsibility Matrix between EPC CONTRACTOR and T&I CONTRACTOR.

6.6 **Services and Facilities for COMPANY PERSONNEL**

The EPC CONTRACTOR shall provide services and facilities for COMPANY PERSONNEL to the extent requested by the COMPANY. The nature and type of facilities that may be requested by the COMPANY is attached as Exhibit A Annex-7.

These are sub-divided by type i.e. those services and facilities which are priced on a lump sum basis and those which are subject to Call-Off process.

For the Call-off process, the COMPANY shall instruct the EPC CONTRACTOR as to the actual quantities and types of services and facilities to be provided. The EPC CONTRACTOR shall not provide a service or facility for COMPANY PERSONNEL unless the COMPANY has issued an applicable Call-off order.

The PARTIES shall record and document provision on monthly basis and the end of each services and or facility.

The EPC CONTRACTOR shall be compensated for actual provision and maintenance of Call-off process services in the manner stipulated in Exhibit B.

The Lump Sum Prices for Services to the COMPANY identified as such in Exhibit B Annex-7 shall not subject to price adjustment.

6.7 **Project Close Out Report**

The EPC CONTRACTOR shall prepare and submit as part of FINAL DOCUMENTATION a fully developed and comprehensive PROJECT Close out Report. The format of the PROJECT Close out Report shall be proposed for APPROVAL.

The EPC CONTRACTOR shall organize and provide relevant PERSONNEL for lesson learned workshop for project close out.

The PROJECT Close out Report shall include as a minimum all of the information stated in SPECIFICATION 10008-STD-6-GEN-004 (Minimum Requirements for EPC CONTRACTOR's Documentation) and shall also include cost information including all priced POs of type and format to interface with the COMPANY Estimating Systems.

The EPC CONTRACTOR shall provide the summary priced table of all package items, tagged items, and bulk materials as part of the FINAL DOCUMENTATION. The COMPANY may request and the EPC CONTRACTOR shall provide COMPANY access to and sight of the back-up documents, subcontracts, Purchase Order, etc.

6.8 Disposal of Scrap and Unused EPC CONTRACTOR ITEMS

Disposal and scrap of unused EPC CONTRACTOR ITEMS are solely responsible by EPC CONTRACTOR. Of which any items imported or related to Government, it shall be handled and subject to government approval and APPLICABLE LAW.

The EPC CONTRACTOR shall be fully responsible for all activities and costs incurred on such surplus and scrap EPC CONTRACTOR ITEMS that are disposed in or removed from WORKSITES. Such surplus and scrap shall be separated, managed and controlled for each development Asset (e.g. Arthit, G8/50, G1/61 or G2/61). This shall be read in conjunction with AGREEMENT 14.5.

Regarding T&I CONTRACTOR ITEMS if require to keep or use at EPC WORKSITE in order to support EPC CONTRACTOR performance, the EPC CONTRACTOR shall be fully responsible for all activities and costs incurred on such surplus and scrap of T&I CONTRACTOR ITEMS until handover it to T&I CONTRACTOR.

7.0 SSHE Management of WORK Performance

The EPC CONTRACTOR shall develop and implement a PROJECT specific SSHE MS for the WORK and the PLANT which shall as a minimum comply with the SSHE Requirements described in Exhibit L, article 24 of the AGREEMENT, APPLICABLE LAWS, and the other terms and requirements of the CONTRACT.

The EPC CONTRACTOR may utilize his own Company SSHE MS however such system shall be upgraded by the EPC CONTRACTOR specifically for the WORK and the PROJECT. The EPC CONTRACTOR shall propose the SSHE MS and SSHE MS documentation to the COMPANY for APPROVAL. All as further described and explained in Exhibit L.

8.0 Quality Management

8.1 General Requirement

The EPC CONTRACTOR shall effectively manage and implement Quality Management for all aspects of the WORK and the PROJECT in compliance with ISO 9001 or 29001 requirements, Exhibit H, APPLICABLE LAWS and the other provisions of the CONTRACT.

The EPC CONTRACTOR shall impose and implement like Quality Management on VENDORS, SUBCONTRACTOR and to the extent applicable, on third parties and SUPPLIERS.

8.2 Project Quality Plan

The EPC CONTRACTOR shall develop and maintain a PROJECT Quality Plan as required by Exhibit H. The PROJECT QUALITY PLAN shall describe how QA/QC will be implemented for the WORK and the PLANT and shall contain a list of QA/QC procedures and plans the EPC CONTRACTOR will produce for the WORK including but not limited to the QA / QC plans and procedures listed in Exhibit A Annex-1.

8.3 Independent Inspection and Certification

8.3.1 Selection and Appointment

Selection and appointment of the Independent Third Party Inspection / Certifying Authority shall be made in accordance with the following requirements and shall be subject to prior written approval by the COMPANY

- a) AGREEMENT article 11 SUBCONTRACTOR and VENDORS
- b) Exhibit J (List of VENDORS and SUB CONTRACTORS),
- c) Exhibit G Annex-2 (Procurement and Material Control),
- d) Exhibit H (Quality Management)
- e) the other terms and requirements of the CONTRACT.

The Independent Third Party Inspection Agency shall be accredited to ISO/IEC 17020 “Type A”, subjected to the below requirements and COMPANY approval.

8.3.2 Independent Engineering Review

Not Used.

8.3.3 Independent Third Party Inspection and Certifying Authority

The EPC CONTRACTOR shall employ a competent, experienced and qualified Independent Inspection and Certification Agency to inspect, verify, witness, review and certify:

- a) EPC CONTRACTOR ITEMS including but not limited to pedestal cranes, lifting pad eyes, pressure vessel, helideck etc., and
- b) Any other to inspection, verification, witnessing, reviews and certification required to be performed by Independent Third Party Inspection Agency

as per the terms and requirements of the CONTRACT and or APPLICABLE LAWS

8.3.4 EPC CONTRACTOR Responsibilities

The EPC CONTRACTOR shall co-ordinate the activities of the Independent Third Party Inspection Agency and shall provide in a timely manner all necessary and or requested documents and other information, as well office accommodation and facilities, and safe access

for his PERSONNEL to review and/or inspect the WORK, the RESULT OF THE WORK, and CONSTRUCTION EQUIPMENT.

The EPC CONTRACTOR shall comply with Independent Third Party Inspection Agency comments, recommendations and findings without limitation or restriction to the EPC CONTRACTOR's obligations, responsibilities and liabilities under the CONTRACT.

Any aspects of the EPC CONTRACTOR DOCUMENTS/WORK identified by the Independent Third Party Inspection Agency or the COMPANY that do not comply with the requirements of the CONTRACT shall be rectified by EPC CONTRACTOR at his own cost and expense.

8.4 Marine Warranty Surveyor

8.4.1 Selection and Appointment

The T&I CONTRACTOR shall engage the services of an independent Marine Warranty Surveyor, who shall perform Marine Warranty Surveyor WORK to be performed for both the EPC WORK and the T&I WORK.

8.4.2 Marine Warranty Surveyor (MWS) Scope of WORK

The MWS shall perform the WORK ascribed to the MWS as per the requirements of:

- a) Sub-article 16.3 of the AGREEMENT
- b) Exhibit A Section 8.4 (Marine Warranty Surveyor),
- c) Exhibit A Annex 4 (Marine Warranty Surveyor Scope of WORK)
- d) Exhibit A Annex 10 (Interface Matrix) and
- e) the other terms and requirements of the CONTRACT.

8.4.3 EPC CONTRACTOR Responsibilities and Obligations

The EPC CONTRACTOR shall perform at his own cost and expense, all required and necessary WORK to support and facilitate the performance of EPC WORK related Marine Warranty Surveyor activities, including but not limited to provision of T&I CONTRACTOR DOCUMENTS for review and approval, safe, clear, clean access for inspections, office accommodation at onshore WORKSITES, onshore transport, accommodation, messing and laundry etc., where applicable).

The EPC CONTRACTOR shall provide no less than fourteen (14) days notice to the MWS (plus a copy to the T&I CONTRACTOR) for MWS inspections at WORKSITES.

The EPC CONTRACTOR shall comply in a timely manner with all Marine Warranty Surveyor Requirements (recommendations, instructions, directions, conditions in Marine Warranty Certificates, etc.) without any additional cost and or expense to the COMPANY.

Any aspects of the EPC WORK identified by the MWS and/or the COMPANY that do not comply with the requirements of the CONTRACT or are necessary shall be rectified by the EPC CONTRACTOR in a timely manner at his own cost and expense.

No Load Out Operations, no Marine Transport Operations and no SITE Installation Operations shall be initiated / commenced before written approval / certification by the Marine Warranty Surveyor. A minimum list of such required approvals and certificates is provided in Exhibit A Annex-4 Attachment-2

9.0 Engineering

9.1 General Requirements

The EPC CONTRACTOR shall perform all required and necessary engineering for the correct and complete detailed definition of the WORK and the PLANT in accordance with the terms and requirements of the CONTRACT and APPLICABLE LAWS.

The interface scope of WORK between EPC CONTRACTOR and T&I CONTRACTOR, EPC CONTRACTOR shall refer to Interfacing Matrix from Exhibit A Annex 10.

COMPANY will provide the native files including AutoCAD Files, PDMS Model, Engineering Analysis (i.e. pipeline hydraulic steady, topside steady state, radiation/dispersion, piping stress analysis input) for EPC CONTRACTOR to use as for his reference and further develop his Detailed Engineering WORK and to optimize his Detailed Engineering man-hours without any liability or obligation, whatsoever on the part COMPANY.

9.1.1 Work Package 1

EPC CONTRACTOR's scope of WORK for detailed engineering shall include but not limit to:

- Generic Design of Gas Wellhead Platform⁽¹⁾
- Generic Design of Oil Wellhead Platform
- Particular Design of Gas Wellhead Platform
- Particular Design for Oil Wellhead Platform

COMPANY will provide the latest Detailed Engineering package of Gas Wellhead Platform (GWHP) and Basic Engineering package of Oil Wellhead Platform (OWHP) in Exhibit E Annex-1 and Annex-2 as part of DESIGN DOSSIER for the basis of CONTRACTOR's proposal. However, COMPANY will hand over the complete Detailed Engineering package for GWHP which contains Generic Design of GWHP to EPC CONTRACTOR for further develop particular Detailed Engineering no later than thirty (30) days after the EFFECTIVE DATE.

Note:

- (1) EPC CONTRACTOR shall perform only generic design of Jacket for Gas Wellhead Platform only and the design case shall refer to Section 9.8.6.1. The other part of generic design of Gas Wellhead Platform shall refer to Exhibit E, Annex-1
- (2) Generic Design means engineering WORK that EPC CONTRACTOR shall perform only one time and can be used such design for next PLATFORMS or PHASE.
- (3) Particular Detailed Engineering means minimum engineering WORK that EPC CONTRACTOR shall perform by utilizing the RELY UPON INFORMATION such as GTI, GSI to develop detailed engineering of each Wellhead Platform.
- (4) Incorporate the design input from T&I CONTRACTOR to develop detailed engineering

EPC CONTRACTOR shall exchange and provide information of detailed engineering to T&I CONTRACTOR as the agree timeline in accordance with Exhibit C.

T&I CONTRACTOR shall be responsible for the detailed transportation and installation engineering for Wellhead platform topside, jacket, appurtenances and piled foundations. T&I CONTRACTOR shall exchange and provide information to EPC CONTRACTOR as the agree timeline in accordance with Exhibit C.

9.1.2 Work Package 2

All scope of WORK of this Work Package shall be responsible by T&I CONTRACTOR. However, T&I CONTRACTOR may ask or request the design input from EPC CONTRACTOR time to time that EPC CONTRACTOR shall coordinate and provide such information upon the request or in accordance with the CONTRACT requirement.

9.1.3 Work Package 3

EPC CONTRACTOR's scope of WORK for detailed engineering shall include but not limit to:

- Particular Design of Existing Topside Brownfield Modification

The detailed scope of work shall refer to Section 9.10 in this Exhibit.

In case of optional scope of WORK either Pig receiver and its facilities, deck extension (under EPC CONTRACTOR scope of WORK) or post-installed riser (under T&I CONTRACTOR scope of Work Package 2) are required, EPC CONTRACTOR shall perform the existing Wellhead Platform Verification to ensure that the integrity of existing Wellhead Platform meet with the design requirement.

9.1.4 Work Package 4

EPC CONTRACTOR's scope of WORK for detailed engineering shall include but not limit to:

- Existing Topside Design Verification
- Particular Design of New Jacket, Piles, Boatlanding and appurtenances (similar with Work Package 1)
- Particular Design of Navigation Aids Platform

The detailed scope of work shall refer to Exhibit A, Annex 11.

9.1.5 Work Package 5

All scope of WORK of this Work Package shall be responsible by T&I CONTRACTOR.

9.2 Engineering Software

The EPC CONTRACTOR shall use and comply with the Engineering Software requirements as specified in Exhibit A Annex-2.

9.3 Engineering Execution Plan

The EPC CONTRACTOR shall prepare and submit a fully developed Engineering Execution Plan (overall) for APPROVAL no later than thirty (30) days after the EFFECTIVE DATE.

The Engineering Execution Plan shall, as a minimum:

- a) describe and of how and where the engineering WORK will be performed
- b) the engineering objectives and key success factors
- c) the engineering activities, schedule and manpower plan
- d) engineering execution strategy for all phases of the WORK and APPROVAL process
- e) applicable principles and requirements for engineering documents and drawings
- f) engineering quality assurance and control
- g) third party and facilitated third party engineering studies
- h) list of proposed engineering software

- i) engineering interface management
- j) communication management
- k) engineering reviews
- l) incorporate COMPANY, EPC CONTRACTOR, T&I SUBCONTRACTOR and major SUBCONTRACTORS lessons learned, engineering design variation, design improvement and optimization, Basic Engineering's Opened Action Items of OWHP e.g. HAZID, HAZOP, SIL, Gap Register (Exhibit E, Annex-2), Hold Register (Exhibit E, Annex-3), PTR#2 (Exhibit E, Annex-4), and etc. as applicable

9.4 Verification of Engineering Data and Information

9.4.1 Verification of Requirements Before Commencement of Engineering

Before commencement of detailed engineering design activities, the EPC CONTRACTOR shall carefully verify the contents of the DESIGN DOSSIER, but not the RELY UPON INFORMATION, for completeness and suitability for use in the WORK and for the PLANT.

The EPC CONTRACTOR shall notify the COMPANY in writing of all errors, conflicts and omissions within the DESIGN DOSSIER and of any errors, conflicts and omissions between the DESIGN DOSSIER including RELY UPON INFORMATION and the other CONTRACT DOCUMENTS together with proposed solution and supporting technical justification.

All such errors, conflicts and omissions (if any) shall be resolved as per AGREEMENT article 6 (Interpretation of the CONTRACT).

9.4.2 Basic Engineering's Opened Action or Transfer to next Phase Items of OWHP

Before commencement of related detailed engineering activities, the EPC CONTRACTOR shall close out Basic Engineering Open Action or Transfer to next Phase items including but not limited to those in:

- a) Hold Register stipulated in Exhibit E, Annex-3,
- b) PTR#2 stipulated in Exhibit E, Annex-4,
- c) HAZID,
- d) HAZOP
- e) SIL

The EPC CONTRACTOR shall perform all required and necessary WORK to engineer and to close out the Basic Engineering's Opened Action Items, and to update the relevant documents and drawings in the DESIGN DOSSIER accordingly, in timely manner.

The EPC CONTRACTOR shall submit an optimized plan for closure of Basic Engineering's Opened Action Items for APPROVAL describing each Basic Engineering's Opened Action Items, the documents and drawings affected and the manner in which the EPC CONTRACTOR proposes to close out Basic Engineering's Opened Action Items i.e. by updated document and or drawing or by Closure Record Sheet.

Closure of each Basic Engineering's Opened Action Items shall be subject to APPROVAL and the EPC CONTRACTOR shall report close out progress and status on a weekly basis until close out of all Basic Engineering's Opened Action Items is APPROVED.

9.5 3D PDMS Model

9.5.1 General Requirements

The EPC CONTRACTOR shall develop and maintain 3D PDMS model covering a bird's eye view and a walkthrough of the complete model for Topsides, Jacket, and brownfield modification WORK in accordance with:

- a) PDMS Guideline, 10008-GDL-5-GEN-010-R00
- b) Model Review Check List, 10008-STD-5-GEN-005-R00
- c) and the other requirements of the CONTRACT.

The EPC CONTRACTOR shall also provide, as part of the FINAL DOCUMENTATION, a complete set of as-built PDMS 3D model with all PROJECT databases (error free).

The EPC CONTRACTOR shall perform accurate development and construction the model of New Wellhead Platforms and update model of platform subjected to Brownfield WORK in accordance with latest issued P&IDs, project standards, specifications and available VENDOR data, and etc.

The Piping discipline shall have prime responsibility for obtaining input from other disciplines and for providing those disciplines with the information and documents they require from the model. The basic model philosophy together with all applicable standards and specifications shall be established by the Project Engineering Manager, and the Lead Discipline Engineers prior to the start of any model work. Thereafter, it is the responsibility of all engineering and drawing office groups to ensure the project standards and specifications are being correctly applied and that the latest revisions of the P&IDs are being used.

9.5.2 PDMS Model Reviews

3D PDMS model reviews (30%, 60% and 90%) shall be performed in accordance with Model Review Check List, 10008-STD-5-GEN-005-R00. The EPC CONTRACTOR shall propose the agenda, date, location of the model review and the EPC CONTRACTOR PERSONNEL who will attend, no later than thirty (30) days before each review for APPROVAL

COMPANY PERSONNEL shall attend and participate in the 3D PDMS model reviews. All findings shall be registered in the technical items database and shall be closed by the EPC CONTRACTOR in accordance with requirements. The close out 3D PDMS findings shall be verify and approved by COMPANY before issuance of the applicable AFC detailed engineering EPC CONTRACTOR DOCUMENTS for APPROVAL.

9.6 **Material Selection**

The EPC CONTRACTOR shall utilize the material selection study from DESIGN DOSSIER (Exhibit E) for development of the detailed engineering design. Material selection is not required to newly develop again that shall refer to the following documents for Generic design. However, material of Pig launcher and pipeline whether sour or non-sour depend on specific information from SOR such as H2S and CO2 content:

- a) Topside Facility and Pipeline Corrosion Assessment and Material Selection Study Report, TH-BUN3-XX-WPGX-COR-RPT-0002.
- b) Topside Facility and Pipeline Corrosion Assessment and Material Selection Study Report, TH-BUN3-XX-WPOX-COR-RPT-0002.
- c) Topside Facility and Pipeline Corrosion Control and Material Selection Philosophy, TH-BUN3-XX-WPXX-COR-RPT-0001.
- d) Material for Offshore Steel Structures, 10016-STD-6-OSS-007-R01 and other applicable terms of the CONTRACT

9.7 Safety Studies

9.7.1 General Requirements

The following safety studies matrix shall be performed by the EPC CONTRACTOR include but not limit to Wellhead Platform, Associated Pipeline, Tie-ins and Brownfield Scope of WORK:

Safety Study	GWHP	OWHP
HAZID ⁽¹⁾	X	P
HAZOP ⁽¹⁾	X	P
Bow-Tie	X	P
EER Analysis	X	P
FERA	X	P
QRA	X	P
Vent Dispersion & Thermal Radiation Study (including noise, toxic, temperature)	X	P
Dropped Object Study (Topside, Associated Pipeline and tie-ins)	X	P
SIL Classification and Verification to demonstrate the detailed engineering design complies with the specified SIL levels ⁽¹⁾	X	P
Hazardous Area Classification schedule and drawing	X	P
Hot plume dispersion study	X	P
Design Safety Case	X	P
SCE PS	X	P
ALARP ⁽¹⁾	X	P

P: Perform by EPC CONTRACTOR

X: Only update or revisit from Detailed Engineering package of GWHP

Note (1) Denotes third party facilitator and technically qualified scribe is required. The EPC CONTRACTOR shall propose lead facilitators for COMPANY APPROVAL.

The HAZID and HAZOP studies shall be undertaken at the early or intermediate stage of detailed engineering phase (30-40% progress) and all other studies in accordance with the APPROVED Detailed Work Time Schedule.

T&I CONTRACTOR shall arrange representative to attend the safety study workshop that relevant with his WORK.

9.7.2 Safety Study Workshops

The EPC CONTRACTOR shall conduct separate safety study workshops for each of the above studies to be attended by EPC CONTRACTOR and COMPANY PERSONNEL and others as necessary. The location and date of each study workshop shall be proposed by the EPC CONTRACTOR for APPROVAL. The EPC CONTRACTOR shall provide the meeting room and associated facilities.

The EPC CONTRACTOR shall prepare fully developed draft worksheets and associated procedures, deliverables and terms of reference to the COMPANY for APPROVAL no later than thirty (30) days before the date of the applicable safety study workshop.

9.7.3 3rd Party Facilitators for Safety Study Workshops

The EPC CONTRACTOR shall provide suitably qualified third party specialist and scribe for each of the safety study workshops as identified in Section 9.7.1 above. The third party specialist facilitators shall be selected from the list in Exhibit J (category – third party safety study) and the CVs of the proposed facilitator submitted along with workshop terms of reference etc. for APPROVAL.

9.7.4 Design Safety Case

The EPC CONTRACTOR shall:

- a) Conduct a safety case workshop to be attended by EPC CONTRACTOR PERSONNEL, T&I CONTRACTOR PERSONNEL (if require) and COMPANY PERSONNEL. Design safety case facilitator shall be proposed by EPC CONTRACTOR for COMPANY APPROVAL.
- b) Prepare a Design Safety Case as per requirements of Safety Case Standard 11038-STD-SSHE-420-008, Safety Case Guideline and the other terms of the CONTRACT.
- c) The purpose of the Design Safety Case to ensure that MAEs and High Risk Hazards are identified and measures to prevent or mitigate the MAEs are incorporated into the WORK and the PLANT design to achieve an inherently safe design and reduce risks to ALARP.

The EPC CONTRACTOR shall submit the Design Safety Case as and when updated to the COMPANY for information and the final version of the Design Safety Case for APPROVAL.

9.7.5 Operations Safety Case

The Operations Safety Case shall be performed by the COMPANY prior to platform start-up and as such is not part of the WORK. However, the EPC CONTRACTOR shall make available when requested the finalized Design Safety Case and referenced documents for COMPANY use (number and type of copies to be advised). The EPC CONTRACTOR shall also make EPC CONTRACTOR PERSONNEL available to answer promptly any questions that may arise concerning the finalized Design Safety Case.

9.7.6 Tracking and Close Out of Safety Engineering Actions

The EPC CONTRACTOR shall track status and close out of EPC CONTRACTOR, VENDOR, SUPPLIER and SUBCONTRACTOR safety engineering and safety study actions by means of a SEAMS (Safety Engineering Action Monitoring System) report which shall be updated regularly by the EPC CONTRACTOR and shall be submitted every week for REVIEW. The format and content of initial SEAMS tracking register shall be submitted to the COMPANY for APPROVAL.

9.8 Detailed Engineering Design for Wellhead Platforms

9.8.1 General Requirements

The EPC CONTRACTOR shall:

- a) Utilize the DESIGN DOSSIER (Exhibit E) as a starting point for development of the detailed engineering design. Perform all required and necessary engineering WORK for the detailed definition of the WORK and the PLANT to final APPROVED for Construction status as per the requirements of this Exhibit A, Exhibit A Annex-1, the other terms and requirements of the CONTRACT and APPLICABLE LAWS. The

- minimum list of required EPC CONTRACTOR Technical Documents is stated in Exhibit A Annex-1,
- b) Verify and incorporate VENDOR, SUPPLIER and SUBCONTRACTOR engineering, data and information into the detailed engineering design prior completion of the respective parts of the detailed engineering design.
 - c) Late and or incomplete incorporation of VENDOR data into the detailed engineering design may result in re-works and all the consequent impacts must be corrected by EPC CONTRACTOR at his own risk and responsibility.
 - d) Prior commencing the Procurement Engineering Works prepare and submit Equipment Critical Rating as specified in the Quality Requirement for Contractor/ Vendor, 10008-STD-6-GEN-005, for APPROVAL. The result of Equipment Critical Rating shall be used to identify the inspection requirements in respects of criticality of each particular procurement packages.
 - e) Incorporate engineering, data and information of COMPANY ITEMS into the detailed engineering design and ensure process logic, operation outline, safety operation, construability, maintenance and operation aspects are well defined and incorporated by EPC CONTRACTOR, if applicable.
 - f) Ensure standardization requirements are taken into consideration and incorporated into the detailed engineering design as per the requirements of Exhibit A Section 5.4 and the other terms of the CONTRACT.
 - g) Sizes, weights, ratings, equipment and tagged items and device types shall be reviewed, verified and updated by the EPC CONTRACTOR as part of detailed engineering design.
 - h) Perform any re-engineering that may be required and/or necessary.
 - i) Verify the completeness and incorporate information of Preliminary Transportation and Installation arrangement provided by T&I CONTRATOR into Wellhead Platform Detail Design. The Preliminary Transportation and Installation arrangement concept design shall be mutual agreed between EPC CONTRACTOR and T&I CONTRACTOR within the timeline in accordance with Exhibit C.

9.8.2 Process Detailed Engineering Design

9.8.2.1 General Requirements for both GWHP and OWHP

The EPC CONTRACTOR shall perform required and necessary process detailed engineering design for the detailed definition of the WORK and the PLANT as per the requirements of this Exhibit A and the other terms and requirements of the CONTRACT.

The EPC CONTRACTOR to note that additional process simulation cases to be performed during detailed engineering to be aligned with Statement of Requirement, Exhibit E, Annex-9. The EPC CONTRACTOR is responsible to ensure that process simulations cover possible operating scenario and incorporate into the WORK.

The EPC CONTRACTOR shall ensure that critical vendor information and major outstanding items from PTR2, and HOLD register are addressed into P&IDs prior HAZOP (Issue For HAZOP-IFH revision)

Process detailed engineering design shall include but is not limited to the following activities:

- a) Provide the complete list of Process Detailed Engineering Technical Documents for inclusion in the MDDR (see Exhibit A Section 5.5).
- b) Verify and incorporate VENDOR, SUPPLIER and SUB CONTRACTOR detailed process engineering design, information and data into the EPC CONTRACTOR's detailed engineering design.

- c) Prepare and submit all necessary and required Process Detailed Engineering Technical Documents as per Exhibit A, Annex-1 requirements up to and including final AFC status.
- d) Perform and incorporate the results of studies in the detailed engineering design
- e) Incorporate comments from FEED's study, report, HAZOP, PTR, Punch list, Gap Register into all relevant documents and drawings.
- f) Review and update the Process Basis of Design and all philosophies on a progressive basis.
- g) Review and update the calculations, reports, heat and material balances, drawings, datasheets, line lists, and all other EPC CONTRACTOR Process Detailed Engineering Technical Documents.
- h) Calculation note for relief system and blowdown shall be updated. Aspen blowdown (Rigorous blowdown) is preferred for depressurization software. Design margin and other parameters shall refer to 10008-STD-6-PRO-002-R01, section 7.10 Software.
- i) Calculation note for test separator shall be updated considering updated de-rating factor of K value, this can be referring to 10008-STD-6-PRO-002-R01, section 7.3 Vessel Sizing Criteria.
- j) Verify sizing of all lines and equipment including equipment inside WHCP Units.
- k) Review and update Safety Analysis Function Evaluation (SAFE) Charts and Emergency Shut Down (ESD) Logic Diagrams
- l) Review and update Process Control Narrative
- m) Provide Operating Manual
- n) Conduct Flow Induced Vibration and Acoustic Induced Vibration Report (if any) and perform study and provide mitigations to ensure the integrity of piping for vibration Perform any other process detailed design required and or necessary for the completion of the WORK and the PLANT in accordance with the terms of the CONTRACT and APPLICABLE LAWS.
- o) Topsides Overpressure Protection Study Report is not required but the following to be performed to support SIL classification, HAZOP close out, and PTR close out. Perform dynamics simulation to determine process safety time, verify high-high pressure set point, pressure safety valve capacity and demonstrate action of smart positioner, and the closure of Shutdown valve or Emergency shutdown valve.
- p) Review Flow Assurance Study from T&I CONTRACTOR and provide input as required. Update results from Flow Assurance study to all related documents and drawings including PAHH set point, etc.

Flow Assurance Study and Report

The scope of flow assurance shall be responsible by T&I CONTRACTOR with the following minimum requirement:

Steady State:

- i. Steady state simulations are to be developed in the latest version of OLGA or PIPESIM with latest production profile data, pipeline and operating conditions to comply with the production throughput and specification in Process Design Basis and SOR. Note that production flowrate will be confirmed later.
- ii. The following parameters in the study shall include but not limited to pressure profile, temperature profile, liquid hold up, flow regime, fluid velocity profile, erosional velocity ratio, density profile, hydrate and slug volume.
- iii. Perform sensitivity study to establish a range of condition (Flow rate, Pressure and Temperature) within which the process may operate and assess the impact

during off-design conditions. The case studies shall be included but not limited to the following:

- Perform study to be input for pipeline design (at design conditions and maximum operating conditions)
- Perform study for case maximum flowrate. Back pressure will be determined.
- Perform study to identify turndown flowrates

For above case studies, high and low export pressure shall be considered.

Transient Analysis:

Transient simulations are to be developed in the latest version of OLGA to support pipeline mechanical design and pipeline walking assessment.

- i. Perform study to establish the transient temperature profile which represent the possibly maximum and minimum temperature along each pipeline
- ii. Minimum simulation cases for each pipeline shall be as follows;
 - Shutdown without depressurized and restart
 - Shutdown with depressurized and restart

9.8.2.2 Process Detailed Engineering Design for OWHP only

- a) Wax Mitigation Study shall be performed for Oil WHP but not limited to the following:
 - Study the wax deposit operating envelop on topside facilities and in pipelines under multiphase flow.
 - Model wax deposition process with for various scenarios by using transient simulation software such as OLGA. Input composition to be updated and provided by COMPANY.
 - Sensitivity analysis shall include case shutdown, restart, pigging, etc.
 - Incorporate comments from FEED's Wax Mitigation Report, HAZOP and PTR
- b) IG/UG Optimization Study shall be updated for Oil WHP but not limited to the following:
 - The IG/UG Optimization Study shall be updated with updated input parameters e.g. IG/UG consumption, Oil composition, Vendor data etc.
 - Incorporate comments from FEED's IG/UG Optimization Study, HAZOP and PTR

9.8.3 Safety Detailed Engineering Design

9.8.3.1 General Requirements

The Safety design requirement for Wellhead Platform shall be an inherently safe but not normally manned offshore wellhead platform, which shall be fit for purpose and operable as per the CONTRACT requirements, with minimum supervision while still ensuring overall safety and integrity.

The EPC CONTRACTOR shall perform the safety detailed engineering design WORK subject to and in accordance with Exhibit E Safety Concept document, related documents and drawings in Exhibit E and the other requirements of the CONTRACT.

The EPC CONTRACTOR shall perform all required and necessary safety detailed engineering design for the WORK and the PLANT including but not limited to:

- a) Hazard Preventions
- b) Hazard Controls
- c) Hazard Mitigation
- d) Escape Evacuation and Rescue
- e) Lifesaving Appliances and Safety Equipment
- f) Occupational Safety
- g) Emergency Power Supply and Communications

9.8.3.2 Safety detailed engineering design activities

Safety detailed engineering design activities shall include but are not limited to

- a) Provide the complete list of Safety Detailed Engineering Technical Documents for inclusion in the MDDR (see Exhibit A Section 5.5).
- b) Verify and incorporate VENDOR, SUPPLIER and to the extent applicable SUB CONTRACTOR safety detailed engineering design, information and data into the EPC CONTRACTORS detailed engineering design.
- c) Prepare and submit all necessary and required Safety Detailed Engineering Technical Documents as per Exhibit A, Annex-1 requirements up to and including final AFC status.
- d) Perform and incorporate the results of Safety Studies in the Detailed Engineering Design.
- e) Perform any other safety detailed engineering design required and or necessary for the completion of the WORK and the PLANT in accordance with the terms of the CONTRACT and APPLICABLE LAWS.

9.8.4 Mechanical Detailed Engineering Design

9.8.4.1 General Requirements

The EPC CONTRACTOR shall perform required and necessary mechanical detailed engineering design for the detailed definition of the WORK and the PLANT as per the requirements of this Exhibit A and the other terms and requirements of the CONTRACT.

9.8.4.2 Mechanical Detailed Engineering Design Activities

Mechanical detailed engineering design shall include but not limited to the following activities:

- a) Provide the complete list of Mechanical Detailed Engineering Technical Documents for inclusion in the MDDR (see Exhibit A Section 5.5).
- b) Verify and incorporate VENDOR, SUPPLIER and SUBCONTRACTOR detailed process engineering design, information and data into the EPC CONTRACTOR's detailed engineering design.
- c) Prepare and submit all necessary and required Mechanical Detailed Engineering Technical Documents as per Exhibit A, Annex-1 requirements up to and including final AFC status.
- d) Review and update the Mechanical Basis of Design
- e) Detailed engineering and design of mechanical equipment (equipment design, material selection, reliability, computing software etc.)
- f) Equipment General Arrangement (general layouts and details).
- g) Spill containment
- h) Protection from ignition by static charge
- i) Equipment noise and vibration limits
- j) Internal coating, cathodic protection, surface preparation and painting
- k) Compliance with Hazardous area classification

- l) Material handling study supporting by 3D PDMS model to visualize the handling of equipment.
- m) Design of equipment bases and supports, including Provision for mitigation of transmission of noise and vibration.
- n) Equipment erection/mounting diagrams and procedures
- o) Thermal analysis and design for heat exchangers, if required

Perform any other mechanical detailed engineering design required and or necessary for the completion of the WORK and the PLANT in accordance with the terms of the CONTRACT and APPLICABLE LAWS.

9.8.5 Piping Detailed Engineering Design

9.8.5.1 General Requirements

The EPC CONTRACTOR shall perform required and necessary piping detailed engineering design for the detailed definition of the WORK and the PLANT as per the requirements of this Exhibit A and the other terms and requirements of the CONTRACT.

9.8.5.2 Piping detailed engineering design Activities

Piping detailed engineering design shall include but is not limited to the following activities:

- a) Provide the complete list of Piping Detailed Engineering Technical Documents for inclusion in the MDDR (see Exhibit A Section 5.5).
- b) Verify and incorporate VENDOR, SUPPLIER and SUBCONTRACTOR detailed piping engineering design, information and data into the EPC CONTRACTOR's Piping Detailed Engineering Design.
- c) Prepare and submit all necessary and required Piping Detailed Engineering Technical Documents as per Exhibit A Annex-1 requirements up to and including final AFC status.
- d) Review and update the Piping Basis of Design
- e) Identify Stress Critical Line List and Perform piping stress analysis, including piping dilatation calculation and vibration analysis
- f) Pipe support detailed design and drawings
- g) Pipe Wall Thickness Calculation
- h) Project Particular Specification (PPS) for Piping and Valves Material
- i) Valves and Piping special items Datasheets
- j) Equipment layouts
- k) Verify and incorporate VENDOR and SUPPLIER information and data into the detailed engineering design.
- l) General arrangement drawings (piping and support) and isometric drawings for all pipe sizes
- m) 3D PDMS model for all pipe sizes to ensure a clash free status between installation i.e. on the structure, equipment layout, piping layout, emergency escape route, hook-up access, and complying with maintenance and inspection requirements
- n) 3D PDMS Clash Check report with two (2) Tender Assisted Drilling Rig model as per COMPANY shall suggest.
- o) Perform vibration analysis and design anti-vibration system, including small bore geometry. Piping vibration analysis shall be performed and included in EPC CONTRACTOR scope of work. EPC CONTRACTOR shall include performing of dynamic design of pipe supports to eliminate and prevent piping vibration problem. The boundary of analysis shall be limited and end up until the adjacent and remaining pipe routing have no significant effect and impact to the analyze system. The scope of analysis shall be included inlet, outlet and associated lines inlet PSV, vent lines to

HP header. Refer to 10008-STD-6-PIP-002-R00, Pipe Stress Analysis, for more detail of piping dynamic analysis scope of work.

- p) Design and locate service/access platforms as required
- q) Piping material, specialty items and valve MTOs
- r) Consult with T&I CONTRACTOR to collect the design input for piping hook up spools (piping connected after Jacket and Topsides installation at Offshore)
- s) Perform any other piping detailed engineering design required and or necessary for the completion of the WORK and the PLANT in accordance with the terms of the CONTRACT and APPLICABLE LAWS.

9.8.6 Structural Detailed Engineering Design

9.8.6.1 General Requirements

The EPC CONTRACTOR shall verify and endorse structural design dossiers provided in Exhibit E, Annex-1 and Annex-2.

The structural design dossier consists of followings but not limited to;

- Detailed Engineering of GWHP Topsides and Basic Engineering of GWHP for four (4) Generics models of Jacket and Piles
- Basic Engineering of OWHP Topsides and four (4) Generics models of Jacket and Piles

For GWHP, EPC CONTRACTOR shall further development Generic Detailed Engineering documents only for the Jacket and Piles with four (4) generic design cases refer below table. For Topsides of GWHP, EPC CONTRACTOR shall utilize the Generic Detailed Engineering provided in Exhibit E, Annex-1.

For OWHP, EPC CONTRACTOR shall fully develop generic design for Topsides and four (4) Generics models of Jacket and Piles with four (4) generic design cases refer below table.

The four (4) generic design cases for Jacket and Piles (For GWHP and OWHP)

Design Case	Soil Condition	Water Depth
Bundle 3: Jacket Gen 1.1	Weak Soil	60-70 m.
Bundle 3: Jacket Gen 1.2	Moderate Soil	60-70 m.
Bundle 3: Jacket Gen 2.1	Weak Soil	70-80 m.
Bundle 3: Jacket Gen 2.2	Moderate Soil	70-80 m.

The Generic design of GWHP and OWHP shall be utilized for further development of the Particular Detailed Engineering which shall be performed with the information relate to the change of site-specific data such as water depth, GSI and GTI.

The EPC CONTRACTOR shall perform required and necessary structure detailed engineering design both global and local for the detailed definition of the WORK and the PLANT as per the requirements of this Exhibit A, Annex 1 of this Exhibit A and other terms and requirements of the CONTRACT.

Design basis shall include at least two (2) drilling rig model, EPC CONTRACTOR shall subcontract “Drilling rig load analysis” for rig load case to APPROVED experienced 3rd party.

The integrity check of Wellhead Platform for transportation and installation condition shall include in EPC CONTRACTOR scope of WORK. EPC CONTRACTOR shall request the

related information for transportation and installation for each specific Wellhead Platform from T&I CONTRACTOR that require to incorporate in the structural detailed engineering.

Selection and definition of structural materials in accordance with 10016-STD-6-OSS-007 Materials for Offshore Steel Structures, and the other terms and provisions of the CONTRACT.

9.8.6.2 Structural detailed engineering design Activities

Structural detailed engineering design shall include but is not limited to the following activities:

- a) Coordinate with onshore construction and T&I CONTRACTOR for design data, requirement and method selection to be considered in structural engineering within 90 days after EFFECTIVE DATE.
- b) Verification and incorporate VENDOR, SUPPLIER and SUBCONTRACTOR Structural Detailed Engineering Design, information and data into the EPC CONTRACTOR's detailed engineering design.
- c) Develop Structural Basis of Design as followings:
 - Address, capture and document the structural requirements for the wellhead platforms from COMPANY's provided data in SOR, Metocean data, Soil data etc.
 - To include but not limited to following:
 - Design codes, standards and references
 - Design data
 - Design requirements
 - Structural configuration
 - Structural steel
 - Deck and Substructure analysis methodology

This structural Basis of Design is subject to be updated progressively as the work evolves and the requirements become more settled.

For Platform Topsides, it shall be designed for single lifting installation campaign (pre-installed all equipment).

- d) Develop modelling formulation of structural model

In service analyses:

- i) In-place analysis
- ii) Dynamic analysis
- iii) Fatigue analysis

The analysis shall include 4 cases – with drilling, without drilling, Pile driving, and transportation. Fatigue damage of jacket during Pile driving is not required. However, Fatigue analysis during pile driving is referring to fatigue damage of pile during piling/driving. Pile fatigue damage shall therefore be considered during in-place analysis in combination with fatigue damage during pile driving. For clarity, both topside and jacket fatigue analysis shall be performed as part of Detailed Engineering scope.

- The cumulative damage ratio of the pile during pile driving and in-place phases shall be less than 1.0. Safety of Factor 10 shall be applied during in-place condition whereas safety of factor 2.0 shall be applied during driving.
- iv) Platform vibration analysis for booster compressor for GWHP and Gas lift compressor and SWIMS unit for OWHP.
 - v) Ship/Boat impact analysis including Post damage analysis (energy methods and non-linear analysis)
 - vi) Nonlinear pushover analysis for OWHP from generic jacket (Jacket Gen 1.1, 1.2, 2.1 and 2.2)
 - vii) Drop object study shall be separately study for gas topside/ pipeline and oil topside/ pipeline (energy methods and non-linear analysis)

Pre-services analyses:

- i) Load out analysis
 - ii) Sea transportation analysis
The analysis including fatigue effects for towing duration more than fifteen (15) days with five (5) knots for barge and twelve (12) knots for vessel. This analysis shall include sagging and hogging effects. This fatigue effect shall be applicable to Jacket. Fatigue of Topside during transportation is not required.
 - iii) Lift analysis
 - iv) Floatation, upending and damaged compartment analysis
 - v) On-bottom stability analysis
 - vi) Levelling analysis
 - vii) Pile stick-up calculation
 - viii) Wellhead Platform Pile drivability analysis
 - ix) Clash check of installation aids to structure members
- e) Corrosion protection system design performed by NACE level 3 certified PERSONNEL as per PEGS-0842-COR-020 Section 5.1 either in-house or by certified 3rd party
 - f) Miscellaneous Design and Calculation (Deliverable shall be separated as appropriate)

Topside design

- Topside Node plates design at leg joints of upper level lower level and crane pedestal support.
- Joints connection design between tubular and plate girders / beams
- Fatigue Checks for Crane Pedestal Connections
- Access Platform Design
- Vortex Shedding Checks
- Crane Boom Rest and Vent Boom
- Wave Slamming Checks
- Deck Lifting Padeye Design
- Stair Case Design
- Drop Object Design
- Beam Clamp Support Design
- Secondary Beam Design
- Hatch Cover Design
- Deck Flooring Design
- Widow Maker and Support Design
- Transition Piece Design
- Padeye Design for Swing Rope
- Weld and Bolt Design

- Casing Slot Design
- Pipe rack, E&I Room, Hand rail, Platform sign panel, Solar support, stabbing guide, amenities cubicle

Jacket design

- Welding and joint design
- Local member checks for wave slamming
- Jacket and pile interface design
- Hydrostatic collapse rings including vortex shedding analysis both air and water
- Crown shim plate
- Lifting trunnion & upending padeyes
- Buoyancy tank (if any)
- Mudmat design⁽¹⁾

Note(1): EPC CONTRACTOR shall design mud-mat size to meet with the requirement from international code, standard and COMPANY specification. Increase area of mud-mat shall be subjected to COMPANY approval with technical and engineering justification.

Without cost to COMPANY, the COMPANY reserves its right to request the CONTRACTOR to provide additional miscellaneous design / calculation support apart from list above, as it deems necessary to fulfill requirement of WORK.

Finite element analysis (method statement is subjected to COMPANY APPROVAL) shall be required for the following condition:

- a. Joint with strength joint UC is more than 1.0
 - b. Joint with requirement of internal ring stiffeners
 - c. all overlap joint, if required
- g) Boat Landing including lifting, transportation, and boat impact analysis.
 - h) Vent Boom
 - i) Perform conductor shielding factor to reduce hydrodynamic shielding effect (API RP2A) of wave forces to well conductors.
 - j) Vortex shedding analysis in air and water (Note: VIV for underwater member is also required to be checked by EPC CONTRACTOR.
 - k) Appurtenances necessary to operate the PLANT such as mechanical handling system, secondary beams, raised floors, working platform, dropped object protection, riser clamps, joint designs and stairs. The riser clamp design input shall be provided by T&I CONTRACTOR. However, the jacket member/joints/fatigue check of riser clamps and related riser stubs shall be performed by Structural discipline with proper engineering software in order to satisfy COMPANY's Structural design basis, design brief and API RP2A.
 - l) Necessary local reinforcements
 - m) Anchor pipe supports, cable tray and related supports
 - n) Equipment supports based on VENDOR data
 - o) Erection and installation aids
 - p) Construction support, load-out support frame and buoyancy tanks
 - q) Transportation, load-out and sea fastening arrangements design.
 - r) All structural drawings including general notes and standard details
 - s) All Structural MTO, Cutting plan & BOMs

9.8.7 Electrical Detailed Engineering Design

9.8.7.1 General Requirements

The EPC CONTRACTOR shall perform required and necessary electrical detailed engineering design for the detailed definition of the WORK and the PLANT as per the requirements of this Exhibit A and the other terms and requirements of the CONTRACT.

9.8.7.2 Electrical Detailed Engineering Design Activities

Electrical detailed engineering design shall include but is not limited to the following activities:

- a) Provide the complete list of Electrical Detailed Engineering Technical Documents for inclusion in the MDDR (see Exhibit A Section 5.5).
- b) Verify and incorporate VENDOR, SUPPLIER and SUBCONTRACTOR Electrical Detailed Engineering Design, information and data into the detailed engineering design.
- c) Prepare and submit all necessary and required Electrical Detailed Engineering Technical Documents as per Exhibit A Annex-1 requirements up to and including final AFC status.
- d) Review and progressively update the Electrical Basis of Design
- e) Electrical Specifications and Data sheets
- f) Electrical power generation, battery, distribution, control and protection system.
- g) Navigation Aids System
- h) Update load consumption and main equipment sizing calculation. Short circuit calculation shall be included in the main equipment sizing and calculation.
- i) Power system study including short circuit study, relay setting study and other study to verify design/Section of equipment and system power 24 VDC, power 230 VAC, batteries, etc.
- j) Battery autonomous and recovery time
- k) Battery charger calculation and selection
- l) Verify solar panel layout and tilt angle
- m) Perform studies, analyses, calculation notes and sizing
- n) Electrical distribution and earthing design.
- o) Drawings (schematic, diagram, layout, earthing, cable tray routing, lighting, hook-up etc.)
- p) Lightning protection study and design
- q) Earthing
- r) Explosion proof equipment registration
- s) Preventive maintenance & operation procedure
- t) Electrical MTOs
- u) Perform any other electrical detailed engineering design required and or necessary for the completion of the WORK and the PLANT.

9.8.8 Instruments Detailed Engineering Design

9.8.8.1 General Requirements

The EPC CONTRACTOR shall perform required and necessary instrumentation detailed engineering design for the detailed definition of the WORK and the PLANT as per the requirements of this Exhibit A and the other terms and requirements of the CONTRACT.

9.8.8.2 Instrument Detailed Engineering Design Activities

Instrument detailed engineering design shall include but is not limited to the following activities:

- a) Provide the complete list of Instrumentation Detailed Engineering Technical Documents for inclusion in the MDDR (see Exhibit A Section 5.5).
- b) Verify and incorporate VENDOR, SUPPLIER and SUBCONTRACTOR Instrumentation Detailed Engineering Design, information and data into the EPC CONTRACTOR's detailed engineering design.
- c) Prepare and submit all necessary and required Instrumentation Detailed Engineering Technical Documents as per Exhibit A Annex-1 requirements up to and including final AFC status.
- d) Review and progressively update the Instruments Basis of Design
- e) Selection and definition of instrument materials and equipment.
- f) Instrument specification and data sheets
- g) All instrument calculation notes and sizing (sizing for flowmeter, sizing and noise calculation for control and safety valves, actuator sizing and speed & torque calculation for on/off valve, stress calculation note for all instruction/insertion instrument, etc.)
- h) Utilities consumption calculation notes (N₂, instrument gas, utility gas, hydraulic, electrical power demand, etc.).
- i) EPC CONTRACTOR shall engage 3rd party to perform SIL verification for GWHP only. But for OWHP, both SIL Classification and SIL verification is required. The EPC CONTRACTOR shall follow the list of 3rd party specialists to be engaged in SIL verification as per Exhibit J with CVs of key personal for APPROVAL. PFD values for SIL verification shall be referred to OREDA (latest revision) or upon COMPANY provided.
- j) Instrument control block diagram, interface block diagram between ICSS/DSS, SCADA, PCS/SIS and package units
- k) Instrument schedule database (by INTOOLS software)
- l) Layout drawing (instrument, fire and gas detector, junction box etc.)
- m) Hook-up drawing (process utilities, pneumatic hydraulic, electrical etc.)
- n) Diagrams for wiring, cable block diagram, troubleshooting, interconnecting, termination, connection and functional logic and the like
- o) Living Quarter/Central Processing Platform console modification
- p) Instrument cable/tubing tray and cable route layout
- q) Instrument cable/tubing sizing/anti-corrosion tube clamp
- r) Instrument MTOs
- s) Explosion proof equipment registration
- t) Preventive maintenance & operation procedure
- u) Perform any other instrumentation detailed engineering design required and or necessary for the completion of the WORK and the PLANT.

9.8.9 Telecommunication Detailed Engineering Design

9.8.9.1 General Requirements

The EPC CONTRACTOR shall perform required and necessary telecommunications detailed engineering design for the detailed definition of the WORK and the PLANT as per the requirements of this Exhibit A and the other terms and requirements of the CONTRACT.

9.8.9.2 Telecommunications Detailed Engineering Design Activities

Telecommunication detailed engineering design shall include but is not limited to the following activities:

- a) Provide the complete list of Telecommunications Detailed Engineering Technical Documents for inclusion in the MDDR (see Exhibit A Section 5.5).
- b) Verify and incorporate VENDOR, SUPPLIER and SUBCONTRACTOR Telecommunications Detailed Engineering Design, information and data into the EPC CONTRACTOR's detailed engineering design.
- c) Prepare and submit all necessary and required Telecommunications Detailed Engineering Technical Documents as per Exhibit A Annex-1 requirements up to and including final AFC status.
- d) Review and progressively update the telecommunications Basis of Design
- e) Link budget calculation and reflection analysis and coverage area study
- f) Selection and definition of telecom materials and equipment
- g) Modification of existing trunk radio system to support/connect for new Wellhead Platform in Arthit and G2/61 field (if applicable)
- h) Modification of existing 4G – LTE system to support/connect for new Wellhead Platform in G1/61 field (if applicable)
- i) Equipment specification and data sheets
- j) Functional SPECIFICATION
- k) Perform studies, analyses and calculation notes.
- l) Drawings (schematic, diagram, layout, earthing, hook-up etc.)
- m) Telecom antenna co-location plan
- n) Telecom cable trays/cable transit
- o) Acquire telecom hardware and software licenses and IT support for related equipment
- p) Telecommunication MTOs
- q) Explosion proof equipment registration
- r) Perform any other telecommunications detailed engineering design required and or necessary for the completion of the WORK and the PLANT.
- s) Link budget and coverage area calculation shall include reflection and tide analysis.

9.8.10 Provision for Future (by others) Equipment and Sparing

Procurement, supply, fabrication and installation of future (by others) equipment is not part of the WORK to be performed by the EPC CONTRACTOR. However the EPC CONTRACTOR as part of the detailed engineering design shall take into account and provide space, connection for future specified in the Basic Engineering package, Exhibit E.

9.8.11 Materials Handling Study

The EPC CONTRACTOR shall conduct a material handling study as required by the applicable Exhibit E DESIGN DOSSIER, Basis of Design and the SPECIFICATIONS.

The EPC CONTRACTOR shall prepare Material Handling Study Report for the Project and detailed procedure(s) for the removal of each component or item of equipment, where periodic removal is required to facilitate maintenance. Material Handling Study for COMPANY ITEMS shall be EPC CONTRACTOR scope.

Ultimate design for material handling study shall comply with offshore operation and maintenance requirement throughout the detailed engineering and being reviewed, confirmed during PDMS model.

In case of conflict the removal frequency shall be the most stringent between VENDOR recommendation and criteria specified in Material Handling Study Report.

9.8.12 Layout of Wellhead Platform Topside

Exhibit E Annex-1 and Annex-2 includes a layout of GWHP and OWHP for the EPC CONTRACTOR to review and verify, The EPC CONTRACTOR shall further develop the layout during detail engineering design phase in accordance with the CONTRACT requirements and incorporating VENDOR data for COMPANY APPROVAL

9.8.13 Weight Control

The EPC CONTRACTOR shall perform weight monitoring, weight control and weight reporting (minimum as monthly basis) for all aspects of the WORK including but not limited to wellhead platform (topside and jacket, piles and major shipped loose items), in accordance with 10008-STD-6-OSS-019, Weight Monitoring and Weighing Offshore Units, and the other requirements of the CONTRACT.

The EPC CONTRACTOR shall prepare and submit a fully developed and comprehensive weight monitoring, control and reporting procedure no later than (30) days after the EFFECTIVE DATE for APPROVAL.

Upon COMPANY and Marine Warranty Surveyor APPROVAL, EPC CONTRACTOR may not be performed actual weighing for the Jacket(s). However, EPC CONTRACTOR shall establish detailed weight monitoring and control program based on three independent methods during fabrication e.g. 3D Model, Shop drawings and Nesting plan to ensure the actual COG without actual weighing as minimum. EPC CONTRACTOR shall also consider larger COG uncertainty in the subsequence pre-service analysis and Transportation and installation analysis.

9.9 **Pipeline Detailed Engineering Design**

Pipeline detailed engineering shall be performed by T&I CONTRACTOR. However, EPC CONTRACTOR shall incorporate the interface information of pipeline and tie-ins design provided by T&I CONTRACTOR for Wellhead Platform detailed engineering.

9.10 **Existing Topside Brownfield Modifications Detailed Engineering Design**

9.10.1 General Requirement

The Scope of WORK covers all WORKS to be carried out by the EPC CONTRACTOR for, and in relation to the connection to existing host facilities, which includes tie-ins, modification WORK on host Wellhead Platforms, all wellhead platforms related to inter-trip logic and etc.

EPC CONTRACTOR shall incorporate and update process and control engineering including the modification of the existing SCADA, inter-trip, Electrical and Instrument field instrument, telecommunication systems on Living Quarter/Central Processing Platform and existing wellhead platforms to fulfil existing operation and control philosophy for the new wellhead platform. The compatibility and integration with the existing facilities shall be engineered and designed. Related safety engineering to be performed as applicable by EPC CONTRACTOR, section 9.8.3 refers to.

Annex 10 of this Exhibit A have defined the scope of WORK and responsibility of EPC CONTRACTOR and T&I CONTRACTOR regarding the WORK which require interface between the parties.

9.10.2 Engineering Surveys of Existing Host Facilities

9.10.2.1 Arrangements for Access to Existing Facilities

The EPC CONTRACTOR shall prepare and submit to the COMPANY for APPROVAL all required and necessary documentation including but not limited to:

- a) Engineering Survey Procedure,
- b) JSA, PTW, risk assessments and mitigations etc.,
- c) helicopter / crew boat travel requests etc.,
- d) PTTEP Safety & Health Verification stipulated in Exhibit A Section 12.4.7

not less than sixty (60) days before the schedule date of each survey.

9.10.2.2 Pre-engineering Survey of Existing Host Facilities

The purpose of the pre-engineering survey is to inspect the existing host facilities and to measure, document and gather all data and information necessary for design, detailed, engineering and construction engineering of the tie-in and brownfield modification WORK.

The EPC CONTRACTOR shall prepare and submit to COMPANY for APPROVAL a detailed procedure for the pre-engineering survey which shall as minimum include:

- a) Details, layout, dimensions, etc., of topside and receiving facilities for the tie-in WORK and brownfield modifications to the existing host facilities.
- b) Verification of as-built drawings (layouts, structural drawings, piping arrangements, instruments, electrical and telecom cables routings and arrangement, and the like), if as-built drawings are not available the EPC CONTRACTOR shall record actual details.
- c) A record of available spares within junction boxes and marshalling cabinets for connection of instrumentation and, as applicable, electric cables, and the like.
- d) Pre-installed riser (if any) above water level, pre-installed pig receiver (if any) and existing piping & valves positions and conditions to identify the provisions for installation of associated piping, instrument tubing and material handling,
- e) Collecting control system databases for detailed engineering,
- f) Anything else necessary and or required for the performance of the tie-in WORK and brownfield modifications.

The EPC CONTRACTOR shall prepare and issue a pre-engineering survey report no later than fourteen (14) days after the completion of the pre-engineering survey.

9.10.2.3 Post-engineering Survey of Existing Host Facilities

The EPC CONTRACTOR shall perform a post-engineering survey of the existing host facilities prior to completion of detailed engineering and construction engineering for the tie-in and brownfield modification WORK.

The purpose of the post-engineering survey of the existing host facilities is for the EPC CONTRACTOR to identify changes made since the pre-engineering survey (if any) and to update the detailed engineering and construction engineering for the tie-in and brownfield modification WORK accordingly.

The schedule for post-engineering site surveys in principle shall be no sooner than 4 months prior to offshore brownfield execution. This is in order to ensure the information obtaining from the post-engineering facility is the most up-to-date.

The EPC CONTRACTOR shall update the pre-engineering survey report to post engineering survey report for COMPANY review no later than fourteen (14) days after the completion of the applicable survey visit.

9.10.2.4 Offshore Transportation and Accommodation

For pre-engineering and post-engineering surveys of existing host facilities the COMPANY shall provide free of charge per PHASE;

- a) Transportation for EPC CONTRACTOR PERSONNEL either by crew boat or helicopter (subjected to availability) to and from the COMPANY's onshore base to COMPANY's offshore location, for one (1) visit each for the pre-engineering and post engineering surveys. Maximum four (4) EPC CONTRACTOR per visit.
- b) Offshore accommodation and infield transportation by crew boat from the COMPANY's location to the existing host facilities.

Additional visits shall be back-charged to EPC CONTRACTOR except for separate survey groups and/or times caused by COMPANY SITE condition and or POB constraints.

9.10.3 Detailed Engineering for Brownfield Modification

9.10.3.1 Base Scope for Topside Brownfield Modification

Brownfield Modification scope of work depends on specific Existing Wellhead Platform and Living Quarter/Central Processing Platform where will confirm with NOTICE TO PROCEED. The EPC CONTRACTOR shall develop detailed engineering for Brownfield Modification by utilizing the information from Engineering Survey. Outline scope of WORK refer to the following sections as minimum but not limited to, with the following specific requirements:

Process and Safety

- a) Review and update Addendum to all Philosophies and Process Control narratives
- b) Provide Addendum to Operating Manual
- c) Review and update Report, Calculations, Drawings, Datasheets, and all other process engineering EPC CONTRACTOR DOCUMENTS.
- d) Review and update Safety Analysis Function Evaluation (SAFE) Charts and Emergency Shut Down (ESD) Logic Diagrams
- e) HAZOP for the existing topside which require to add, change and modify the facilities

Telecom and Control system

The Instrumentation and telecommunication engineering for modification of existing wellhead platforms package, Central Processing Platform, Process and Control System (PCS), Safety and Control System (SCS), SCADA and SCADA radio system. The detailed and existing information of SCADA system shall refer to Exhibit A, Annex-14

9.10.3.2 Optional Scope for Topside Brownfield Modification

EPC CONTRACTOR shall perform existing Topside Design Verification for all related disciplines including calculations, analysis, drawings and etc. in case optional scope is confirmed to be executed that refer to the following parts of WORK:

- Post Installed Riser (including riser protector)
- Pig Receiver and its Facilities
- Deck Extension

EPC CONTRACTOR shall provide list of required information of existing platform for engineering design and notice to COMPANY within 30 Days after receiving of NOTICE TO PROCEED.

Post Installed Riser

This part of WORK shall be designed by T&I CONTRACTOR. However, EPC CONTRACTOR shall responsible to request the information and input of Post Installed Riser including its supports, clamps and riser protector design from T&I CONTRACTOR use to develop the global analysis check as part of existing Topside Design Verification, feedback and advise T&I CONTRACTOR to adjust the design if require in order to minimize the modification at existing Topside.

Pig Receiver & Facilities and Topside Riser Hook Up

COMPANY will instruct EPC CONTRACTOR by means of NOTICE TO PROCEED to develop detailed engineering in the event that the existing Wellhead Platform is required Pig Receiver and its facilities including riser hook up connected between riser above hanger flange and piping upstream of Pig Receiver, but deck extension is not required. The scope of WORK includes multi-disciplinary involvement to perform detailed engineering, site survey and procurement (if any). EPC CONTRACTOR shall refer the deliverable list specified in Exhibit E, Annex 6 as the basis for EPC CONTRACTOR's proposal.

Deck Extension

COMPANY will instruct EPC CONTRACTOR by means of NOTICE TO PROCEED to develop detailed engineering in the event that the existing Wellhead Platform is required deck extension for operating purpose. The scope of WORK mainly involve with structural discipline, however EPC CONTRACTOR shall take into account the input from other discipline (if require) to perform detailed engineering, site survey and procurement (if any). EPC CONTRACTOR shall refer the deliverable list specified in Exhibit E, Annex 6 as the basis for EPC CONTRACTOR's proposal.

EPC CONTRACTOR shall perform global and local analysis to check existing PLATFORM integrity for the extension potion to support pig receiver, its facilities and deck extension.

Convert manual valve to be ESDV on existing Wellhead Platform

- i) Installation of actuators with accessories for ESDV
- ii) Update cable routing, cable block diagram, typical installation and hookup drawing
- iii) Modify PLC and HMI programs to include the new actuators.

9.10.4 Detailed Engineering for Operation and Maintenance

9.10.4.1 General Requirements

PLANT operability requirements and shall include but not be limited to:

- a) Provide permanent provisions for accessibility (without dismantling of other equipment), dismantling and lay down of heavy components.
- a) Minimize operator intervention.
- b) Minimize maintenance cycle, complexity and duration.

- c) Minimize risk to operators and PLANT.
- d) Adequate and proper access to all parts of the PLANT, including for maintenance and component withdrawal/replacement.
- e) Easy access to, and readability of, alarms, control and instruments.
- f) Adequate and proper material handling arrangements.
- g) Equipment and systems shall be designed for a major inspection and maintenance frequency of not less than three years.
- h) The design shall incorporate safety, reliability and efficiency of PLANT operation.
- i) Equipment shall be of proven design and of proven satisfactory operation in the Gulf or in a similar environment.
- j) Equipment shall be designed by assembly of independent components to simplify inspection and removal.
- k) Design shall provide for in-situ repairs and maintenance, including inspections and overhauls.
- l) Equipment, spare parts and consumables shall be standardized.
- m) Equipment shall be compatible with the On Line Condition Monitoring Program for Process/Safety Control.
- n) Modularity. As far as possible the equipment shall be designed by assembly of independent modules for easy trouble shooting and replacement of components.
- o) Ease of dismantling/tooling. The design shall provide for in-situ repairs and maintenance works including inspections and the overhauls.
- p) The design shall take into consideration the potential hazard assessment (e.g. corrosion, etc.)
- q) Permanent maintenance lay down areas and easy access shall be integral part of the design and layout of the wellhead platform.
- r) Clear access area shall be provided for the equipment which would require to be removed from its location for repair/maintenance purposes. All such equipment removal shall be without any structural or piping alterations. Also, necessary access & ladders or working platform shall be provided in order to minimize scaffolding requirements.
- s) Gauges, instrumentation, cable trays, small bore equipment, piping shall not interfere with access for routine maintenance.
- t) All sight glasses, gauges and manually controlled by pass shall be visible and accessible.
- u) ESDV, SDV and other major isolation valves are to be provided with a safe access
- v) All switchboards, electrical and instrument panels should have rear access to facilitate maintenance particularly during breakdowns including the pressurized panels. Electrical sockets shall be provided near all major equipment for connecting the portable equipment/tools during routine/shutdown maintenance.
- w) Emergency shutdown and major isolation valves are to be located preferably at grade level or shall be provided with good and safe access. These shall be with unique identification or color codes so that possibility of "Accidental" operation shall be minimum.
- x) Adequate space for swinging a spectacle blind, reinstalling the blinds, removal and storage of test blinds shall be considered. Necessary provisions facilitate handling these operations shall be provided. Blinds shall be painted legibly that include size (according to ANSI specs.)
- y) Any utility service points for water from utility storage water (Tote tank), air, and shall be provided at various locations for maintenance purpose.
- z) The crane installed shall have the reach to remove/re-install all equipment, heavy loads, which does require cranes for transferring it to or from the boat for repair works. In doing so, it shall be positioned as such that it does not pass over any hydrocarbon piping or equipment. However, in case it could not be avoided in spite of various lay

- out options such equipment and piping shall be protected by covering to withstand impact of maximum heavy load transfer.
- aa) For all size of blinds used at Platforms, a proper blinds stacking location at each platform shall be provided to keep them safely and readily available.
 - bb) PLANT shall be designed for less frequency visits i.e. once every 2 weeks interval during normal operation. This is included, but not limited to, equipment sizing (diesel/ lube oil/ corrosion inhibitor), remote monitoring , power generation, remote start, fail safe design, process/ alarm monitoring, etc.
 - cc) Sufficient and appropriated provision for Booster Compressor's engine lifting for overhaul, engine replacement thru hatch on the upper deck.

9.10.5 RAM Study (for OWHP only)

The EPC CONTRACTOR shall perform a Reliability Availability Maintainability (RAM) Study during the detailed engineering design phase (see SPECIFICATION PEGS-12089-PJC-001, Reliability Availability Maintainability (RAM) Study General Specification) to verify that the PLANT (new wellhead platform as aforesaid) can achieve the overall efficiency and other requirements from the Basic Design. COMPANY provided RAM study report part of Exhibit E. However, during detailed engineering, EPC CONTRACTOR scope is included, but not limited to;

- a) Re-visit the sensitivity cases
- b) To ensure the design can achieve the requirement of basic engineering design (Exhibit E)

10.0 PROCUREMENT SERVICES AND SUPPLY

10.1 General Requirements

The EPC CONTRACTOR shall perform all required and necessary procurement services and shall supply all required and necessary EPC CONTRACTOR ITEMS in a correct and timely manner in accordance with the requirements of:

- a) AGREEMENT sub-article 14.5 (Procurement and Supply of EPC CONTRACTOR ITEMS),
- b) this Exhibit A
- c) Exhibit A Annex 10 (Interface Matrix)
- d) Exhibit A Annex 12 (Material Group for Procurement)
- e) Exhibit J (List of VENDORS and SUBCONTRACTORS),
- f) Exhibit G Annex-2 (Procurement and Materials Control), and
- g) the other terms and requirements of the CONTRACT, APPLICABLE LAWS.

COMPANY reserve its right to novate COMPANY available long-term agreement with any VENDORS or SUPPLIERS for Material Group 1 (refer to Exhibit A, Annex 12) and EPC CONTRACTOR shall engage and provide the procurement service accordingly.

10.1.1 Work Package 1:

EPC CONTRACTOR shall be responsible for Procurement services and supply of all material require for performance of the Work Package 1 (all material for new Wellhead Platform) except the material supplied by T&I CONTRACTOR. EPC CONTRACTOR shall include below items for the scope of supply;

- Sea fastening and grillage
- Steel material for installation aids fabrication (e.g. beam, shape, plate, tubular, pipe)

T&I CONTRACTOR shall be responsible for Procurement services and supply for Work Package 1 and deliver to EPC CONTRACTOR WORKSITE as following and except the material supply by EPC CONTRACTOR:

- supply of all ASME B31.8/B31.4 pipeline, Riser, Bends, subsea flanges & blind flanges and bolts, nuts, gaskets
- Installation Aids
- providing information, be represented for consulting, verifying and witness as stipulated in Exhibit A, Exhibit A Annex 10, AGREEMENT and EXHIBITS

10.1.2 Work Package 2:

The scope of procurement and supplied for pipeline system and tie-ins shall be responsible by T&I CONTRACTOR. However, EPC CONTRACTOR shall be responsible to provide the information and quantity to T&I CONTRACTOR for Procurement and services.

For Optional scope of WORK, EPC CONTRACTOR shall be responsible for Procurement services and supply for items below refer to the detailed in Exhibit E, Annex-10,

- Any Subsea structure/Equipment for pipeline system as required e.g. Subsea PLEM/WYE, Pipeline crossing sleepers. (except subsea Valves, WYE, Bends and pipeline material)
- Support structure for Post Installed riser such as riser protector, clamps, riser stubs for the existing wellhead platform up to the first weld joint above hanger clamp

10.1.3 Work Package 3:

EPC CONTRACTOR shall be responsible for Procurement services and supply all material Group 1 for Topside Brownfield Modification refer to Exhibit A, Annex 12 and Exhibit E, Annex 6 and Annex 14 that shall include the services both onshore and offshore of VENDOR for Telecommunication and Control system modification.

For Optional scope of WORK, EPC CONTRACTOR's shall provide all Material Group 2 (minor and bulk items) except Material Group 1 refer to Exhibit A, Annex 12 and Exhibit E, Annex 6 to complete the WORK on the existing PLATFORMS.

COMPANY shall confirm the Option of Topside Brownfield Modification via NOTICE TO PROCEED.

10.1.4 Work Package 4:

EPC CONTRACTOR shall provide material require for Topside Relocation refer to Exhibit A, Annex 11, Annex 12 and Exhibit E Annex 11 which include but not limit to:

- Jacket, Boatlanding, Piles and etc. (requirement shall similar with Work Package 1)
- Hook up material for Platform Completion items such as ladder, stairs, piping and miscellaneous items
- Grillage, Temporary support and Sea-fastening material require for transportation of Topside include items require to install on the transportation barge and ship loose items such as dock plates, bracing, etc require for T&I CONTRACTOR install at SITE.
- Steel material for installation aids fabrication (e.g. beam, shape, plate, tubular, pipe)
- Navigation Aid Platform and its sea fastening

T&I CONTRACTOR shall provide material require for Topside Relocation refer to Exhibit A, Annex 11, Annex 12 and Exhibit E Annex 11 shall include but not limit to:

- supply of all ASME B31.8/B31.4 pipeline, Riser, Bends, subsea flanges & blind flanges and bolts, nuts, gaskets for new Jacket (requirement shall similar with Work Package 1)
- Installation Aids
- Other material required for Transportation and Installation exclude material supplied by EPC CONTRACTOR.

10.1.5 Work Package 5:

EPC CONTRACTOR is not required to supply material for Work Package 5.

10.2 **Procurement Services**

The procurement services to be performed by the EPC CONTRACTOR are further described in Exhibit G Annex-2 and include but are not limited to:

- a) Establishment of the EPC CONTRACTOR's Procurement and Supply Organization.
- b) Mobilization and demobilization of the EPC CONTRACTOR's Procurement PERSONNEL.
- c) Procurement Management Plan (to be issued within thirty (30) days after EFFECTIVE DATE)
- d) Procurement control, status monitoring and reports
- e) Selection and minimum criteria for selection of VENDORS and SUBCONTRACTORS

- f) Tendering, evaluation, APPROVAL and award of Purchase Orders and SUBCONTRACTS
- g) VENDOR and SUBCONTRACTOR Correspondence and Technical Documents
- h) Expediting, inspection and testing
- i) Shipping documents, logistics and transportation
- j) Logistics and importation procedures
- k) Spare parts and SPIR forms
- l) WORKSITES procurement services
- m) Provide RFQ, TBE for tagged equipment, Technical deviation (if any)
- n) Conduct expediting meeting for all packages by weekly basis. It may request for daily basis based on project situation.
- o) KOM between EPC CONTRACTOR and VENDORS shall be conducted within seven (7) days after PO or LOI.
- p) Table summary for Priced PO including bulk materials (by discipline, by tagged items, etc.)

10.3 Green Procurement

EPC CONTRACTOR, SUBCONTRACTOR, VENDORS, SUPPLIERS shall use their best endeavors to comply with best practice Green Procurement Criteria and to promote and implement best practice criteria and environmental management throughout the entire supply chain in order to provide more environmentally responsible products.

The Green Procurement aims for procurement of products and services that impose less environmental burden through the proper use of chemical substances, preservation of ecosystems, energy efficiency, longer durability, resource conservation, ease of recycling, disassembling, and disposing of parts, from suppliers who are positively addressing environmental activities. (see also Exhibit G Annex-2)

The EPC CONTRACTOR shall cascade the above requirements down to VENDORS, SUBCONTRACTORS and SUPPLIERS and ensure compliance.

10.4 Supply of EPC CONTRACTOR ITEMS

10.4.1 General Requirements

The EPC CONTRACTOR shall procure and supply all required and necessary EPC CONTRACTOR ITEMS comprising packaged equipment, itemized (tagged) items and materials and non-itemized (bulk) items and materials, and anything else required for the WORK and the PLANT.

The EPC CONTRACTOR shall refer to Exhibit A, Annex 12 and Exhibit B for the Material Group and requirement of compensation scheme.

The EPC CONTRACTOR shall plan and schedule in advance and shall ensure VENDOR documents submissions for APPROVAL, review, and the incorporation of COMPANY comments as well as procurement, manufacturing, testing, transportation and delivery to the WORKSITE is done in a correct and timely manner in accordance with the APPROVED Procurement Plan, the final AFC Technical Documents and the requirements of the CONTRACT, APPLICABLE LAWS and GOVERNMENT.

10.4.2 Major SUBCONTRACTS

Major SUBCONTRACTORS shall be those identified as such in Exhibit K. Appointment of all SUBCONTRACTORS and the award of all SUBCONTRACTS shall be subject to the prior

APPROVAL of the COMPANY in accordance with the process stipulated in Exhibit G Annex-2.

10.4.3 Quantities of EPC CONTRACTOR ITEMS

The EPC CONTRACTOR shall procure sufficient quantities of EPC CONTRACTOR ITEMS in a timely manner, including allowance for waste, contingency, over, shortage, damage and all other risks, together with sufficient quantities of construction spare parts, first fills and consumables and overbuy per type of bulk materials so as to prevent hold-ups or disruption in the performance of the WORK.

10.4.4 Quality and Type of EPC CONTRACTOR ITEMS

All EPC CONTRACTOR ITEMS shall be new and of proven design and shall be procured from APPROVED VENDORS. Prototypes, new designs, extensive modifications of standard designs and the like shall be specified in TBE and subject to COMPANY APPROVAL prior placing P.O. The EPC CONTRACTOR shall cascade this requirement as part of PO terms and conditions.

10.4.5 Kick off Meeting for VENDORS and SUBCONTRACTORS.

The EPC CONTRACTOR shall arrange separate kick-off meetings for each VENDOR's and SUBCONTRACTOR's package. The purpose of such kick of meetings are:

- a) To check conformity of technical documents provided to / to be provided to VENDORS and SUBCONTRACTORS with latest issue of AFC documents.
- b) To review the inspection program and reports and identify critical items.
- c) To review corrective actions carried out or proposed by EPC CONTRACTOR for such critical items.
- d) To review the Factory Acceptance test procedures and check the test records.
- e) Verify accuracy of the Materials Control Procedure.
- f) Review SSHE mode, risk analysis and SSHE MS arrangements
- g) All other technical and schedule aspects.

10.4.6 Inspection and Testing of EPC CONTRACTOR ITEMS at Place of Manufacture

Inspection shall be done subject to and in accordance with the requirements of Exhibit H, APPROVED ITPs and the other applicable terms of the CONTRACT.

Use of Third-Party Agencies for inspections other than EPC CONTRACTOR PERSONNEL shall subject to prior written APPROVAL from the COMPANY.

10.4.7 Factory Acceptance Tests (FAT)

FAT shall be performed subject to and accordance with the requirements Exhibit H and the terms of the CONTRACT.

For Material Group 1, EPC CONTRACTOR shall arrange the reasonable number of EPC CONTRACTOR PERSONNEL for FAT for the package in accordance with the requirement in Exhibit A, Annex 12. The cost for EPC CONTRACTOR PERSONNEL shall include in the Procurement Management and Expediting Service cost, except the travelling and accommodation cost which shall be reimbursed once the location is confirmed during execution.

Attending the FAT activities for COMPANY PERSONNEL, travelling fares, accommodation during FAT visits, will not be in the EPC CONTRACTOR scope.

Before each FAT to be attended by COMPANY PERSONNEL, the EPC CONTRACTOR shall ensure that a FAT has been fully and successfully conducted for all critical items/functions and witnessed by VENDOR and EPC CONTRACTOR. Any additional FAT inspection visits shall be made as required to fulfill inspection point requirements, or to confirm correction of all deficiencies.

In the event of additional FAT inspection visits including cost for COMPANY PERSONNEL as mentioned above is required to fulfill the correction of all deficiencies, it shall be the EPC CONTRACTOR to accommodate such cost incurred and/or the CONTRACT PRICE shall be adjusted accordingly.

Unless otherwise agreed to by the COMPANY all notifications for attending FAT shall be officially submitted to COMPANY no later than thirty (30) days before the planned date for commencement of the FAT. All costs and expenses arising from the failure to notify as per the foregoing and any delays arising shall be for the EPC CONTRACTOR's account and borne by the EPC CONTRACTOR.

Documents required for the FAT shall be early identified in the package KOM with VENDOR. The EPC CONTRACTOR shall ensure all documents required for FAT are in AFC status prior FAT as schedule therein.

Any deficiencies or defects shall be immediately listed and summary part of FAT report including action plan for the close out and target date. FAT punch lists shall all be closed before dispatched to WORKSITES, unless mutual agreed by COMPANY in writing where delivery with punch list conditions could be allowed. Formal submission of Release Note including close out evidence of all the punch list shall be submitted to COMPANY prior release of shipment.

10.4.8 Supply of First Fills and Consumable Materials

The EPC CONTRACTOR shall identify, define, procure in necessary quantities including contingency quantities and supply all operating consumables, materials, first fills and tools which are required for the execution of the WORK.

Consumables and materials are strictly in accordance with VENDORS and equipment manufactures recommendations, and availability and delivery conditions are acceptable. The consumables, materials and first fills shall include as applicable, but not be limited to:

- a) Diesel Oil
- b) Hydraulic fluids
- c) Potable Water
- d) Utility water
- e) Inhibitors
- f) Chemicals
- g) Filter Elements
- h) Lubricants
- i) Protective coatings
- j) Gaskets and jointing

Note: First fills shall include complete filling of systems and storage tanks.

10.5 Ship Loose Materials, Spare Parts and Associated Items

EPC CONTRACTOR shall prepare and handover ship loose material to COMPANY of each PHASE as the following.

10.5.1 Hook-Up Flowline

The EPC CONTRACTOR shall provide material for Piping, Instrument/ Electrical, Structural Support sufficiently for COMPANY to subsequently install hook-up flowline after platform drilling. Quantity shall include installation contingency. List of Hook-Up material shall be produced by EPC CONTRACTOR and to be approved by COMPANY at execution stage.

The EPC CONTRACTOR shall transport the well hook-up bulk materials, including copy engineering drawings, material certificates, etc to COMPANY Supply Base in Songkhla, Thailand or other designed locations instructed by COMPANY via DAP (Delivery At Place) INCOTERMS 2010.

10.5.2 Spare Parts for Offshore Commissioning and Start Up

Minimum list of Offshore Commissioning/ Start-up Spare Parts that are to be supplied by the EPC CONTRACTOR in accordance with a list developed by COMPANY Commissioning Team based on standard package on the Wellhead Platform currently operated by COMPANY (Exhibit A, Annex-8). The list in Exhibit A, Annex-8 shall be provided for Material Group 1 and Group 2. For the spare parts of Material Group 1 shall be clearly specified again during execution and compensated by At Cost basis refer to Exhibit B. For Material Group 2, the list provided shall be responsible by EPC CONTRACTOR and compensated with Lump Sum basis.

However, specific recommendation by VENDOR shall be included so to ensure efficient manner for COMPANY to undergo the successful offshore commissioning/start-up works timely. After all, the final list incorporated VENDOR Recommendation for Commissioning/ Start-up Spare Parts shall be supplied and in the EPC CONTRACTOR Scope.

The Offshore Commissioning Spare Parts, handed over to COMPANY, shall be in separate from onshore pre-commissioning/commissioning as define as onshore construction material that is in EPC CONTRACTOR' Scope. For clarity, EPC CONTRACTOR shall provide spare parts for offshore commissioning/start-up activity that is to be performed by COMPANY. EPC CONTRACTOR shall separate the Purchase Order for Offshore Commissioning Spare Parts and other onshore construction material. This is in order to ensure no mixed-up usage of such material at on-shore where shortage of Offshore Commissioning Spares causing delay handover to COMPANY in a complete lot.

The EPC CONTRACTOR shall transport the spare parts for offshore commissioning and start up, including its copy engineering drawings, certificates and pre-commissioning dossier, to COMPANY Supply Base in Songkhla, Thailand or other designed locations instructed by COMPANY via DAP (Delivery At Place) INCOTERMS 2010.

10.5.3 Operational Special Tool/ Material Handling Equipment

Operational Special Tool/ Maintenance Handling Equipment required to operate the PLANT. COMPANY will instruct and confirm EPC CONTRACTOR to supply and they will be compensated as At Cost basis. List and Quantity shall be enough to operate and maintenance the PLANT following the standard package corresponding to O&M Supplier.

Material Handling Equipment as per Material Handling Study Report is not required to be provided by EPC CONTRACTOR.

The EPC CONTRACTOR shall secure and preserve the operational special tool, including its copy engineering drawings, specification and certificates on to Wellhead Platform or other designed locations instructed by COMPANY.

10.5.4 Two-Years and Operational Spare Part List

Prior to placing any of the corresponding Subcontracts and/or Purchase Orders, the EPC CONTRACTOR shall establish and submit for APPROVAL a detailed list of recommended spare parts that the EPC CONTRACTOR, relevant SUBCONTRACTORS and VENDORS deem to be necessary for the first two (2) years and entire continuous operation of the PLANT, specifying quantities, unit prices and schedule for delivery based on detailed information and data obtained in writing from VENDORS.

EPC CONTRACTOR shall consolidate list of spare parts sufficiently required for COMPANY to operate the PLANT in the period of two years operations. COMPANY will incorporate the list of Two-Years Spare Parts into his maintenance/ operation database. EPC CONTRACTOR is not required to supply this two-year and operational spare parts in his scope.

The full list of operational spare parts is for COMPANY to determine the technical-economical sound spare part management and strategies.

10.5.5 Spare Pipeline Spool for Emergency Pipeline Repair (Not Used)

10.5.6 COMPANY ITEM Spare Parts (Not used)

10.6 **Transportation and Delivery of Ship Loose, Spare Parts and Associated Items**

The EPC CONTRACTOR immediately on completion of the applicable WORK activities shall deliver surplus and ship loose items to COMPANY Supply Base in Songkhla, Thailand or other designed locations instructed by COMPANY via DAP (Delivery At Place) INCOTERMS 2010.

All such items shall be itemized and containerized and weights of filled containers shall not exceed 10 short tons. Delivery arrangements shall be subject to APPROVAL and the EPC CONTRACTOR shall co-ordinate delivery so as to avoid disruption to COMPANY shore-based operations.

All the above shiplooses shall be provided with Material Test Certificate (MTC), Material Data Book and relevant Certificate and submitted in advanced for COMPANY Review. Subsequently, EPC CONTRACTOR shall make all required document as listed above to be available at the time of shiploose handover to COMPANY Supply Base. EPC CONTRACTOR shall notify in writing to COMPANY, at least two weeks, prior handover such shiploose items to COMPANY Supply Base for preparation and arrangement.

COMPANY may instruct EPC CONTRACTOR to hand over above each of above ship loose categories to COMPANY Supply Base in separate time and occurrence at COMPANY convenient schedule.

10.7 Procurement Monitoring and Control

The EPC CONTRACTOR shall monitor and report procurement progress (POs and subcontracts) and prepare and maintain a Procurement Status Report (PSR) which shall show progress (planned and actual) for all procurement items and issue updated PSR on a weekly basis.

The format and content of the PSR shall comply with the requirements of Exhibit G Annex-2 and shall be proposed by the EPC CONTRACTOR for APPROVAL.

The EPC CONTRACTOR shall propose and implement mitigating actions / activities for procurement items for which actual progress is less than planned progress.

10.8 VENDOR and SUPPLIER Assistance

The EPC CONTRACTOR shall provide all required and/or necessary VENDORS' service representatives for assistance during fabrication, pre-commissioning and commissioning. The EPC CONTRACTOR's execution plan for VENDOR assistance shall form part of the PROJECT Procurement Plan and shall be subject to APPROVAL.

11.0 Onshore Construction

11.1 General Requirements

The EPC CONTRACTOR shall perform onshore construction including but not limited to fabrication engineering, fabrication, assembly, construction, testing, pre-commissioning, commissioning, preservation and load out of the new PLATFORMS (topside, jacket and appurtenances and piles) in accordance with the requirements of:

- a) AGREEMENT sub-article 14.6
- b) this Exhibit A
- c) Exhibit A Annex-5 (Pre-commissioning / Commissioning Responsibilities)
- d) Exhibit A Annex-6 (Preservation and Protection)
- e) Exhibit A Annex-7 (Services and Facilities for the COMPANY)
- f) Exhibit A Annex 10 (Interface Matrix)
- g) Exhibit H Quality Management
- h) Exhibit K EPC CONTRACTOR's Organization and Resources
- i) Exhibit L SSHE requirement
- j) SPECIFICATIONS
- k) APPLICABLE LAWS
- l) APPROVED AFC (Category C) EPC CONTRACTOR DOCUMENTS
- m) the other terms and provisions of the CONTRACT

11.1.1 Work Package 1:

All Onshore Construction for Work Package 1 shall be performed by EPC CONTRACTOR. However, T&I CONTRACTOR shall be responsible to support EPC CONTRACTOR for the Onshore Construction activities such as providing the interface information, be represented for consulting, verifying and witness at EPC CONTRACTOR WORKSITE as stipulated in this Exhibit A.

EPC CONTRACTOR shall propose the execution plan to perform Onshore Construction WORK of Wellhead Platform from four (4) to fifteen (15) platforms per installation year. The execution plan shall specify the number of Wellhead Platform (Topside, Jacket, Piles, Boatlanding and appurtenances) to be constructed within one WORKSITE and/or number of Topside or Jacket including piles, boatlanding and appurtenances in the different WORKSITE location. The propose execution plan shall refer to Exhibit K.

11.1.2 Work Package 2:

Scope of this Work Package for the new pipeline systems from the first connection of first tie-in spool at the new Wellhead Platform to the last tie-in flange at the subsea PLEM/WYE, existing bottom riser of existing Wellhead Platform as base scope including flange protectors shall be responsible by T&I CONTRACTOR.

For Optional scope of WORK, EPC CONTRACTOR shall be responsible for onshore construction activities for below items refer to the detailed in Exhibit E, Annex-10,

- Any Subsea structure/Equipment for pipeline system as required e.g. Subsea PLEM/WYE, Pipeline crossing sleepers.
- Post-installed riser, riser protector and it support structure at the existing wellhead platform up to the first weld joint above hanger clamp
- For clarity, this shall except the pre-installed riser and its support structure of new Wellhead Platform that is base scope and include in Work Package 1

11.1.3 Work Package 3: (Optional)

EPC CONTRACTOR's onshore construction scope of WORK in this work package shall include all pre-fabrication WORK to complete the WORK on the existing PLATFORMS as per the defined option in the NOTICE TO PROCEED including but not limited to, the items identified below refer to Exhibit A, Annex 12 and Exhibit E, Annex 6;

- Deck Extension for pig receiver and its associated facilities
- Pig Receiver and its associated facilities
- Supports and other miscellaneous items on existing topside modification

For Clarity, this shall exclude pre-fabrication of post installed riser, riser protector and its support structure which is already included in the Work Package 2, detailed of each option refer to Exhibit E, Annex 6.

11.1.4 Work Package 4:

EPC CONTRACTOR's onshore construction scope of WORK in this work package shall include all pre-fabrication to complete the WORK but not limit to;

- Jacket, Boatlanding, Piles and appurtenances (requirement shall similar with Work Package 1)
- Hook up items for Platform Completion such as riser hook up spools, ladder, stairs, piping and miscellaneous items
- Grillage, Temporary support and Sea-fastenning require for transportation of Topside include items require to install on the transportation barge and ship loose items such as dock plates, bracing, etc require for T&I CONTRACTOR install at SITE.
- Navigation Aid Platform and its sea fastenning

Refer to detailed scope of WORK at Exhibit A, Annex-11

T&I CONTRACTOR's onshore construction scope of WORK in this work package shall include all pre-fabrication to complete the WORK but not limit to;

- Other fabrication items require to support Transportation and Installation WORK exclude EPC CONTRACTOR ITEMS.

11.1.5 Work Package 5:

This work package shall be responsible by T&I CONTRACTOR.

11.2 **Onshore Construction Execution Plan**

The EPC CONTRACTOR shall prepare and submit a fully developed, detailed and comprehensive onshore construction execution plan not later than ninety (90) days after the EFFECTIVE DATE to the COMPANY for APPROVAL. EPC CONTRACTOR shall provide the provision to adjust the sequence of onshore construction in order to align with Offshore Installation sequence provided by COMPANY.

The onshore construction execution plan shall as minimum describe:

- a) The onshore construction engineering and onshore construction WORK to be performed
- b) List of WORKSITES and onshore construction WORKSHOPS
- c) Onshore construction resources and time scaled resource plan and histograms (EPC CONTRACTOR PERSONNEL and CONSTRUCTION EQUIPMENT).
- d) Material handling, receiving, transportation, storage and preservation and tracking procedure.

- e) Proposed list and scope of work of SUBCONTRACTORS, VENDOR and SUPPLIER and their mobilization/demobilization plan
- f) Sequence of fabrication, assembly, welding, erection, commissioning/pre-commissioning and Loadout
- g) List the onshore construction procedures and plans to be prepared by the EPC CONTRACTOR
- h) Interface management and coordination plan with T&I CONTRACTOR
- i) Quality management plan including the following as minimum:
 - i) Inspection test plan
 - i) Proposed arrangements for management, implementation, monitoring, control, inspection testing and APPROVAL.
 - ii) Welding Procedure Qualification (WPQ) test plan
 - iii) Zero punch list program
 - iv) Daily QC Database and progress tracking
- j) Onshore construction SSHE management Plan as per requirement in Exhibit L

The same shall apply to Major fabrication SUBCONTRACTORS (if any) who shall prepare the onshore construction/fabrication execution plan with the same detail for the specific scope of WORK not later than ninety (90) days after EFFECTIVE DATE for APPROVAL.

11.3 Onshore Construction Engineering

11.3.1 Fabrication Engineering

EPC CONTRACTOR shall perform all required and necessary fabrication engineering for the detailed definition and performance of the WORK and submit for COMPANY APPROVAL. EPC CONTRACTOR shall collect or exchange the information with T&I CONTRACTOR that shall be used to develop fabrication engineering at the beginning of the project. Fabrication engineering shall include, but not limited to the following scopes:

- a) Fabrication yard layout at each major stage
- b) Shop drawings, Cutting plans, and Calculation note including the preparation and issue of documents necessary for the pre-fabrication, fabrication and erection WORK, such as the following:
 - i) Temporary supports or skid way (if applicable)
 - ii) Structural panel and appurtenance pre-fabrication
 - iii) Piping spool pre-fabrication
 - iv) Piping and E&I support pre-fabrication
 - v) Riser pre-fabrication
 - vi) Temporary templates, jigs, and the like
 - vii) Sea fastening, grillage and miscellaneous support for transportation designed by T&I CONTRACTOR
 - viii) Installation aids, buoyancy tanks, temporary working platform designed by T&I CONTRACTOR
- c) Assembly plan of the structural WORK
- d) Equipment/Special package installation and piping erection plan/procedure
- e) Electrical / Instrumentation / Telecommunication installation procedure
 - i) Cables pulling schedules (by cable drum),
 - ii) Support details for devices, control units, lightings, cables/tubing trays and ladders,
 - iii) Equipment/device tagging details and materials,
 - iv) Construction procedures

- v) Typical installation
 - f) Lifting plans and method statement of Heavy lifting and Site move activity
 - g) Weight Monitoring and Control procedure
 - h) Quality control/assurance procedure as per the requirement in section 8.0 and exhibit H
 - i) Painting and repair procedure (Protective coating sequence and procedure)
 - j) EPC CONTRACTOR ITEMS and COMPANY ITEMS storage, preservation and records

11.3.2 Load out Engineering

The EPC CONTRACTOR shall perform load-out engineering for all Wellhead platform components and submit to the Marine Warranty Surveyor and T&I CONTRACTOR for review and approval prior issue to COMPANY for APPROVAL. Load out engineering shall include, but not limited to the following:

- a) Corroborate with T&I CONTRACTOR by providing & collecting all necessary information to use as design input for loadout activities.
- b) Provide loading data for loadout cases to T&I CONTRACTOR to verify of the barge stability and barge strength
- c) Loadout Procedures including Ballasting sequences with actual tidal and current
- d) Analysis for temporary reinforcement for Topside, Jacket and Piles
- e) Specific CONSTRUCTION EQUIPMENT and SUBCONTRACTORS for loadout operation
- f) SPMT (as base case) or Skidding or lifting analysis (alternative method shall be subjected to COMPANY APPROVAL), including verification of the adequacy of load out equipment such as SPMT, winching or lifting equipment for Load-out
- g) Strength analysis/check for all Load-out related component e.g. Skid ways, dollies or trailers, sliding shoe, Quay side, link beam, Pad-eyes/ears, trunnions, shackles, slings, Jetty's Bollard and other temporary appurtenances
- h) Ballasting and stability during loadout operation
- i) Environmental data, Tidal monitoring and weather forecasting
- j) Joint review and agree of sea fastening design (designed by T&I CONTRACTOR) and drawings including cut-lines to allow re-use of sea fastening where applicable
- k) Bathymetric Survey of Loadout's jetty and water way to ensure accessibility of transportation barge to EPC CONTRACTOR's jetty

The EPC CONTRACTOR shall prepare and submit loadout engineering and detailed procedures for load-out, and sea fastening for each vessel voyage no later than sixty (60) days before the planned loadout date for APPROVAL by MWS, T&I CONTRACTOR and COMPANY prior commencement Load Out operation.

11.3.3 Pre-Commissioning & Commissioning Engineering

EPC CONTRACTOR shall develop general construction completion verification check sheet which to be used as pre-requisite condition to initiate pre-commissioning activity. The

verification shall include COMPANY APPROVAL of general construction partial or full completion of sub system.

Mark up System and Sub-system shall be finalized as soon as possible after receiving AFC drawing and no later than one hundred and twenty (120) days before commencing pre-commissioning activities.

The EPC CONTRACTOR shall issue Pre-commissioning and Commissioning Procedures of Subsystems/ Systems for COMPANY review at least one hundred and twenty (120) days before the commencement of any Pre-commissioning and Commissioning operations. EPC CONTRACTOR shall identify any Subsystems/ Systems to be operationally tested with hydrocarbons for APPROVAL. Procedures shall follow project document review cycles.

The Pre-commissioning Engineering shall incorporate VENDOR and SUPPLIER recommendations and requirements and shall include, but is not limited to the following:

- a) Pre-commissioning and Commissioning Procedures for each discipline, Subsystem, System and equipment incorporating VENDORS procedures for APPROVAL.
- b) Scheduling mobilization of EPC CONTRACTOR's Representative and VENDOR's representatives in accordance with the requirements of the WORK TIME SCHEDULE.
- c) Identify pre-commissioning and commissioning spare parts for both onshore at WORKSITE and offshore at SITE in accordance with Exhibit A Annex-8, VENDOR and SUPPLIER recommendations in sufficient quantities so as not to jeopardize the timely performance of the WORK, the WORK TIME SCHEDULE and COMPLETION DATES.
- d) Colored P&ID's, one-line diagrams and loop diagrams showing the limits of the Subsystems and Systems.
- e) Pre-commissioning and Commissioning job cards, including scope, test values, reference drawing or other document, testing equipment, test duration, and other test parameters, referred to Exhibit A Annex-5 (Pre-commissioning / Commissioning Responsibilities).

The EPC CONTRACTOR shall develop onshore commissioning completion verification which require COMPANY APPROVAL for each system. This verification shall be part of the requirement for Load Out Certificate.

The EPC CONTRACTOR shall ensure that pre-commissioning and commissioning status monitoring is performed efficiently using project information management system.

11.4 Other Requirements

11.4.1 WORKSITES preparation

WORKSITES shall be clear dedicated for PROJECT, sufficient areas, clear access and consider long period for fabrication and assembly. Concrete pavement, flooding precaution, proper drainage shall be taken into consideration when working thru raining season. Sub-assembly shall consider working under shading/ roof as much as possible so as to maximize the productivity in raining season. Number of site moves during major part's assembly shall be minimized so as to reduce transportation risks.

EPC CONTRACTOR shall provide Services and Facilities for COMPANY PERSONNEL in each WORKSITES as specified in section 6.6 in this Exhibit A, Exhibit A annex 7 and Exhibit B annex 7

EPC CONTRACTOR shall provide soil bearing reports with respect to construction and loadout area and sequence specified below to verify the capacity of WORKSITES foundation

areas are suitable for construction and loadout. The soil bearing report shall be not be older than 1 years before commencement of the fabrication.

EPC CONTRACTOR shall provide quayside and waterway bathymetry survey report with respect to loadout and transportation to verify WORKSITES capacity to Loadout and transportation. The bathymetry survey report shall be not be older than 1 years before commencement of the fabrication and shall be re-verified and rectify by EPC CONTRACTOR just before first loadout and transportation if the bathymetry is not comply with the requirement.

EPC CONTRACTOR shall submit preparation plan of the WORKSITES specified in Exhibit K to fill in the gap(s) in the above WORKSITES requirement for COMPANY APPROVAL within sixty (60) days after EFFECTIVE DATE.

11.4.2 Dimensional Control

The EPC CONTRACTOR shall effectively implement, manage dimensional control for the fabrication WORKS. The dimensional control procedure shall be completed and submitted for APPROVAL no later than sixty (60) days before the planned start date for onshore fabrication. The procedure shall define in following detail as minimum:

- a) Methodology and tool for dimensional control
- b) Establishing of permanent and stable survey benchmark stations and submit for COMPANY APPROVAL prior to the commencement of assembly WORK. EPC CONTRACTOR shall engage independent third party surveyor for verification of the benchmark station.
- c) Dimensional checks frequency and acceptable tolerance to ensure that tolerances specified in the SPECIFICATION, design drawings and proper fit-up during the installation offshore of the overall PLANT shall be satisfied.
- d) Dimensional inspector qualification and competency
- e) Calibration of dimension control equipment and instrument
- f) Specific project formats for dimension control report

11.4.3 Welding and NDT Qualification

The scope of WORK includes Welding, Welder and NDT qualification to meet the requirement define in detail in Exhibit H.

11.4.4 Weighing

In accordance with the APPROVED Weight Control Procedure (see Exhibit A Section 9.8.13 and the requirements of SPECIFICATION 10008-STD-6-OSS-019, EPC CONTRACTOR shall perform weighing of the PLANT to verify the weight and center of gravity with calibrated load cells and APPROVED methodology.

As regard to weighing operations for final installation, EPC CONTRACTOR shall give COMPANY and Marine Warranty Surveyor three weeks prior written notice to enable them to witness such operations. The document recording the final weight values will be signed by EPC CONTRACTOR and co-signed by COMPANY and Marine Warranty Surveyor.

Produce weighing report and update weight control report to reflect the weighing results for all weight conditions and produce the final weight control report in “as-weighing stage”.

11.4.5 Onshore Construction SUBCONTRACTORS

Scope of works for major onshore construction/fabrication SUB CONTRACTOR as identified in Exhibit K, milestone/ schedule, terms & conditions, progress payment method, specific SSHE requirements bridging to the main CONTRACT, shall be submitted to COMPANY for review within sixty (60) days after EFFECTIVE DATE.

Other onshore construction SUB CONTRACTORS list and strategy shall be submitted for COMPANY APPROVAL within ninety (90) days after EFFECTIVE DATE.

COMPANY reserve right to request other onshore construction subcontracting RFQ (including scope of scope of work, scheduling, term and condition, term of payment and SSHE requirement) for APPROVAL or review prior launching of subcontracts tendering process.

TBE for onshore construction subcontracts may also be requested for COMPANY'S APPROVAL for any specific scope of work, in such case EPC CONTRACTOR shall not award sub-contracts without COMPANY APPROVAL.

11.4.6 Technical and Readiness Review for Onshore Construction

The purpose of this review will be:

- a) To review any document not available during the above engineering review and to confirm compliance with that review
- b) To review changes to the specifications and designs post Approved For Construction
- c) To identify gap of onshore construction readiness and action plan against COMPANY specification
- d) To confirm that the preparation of plans and procedures for onshore pre-commissioning and commissioning is in progress in accordance with schedules.
- e) To check correctness of documents used for fabrication/construction.
- f) To review the welding/NDT procedures.
- g) To check conformity of welding operation with welders qualification.
- h) To check storage conditions for COMPANY and EPC CONTRACTOR ITEMS, and ensure that VENDORS instructions are complied with.
- i) To review SSHE procedures and SSHE Risk Management to ensure meet with standards.
- j) To check conformity of fabricated elements with AFC documentation.

The technical readiness review for Onshore Construction shall be held no later than thirty (30) days before planned first commencement of onshore fabrication.

11.4.7 SSHE Commencement and Restoration Certificates for Fabrication Yards

11.4.7.1 SSHE Commencement Certificates

Before commencement of WORK at a Fabrication Yard a pre-commencement SSHE review meeting shall be held to be attended by COMPANY and EPC CONTRACTOR PERSONNEL.

The purpose of the pre-commencement SSHE review is to verify compliance with SSHE Requirements including but not limited to the Fabrication Yard and facilities, CONSTRUCTION EQUIPMENT, PERSONNEL, training, tools, inspection/certificates, medical check-up report etc., all to be as per the APPROVED SSHE Execution Plan.

The results of the SSHE review shall be recorded in the SSHE Commence Certificate which shall be issued by the COMPANY. The EPC CONTRACTOR shall implement any corrective action items in a timely manner. The rights and obligations of the PARTIES with regard to SSHE Commencement Certificates shall be as stated in Exhibit L.

11.4.7.2 SSHE Restoration Certificates for Fabrication Yards

Upon completion of WORK at a Fabrication Yard a SSHE Review meeting shall be held, attended by COMPANY and EPC CONTRACTOR PERSONNEL to verify that demobilization and site restoration are complete and satisfy all requirements. Whereupon the COMPANY will issue a SSHE Restoration Certificate. The rights and obligations of the PARTIES with regard to SSHE Restoration Certificates shall be as stated in Exhibit L.

11.5 **Fabrication for Wellhead Platform**

The EPC CONTRACTOR shall perform all required and necessary fabrication WORK at the APPROVED fabrication yard(s) as per identified in Exhibit K in compliance with terms and provisions of the CONTRACT, including but not limited to:

11.5.1 Structural fabrication WORK for Jackets and Piles

EPC CONTRACTOR shall fabricate and erect at the WORKSITES of wellhead platform jacket, loadout, installation aids, service platforms and piles. The scope of work shall include:

- a) Materials cutting for Jacket, boat landing, piles and related appurtenances (riser pipe for export and import line, ladders, mud mats, pile stabbing guide, riser clamp, riser stub, grating, handrail and the like) profiling and welds preparation
- b) Pre-fabrication, Fabrication and assembling of Jacket, boat landing, piles and related appurtenances
- c) Abrasive blasting and painting application
- d) Inspection, NDT and dimensional control
- e) Anodes mounting
- f) Marking
- g) Leak test of all buoyancy compartments (jacket legs, buoyancy tanks)
- h) Boat Landing and crown shim trial connection and fit on jacket structure before load-out
- i) Supply, fabricate and install all applicable and necessary for loadout and transportation including grillage and sea-fastening
- j) Supply (refer to Exhibit A, Annex 10), fabricate, erection and pre-installed the installation aids
- k) Field joint coating (FJC) of riser including PQT

11.5.2 Structural WORK for Topside

EPC CONTRACTOR shall fabricate and erect at the WORKSITES of wellhead platform topside, including its equipment, piping, control system, mudwall, platform identification, and the like. The scope of work shall include:

- a) Material cutting, profiling and weld preparation,
- b) Abrasive blasting and painting application,
- c) Preparation WORK, tacking, welding, sub-assembling including fastening to mainframe of all secondary structures and appurtenances, including drilling gang-way supporting structure (widow maker and or par-pin).
- d) Final assembling,
- e) All yard hook-up WORK shall include positioning, fastening, and welding of structural hook-up pieces.
- f) Inspection, NDT and dimensional controls.
- g) Testing and certify lifting provided lifting gears, equipment, monorail and pad eye
- h) Supply (refer to Exhibit A, Annex 10), fabricate, erection and pre-installed the installation aids

11.5.3 Equipment Installation

All equipment on the deck shall be inspected, installed, tested and coated. In order to minimize offshore installation WORK, all equipment shall be installed at fabrication yard. No equipment shall be installed offshore unless APPROVED in writing and COMPANY reserves the right to back charge all associated cost incurred due to offshore equipment installation.

Equipment installation WORK shall comply with all VENDORS' and/or SUPPLIERS' handling and installation instructions. Where necessary (e.g. mandated by warranty conditions) Equipment installation WORK shall be performed with VENDORS' (and/or SUPPLIERS') representative(s) in attendance.

Equipment installation including Pressure Vessels, Pedestal Crane, Pig Traps shall include as applicable:

- a) Prefabrication and erection of supports, guides and local reinforcements and its dimensional control as necessary.
- b) Complete painting of supports, local reinforcements and the like.
- c) Re-assembly of Equipment pieces, instrumentation, etc., which have been shipped loose or have been dismantled for transportation.
- d) Erection, including shimming, alignment, fastening, and connecting of Equipment on supports.
- e) Inspection, NDT and dimensional controls.
- f) Repair and/or application of protective material.

11.5.4 Piping, Fabrication and Erection

Piping preparation, sub-assembly prefabrication and erection shall include as applicable:

- a) Spools prefabrication including cutting, profiling, and welding of pipes, fittings and valves and internal cleaning as per the requirement in SPECIFICATION
- b) Water jet cleaning of pipe spool is required before erection
- c) Pickling for stainless steel welded joint
- d) Spool piece weld tests
- e) Pipe support prefabrication including cutting, profiling, welding of supports, pipe guide and I-rod.
- f) Prefabrication of manifolds and other piping sub-assemblies.
- g) Dimensional controls
- h) Fit-up and field joint welding
- i) Provision of temporary special blind flanges compatible to compact ball valves to facilitate of flowline piping hydrotest
- j) Provision of temporary special blind flanges compatible to flowline G-clamp hub.
- k) Preheat and Post Weld Heat Treatment as per SPECIFICATION requirement
- l) Inspection, NDT and line check
- m) Hydrostatic leak tests as per onshore pre-commissioning and commissioning requirement.
- n) Pipe flushing before valve installation to ensure no welding slack, debris, metal contamination remains in the piping and witness by COMPANY
- o) Valves passing (seat) tests at workshop before installation
- p) System service leak tests
- q) Repair of coatings
- r) Re-instatement
- s) Line identification marking and color coding
- t) Temporary closures, strainers
- u) Piping system preservation before sail away

11.5.5 Riser Fabrication and Erection

Riser preparation, sub-assembly prefabrication and erection shall include as applicable:

- a) Riser support prefabrication including cutting, profiling and welding of supports
- b) Dimensional controls
- c) Preheat and Post Weld Heat Treatment as per SPECIFICATION requirement
- d) Inspection, NDT and hydrostatic leak test
- e) Riser splash zone coating and repair of the coating
- f) Riser joints coating and Repair of coatings
- g) Identification marking
- h) Temporary closures, Preservation and supports
- i) Installation of the risers on wellhead platform topside and jackets. For jackets, the scope shall include provision and installation of permanent blind flange at both the bottom of riser and the cap on top of riser. Pressure gauge shall be installed at the top of future riser with environmental protection
- j) Hook-up pieces (connected between topside pipeline and riser) prefabrication and final preparation, including preparation of all items for hook-up

11.5.6 Electrical, Instrument, Telecommunication and Safety

11.5.6.1 Electrical

- a) Prefabrication and erection of supports.
- b) Installation of outdoor electrical equipment including generator and solar panel package and the like as per VENDORS' recommendations.
- c) Hook-up pieces prefabrication and final preparation, including preparation of all items for hook-up.
- d) Positioning and fixing of electrical panels, batteries, boards, junction boxes as per VENDORS' recommendations.
- e) Positioning and fixing of indoor/outdoor electrical bulk material such as motor control stations, junction boxes, lighting fixtures, socket outlets, cable trays/racks with covers and the like as per VENDORS' recommendations.
- f) Installation of Navigation Aids system, indoor/outdoor lighting fixtures and signs.
- g) Hook-up pieces installation, which shall include positioning alignment, fastening and tightening for fittings.
- h) Pulling, laying and clamping of indoor/outdoor power, control, lighting and earthing relevant cables on cable trays/racks.
- i) Glanding, terminating and marking of all cables.
- j) Identification, tagging, labelling of all equipment.

11.5.6.2 Instrumentation

- a) Prefabrication and installation support of instruments, sensors, detectors, valves, control stations, junction boxes, cabinets, instrument related accessories.
- b) Prefabrication and installation of permanent access to instruments, valves, sensors and the like.
- c) Calibration of instrument items
- d) Hook-up of instruments, sensors, detectors, valves, probes, thermowells and the like.
- e) Installation of orifice carriers, plates and restriction orifices (RO).
- f) Installation of tubing and cable trays and associated covers.
- g) Installation of tubing, cutting to length, fitting, fixing and connection.
- h) Mounting of instrument junction boxes and other accessories.
- i) Instrument installation on equipment, including fixing, identifications, termination.

- j) Laying of the instrument, control and safety related cables in instrument cable trays, fastening, cutting to length, ends preparation, fitting and connection.
- k) Glanding, terminating, and marking of all cables
- l) Identification, tagging, labelling of all equipment
- m) Laying of instrument earthing cables, fastening, cutting to length, ends preparation, fitting and connection.
- n) Installation of control and safety systems cabinets as per VENDORS' recommendations.
- o) Installation of packages related control systems cabinets as per VENDORS' recommendations.
- p) Supplying and Installation of RACON including but not limited to, support, framing, cables, accessories, pre-commissioning/ commissioning, and anything else required and/or necessary for RACON.
- q) To install and commission Red Lantern

11.5.6.3 Telecommunication

- a) Prefabrication and erection of supports.
- b) Mounting of telecommunication equipment including hook-up fittings.
- c) Hook-up pieces prefabrication, and final preparation for hook-up.
- d) Mounting of telecommunication cable trays, covers, and cables.
- e) Telecommunication equipment installation, including fixing, and identification.
- f) Hook-up pieces installation.
- g) Laying of telecommunication cables in the related cable trays.
- h) Glanding, terminating, and marking of all cables
- i) Identification, tagging, labelling of all equipment

11.5.7 Safety Equipment

Safety equipment scope of WORK shall comply with SPECIFICATIONS and shall include as applicable:

- a) Installation of safety equipment pre-fabricated supports.
- b) Installation of all safety equipment according to APPROVED Engineering documents/drawings.
- c) Installation of safety signs and notices accordingly safety requirements.
- d) Installation of firemen outfit, fire blanket, PERSONNEL's safety equipment and lifesaving equipment.
- e) Fixing of swing ropes above boat landing platform (location and structure member to be APPROVED).
- f) Any and all other safety WORK and/or services necessary to complete the WORK.

11.5.8 Painting, Coating, and Miscellaneous Works

Painting, coating, galvanizing, insulating and fire proofing WORK shall comply with SPECIFICATIONS and shall include as applicable;

- a) Preparation of application procedure and qualification test of materials, procedure and applicators
- b) Surface preparation of all items to be painted and coated
- c) Painting of main and secondary structures for jacket, topside, boat landing, and appurtenances, including all gratings and non-structures
- d) Painting of all supports, pipe racks, hook-up pieces, clamps and the like
- e) Painting, insulation and cladding of piping, including color coding and line number identification, as per COMPANY criteria and SPECIFICATION

- f) Painting and/or touch-up and insulation (if applicable) of EPC CONTRACTOR ITEMS
- g) Provision and installation of PERSONNEL protection guards for pipes and items as per SPECIFICATION
- h) Provision and installation of thermal insulation and cladding, including fixation of insulation and sealant to cladding joints in accordance with VENDORS instructions (if applicable)
- i) Final painting, coating repair and touch-up before and after load-out of topside and jackets
- j) Any and all other coating/insulation/painting/fire proofing WORK and/or services necessary to complete the WORK
- k) Using paint products with low VOC or registration of "GREEN or Environmentally Friendly Label" or equivalent
- l) Abrasive blasting shall be silica free type.

11.5.9 Onshore Pre-commissioning and Commissioning

The EPC CONTRACTOR shall effectively perform pre-commissioning and to the extent required commission the new wellhead platform components in accordance with the terms and requirements of the CONTRACT AGREEMENT sub-articles 14.10, 14.11 and 14.12, using the applicable AFC EPC CONTRACTOR, VENDOR and SUPPLIER documents and drawings as per Exhibit A Annex-5, the SPECIFICATIONS, the PROJECT Safety Requirements, APPLICABLE LAWS and the other requirements of the CONTRACT.

Pre-commissioning and Commissioning works shall be in optimum sequences with the preference for key utility system/sub-system i.e. IG/UG, PCS/SIS, power generation, etc. EPC CONTRACTOR shall provide temporary power sources and other utilities for all pre-commissioning and commissioning activities.

Utility and Instrument gas systems shall be fully commissioning onshore with temporary instrument air/Nitrogen. Upon the completion of onshore commissioning, piping and distribution tubing shall be made oxygen free to ensure that starting up the platform is safe.

Inhibited water or other suitable liquid shall be used for onshore function test of vessel, pumps and associated instrument. Tested equipment and instrument shall be drained and dried prior proceeding to next testing requirement.

Performing Nitrogen helium leak test as part of onshore pre-commissioning works. Procedure and sub-system demarcation shall be submitted for COMPANY APPROVAL.

11.5.10 Preservation

The EPC CONTRACTOR shall clean, store, protect, maintain and preserve the COMPANY ITEMS, EPC CONTRACTOR ITEMS and the RESULTS OF THE WORK and the PLANT, in an as new condition, also in accordance with the SPECIFICATIONS, VENDOR, SUPPLIER requirements / recommendations, Exhibit A Annex-6 and the other applicable terms of the CONTRACT.

The EPC CONTRACTOR shall prepare and maintain at each applicable WORKSITE during the performance of the WORK a Preservation Dossier which shall as a minimum include:

- a) Description of WORK relevant part of the PLANT
- b) Frequency of inspection and maintenance required
- c) Check-lists, maintenance and inspection records

- d) Lists of tools and equipment, including special items
- e) Lists of required lubricants, first fills, testing kits, preservatives and other consumables
- f) Preservation report showing completion of preservation activity separate by area and or tagged items

The proposed format and content of the Preservation Dossier shall be submitted for REVIEW and APPROVAL in advance of the performance of the applicable WORK. The Preservation Dossier shall be made available when requested for review and inspection.

Preservation check lists (items, condition and status) for EPC CONTRACTOR ITEMS, COMPANY ITEMS and RESULTS OF THE WORK (topside, jackets, piles, appurtenances, and associated materials) to be transported to the SITE shall be prepared by the EPC CONTRACTOR and submitted for APPROVAL no later than three (3) days before the planned sail away date. The Preservation Check Lists shall be verified and witnessed by the EPC CONTRACTOR, T&I CONTRACTOR, MWS and COMPANY.

11.5.11 Zero Punch List program

The EPC CONTRACTOR shall effectively implement and manage a Zero Punch List Program and shall use his best endeavors with full commitment so that no fabrication punch list items and if any punch list items, only minimal are remaining at each applicable sail away. However, EPC CONTRACTOR shall take

The Zero Fabrication Punch List Program for the PROJECT shall be developed by the EPC CONTRACTOR and shall be submitted for APPROVAL as part of the Fabrication Execution Plan/ Detailed Construction Execution Plan submitted by the EPC CONTRACTOR.

The Zero Punch List Program shall include but is not be limited to:

- a) Leadership and Commitment at by EPC CONTRACTOR's Senior management and Project management team
- b) Zero Punch List Taskforce Team to monitor status of all open punch list items, expediting close out of open punch lists items, pending procurement and communicate with COMPANY
- c) Key performance indicators and/or an incentive program
- d) Remaining WORK Items / Punch list Schedule

Remarks for Work Package 1, 3 and 4:

“Onshore punch list” shall be defined as the remaining work which can be done by EPC CONTRACTOR at onshore but was not done before the sail away and “the defect which are found after the sail away but was proved to be EPC CONTRACTOR fault”. Onshore Punchlist shall be under EPC CONTRACTOR's scope of work.

“Offshore punch list” shall be defined as the remaining work which can't be done onshore and shall be done by T&I CONTRACTOR i.e. hook up for Wellhead Platform completion, WORK which have to be done after PLATFORM hook up and “defects which are found after sail away but can't be proved to be EPC CONTRACTOR fault” Offshore Punchlist shall be under T&I CONTRACTOR's scope of WORK.

11.5.12 Load-out and Sea Fastening

EPC CONTRACTOR's scope of load-out operation, sea fastening fabrication and installation for Wellhead Platform shall include all activities and provision of EPC CONTRACTOR PERSONNEL and resources required and necessary for the preparation and load-out

operations for the PLANT, Part of PLANT, necessary spare part, CONSTRUCTION EQUIPMENT.

Load-Out and Sea Fastening WORK shall include but is not limited to:

- a) Provision of load-out and sea fastening procedures, analysis, drawings and reports.
- b) Performance of functional and capacity tests and/or load tests of all loadout equipment such as Self-Propelled Modular Trailer (SPMT), bogies, ballasting pumps, winches, hydraulic jacks, slings, cranes, and etc.
- c) Preparation of suitable mooring arrangements before, during and after the load-out. The mooring utilized during load-out shall be a system allowing re-tensioning of the mooring at any time.
- d) Load out temporary structures, supports and other means require for load-out
- e) Movement of jackets, topside, and any other items to be loaded out from fabrication or storage area(s) to loading area(s)
- f) All required reinforcements for Load-out, securing WORK (including the internal sea fastening of PLANT) and voyage protection (if applicable).
- g) Load-out onto transportation barges including provision of installation and removal of all temporary works, materials and equipment, necessary for load-out operations.
- h) Placing and sea-fastening for the Loaded-out Part of the PLANT as per the SPECIFICATION and/or direction form MWS
- i) Provision and installation of all temporary equipment, material and tools for sea fastening on cargo barges.
- j) Inspection and testing of sea fastening shall be approved and endorsed by T&I CONTRACTOR, MWS and COMPANY.
- k) Remove all temporary padeyes/trunnion for Loadout and sea-fastening activity
- l) Achieving of READY FOR LOAD-OUT CERTIFICATE and READY FOR TRANSPORTATION CERTIFICATE(S) as per article 19.1.1 in the AGREEMENT prior to proceed with load out and transportation, respectively.
- m) Arrangement of assist tug or vessel to bring transportation barge (provided by T&I CONTRACTOR) from the Designated Anchorage Point (port in location) to alongside with EPC CONTRACTOR' jetty, up on the completion of loadout operation, complete sea fastening installation and ballasting the transportation barge to transportation condition, EPC CONTRACTOR shall assist to bring transportation barge with Wellhead Platform out to the Designated Anchorage Point (port out location).

T&I CONTRACTOR shall responsible to obtain the Gas Free Certificate prior to handover the transportation spread (transportation barge and associated towing anchor handling tug) for EPC CONTRACTOR at the Designated Anchorage Point (out of the port and before pilot embarking, custom clearance and immigration) by notification EPC CONTRACTOR in accordance with the requirement and notification window in Exhibit C and the following requirement:

- For the first trip of each barge for each installation year, Barge shall be delivered as clean flat barge condition
- For the subsequence trip of the barges, EPC CONTRACTOR and T&I CONTRACTOR may mutual agree to reuse the installed grillage and sea fastening as seem appropriate. EPC CONTRACTOR shall be responsible to clear, modify and reuse the agreed grillage and sea fastening.
- EPC CONTRACTOR shall return the barge to the Designated Anchorage Point with completed load-out, sea fastening and custom clearance of the part of the PLANT and ballast the barge to be ready for sail-away on the planned sail-away date
- If the Topside and Jacket are combined in the same transportation barge, the duration above shall be increased as per Exhibit C.

- Transportation barge with grillage and sea fastening of last PHASE for each installation year shall be return to EPC CONTRACTOR WORKSITE. EPC CONTRACTOR shall remove and clean the barge and hand over the barge back to T&I CONTRACTOR as clean flat barge condition.
- EPC CONTRACTOR shall reconcile grillage and sea fastening after completion of Installation of each year in order to identify the quantity of reusable which shall be preservation and storage at EPC CONTRACTOR WORKSITE for next Installation year and quantity of scrap that require to dispose in accordance with the Article 14.5 of AGREEMENT.
- T&I CONTRACTOR shall confirm and notify EPC CONTRACTOR thirty (30) days prior the last transportation barge for each Installation year will arrive the EPC CONTRACTOR WORKSITE and EPC CONTRACTOR shall complete removal of grillage and sea fastening within seven (7) days.

T&I CONTRACTOR shall support EPC CONTRACTOR who is responsible for overall load out and sea-fastening activities of wellhead platform as defined below:

- Provide Grillage and Sea-fastening engineering drawing which is the result of the installation engineering WORK stipulated in section 12.3.2 for EPC CONTRACTOR to prefabricate and install accordingly
- Monitor EPC CONTRACTOR in pre-fabrication and installation of the grillage and sea fastening to ensure its quality and integrity
- EPC CONTRACTOR shall be responsible for supply of material and pre-fabrication of the grillage and sea fastening up to 100 metric tons (base weight) for each jacket and Piles transportation barge and 50 metric tons (base weight) each topside transportation barge only. EPC CONTRACTOR shall maximize the reuse of the grillage and sea fastening structure.
- T&I CONTRACTOR shall be responsible for the optimization design of the grillage and sea-fastening material and fabrication. Any excessive requirement from his design for the additional material and fabrication of grillage and sea fastening, cost incur shall be compensated by T&I CONTRACTOR.
- EPC and T&I CONTRACTOR shall use his best endeavor to maximize reuse of the Grillage and Sea-fastening as much as reasonable. EPC CONTRACTOR shall reuse and modify of the existing grillage and sea-fastening on the barge and shall be responsible to preserve and reinspection of the grillage and sea fastening.
- Co-ordinate with MWS to Achieving of READY FOR LOAD-OUT CERTIFICATE and READY FOR TRANSPORTATION CERTIFICATE(S) as per article 19.1.1 in the AGREEMENT prior to proceed with load out and transportation, respectively.
- Other T&I CONTRACTOR responsibilities as defined in Exhibit-A Annex10

Loadout operation shall complete within the duration in accordance with the requirement in Exhibit C.

The T&I CONTRACTOR shall also ensure to arrange the Transportation Spread to the loadout quay, that decks are clear of obstructions and ready for installation of barge grillage steelwork, and any required internal reinforcement or barge reinforcement is completed. In order to ensure the accessibility of access way/water way, the transportation barge provided by T&I CONTRACTOR shall be managed and controlled the maximum draft of towing condition from anchorage point to EPC CONTRACTOR loadout quay and EPC CONTRACTOR loadout quay to anchorage point. "Maximum Draft of Towing Condition" is 3.8 m.

Or otherwise subject to mutual agree between EPC and T&I CONTRACTOR, tide of water way to EPC CONTRACTOR shall be confirmed and managed together by both parties in order to allow transportation barge access to EPC CONTRACTOR loadout quay safely.

In the other hand, EPC CONTRACTOR shall be responsible to take all necessary actions to provide the access for transportation barge without obstacle and ensure that the water level of water way (access way) from anchorage point to EPC CONTRACTOR loadout quay shall be minimum of "Maximum Draft of Towing Condition" plus Zero point five (0.5) meter.

11.5.13 Installation aids fabrication and erection

EPC CONTRACTOR shall Supply (refer to Exhibit A, Annex 10), fabricate and install installation aids for Wellhead Platform including as applicable:

- i) Diaphragm leg closures
- ii) Buoyancy aids
- iii) Lifting trunnions
- iv) Flooding/ballasting and up-ending systems
- v) Jacket Levelling Systems (if applicable) and their commissioning
- vi) Main and secondary pad-eyes (if applicable)
- vii) Lifting devices (slings, shackles and the like)
- viii) Rigging platforms and temporary working platforms
- ix) Transition Pieces

T&I CONTRACTOR shall support the EPC CONTRACTOR who is responsible for installation aids fabrication and erection activities of wellhead platform as defined below:

- Provide installation aid engineering drawing which is the result of the installation engineering WORK stipulated in section 12.3.2.1 for EPC CONTRACTOR to prefabricate and erect accordingly
- Monitor EPC CONTRACTOR in pre-fabrication and erection of Installation Aids to ensure its quality and integrity
- EPC CONTRACTOR shall be responsible for supply of material and pre-fabrication of the installation aids up to 50 metric tons (base weight) for each Wellhead Platform installation only. EPC CONTRACTOR shall maximize the reuse of the installation aids structure.
- T&I CONTRACTOR shall be responsible for the optimization design of the installation aids up to 50 metric tons (base weight) for each Wellhead Platform. Any excessive requirement from his design for the additional material and fabrication of installation aids, cost incur shall be compensated by T&I CONTRACTOR.
- EPC and T&I CONTRACTOR shall use his best endeavor to maximize reuse of the Installation Aids as much as reasonable. EPC CONTRACTOR shall reuse and modify of the existing Installation Aids on the barge and shall be responsible to preserve and reinspection.

EPC CONTRACTOR shall reconcile Installation Aids after completion of Installation of each year in order to identify the quantity of reusable which shall be preservation and storage at EPC CONTRACTOR WORKSITE for next Installation year and quantity of scrap that require to dispose in accordance with the Article 14.5 of AGREEMENT.

11.5.14 Dropped ESDV, Valves and spading of export line for Pipeline Offshore Pre-Commissioning

Upon completion of pre-commissioning Topside, EPC CONTRACTOR shall drop ESDV, related valves of export line, provide and install dummy spools and spading which cover from pig launcher to ESDV. This will support offshore pigging activities that will be performed by T&I CONTRACTOR. T&I CONTRACTOR shall be responsible to verify, witness and

supervise during EPC CONTRACTOR (refer to Exhibit A, Annex 10), fabricate and install installation aids for Wellhead Platform including as applicable:

- i) Diaphragm leg closures

11.6 Fabrication of Linepipe and Associated Items

Not used.

11.7 Fabrication of Optional Scope of WORK

11.7.1 Structural WORK for Deck Extension for Pig Receiver (Optional)

EPC CONTRACTOR shall fabricate and erect at the WORKSITES of deck extension required for pig receiver and its facilities. The scope of work shall include:

- a) Materials cutting for deck extension and related appurtenances (floor plate, handrail and the like) profiling and welds preparation
- b) Pre-fabrication, Fabrication and assembling of deck extension and related appurtenances
- c) Abrasive blasting and painting application
- d) Inspection, NDT and dimensional control
- e) Marking
- f) Supply, fabricate and install all applicable and necessary loadout, transportation and installation aids for deck extension

11.7.2 Piping, Fabrication and Erection for Pig Receiver (Optional)

Piping preparation, sub-assembly prefabrication and erection shall include as applicable:

- a) Spools prefabrication including cutting, profiling, and welding of pipes, fittings and valves and internal cleaning as per the requirement in SPECIFICATION
- b) Water jet cleaning of pipe spool is required before erection
- c) Pickling for stainless steel welded joint
- d) Spool piece weld tests
- e) Pipe support prefabrication including cutting, profiling, welding of supports, pipe guide and I-rod.
- f) Prefabrication of manifolds and other piping sub-assemblies.
- g) Dimensional controls
- h) Fit-up and field joint welding
- i) Preheat and Post Weld Heat Treatment as per SPECIFICATION requirement
- j) Inspection, NDT and line check
- k) Hydrostatic leak tests as per onshore pre-commissioning and commissioning requirement.
- l) Pipe flushing before valve installation to ensure no welding slack, debris, metal contamination remains in the piping and witness by COMPANY
- m) Valves passing (seat) tests at workshop before installation
- n) System service leak tests
- o) Repair of coatings
- p) Re-instatement
- q) Line identification marking and color coding
- r) Temporary closures, strainers
- s) Piping system preservation before sail away

11.7.3 Instrument and Telecommunication for Pig Receiver (Optional)

- a) Prefabrication and installation support of all instruments and instrument related accessories for pig receiver.
- a) Calibration of instrument items
- b) Hook-up of instruments items
- c) Installation of instrument items including tubing and associated covers
- d) Instrument installation on equipment, including fixing, identifications, termination.
- e) Laying of the instrument, control and safety related cables in instrument cable trays, fastening, cutting to length, ends preparation, fitting and connection.
- f) Glanding, terminating, and marking of all cables
- g) Identification, tagging, labelling of all equipment
- h) Laying of instrument earthing cables, fastening, cutting to length, ends preparation, fitting and connection.
- i) Installation of control and safety systems cabinets as per VENDORS' recommendations.
- j) Installation of packages related control systems cabinets as per VENDORS' recommendations.

For clarity, T&I CONTRACTOR's scope shall be responsible for all onshore construction physical work related with instrumentation work require for pig receiving facilities.

11.7.4 Post-installed riser (Optional)

Riser preparation, sub-assembly prefabrication and erection shall include as applicable:

- a) Spool prefabrication including cutting, profiling and welding
- b) Spool piece weld tests
- c) Riser support prefabrication including cutting, profiling and welding of supports
- d) Dimensional controls
- e) Preheat and Post Weld Heat Treatment as per SPECIFICATION requirement
- f) Inspection, NDT and hydrostatic leak test
- g) Riser splash zone coating and repair of the coating
- h) Riser joints coating and Repair of coatings
- i) Identification marking
- j) Temporary closures and supports
- k) Installation of the risers on wellhead platform topside and jackets. For jackets, the scope shall include provision and installation of permanent blind flange at both the bottom of riser and the cap on top of riser. Pressure gauge shall be installed at the top of future riser with environmental protection

Hook-up pieces prefabrication and final preparation, including preparation of all items for hook-up

11.7.5 Navigation Aids Platform (Optional)

Refer to Exhibit A, Annex-11

11.7.6 PLEM or WYE

The general requirement shall refer to Section 11.5.2, 11.7.1 and 11.7.2 as applicable.

12.0 Transportation and Offshore Installation

Not Used.

13.0 FINAL DOCUMENTATION

13.1 General Requirements

The EPC CONTRACTOR shall compile all FINAL DOCUMENTATION PHASE by PHASE basis including that from VENDORS, subcontractors and SUPPLIERS, in accordance with;

- a) AGREEMENT sub-articles 14.4.5 and 14.4.6,
- b) This Exhibit A, Exhibit A Annex-1 & 2
- c) 10008-STD-6-GEN-002, Coding Protocol for Project Specific Documents and Drawings
- d) 10008-STD-6-GEN-004, Min. Requirements for Contractor's Documentation,
- e) PEGS-0710-DWG-002 Standard Symbols and Legend for P&ID
- f) 10008-STD-6-DWG-00, AutoCAD Standard and Procedures
- g) any other applicable term of the CONTRACT

13.1.1 Work Package 1, 3 and 4:

Final documentation for Work Package 1, 3 and 4 shall be performed by EPC CONTRACTOR. However T&I CONTRACTOR shall be responsible to provide the offshore as-built survey result of the wellhead platform after installation (i.e. Platform position, Platform elevation, Platform orientation), platform installation record (i.e. Pile driving record, offshore welding record and QA/QC record, platform hook up redline marked up) and other related information as requested by EPC CONTRACTOR to complete its final documentation scope of WORK

13.1.2 Work Package 2 and 5:

Final documentation for Work Package 2 and 5 shall be performed by T&I CONTRACTOR. However, if pipeline as-built survey is performed by COMPANY other CONTRACTOR, the data and information will be provided to T&I CONTRACTOR to complete his final documentation scope of WORK.

The minimum list of FINAL DOCUMENTS is indicated in Exhibit A Annex-1.

FINAL DOCUMENTATION shall comprise;

- a) Project management document, correspondences, project close out report, etc.
- b) the latest APPROVED EPC CONTRACTOR and SUBCONTRACTOR Technical Documents,
- c) native software, input and databases (error free) for all reports, calculation and simulation listed in the Exhibit-A Annex-2
- d) VENDOR Technical Documents
- e) SUPPLIER Technical Documents
- f) QA/QC Dossier

The above compilation shall include updated revisions and or changes made during the performance the WORK based on as-builts.

The EPC CONTRACTOR shall prepare As-Built documents/drawings of Wellhead Platform and Brownfield modification based on Red Line Mark-ups made during the WORK, the offshore installation Red Line Mark-ups to be provided by T&I CONTRACTOR after completion of the installation work. EPC CONTRACTOR shall update/revise all engineering and construction documents, including PDMS model, VENDOR documents and QA/QC

documents as results of modifications that arise in the course of construction/onshore pre-commissioning, commissioning, and installation

FINAL DOCUMENTATION structure (MDDR) and procedure shall be submitted for APPROVAL prior start preparation and consolidation of FINAL DOCUMENTATION.

The FINAL DOCUMENTATION shall include soft copies with the number of copies as specified in EXHIBIT G. The soft copies shall include both in PDF format (printed from PDF program and searchable with signed& scanned cover page) and their native files such as word, AutoCAD, computer program input files.

The EPC CONTRACTOR shall provide the summary priced table of all package items, tagged items, and bulk materials as part of the FINAL DOCUMENTATION. The COMPANY may request and the EPC CONTRACTOR shall provide COMPANY access to and sight of the back-up documents, subcontracts, Purchase Order, etc.

13.2 FINAL DOCUMENTATION Index and Execution Plan

13.2.1 Index

The EPC CONTRACTOR shall prepare, propose and submit a comprehensive index of FINAL DOCUMENTATION per PHASE (dossiers, documents and drawings) no later than ninety (90) days after the EFFECTIVE DATE for APPROVAL. The FINAL DOCUMENTATION Index shall be developed along with Master Deliverable Register in similar format and structure.

13.2.2 FINAL DOCUMENTATION Execution Plan

The EPC CONTRACTOR shall prepare and submit a comprehensive fully developed FINAL DOCUMENTATION Execution Plan per PHASE no later one hundred and twenty (120) days after the EFFECTIVE DATE for APPROVAL. The FINAL DOCUMENTATION Execution Plan shall:

- a) Describe, categorize and explain how all FINAL DOCUMENTATION from the EPC CONTRACTOR, and that from VENDORS, T&I CONTRACTOR, subcontractors and SUPPLIERS will be prepared, expedited, reviewed, verified and submitted for APPROVAL.
- b) Describe and explain how comments from the COMPANY will be incorporated, actioned and FINAL DOCUMENTS updated.
- c) Contain a time scaled plan comprising a categorized list of FINAL DOCUMENTS and the planned / target dates for activities 14.2.2 a) and b) above.

Such APPROVAL shall not limit or restrict the number and type of FINAL DOCUMENTS to be submitted by the EPC CONTRACTOR, VENDORS, subcontractors and SUPPLIERS.

13.2.3 Submission Deadlines

FINAL DOCUMENTATION shall be submitted for APPROVAL as follows:

- | | |
|---|---|
| a) For non-itemized (bulk) EPC CONTRACTOR ITEMS : | No later than thirty (30) days after delivery to the WORKSITE |
| b) For itemized (tagged) EPC CONTRACTOR ITEMS : | No later than sixty (60) days after delivery to the WORKSITE |

- | | |
|---|---|
| c) EPC CONTRACTOR and subcontractor fabricated items: | No later than thirty (30) days after sail away from the applicable WORKSITE |
| d) Completion of FINAL DOCUMENTATION | No later than 90 days after platform sail away |

The EPC CONTRACTOR shall cascade the above requirements down to VENDORS, subcontractors and SUPPLIERS to ensure compliance with the required submission dates to COMPANY.

13.3 Number and Types of Copies

13.3.1 Submission for APPROVAL

All FINAL DOCUMENTS shall be submitted for APPROVAL in electronic format (searchable PDF, index bookmarks and native file) via the PROJECT EDMS and in accordance with the Exhibit A Annex-1 procedure for document control. It is subject to Fabrication requirement, document used at fabrication yard may be also required hardcopy for review. Paper copies are generally not required except during final verification of complied FINAL DOCUMENTATION dossiers.

13.3.2 Compilation and APPROVAL of Dossiers

Compilation and APPROVAL of complied FINAL DOCUMENTATION dossiers shall be done on a progressive basis, dossier by dossier.

The required FINAL DOCUMENTATION dossiers (set) are:

- a) Project Management Dossier
- b) Engineering Dossier
- c) As-built Drawings Dossier
- d) Vendors Dossier
- e) Quality Dossier
- f) Installation & Hook up Dossier
- g) Pre-commissioning and Commissioning
- h) Operation and Maintenance
- i) Project Close Out Dossier
- j) Correspondence
- k) Software

When all compiled dossiers are APPROVED the EPC CONTRACTOR shall make and deliver five (5) electronic sets of compiled FINAL DOCUMENTATION dossiers (one set per hard disk or suitably sized flash drive) to the COMPANY, each. All FINAL DOCUMENTS in each complied dossier shall be in searchable PDF format (printed PDF from native file, OCR format is unacceptable).

The EPC CONTRACTOR shall reduce size of documents before submitted. All contents in the documents shall be clear, sharp and easy to read with index bookmarks, including native files for input database/ reports/ calculation/ simulation and suitably indexed, referenced and linked.

The EPC CONTRACTOR shall convert all radiographed film to soft files, i.e. via RT digitizer (or Film scanner) and include the digital files in the FINAL DOCUMENTATION soft copies. In case of utilizing RT Film scanner, the following shall apply:

- a) Processing Machine and digital image quality shall comply with ISO 14096 Part 1 and Part 2, ASME Section V, ASTM E2339 and ASTM E1936.
- b) Digital images in DICONDE, JPEG and other formats shall be provided along with applicable viewer software. The EPC CONTRACTOR shall propose the Processing Machine (make, model and type) for APPROVAL no later than twenty (20) days before commencement of the RT film digitization
- c) Procedure for RT film digitization as well as required qualifications and experience of machine operators shall be prepared by RT Level 3 PERSONNEL from EPC CONTRACTOR or NDT subcontractor and submitted for APPROVAL no later than twenty (20) days before commencement of the RT film digitization
- d) Digital images shall be reviewed by qualified RT interpreter and then submitted error free to the COMPANY for APPROVAL.

13.4 Progress Reporting

The EPC CONTRACTOR shall prepare and submit a Progress Report on a bi-weekly basis showing planned and actual status of each FINAL DOCUMENT with progress summarized by category and dossiers, and overall.

The format and content of the FINAL DOCUMENTATION Progress Report shall be proposed by the EPC CONTRACTOR for APPROVAL. Progress of FINAL DOCUMENTATION shall be an agenda item in the weekly and monthly project management meetings.

14.0 COMPLETION OF WORK

14.1 MECHANICAL COMPLETION CERTIFICATE

MECHANICAL COMPLETION CERTIFICATES shall be issued only for New Wellhead Platform.

Requests for and issuance of MECHANICAL COMPLETION CERTIFICATES shall be after the completion of the WORK in accordance with the requirement in Section 11 of this Exhibit and AGREEMENT sub-article 19.1 including handover of hook up flowline, spare part for offshore commissioning and special tools, but except below activities,

- a) Load out
- b) Sea fastening
- c) Ballasting the barge for transportation condition

The effective date of each MECHANICAL COMPLETION CERTIFICATE shall be the date when all the applicable requirements of AGREEMENT sub-article 19.1.1 (a) have been achieved, minor WORK items excepted.

The effective date of each MECHANICAL COMPELTION CERTIFICATE shall be the day on which the part of the PLANT is fully completed and accepted by the COMPANY.

14.2 READY FOR TRANSPORTATION CERTIFICATE

READY FOR TRANSPORTATION CERTIFICATES shall be issued only for New Wellhead Platform.

The effective date of each READY FOR TRANSPORTATION CERTIFICATE shall be the date when all the applicable requirements of AGREEMENT sub-article 19.1.1 (c) have been achieved, minor WORK items excepted.

The effective date of each READY FOR TRANSPORTATION CERTIFICATE shall be the day on which the part of the PLANT is fully completed and accepted by the COMPANY.

When requesting INTERIM CERTIFICATES, the EPC CONTRACTOR shall ensure that MWS' approval /certificate is included with the request prior to submit for COMPANY'S APPROVAL. Refer to Exhibit A Annex-4 for details of MWS responsibility matrix.

14.3 PROVISIONAL ACCEPTANCE CERTIFICATES

Unless otherwise agreed by the PARTIES, a single PROVISIONAL ACCEPTANCE CERTIFICATE shall be issued when all of the WORK and the PLANT has been satisfactorily completed. Issuance of the PROVISIONAL ACCEPTANCE CERTIFICATE shall be subject to and in accordance with the procedure stated in AGREEMENT sub-article 19.2. Notwithstanding the foregoing, for ease of administration, the PARTIES may agree to issue PROVISIONAL ACCEPTANCES on a PLATFORM by PLATFORM basis.

14.4 Rectification Procedure for Minor WORK Items and Defects

The EPC CONTRACTOR shall prepare and submit a "Rectification Procedure" for completion of minor WORK and rectification of defects during the WARRANTY PERIOD.

The Rectification procedure shall be comprehensive, include all aspects and shall be submitted no later than ninety (90) days before the planned date of the first HANDOVER CERTIFICATE.

14.5 Tracking Actions and Progress Reports

The EPC CONTRACTOR shall and maintain an up to date live database of minor WORK items (if any) and defects with the current status and shall update and issue Action Tracking Status Report on a regular basis (bi-weekly) for REVIEW.

The format and content of the action tracking register shall be proposed by the EPC CONTRACTOR and submitted for APPROVAL.

15.0 Final Assessment and FINAL ACCEPTANCE CERTIFICATE

The procedure for final assessment shall be as stated in AGREEMENT sub-article 32.6 and the procedure for FINAL ACCEPTANCE shall be as stated in AGREEMENT article 21.

EXHIBIT B

Schedule of Prices and Rates

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Annexes to Exhibit B

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- Annex-7 Services and Facilities for the COMPANY

1.0 Introduction

1.1 Purpose of Exhibit B

The purpose of this Exhibit B and Annexes, 1,2,3,5,6 and 7 is to describe and explain:

- a) the Initial CONTRACT PRICE and how it shall be calculated,
- b) OPTIONS (also referred to as Optional Items),
- c) compensation method for Material Group 1 CONTRACTOR ITEMS,
- d) adjustment basis, prices, rates and terms for CHANGE ORDERS,
- e) other terms and requirements with regard to compensation for performance of the EPC WORK and the completion of the PLANT components and related items.

2.0 CONTRACT PRICE

2.1 General

The CONTRACT PRICE for each PHASE shall comprise the Initial CONTRACT PRICE for the PHASE as modified by CHANGE ORDERS Approved and signed by the COMPANY.

The CONTRACT PRICE for each PHASE shall be the entire, full and complete, compensation due to the EPC CONTRACTOR for the performance of the EPC WORK and for the completion of the PLANT components and related items for such PHASE, in accordance with terms and requirements of this CONTRACT.

The term CONTRACT PRICE shall have the meaning ascribed to it in sub-article 2.1 of the AGREEMENT.

2.2 Initial CONTRACT PRICES

2.2.1 General

The Initial CONTRACT PRICE for each PHASE shall be calculated based on the applicable NOTICE TO PROCEED and the Statement of Requirements (SOR) for the PHASE.

2.2.2 Obligations of the EPC CONTRACTOR

The EPC CONTRACTOR shall prepare and submit the Initial CONTRACT PRICE for each PHASE to the COMPANY for Approval no later than thirty (30) days after the date of issue of the relevant NOTICE TO PROCEED. Each Initial CONTRACT PRICE shall be subject to prior Approval by the COMPANY before its use in the PROJECT.

Each Initial CONTRACT PRICE shall present the full details of constituent items, quantities, sums, prices and rates and shall be calculated in accordance with Section 2.2.3 of this Exhibit B and shall be in such detail as the COMPANY may require.

If the EPC CONTRACTOR fails to submit a properly prepared and correct Initial CONTRACT PRICE for a PHASE within the above timeframe, the COMPANY shall have the right, but not as an obligation, to inform the EPC CONTRACTOR of the Initial CONTRACT PRICE for the PHASE. In such event, the Initial CONTRACT PRICE informed by the COMPANY shall be used for the PHASE and shall be binding on the PARTIES as though it had been prepared by CONTRACTOR and Approved by COMPANY.

2.2.3 Calculation of Initial CONTRACT PRICES

The Initial CONTRACT PRICE for a PHASE shall comprise, as applicable:

- a) EPC WORK Package 1 Wellhead Platform (Base Scope) as per the applicable NOTICE TO PROCEED and Statement of Requirements, priced using applicable Exhibit B Annex-1 Lump Sum Prices and compensation method as per Exhibit B Section 2.3,
- b) EPC WORK Package 3 (OPTION) Existing Topside Brownfield Modifications as per the applicable NOTICE TO PROCEED and Statement of Requirements, priced using applicable Exhibit B Annex-1 prices and compensation method as per Exhibit B Section 2.3,
- c) EPC WORK Package 4 Existing Topside Relocation as per the applicable NOTICE TO PROCEED and Statement of Requirements, priced using applicable Exhibit B Annex-1 prices and compensation method as per Exhibit B Section 2.3,
- d) Optional Items as per Exhibit B Annex-2 to the extent exercised by the issue of the applicable NOTICE TO PROCEED and Statement of Requirements, priced using the applicable Exhibit B Annex-2 List of Prices for Optional Items.

Having regard to Sections 3.1 and 3.2 of this Exhibit B and the other terms and requirements of this CONTRACT, if there is no price or rate for an SOR item in Exhibit B and/or Annexes 1,2,3,5 or 7, the PARTIES may, subject to COMPANY, Approval agree an applicable new sum, price and/or rate to apply which shall be documented in the applicable Initial CONTRACT PRICE and in such case a confirmatory CHANGE ORDER is not required.

However, if the PARTIES are not able to agree on a new price and/or rate as part of the Initial CONTRACT PRICE a provisional amount shall be inserted in the Initial CONTRACT PRICE, and such provisional amount shall be adjusted by CHANGE ORDER at a later date.

2.3 Summary of Compensation Method

The table below presents the Compensation Method by EPC WORK Unit (WU) that shall apply for EPC WORK properly performed in accordance with the terms and requirements of this CONTRACT.

WU	Description	Compensation Method
1	Project Management & Services	Fixed Lump Sum price per PLATFORM calculated using the applicable Exhibit B Annex-1 sums and prices. ^(Note-3)
2	Engineering	<p><u>2.1 Generic Detailed Engineering</u> ^(Note-1) Fixed Lump Sum price for the PROJECT calculated in using the applicable Exhibit B Annex-1 sums and prices. Shall be paid one time only and not on per PLATFORM basis.</p> <p><u>2.2 Particular Detailed Engineering:</u> Fixed Lump Sum Price per PLATFORM calculated using the applicable Exhibit B Annex-1 sums and prices. ^(Note-3)</p>

WU	Description	Compensation Method
3	Procurement Services & Supply	<u>3.1 Material Group 1 CONTRACTOR ITEMS</u> ^(Note-2) 3.1.1 Material: Final Approved Purchase Order Cost and provisional arrangements as per Exhibit B Section 3.6.1.1 3.1.2 Services Fee: Fixed lump sum price per PLATFORM. ^(Note-3) <u>3.2 Material Group 2 CONTRACTOR ITEMS</u> Fixed Lump Sum price per PLATFORM. ^(Note-3)
4	Onshore Construction	Fixed Lump Sum price per PLATFORM. ^(Note-3)
5	Transportation & Installation	Not applicable
6	Mobilization & Demobilization of MARINE SPREAD	Not applicable

Note-1: Generic detailed engineering shall be performed only once for the PROJECT unless otherwise instructed by the COMPANY.

Note-2: Refer to Exhibit A Annex 12 for details of Material Group 1 and 2 CONTRACTOR ITEMS

Note-3 Subject to annual adjustment by index from installation year 2023 and onwards in accordance with Section 9.0 of this Exhibit B.

3.0 Conditions of Prices and Rates

3.1 All Inclusive Nature of the Initial CONTRACT PRICE and CHANGE ORDERS

3.1.1 Entirety of the Initial CONTRACT PRICES

Except for items that are expressly stipulated in the CONTRACT to be the subject of a CHANGE ORDER, the Initial CONTRACT PRICE for each PHASE shall be deemed to include for all things required, implicit and explicit, and for all things of whatsoever nature if stated or not but which are necessary for the correct, complete and timely performance of the EPC WORK for such PHASE and for the correct and timely completion of the PLANT components and related items for such PHASE in accordance with the terms and requirements of this CONTRACT and or may be inferred therefrom.

3.1.2 CHANGE ORDERS

Each CHANGE ORDER shall be deemed to take into account the full and final effects of the modifications described in the CHANGE ORDER on any and all aspects of the CONTRACT and the EPC CONTRACTOR shall not to make any further CLAIM with respect the content of a CHANGE ORDER nor for any matter arising from and or in connection with the subject matter of the CHANGE ORDER except as may be expressly stated therein.

3.1.3 Defective Description and or Omission

Notwithstanding any omission from and or defective description in this CONTRACT or in any CHANGE ORDER, all operations, activities and everything required and necessary for the timely and correct performance of the EPC WORK and the correct and timely completion of

the PLANT components and related items in accordance with the terms and requirements of this CONTRACT are included within the applicable Initial CONTRACT PRICE.

3.2 All Inclusive Prices, Rates and Lump Sum Amounts

Subject to the rights of the PARTIES under the CONTRACT including but not limited to AGREEMENT article 22 and except as may be expressly stated in this CONTRACT, all prices and rates set out in this Exhibit B and Exhibit B Annexes 1, 2, 3, 5, 6, and 7, consistent with the lump sum nature of this CONTRACT shall regardless of difficulty be:

- a) fixed and firm for the duration of the CONTRACT,
- b) shall not be subject to any revision for cost and price escalation, currency and exchange rate fluctuations except in accordance with Exhibit B Section 9.0,
- c) “all inclusive” in nature and without limitation and or restriction, include for all things required and necessary, irrespective of difficulty and irrespective of if such items are stated in and/or required as per the terms and requirements of this CONTRACT or not,
- d) shall be deemed to include for all things required and/or necessary.

3.3 Price Divisions and Price Sub-Divisions

Under no circumstances shall the price division and subdivisions in Exhibit B Annexes 1 and 2 be read and or construed as a qualification or limitation to the concept of the entirety of the lump sum nature of an Initial CONTRACT PRICE.

3.4 Services and Facilities for COMPANY PERSONNEL

3.4.1 Lump Sum Prices for Services and Facilities for COMPANY PERSONNEL

Services and facilities to be provided by the EPC CONTRACTOR on a lump sum price basis for COMPANY PERSONNEL are described as such in Exhibit B Annex-7 and priced in Exhibit B Annex-1. Such services and facilities shall not be subject to the Call-Off process described in Exhibit B Section 3.4.2 and shall be provided when requested by the COMPANY.

The applicable Exhibit B Annex-1 lump sums shall not be adjusted for actual provision, types, quantities and durations of such services and facilities unless by operation of AGREEMENT articles 48 and 49.

3.4.2 Provisional Sum for Services and Facilities for COMPANY PERSONNEL

Exhibit B Annex-7 also lists non-lump types (provisional) services and facilities which the COMPANY may require the CONTRACTOR to provide for COMPANY PERSONNEL.

The EPC CONTRACTOR shall be compensated on a PHASE by PHASE basis for the actual provision of such services and facilities in the manner explained in this section.

The procedure for such provisional services and facilities is as follows:

- a) The COMPANY will instruct the EPC CONTRACTOR by means of Call-Off(s) on a PHASE by PHASE basis for the types, quantities and durations of services and facilities to be provided which shall be priced in accordance with the provisions of Exhibit B Annex-7. The COMPANY shall issue a CHANGE ORDER for the Call-Off amounts.
- b) The EPC CONTRACTOR shall provide the services and facilities in the manner instructed and shall do so until the COMPANY instructs otherwise.
- c) The EPC CONTRACTOR shall record and document the start and end of provision of each service and or facility and submit details to the COMPANY for APPROVAL.

- d) The EPC CONTRACTOR shall invoice on a monthly basis against Call-Off(s) for actual provision: types, quantities and durations of services and facilities, priced in the manner stipulated in the applicable Call-Off. Such invoices shall be supported by full substantiating documentation and APPROVED summaries (monthly and cumulative).
- e) The CONTRACT PRICE for a PHASE shall be adjusted by CHANGE ORDER at the end of the provision of services and facilities as per actual quantities and duration used.

The EPC CONTRACTOR shall not provide an Exhibit B Annex-7 provisional service or facility unless the COMPANY has instructed such service and/or facility is provided or the COMPANY or has issued an applicable Call-Off order.

3.5 Services and Facilities supplied by COMPANY

Unless any services and facilities provided by the COMPANY are expressly stated in this CONTRACT to be provided free of charge the EPC CONTRACTOR shall compensate the COMPANY for services and/or facilities provided by the COMPANY to the CONTRACTOR, SUBCONTRACTOR and/or VENDOR as the case may be.

The COMPANY will provide details of charges for COMPANY provided services from time to time during the performance of the CONTRACT on an as necessary basis.

3.6 Procurement Services and Supply of CONTRACTOR ITEMS

3.6.1 Material Group 1 CONTRACTOR ITEMS

The EPC CONTRACTOR shall be compensated for procurement and supply of for Material Group 1 CONTRACTOR ITEMS shall be as follows:

3.6.1.1 Net Purchase Order Cost

a) Net Approved Final Purchase Order Cost

The compensation amount to EPC CONTRACTOR for Approved Material Group 1 CONTRACTOR ITEMS procured for a PHASE shall be the aggregate net amounts due and paid by the EPC CONTRACTOR to the applicable VENDORS for Material Group 1 CONTRACTOR ITEMS procured for the PHASE in accordance with the terms and requirements of the applicable Purchase Orders but excluding amounts incurred because of the EPC CONTRACTOR's fault, error, neglect, and or omission (if any), referred to as Final Purchase Order Costs.

b) Approval of the Final Purchase Order Cost

The EPC CONTRACTOR shall compile and submit details and full substantiation of the Final Purchase Order Costs of Material Group 1 CONTRACTOR ITEMS on a PHASE by PHASE basis to the COMPANY for review, comment and Approval.

c) Provisional Arrangements Pending Approval of the Final Purchase Order Costs

Pending resolution of the Final Approved Purchase Order Cost for a PHASE the applicable provisional amounts for "Material Cost" stated in line 3.1.1 of Exhibit B shall be utilized for the purposes of establishment of the Initial CONTRACT PRICE for the applicable PHASE as per Section 2.0 of this Exhibit B and for progress payments in accordance with Exhibit G Annex-5, Exhibit G Annex-7 and AGREEMENT article 32.

For clarity the provisional amounts for “Material Cost” stated in line 3.1.1 of Exhibit B shall only be utilized for the first year thereafter the provisional amounts for each PHASE shall be established by reference to the actual amounts from the early year PHASES.

3.6.1.2 Service Fee for Procurement of Material Group 1 CONTRACTOR ITEMS

The EPC CONTRACTOR shall be compensated for procurement services for Material Group 1 CONTRACTOR ITEMS on a PLATFORM by PLATFORM basis by means of the applicable service fee stated in Exhibit B Annex-1 items 3.1.2 and/or 3.1.3 as applicable. The service fee is fixed and firm and shall not be adjusted except if the EPC CONTRACTOR does not procure some of the Material Group 1 CONTRACTOR ITEMS for PLATFORM(S) in the PHASE in such event the Procurement Services Fee will be adjusted accordingly and the Initial CONTRACT PRICE for the PHASE shall be adjusted by means of a negative CHANGE ORDER.

3.6.1.3 Adjustment of Initial CONTRACT PRICE for Each PHASE for Material Group 1 CONTRACTOR ITEMS

Immediately following the Approval of the Final Purchase Order Costs by the COMPANY for a PHASE the Initial CONTRACT PRICE for the PHASE shall be adjusted by means of a CHANGE ORDER for the difference between the provisional amount as per Section 3.6.1.1 c) and the Final Approved Purchase Order Costs for the PHASE and adjustment (if any) of the Service Fee for the PHASE.

3.6.1.4 Details and Arrangements for Material Group 1 CONTRACTOR ITEMS

Refer to AGREEMENT sub-article 14.5 (in particular sub-articles 14.5.7 and 14.5.8), Exhibit A Annex-12 and the other terms and requirements for details of EPC CONTRACTOR responsibilities and arrangements for Material Group 1

The EPC CONTRACTOR shall not award any Purchase Order for Material Group 1 CONTRACTOR ITEMS without first obtaining Approval from the COMPANY to do so.

3.6.1.5 Currency for Payments to EPC CONTRACTOR and CONTRACT PRICE Adjustments

All sums, prices and rates in this Exhibit B with regard to Material Group 1 CONTRACTOR ITEMS are priced in United States Dollars (USD).

Likewise, all payments to the EPC CONTRACTOR for Material Group 1 CONTRACTOR ITEMS and adjustments to the Initial CONTRACT PRICES to be for Material Group 1 CONTRACTOR ITEMS shall be made/done so in USD.

If an Approved Purchase Order for Material Group 1 CONTRACTOR ITEMS is priced in a currency other than USD the Purchase Order prices (for the purposes of this CONTRACT) shall be converted to USD for each invoice. The exchange rate to be used shall be the average of the closing buying and selling rates as published by the Bank of Thailand (BOT) on the invoice date.

For clarity, the prices and terms of the applicable Purchase Order including currencies, governing the relationship between the EPC CONTRACTOR and the VENDOR shall not be changed, irrespective of the foregoing requirements.

3.6.2 Material Group 2 CONTRACTOR ITEMS

Supply of Material Group 2 CONTRACTOR ITEMS and associated procurement services and all related items and matters shall be priced in the applicable Exhibit B Annex-1 Lump Sums as per the terms and requirements of this CONTRACT.

3.7 Not Used

3.8 Not Used

3.9 Lump Sum Price for Optional Items (Exhibit B Annex-2)

The prices and rates in Exhibit B Annex-2 are for use in the calculation of the Initial CONTRACT PRICE for a PHASE, as applicable and, subject to prior Approval by the COMPANY, for use in the evaluation of CHANGE ORDERS.

3.10 Currency

All sums, prices and rates in this Exhibit B are priced in United States Dollars (USD).

All payments to be made by the COMPANY to the EPC CONTRACTOR pursuant to this CONTRACT shall be paid in United States Dollars (USD), or if mandatory in Thai Baht or such other currency as may be required and/or necessary to comply with regulations and/or APPLICABLE LAWS.

If it is necessary to convert from a currency other than USD to USD for CHANGE ORDER(S) or for the payment of separately invoiced “cost” and/or “cost plus fee” amounts to be paid in USD, Thai Baht or such other currency as aforesaid, the exchange rate to be used shall be the average of the closing buying and selling rates as published by the Bank of Thailand (BOT) on the actual date of the cost was occurred.

The foregoing paragraph shall not apply to Material Group 1 CONTRACTOR ITEMS which if priced in a currency other than USD, shall be paid in accordance with the Compensation Method stipulated in Section 2.3 and AGREEMENT article 32.

3.11 Thai Value Added Tax

All prices and rates set out in this Exhibit B and Exhibit B Annexes 1, 2, 3, 4, 5, 6, and 7 do not include for Thai Value Added Tax payable by the COMPANY with regard to payments between the COMPANY and the EPC CONTRACTOR i.e. that which is levied on payments to the EPC CONTRACTOR and payable in the Kingdom of Thailand (which shall be invoiced separately, in accordance with AGREEMENT sub-article 32.1, if applicable).

3.12 Withholding Tax and Statutory Deductions

Without limitation and without restriction to the requirements of AGREEMENT sub-article 31.1 the COMPANY will deduct Withholding Tax from payments due to the EPC CONTRACTOR at the rate or rates required by Department of Revenue of the Kingdom of Thailand also other statutory deductions (if any) required by APPLICABLE LAW if applicable, subject to and in accordance with AGREEMENT sub-article 31.2.

3.13 EPC CONTRACTOR’s Undertaking

Without limitation or restriction to the EPC CONTRACTOR’s other undertakings made under and or in accordance with this CONTRACT and having regard to the foregoing, the EPC CONTRACTOR hereby undertakes not to request any CHANGE ORDER and not to make any CLAIM whatsoever, on the grounds of; price divisions and price sub-divisions, entirety of the Initial CONTRACT PRICE, and CLAIMS for and / or in respective of any and all signed CHANGE ORDERS (unless to the extent as may be stated therein), defective description and or omission, all-inclusive nature of the prices, rates and lump sum amounts, the services and facilities priced on a lump sum basis, currency adjustments as per Exhibit B Section 3.10, deduction of Thai Value Added tax, withholding tax and statutory deductions and any other

matter whatsoever unless the right to compensation and or payment is stated in writing in this CONTRACT.

4.0 Not Used

5.0 Not Used

6.0 CHANGE ORDERS

6.1 CHANGE ORDER Procedure

Requests for CHANGE ORDERS shall be administered, evaluated and processed in accordance with the requirements of AGREEMENT article 22, Exhibit G Annex-4, and the other terms and requirements of this CONTRACT and/or as may be otherwise directed by COMPANY.

6.2 Evaluation of CHANGE ORDER Amounts

Subject to the other provisions of this CONTRACT, and COMPANY rights under sub-article 22.3 of the AGREEMENT, the following shall, subject to COMPANY APPROVAL, be used to evaluate the effects of modifications to the CONTRACT on the CONTRACT PRICE:

- a) Summary of Lump Sum Prices (Exhibit B, Annex-1).
- b) EPC WORK Unit Rates (Exhibit B, Annex-3).
- c) Time Unit Rates (Exhibit B, Annex-5).
- d) Reimbursable at "Cost" and "Cost Plus Fee" Basis (Exhibit B, Annex-6).
- e) Services and Facilities to COMPANY (Exhibit B, Annex-7).

7.0 Invoicing and Payment

7.1 Invoices

All invoices shall be prepared, calculated and submitted by the EPC CONTRACTOR monthly on a PHASE by PHASE basis in accordance with AGREEMENT article 32, this Exhibit B, and Exhibit G Annex-7 and in accordance with the other requirements of the CONTRACT.

The EPC CONTRACTOR shall separately invoice as follows:

- a) Ninety percent (90%) of the Initial CONTRACT PRICE for a PHASE for the monthly amounts for the actual progress percentage satisfactory achieved calculated in accordance with the requirements of Exhibit G Annex-5 and 7, as documented in a corresponding EPC WORK Statement APPROVED by the COMPANY.
- b) Ten percent (10%) of the Initial CONTRACT PRICE for a PHASE in accordance with the Milestone Payment Schedule as per Exhibit B Section 7.3. In this respect separate invoices shall be prepared and submitted for each Payment Milestone satisfactorily achieved as documented in a corresponding EPC WORK Statement APPROVED by the COMPANY.
- c) Individual invoices for APPROVED CHANGE ORDERS for which the corresponding EPC WORK has been properly performed and APPROVED as documented in a corresponding EPC WORK Statement APPROVED by the COMPANY.

7.2 Calculation of the Monthly Progress Percentage

Each monthly progress percentage shall be calculated in the manner stipulated in Exhibit G Annex-5 and in accordance with the provisions CONTRACT.

7.3 Milestone Payment Schedule

The payment condition for Milestone Payment Schedule under this section shall be considered based on full compliance of condition as stated in each milestone, no partial payment/progress shall be allowed.

No.	Description of Payment Milestones	Milestone Percentage
1.	APPROVAL by the COMPANY of the Early EPC CONTRACTOR DOCUMENTS as per Exhibit C Section 10.0 and the receipt by the COMPANY of a performance bank guarantee in accordance with sub-article 33.1 of the AGREEMENT	0.50%
2.	Issuance and acknowledgement by the applicable VENDORS of all Purchase Orders for Long Lead Items as identified in the APPROVED Procurement Plan	0.50%
3.	Delivery of all Long Lead Items at EPC WORKSITE	1.00%
4.	Issuance of the MECHANICAL COMPLETION CERTIFICATE for all Wellhead Platform in a PHASE	3.00%
5.	Rectification and clearance of all punch list items, if any, of all Wellhead Platforms in a PHASE at Offshore	3.00%
6.	Effective Date of PROVISIONAL ACCEPTANCE CERTIFICATE for a PHASE	2.00%
	TOTAL	10.00%

7.4 Payment

Payment of amounts from COMPANY to the EPC CONTRACTOR shall be made in accordance with article 32 of the AGREEMENT, this Exhibit B and the other applicable provisions on the CONTRACT.

8.0 Liquidated Damages

8.1 Liquidated Damages for Late Completion of Topsides, Jacket and Appurtenances

If the EPC CONTRACTOR fails to complete a Topsides or a Jacket and Appurtenances (respectively a “major PLANT component”) on or before the applicable required COMPLETION DATE, calculated in accordance with Exhibit C and as may have been adjusted by CHANGE ORDER(S), the COMPANY shall have the right to apply liquidated damages for late completion of such major PLANT component pursuant to AGREEMENT sub-article 34.1 and this Exhibit B as follows:

Required COMPLETION DATE		Amount of Liquidated Damages
Reference	Description	
CD1A	MECHANICAL COMPLETION CERTIFICATE for a Jacket and Appurtenances.	USD 100,000 for each day of delay ^(Note-1)
CD1B	MECHANICAL COMPLETION CERTIFICATE for a Topsides.	USD 100,000 for each day of delay ^(Note-1)

Note-1 The number days delay shall be calculated as the difference in days between the actual and required effective dates of the applicable MECHANICAL COMPLETION CERTIFICATE.

- Note-2 The above liquidated damages amount shall apply to each period of delay for each Jacket and Appurtenances or Topsides as applicable.
- Note-3 For clarity, the right of the COMPANY to apply liquidated damages for delay shall apply respectively, as applicable in the event of late completion, to each required COMPLETION DATE individually.

8.2 Liquidated Damages for Longer Duration of Layover Period

If the EPC CONTRACTOR fails to achieve READY FOR TRANSPORTATION of a Topsides or a Jacket and Appurtenances (respectively a “major PLANT component”) on or before the applicable required COMPLETION DATE, calculated in accordance with Exhibit C and as may have been adjusted by CHANGE ORDER(S), the COMPANY shall have the right to apply liquidated damages for the longer duration of Layover Period for such major PLANT component pursuant to AGREEMENT sub-article 34.2 and this Exhibit B as follows:

Required COMPLETION DATE		Amount of Liquidated Damages
Reference	Description	
CD2	Required effective date of the READY FOR TRANSPORTATION CERTIFICATE for Wellhead Platform <i>(Combined transportation on one barge of Topside, Jacket and Appurtenances)</i>	USD 300,000 for each additional day ^(Note-1)
CD2A	Required effective date of the READY FOR TRANSPORTATION CERTIFICATE for Jacket and Appurtenances <i>(Transportation of Jacket and Appurtenances only)</i>	USD 300,000 for each additional day ^(Note-1)
CD2B	Effective Date of the READY FOR TRANSPORTATION CERTIFICATE for Topsides <i>(Transportation of Topsides only)</i>	USD 300,000 for each additional day ^(Note-1)

- Note-1 Calculated as difference in days between the actual and required effective dates of the applicable READY FOR TRANSPORTATION CERTIFICATE. The stipulated amount of liquidated damages per day shall be applied prorate for part day(s).
- Note-2 The liquidated damages are applicable to the stated required COMPLETION DATE. For clarity only one required COMPLETION DATE shall apply per shipment i.e. either CD2 or CD2A or CD2B, as applicable.
- Note-3 For clarity, the right of the COMPANY to apply liquidated damages for delay shall apply respectively, as applicable in the event of late completion, to each required COMPLETION DATE individually.

However, if a longer duration of a Layover Period does not cause a critical delay to the critical path of the offshore installation activities for new Wellhead Platform(s) as per the actual progress of the T&I CONTRACTOR measured against the applicable Key date of the latest applicable Approved T&I Detailed Work Time Schedule the above stated liquidated damages shall not be applied

8.3 Liquidated Damages for Unauthorized Removal or Substitution of KEY PERSONNEL

If any KEY PERSONNEL listed in Exhibit K or one as may be subsequently approved by the COMPANY, should be removed or substituted in violation of the requirements of sub-article

25.2 of the AGREEMENT, the COMPANY shall have the right pursuant to sub-article 34.3 of the AGREEMENT subject to the limitation in Section 8.7 of this Exhibit B to apply Liquidated Damages in respect unauthorized removal and/or replacement as follows:

Unauthorized Removal and or Substitution of KEY PERSONNEL	Amount of Liquidated Damage to apply per Occurrence
Any Level 1 Key PERSONNEL listed in Exhibit K	USD 50,000
Any Level 2 Key PERSONNEL listed in Exhibit K	USD 25,000

For the purposes of the application of Liquidated Damages for unauthorized removal and/or replacement KEY PERSONNEL, the categories of the relevant KEY PERSONNEL are listed in Exhibit K. The term KEY PERSONNEL shall have the meaning ascribed to it in AGREEMENT sub-article 2.1.

8.4 Not Used

8.5 Liquidated Damages for Substitution, Removal, Addition of Major SUBCONTRACTOR and/or Related WORKSITE/WORK Location

If a Major SUBCONTRACTOR (from those stated in Exhibit K) or one as may be subsequently approved by the COMPANY, is substituted, removed or added or if a Major SUBCONTRACTOR’s WORKSITE or WORK Location (from those stated in Exhibit K (if any) is substituted, removed or added the COMPANY shall have the right to apply Liquidated Damages as per AGREEMENT sub-article 34.5 and this Exhibit B as follows:

Description		Amount of Liquidated Damage to apply per Occurrence
1	Substitution, removal or addition of a Major SUBCONTRACTOR ^(Note-1)	USD 500,000
2	Substitution, removal or addition of a Major SUBCONTRACTOR’ WORKSITE or Work Location ^(Note-2)	USD 500,000

Note-1 The term Major SUBCONTRACTOR shall mean a SUBCONTRACTOR who performs engineering, fabrication of Topside(s), fabrication of Jackets and Appurtenances, and/or a Major SUBCONTRACTOR named as such in Exhibit K.

Note-2 Item 8.5.2 shall be applied for the substitution, removal or addition of a Major SUBCONTRACTOR’ WORKSITE or Work Location. However, if the substitution, removal or addition of a Major SUBCONTRACTOR as per item 8.5.1 also entails a substitution, removal or addition of a Major SUBCONTRACTOR’s WORKSITE(S) or Work Location(s) then item 8.5.2 shall not be applied and only the amount as per item 8.5.1 shall be applied.

8.6 Liquidated Damages for Substitution, Removal and/or Addition of an EPC CONTRACTOR’s WORKSITE and/or Engineering Office

If the EPC CONTRACTOR should substitute, remove and/or add an EPC WORKSITE and/or Engineering Office from those listed in Exhibit K or one as may be subsequently approved by

the COMPANY, (which are not those of a Major SUBCONTRACTOR referred to under Section 8.5 above), the COMPANY shall have the right to apply liquidated damages as per sub-article 34.6 and this Exhibit B as follows:

Change of EPC CONTRACTOR’s WORKSITE and/or Engineering Office	Amount of Liquidated Damage to Apply Per Occurrence
EPC CONTRACTOR’s WORKSITE and/or Engineering Office	USD 500,000

In addition, and without limitation and or restriction on the rights of the COMPANY to apply liquidated damages as aforesaid, the EPC CONTRACTOR shall be liable for the compensation amount(s) (if any) to be paid by the COMPANY to the T&I CONTRACTOR for additional duration (if any) of barge and tugs used for the transportation of major PLANT components (Topsides and/or Jackets and Appurtenances). In such event the EPC CONTRACT PRICE shall be adjusted by CHANGE ORDER accordingly, the amount of such CHANGE ORDER shall be priced using Exhibit B Annex-4 (Marine Spread Rates for Pricing Change Orders) of the T&I CONTRACT and the T&I CONTRACTOR shall be compensated accordingly.

8.7 Limitation of Liability for Liquidated Damages

The EPC CONTRACTOR’s total aggregate liability under this CONTRACT for liquidated damages shall be as follows:

- a) The combined maximum aggregate liability of the EPC CONTRACTOR for:
 - i) late completion of the EPC WORK in accordance with sub-article 34.1 of the AGREEMENT and Section 8.1 of this Exhibit B, and
 - ii) longer duration of Layover Periods in accordance with sub-article 34.2 of the AGREEMENT and Section 8.2 of this Exhibit B,
 shall be capped so as not to exceed ten percent (10%) of the Initial CONTRACT PRICE of an applicable PHASE on a PHASE by PHASE basis.
- b) The maximum aggregate liability of the EPC CONTRACTOR for unauthorized removal and/or substitution of Key PERSONNEL in accordance with sub-article 34.3 of the AGREEMENT and Section 8.3 of this Exhibit B, shall be capped so as not to exceed seven hundred and fifty thousand United States Dollars (USD 750,000), for this CONTRACT.
- c) Not Used.
- d) The maximum aggregate liability of the EPC CONTRACTOR for unauthorized, substitution and/or change of a Major SUBCONTRACTOR and/or change and/or addition of related WORKSITE and/or WORK location, in accordance with sub-article 34.5 of the AGREEMENT and Section 8.5 of this Exhibit B, shall be capped so as not exceed one million five hundred thousand United States Dollars (USD 1,500,000) per annum.
- e) The maximum aggregate liability of the EPC CONTRACTOR for removal, substitution and/or addition of an EPC WORKSITE and/or EPC Engineering Office, in accordance with sub-article 34.6 of the AGREEMENT and Section 8.6 of this Exhibit B, shall be capped so as not to exceed one million five hundred thousand United States Dollars (USD 1,500,000), per annum.

9.0 Adjustment of Lump Sum Price (Exhibit B Annex-1)

Price adjustment by using indexes identified in this section shall apply only on applicable Exhibit B Annex-1 prices annually for applicable EPC WORK performed in installation year 2023 and onward. The formula for price adjustment is presented below:

$$Adjusted\ Price = Base\ Price \times \frac{Current\ Index}{Base\ Index}$$

Where:

- i) The base prices and applicable base indices are as stated in Exhibit B Annex-1.
- ii) The reference year for the current index and base index for each installation year is presented in the table below. The actual index used (current and base) shall be the average of available data from the period of January to December.

Installation Year	Base Index	Current Index
Year 2022	N/A	N/A
Year 2023	Year 2020	Year 2021
Year 2024	Year 2020	Year 2022
Year 2025	Year 2020	Year 2023
Year 2026	Year 2020	Year 2024

- iii) Below table presents reference and details of the applicable index that is specified in the “Adjustment by Escalation” column in Exhibit B Annex-1.

No.	Description	Index/Composite Index
1	Personnel Index	100% Mercer Global Compensation Planning, average of Thailand, Indonesia, Malaysia and Vietnam Country
2	Material Index	60% UCCS Market, Global Steel, Structural, Asia 40% UCCS Market, Bulk Materials, Wire/Cable, Asia
3	Yard Index	60% Mercer Global Compensation Planning, average of Thailand, Indonesia, Malaysia and Vietnam Country 40% UCCS Market, Yard-Fabrication, Upstream Order, Asia

- a) The EPC CONTRACTOR shall prepare, compile and submit the proposed Exhibit B Annex-1 Lump Sum Adjustment Amount, with all required and necessary explanation and substantiation, calculated as above, every 31st March commencing 31st March 2022 for installation year 2023 until and including the year in which all EPC WORK under this CONTRACT is completed.
- b) After each applicable Annex-1 Lump Sum Adjustment Amount is Approved by the COMPANY the applicable Initial CONTRACT PRICES, as may have been adjusted by CHANGE ORDERS shall be adjusted accordingly for the price difference (positive or negative) between the aggregate of applicable Exhibit B Annex-1 Base Price Amounts and the aggregate of the applicable Exhibit B Annex-1 Adjusted Price Amounts, calculated as aforesaid.

c) Example for facilities installation in year 2023

<i>Base Price: CONTRACT, Exhibit B Annex-1, EPC WORK Package 1, Project Management</i>	<i>USD 1,000,000 per WHP Progress paid (as of 31st March) 10%</i>
<i>Base Index: Average of Index for Project Management (Personnel Index) from the period of January 2020 to December 2020</i>	<i>100</i>
<i>Current Index: Average of Index for Project Management from the period of January 2021 to December 2021</i>	<i>107</i>
<i>Current Index ÷ Base Index:</i>	<i>107/100 = 1.07</i>
<i>Adjusted Initial CONTRACT PRICE: EPC WORK Package 1, Project Management</i>	<i>1,000,000 * 1.07 = USD 1,070,000 per WHP</i>
<i>CHANGE ORDER: Price difference for previous progress paid</i>	<i>+70,000 * 10% = USD 7,000 per WHP</i>

10.0 COMPANY REPRESENTATIVE Assessment

Notwithstanding any other provision in this CONTRACT should there be any difference or disagreement between the PARTIES with regard to the interpretation, application or meaning of this Exhibit B, or the other provisions of this CONTRACT, with regard to an initial CONTRACT PRICE or part thereof, any adjustment of the Initial CONTRACT PRICE and/pr CONTRACT PRICE to be made by CHANGE ORDER, or with regard to invoicing and payment, it is hereby agreed the decision of COMPANY REPRESENTATIVE shall prevail and be final and binding on the PARTIES until resolved as per the provisions of article 54 of the AGREEMENT.