



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

CONTRACT NO. THC21-5493

WITH



FOR

**PROVISION OF 5-YEAR HELICOPTER SERVICES
FOR OFFSHORE OPERATING ASSETS**

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THIS AGREEMENT IS MADE AND ENTERED INTO THIS DAY OF

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 6th, 19th – 36th, Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand, acting for itself, and acting as an Operator for and on behalf of Arthit Consortium, presently composed of the following CO-VENTURERS:

	Shares of interest
- PTT Exploration and Production Public Company Limited	80%
- Chevron Thailand Exploration and Production Limited	16%
- MOECO Thailand Company Limited	4 %

Each CO-VENTURER being liable to the CONTRACTOR, severally and only to the extent of its interest in this Consortium, for operations carried on the “Arthit Concession”; and

PTTEP ENERGY DEVELOPMENT COMPANY LIMITED (hereinafter referred to as “**PTTEP ED**”), a company organized and existing under the laws of Thailand, having its registered office at Energy Complex Building A, Floors 6th, 19th – 36th, 555/1 Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand, acting as an Operator for the operations carried on the Block G1/61; and

PTTEP ENERGY DEVELOPMENT COMPANY LIMITED (hereinafter referred to as “**PTTEP ED**”), a company organized and existing under the laws of Thailand, having its registered office at Energy Complex Building A, Floors 6th, 19th – 36th, 555/1 Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand, acting as an Operator for operations carried on the Block G2/61; and

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 6th, 19th – 36th, Chatuchak, Bangkok 10900, Thailand, acting as Operator for and on behalf of the Consortiums as shown below:

(a) G8/50 Consortium, presently composed of the following CO-VENTURERS:

	Shares of interest
- PTTEP International Limited	80%
- Chevron Petroleum (Thailand) Limited	16%
- Siam MOECO Limited	4%

Each CO-VENTURER being liable to the CONTRACTOR, severally and only to the extent of its interest in this Consortium, for operations carried on the “G8/50 Concession”;

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

of the one part,

AND

..... (hereinafter referred to as the “**CONTRACTOR**”), a company organized and existing under the laws of, having his registered office at

the other part.

WHEREAS, the COMPANY desires to have the SERVICES performed to support its petroleum exploration and production activities; and

WHEREAS, the CONTRACTOR represents that he is experienced in operating helicopters and is willing to provide and operate helicopters, manned, equipped, and maintained in accordance with the provisions as set out hereafter.

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS.

ARTICLE 1 - GENERAL

1.1 Object of the CONTRACT

In support of its petroleum activities in the OPERATIONAL AREA, the COMPANY hereby entrusts the CONTRACTOR and the CONTRACTOR hereby agrees to perform the SERVICES in accordance with the terms and conditions of the CONTRACT.

1.2 Definitions

The following expressions and derivatives thereof appearing in upper case letters in the 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. The same principle shall apply to expressions defined elsewhere in the CONTRACT.

AFFILIATE in relation to any corporate entity means an entity which directly, or indirectly through one or more intermediaries, controls, is controlled by, or is under common control with such corporate entity. For the purpose of this definition, “control” means the power to dictate and conduct the policy of such corporate entity through the direct or indirect control of at least fifty percent (50%) of the shares or voting rights in such corporate entity and “controlled by” and “under common control” shall be construed accordingly. Notwithstanding the foregoing, PTT Public Company Limited shall not be construed as an AFFILIATE of the COMPANY.

AGREEMENT means the present document comprising articles 1 to 25 hereof.

APPLICABLE LAWS means all and any statutes, decrees, ordinances, rules, regulations, by-laws, notices, circulars, guidelines, specifications, codes, orders, directions, other laws and conventions in effect from time to time, and any amendments or re-enactments thereto of any government (or any subdivision thereof), 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 performance of the CONTRACT and/or the locations where the SERVICES will be performed and which have the force of law.

APPROVAL means the COMPANY’s written assent or approval. APPROVE or APPROVED shall be construed accordingly. APPROVAL shall in no way be construed as relieving CONTRACTOR of any of his obligations, responsibilities or liabilities under the CONTRACT or the APPLICABLE LAWS.

AVAILABLE means that when the CONTRACTOR is required to make the HELICOPTER available to the COMPANY, such HELICOPTER shall be air worthy in accordance with the terms of the CONTRACT and the crew shall be present, ready and fit to fly. AVAILABILITY shall be constructed accordingly.

BLOCK TIME means the period of time recorded in the HELICOPTER FLIGHT AND TECHNICAL LOG, as required by the COMPANY, showing period of time between when the engine is started and stopped as distinct from the FLYING TIME.

CALL-OFF HELICOPTER means any HELICOPTER as requested by the COMPANY in the form of VARIATION ORDERS, apart from the PERMANENT HELICOPTERS as more particularly described in Exhibit A and Exhibit C, that shall serve the COMPANY on call-off basis provided by the CONTRACTOR to perform the SERVICES under the terms and conditions of this CONTRACT.

CLAIM(S) means any claim, demand, cause of action, proceedings, judgement, assessments, award (including reasonable legal costs and experts' and consultants' fees, costs and expenses and reasonable sums paid by way of settlement or compromise) liability, loss, expense, penalty, fine, and damages, whether created by law, contract, tort or otherwise, arising from, relating to or in connection with the performance, mis-performance or non-performance of the CONTRACT.

COMMENCEMENT DATE means the date on which HELICOPTER, FACILITIES and CONTRACTOR's PERSONNEL shall be available on the OPERATING BASE, ready to perform the SERVICES with all necessary GOVERNMENT authorizations obtained.

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

COMPANY OTHER CONTRACTOR means

- (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 CONTRACTOR's performance of the CONTRACT; and
- (b) that person's subcontractors at any tier.

COMPANY REPRESENTATIVE means the PERSON appointed by the COMPANY as its duly authorized representative vis-à-vis the CONTRACTOR with respect to the CONTRACT pursuant to sub-article 4.2.

COMPLETION DATE means the scheduled date as specified in this CONTRACT or the COMPANY's notification when the performance of the SERVICES is to be completed in accordance with the CONTRACT requirements, and the CONTRACTOR is to demobilize the HELICOPTER, FACILITIES and CONTRACTOR's PERSONNEL from OPERATING BASE. Such date may be modified by the COMPANY in accordance with the performance of the SERVICES.

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

CONSEQUENTIAL LOSS means any indirect, incidental, or consequential loss or damage resulting from, arising out of, the performance or non-performance of the CONTRACT, including without limitation, loss of: revenue, profit, anticipated profit, use, production, productivity, contracts, business opportunity, 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.

CONTRACT means this signed AGREEMENT with the following EXIHIBITS, including any Annexes which are attached thereto, and any future amendments:

- EXHIBIT A - SCOPE OF SERVICES
- EXHIBIT B - SCHEDULE OF RATES
- EXHIBIT C - COMPANY'S MINIMUM STANDARDS FOR HELICOPTER OPERATIONS
- EXHIBIT D - SSHE CONTRACT REQUIREMENT
- EXHIBIT E - COMPANY'S QUALITY MANAGEMENT

- EXHIBIT F - COMPANY'S RULES AND REGULATIONS
- EXHIBIT G - CONTRACTOR'S ORGANIZATION, PERSONNEL, AND COMMUNICATION
- EXHIBIT H - CONTRACTOR'S OPERATIONS MANUALS (OM-A, OM-B, OM-C AND OM-D)
AND GENERAL MAINTENANCE MANUAL
- EXHIBIT I - CONTRACTOR'S SSHE POLICY AND SAFETY AND QUALITY MANAGEMENT
SYSTEM MANUAL
- EXHIBIT J - INTEGRITY PACT SIGNED BY COMPANY AND CONTRACTOR

CONTRACT DOCUMENTS mean the AGREEMENT and the EXHIBITS specified therein, including any Annexes thereto and any VARIATION ORDERS.

CONTRACTOR GROUP means the CONTRACTOR, his SUBCONTRACTORS, their respective AFFILIATES, and each of their PERSONNEL.

CONTRACTOR REPRESENTATIVE means the PERSON appointed by the CONTRACTOR as his duly authorized representative vis-à-vis COMPANY with respect to the CONTRACT pursuant to sub-article 5.2.

CO-VENTURERS means any entity with whom the COMPANY is or may be from time to time a party to a joint operating agreement, unitization agreement or similar agreement for the purposes of searching, developing and producing hydrocarbons in the OPERATIONAL AREA and the successors in interest of such CO-VENTURERS or the assignees of any interest of such CO-VENTURERS.

DAYLIGHT means that period between sunrise and sunset at surface level. Time of sunrise or sunset shall be as specified by Thai Meteorological Department.

DISEMBARKATION means the period from when any HELICOPTER touches down until the departure of all COMPANY's PERSONNEL and COMPANY OTHER CONTRACTOR's PERSONNEL from the HELICOPTER beyond the helipad/landing area. In the event the HELICOPTER is returning to any OPERATING BASE, DISEMBARKATION shall cease upon departure of all COMPANY's PERSONNEL and COMPANY OTHER CONTRACTOR's PERSONNEL from the OPERATING BASE.

EFFECTIVE DATE means the date specified in sub-article 2.1 on which the CONTRACT comes into force.

EMBARKATION means the period from when COMPANY's PERSONNEL and COMPANY OTHER CONTRACTOR's PERSONNEL enter the helipad/landing area in order to board the HELICOPTER until take-off of the HELICOPTER. In the event the HELICOPTER is departing from any OPERATING BASE, EMBARKATION shall commence when the first COMPANY's PERSONNEL and COMPANY OTHER CONTRACTOR's PERSONNEL enter the OPERATING BASE.

ESTIMATED CONTRACT VALUE means the estimate of the CONTRACT value as specified and identified as such in EXHIBIT B.

EXHIBITS mean EXHIBITS A through J together with their Annexes and/or any other documents attached and referred to therein. The term Exhibit shall be construed accordingly.

FACILITIES mean the ground personnel, maintenance facilities, equipment, materials, spare parts, consumables and services required for the performance of SERVICES.

FLYING HOURS shall be an hour of FLYING TIME and the length of any period of FLYING TIME shall be measured in minutes and hours rounded to the nearest minute.

FLYING TIME shall be the period of time during which the HELICOPTER is airborne from take off until touchdown, made in accordance with the instructions of the COMPANY.

FORCE MAJEURE means any event which causes or contributes to a PARTY's failure to fulfil any of its/his obligations under the 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, including government or authority orders that perniciously impact the COMPANY's operation and/or procurement functions, but shall not include:

- (a) a strike or any labor disruption affecting the performance of the CONTRACT by CONTRACTOR's PERSONNEL;
- (b) breakdown of any CONTRACTOR's equipment, HELICOPTER and FACILITIES of whatever nature unless caused by FORCE MAJEURE;
- (c) a contractual commitment between the CONTRACTOR and the THIRD PARTY;
- (d) an act or omission of any member of the CONTRACTOR GROUP;
- (e) for any reason, inability or incapacity of the CONTRACTOR to obtain and maintain any necessary GOVERNMENT authorizations during the period of the CONTRACT;
- (f) mere shortage of or inability to obtain labor, equipment, materials or transportation unless caused by FORCE MAJEURE; or
- (g) any financial distress on the part of the CONTRACTOR, or any member of the CONTRACTOR GROUP.

GOVERNMENT means any national, federal or local government, and/or their agencies and instrumentalities having jurisdiction over any area where the SERVICES will be performed.

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 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.

HELICOPTER means one or more helicopter [with model], which may be PERMANENT HELICOPTERS, and/or CALL-OFF HELICOPTER, and/or any replacement thereof as more particularly described in Exhibit A and Exhibit C. Such HELICOPTER shall be supplied to and APPROVED by the COMPANY to carry out the SERVICES. HELICOPTER may also include the crew when the context so admits. The term HELICOPTERS shall be construed accordingly.

HELICOPTER FLIGHT AND TECHNICAL LOG means the documents required to be maintained by the commander of the HELICOPTER under the regulations of the Civil Aviation Authority of Thailand ("CAAT"). BLOCK TIME and FLYING TIME shall be recorded in the HELICOPTER FLIGHT AND TECHNICAL LOG.

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

KEY PERFORMANCE INDICATORS or KPIs means the performance related parameters measured on a monthly basis to monitor performance trends.

MAJOR MAINTENANCE means that maintenance or those inspections to attend major overhaul or replacement of major parts as detailed in Exhibit A.

NOTAM means Notice to Airmen as required by the Civil Aviation Authority of Thailand.

NIGHT means that which is not a period of DAYLIGHT.

NORMAL OPERATING HOURS mean the time between sunrise to sunset Monday to Sunday, including public holidays.

OFFSHORE LOCATIONS mean all offshore platforms, Floating Storage Offshore (FSO) Vessel, drilling rigs, accommodation vessels, diving support vessels or any other fixed or floating installations or vessels.

OPERATIONAL AREA means Thailand including its continental shelf and such other locations as may be otherwise agreed from time to time between the PARTIES.

OPERATIONAL CONTROL means the period of time from the commencement of EMBARKATION until the completion of DISEMBARKATION, including FLYING TIME, during which the commander shall retain full operational control of the HELICOPTER.

OPERATIONAL PERIOD means either the period of time defined in sub-article 2.3 with any subsequent extensions or the period of time between COMMENCEMENT DATE and the date on which the CONTRACT has been terminated pursuant to the provisions of article 15 whichever occurs first.

OPERATING BASE means the COMPANY's base or other facility as specified in Annex 1 of Exhibit A from which the SERVICES shall be provided. When and as relevant in the CONTRACT, OPERATING BASE shall also include CONTRACTOR's base.

OPERATION READINESS AUDIT means the audit which shall be conducted before the COMMENCEMENT DATE as specified in sub-article 2.2.1 to ensure that the findings raised in PRE-AWARD AUDIT are closed by the CONTRACTOR and the CONTRACTOR will be ready to perform the SERVICES on such COMMENCEMENT DATE.

PARTIES mean the COMPANY and the CONTRACTOR.

PARTY means the COMPANY or the CONTRACTOR.

PERMANENT HELICOPTERS mean two (2) HELICOPTERS to be provided for SERVICES as more particularly described in Exhibit A and Exhibit C.

PERSON means any individual, company, firm, partnership, association or body corporate.

PERSONNEL means, as the case may be, the directors, officers, employees, servants, agents (including agency personnel) and invitees.

PRE-AWARD AUDIT means the audit, which shall be conducted before awarding the CONTRACT to the CONTRACTOR in order to verify that all technical documents provided by the CONTRACTOR during the tender period are correct and properly implemented in accordance with the COMPANY's requirements and seek the gaps between the CONTRACTOR's as-is operation and CONTRACT requirements to come up with findings for the CONTRACTOR to propose corrective action plan to rectify and complete by the COMMENCEMENT DATE as specified in sub-article 2.2.1.

REVENUE FLIGHTS mean all flights executed at the request of and authorized by the COMPANY excluding TEST, TRAINING AND PROFICIENCY FLIGHTS.

SERVICES mean any and all activities, works and services necessary including operation and maintenance of HELICOPTER as specified in the CONTRACT and any and all associated services or

obligations imposed on the CONTRACTOR under the CONTRACT and/or as may be modified by VARIATION ORDERS.

SPARE PARTS mean all parts of the HELICOPTER, which are required by the CONTRACTOR for the maintenance of the HELICOPTER to ensure that it is capable for performing the operations required by the CONTRACT.

SUBCONTRACTOR means any PERSON to whom with prior APPROVAL, the CONTRACTOR has subcontracted directly or indirectly at any tier for the performance of any part of the SERVICES in accordance with the provisions of article 12.

THIRD PARTY means any PERSON that is not a member of COMPANY GROUP or CONTRACTOR GROUP.

TEST, TRAINING AND PROFICIENCY FLIGHTS are those flights carried out solely for either testing the HELICOPTER after maintenance or the training and proficiency testing of aircrew. The timings of these flights will be agreed in advance between the COMPANY and the CONTRACTOR.

US Dollars or USD means the lawful currency of the United States of America.

VARIATION ORDERS mean modifications to the CONTRACT made in accordance with the provisions of sub-article 1.10. The term VARIATION ORDER shall be construed accordingly.

1.3 **Significance of expressions**

1.3.1 In the CONTRACT, headings shall be for convenience only and do not affect interpretation.

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

1.3.3 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.

1.3.4 In order to prevent any misunderstanding, the terms “he”, “him” and “his” shall be used in relation to the CONTRACTOR, whereas the terms “it” and “its” shall be used in relation to the COMPANY.

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

- (a) a document includes any variation, amendment or replacement of it and any annexure, schedule or exhibit attached to it or incorporated into it by reference;
- (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;
- (e) “days” or “months” means “consecutive calendar days” or “consecutive calendar months”, it being understood that all dates and time periods referred to in the CONTRACT relate to Gregorian calendar;
- (f) “require”, “request”, “submit”, “answer”, “notify”, “instruct”, “state”, “inform”, “agree”, “approve”, “advise” and the like shall be deemed to be completed by the expression “in writing”;
- (g) the words “include”, “including”, “included”, “for example”, “such as” and the like shall be deemed to be completed by the expression “but not limited to”; and
- (h) 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.

1.3.6 The misplacement, addition or omission of a word or character shall not change the intent of any part of the CONTRACT from that set forth by the CONTRACT as a whole. The CONTRACTOR shall be solely responsible for requesting any interpretation or clarification in such respect and shall bear any costs and expenses arising from its failure to do so.

1.3.7 Errors, omissions, deficiencies, inaccuracies, contradictions, ambiguities, discrepancies and/or mis-description in the CONTRACT, shall not relieve the CONTRACTOR from carrying out all necessary services and works which are required by sound Oil & Gas Industry practice to carry out the intent hereof, and the CONTRACTOR shall perform such services and works as part of the SERVICES.

1.3.8 Any APPROVAL and/or payment by the COMPANY shall neither be construed as acceptance or commitment of the Company, nor be construed as relieving the CONTRACTOR of any of his obligations, responsibilities or liabilities under the CONTRACT or at laws.

1.4 Language of the CONTRACT

Unless otherwise specified in the CONTRACT, all matters (including documentation) pertaining to the CONTRACT and the relations between the PARTIES under the CONTRACT shall be conducted in English, as being the language of the CONTRACT.

1.5 Entire agreement

The CONTRACT contains the entire agreement between the PARTIES with respect to the performance of this CONTRACT and supersedes all previous oral and written agreements, representations, warranties, understandings and negotiations made between the PARTIES prior to the execution hereof.

1.6 Order of Priority of CONTRACT DOCUMENTS

For the purposes of interpretation, should there be any conflict, discrepancy, inconsistency or ambiguity between any of the documents forming the CONTRACT, and unless expressly provided otherwise, priority shall be given in the order of precedence in which documents appear, i.e. the articles of the AGREEMENT take precedence over the rest of documents forming the CONTRACT, followed by the Annexes thereto and then the EXHIBITS. The priority of the Annexes and the EXHIBITS shall be construed in the order of precedence set out in the definition of the CONTRACT.

1.7 Obligations of the PARTIES

The obligations of the PARTIES shall not be limited to those set out in the CONTRACT when APPLICABLE LAWS enforce other obligations, provided however that the CONTRACT shall always take precedence over any APPLICABLE LAWS with which it conflicts or which is expressly excluded by the CONTRACT as far as legally permissible.

1.8 Correctness and sufficiency of the CONTRACT

The CONTRACTOR hereby declares that it is fully satisfied as to the correctness and completeness of the CONTRACT DOCUMENTS and that they are in all respects fit and sufficient for their intended purpose.

1.9 Severability

If any provision (or part thereof) of, or pursuant to, 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.

1.10 VARIATION ORDERS

The COMPANY shall have the right at any time to modify (by additions, deletions, substitutions or any other alteration) the scope of SERVICES or any other part of the CONTRACT. Such modifications shall include but shall not be limited to, amendments, change requests, or variations. Any request for modification shall be made in writing by the COMPANY REPRESENTATIVE in the form of a VARIATION ORDER, and be subject to COMPANY'S APPROVAL.

Unless agreed otherwise in this CONTRACT, any adjustment to the CONTRACT prices and rates resulting from any VARIATION ORDERS shall be valued at the appropriate prices and rates included in the CONTRACT or, in the absence of any appropriate prices and rates, a fair valuation shall be made and agreed between the COMPANY and the CONTRACTOR and included in the VARIATION ORDERS.

Adjustments as indicated in the VARIATION ORDERS shall be deemed to take into account the full and final effects of the considered modifications upon any and all aspects of the CONTRACT. The CONTRACTOR hereby agrees to make no further CLAIM for any other consequences of VARIATION ORDERS whether directly or indirectly resulting there from at the time of the VARIATION ORDERS or thereafter.

The VARIATION ORDERS shall in no way vitiate or invalidate the CONTRACT, and, unless otherwise specified in the VARIATION ORDERS, all provisions of the CONTRACT shall apply to the VARIATION ORDERS.

1.11 Non-waiver of rights

A right created under the CONTRACT may only be waived in writing, signed by the PARTY giving the waiver, and:

- (a) a PARTY'S failure to enforce, or delay in enforcing, any of its/his rights under the CONTRACT does not constitute a waiver of those rights;
- (b) a waiver of a right on one or more occasions does not operate as a waiver of that right on other occasions; and
- (c) an exercise of a right does not prevent any further exercise of that right or of any other right. No failure or failures on the part of either PARTY to enforce, from time to time, all or any portion of the terms and conditions of the CONTRACT shall be interpreted as a waiver of such terms or conditions.

Notwithstanding the 3rd paragraph of Section 381 and Section 597 of Thai Civil and Commercial Code, the CONTRACTOR agrees that failure by the COMPANY to reserve its right for liquidated damages under the CONTRACT on acceptance of the SERVICES from the CONTRACTOR will not prejudice or affect COMPANY'S right to claim such liquidated damages later.

1.12 Amendments

No amendment to the CONTRACT is valid unless made in writing and executed by the authorized representatives of the PARTIES.

1.13 Survival

Termination or expiration of the CONTRACT shall not release the PARTIES from obligations, which expressly or by their nature survive the termination or expiration of the CONTRACT.

1.14 General Provision relating to Indemnities

Each indemnity under the CONTRACT is a continuing obligation, separate, and independent from the other obligations of the PARTIES, and shall survive the termination or expiration of the CONTRACT and interpreted so as to take precedence over any other clauses to the extent of any inconsistency or uncertainty.

ARTICLE 2 - DURATION

2.1 EFFECTIVE DATE

Notwithstanding the date of its signature, this CONTRACT shall come into force on (*tentatively*) **16th May 2022**, which shall be the EFFECTIVE DATE.

This CONTRACT shall continue in force for a period of **five (5) years and five (5) months** from the EFFECTIVE DATE or until all the obligations of both PARTIES hereunder have been satisfactorily completed, unless the CONTRACT is terminated by a PARTY in accordance with its terms.

2.2 COMMENCEMENT DATE

2.2.1 The COMMENCEMENT DATE for PERMANENT HELICOPTERS shall be on (*tentatively*) **16th October 2022**.

2.2.2 The COMMENCEMENT DATE for CALL-OFF HELICOPTER shall be on the date specified in each relevant VARIATION ORDER.

2.3 OPERATIONAL PERIOD

2.3.1 The initial OPERATIONAL PERIOD for PERMANENT HELICOPTERS shall be of **five (5)** years from the COMMENCEMENT DATE.

2.3.2 The OPERATIONAL PERIOD for CALL-OFF HELICOPTER shall be specified in relevant VARIATION ORDER.

2.4 Option to extend

The COMPANY shall have the right to extend the CONTRACT duration as specified in sub-article 2.1 for one or more HELICOPTER and for one or more periods up to a maximum of twenty-four (24) months, provided that:

- (a) during the first two (2) months of the extension period(s), the same rates, prices, terms and conditions of this CONTRACT shall be applied. The COMPANY shall give a written notice to the CONTRACTOR not later than fifteen (15) days prior to the end of the then-current CONTRACT duration; and
- (b) during any extension period(s) after the first two (2) months, the same terms and conditions of this CONTRACT shall be applied but the rates and prices shall be mutually agreed by the PARTIES. The COMPANY shall give a written notice to the CONTRACTOR not later than thirty (30) days prior to the end of the then-current CONTRACT duration.

2.5 **Completion of SERVICES**

Without prejudice to the COMPANY's rights under this CONTRACT or at laws, the CONTRACTOR accepts that the initial OPERATIONAL PERIOD or any extensions granted thereafter, if any, shall always be extended to complete the performance of the SERVICES in progress until such the SERVICES are completed in full in accordance with the CONTRACT requirements.

ARTICLE 3 - PERFORMANCE OF SERVICES

3.1 **General**

- 3.1.1 The CONTRACTOR shall provide the SERVICES with all due care and diligence and with the skill expected of a reputable CONTRACTOR experienced in performance of the type of services to be provided under the CONTRACT.
- 3.1.2 In the event that the SERVICES or any part thereof have not been satisfactorily performed, the CONTRACTOR shall promptly affect corrective measures to rectify/amend any aspect of the SERVICES at no additional cost to the COMPANY.
- 3.1.3 The CONTRACTOR shall notify the COMPANY immediately of any impending or actual stoppages of work, industrial disputes or other matters affecting or likely to affect the performance of the SERVICES.
- 3.1.4 The CONTRACTOR hereby declares and warrants that prior to entering into the CONTRACT it has fully acquainted himself as to all local, regional, national and OFFSHORE LOCATION conditions which could in any way affect the performance of the SERVICES and/or its obligations under the CONTRACT.
- 3.1.5 The CONTRACTOR shall remain solely responsible for complying with all of his obligations and shall not be relieved from any of his obligations or liabilities under the CONTRACT, notwithstanding any action(s) and/or omission(s) of the COMPANY such as:
 - (a) any approval, acceptance, acknowledgement, or issuance of any certificate by the COMPANY and/or any inspecting entity;
 - (b) any comment whatsoever or absence of comment by the COMPANY;
 - (c) the presence or absence of any COMPANY REPRESENTATIVE during the performance of any operation such as tests or inspections; and/or
 - (d) any payment made by the COMPANY.

3.2 **Independent Contractor**

The CONTRACTOR represents and warrants that he possesses the necessary know-how, he is fully experienced and technically competent to perform the SERVICES required under the CONTRACT and that he is properly financed organized and equipped to perform such SERVICES. The CONTRACTOR shall conduct his operations in a lawful manner and shall exercise all care and diligence to prevent any actions or conditions which could result in a conflict with COMPANY's best interests.

The CONTRACTOR declares and guarantees to be an independent contractor and neither he nor any CONTRACTOR's PERSONNEL shall be deemed for any purpose to be COMPANY's PERSONNEL. In particular, the entire performance, operations, navigation, management and control of the HELICOPTER shall be under the exclusive control and command of the CONTRACTOR.

The CONTRACTOR shall assume any and all costs and expenses appropriate to his independent status with regard to CONTRACTOR's PERSONNEL including but not limited to salaries, bonuses, insurance and social welfare contributions of all description.

3.3 Additional SERVICES

At any time during the period of this CONTRACT, the COMPANY shall have the right to request via a VARIATION ORDER that any HELICOPTER be assigned to activities outside the scope of SERVICES and for which any HELICOPTER is suitable, providing that the CONTRACTOR shall be compensated fully for any and all additional costs which are incurred by the CONTRACTOR arising from the performance of such activities in accordance with the rate specified in Exhibit B.

3.4 Carriage of Dangerous Goods by Air

- Not Applicable -

3.5 COMPANY's Minimum Standards for Helicopter Operations

The CONTRACTOR shall meet and comply with COMPANY's Minimum Standards for Helicopter Operations as set out in Exhibit C.

3.6 Quality

The CONTRACTOR shall take all necessary measures to ensure the quality of the SERVICES provided and shall inform the COMPANY of such measures. The CONTRACTOR shall establish and maintain throughout the OPERATIONAL PERIOD a documented quality system to be implemented for the SERVICES. The CONTRACTOR shall fully comply with the quality management requirements set out in Exhibit E.

By the COMMENCEMENT DATE, the CONTRACTOR shall submit for APPROVAL a Quality Assurance Plan describing his quality system. In the event that any parts of the SERVICES are subcontracted, the SUBCONTRACTOR shall be required by the CONTRACTOR to develop and implement a quality plan relevant to the subcontracted part of the SERVICES.

The CONTRACTOR shall complement the quality assurance plan with quality control plans, which will summarize CONTRACTOR's verification activities for their processes and allow the COMPANY and any certifying authority to incorporate their own surveillance activities into them.

3.7 Safety, Security, Health and Environment (SSHE)

The CONTRACTOR shall strictly comply and ensure the compliance of the CONTRACTOR GROUP with the SSHE requirements as specified in Exhibit D and herein below. Notwithstanding sub-article 1.6, should there be any discrepancy between the SSHE requirements and this sub-article 3.7, the SSHE requirements shall prevail to the extent of that discrepancy.

3.7.1 General

3.7.1.1 The CONTRACTOR shall be responsible for ensuring on the HELICOPTER at his own cost the safety and welfare of all PERSONNEL involved in the performance of the SERVICES.

3.7.1.2 The CONTRACTOR shall take all necessary associated measures with respect to health, safety, environment protection and security in relation with the performance of the SERVICES and shall inform the COMPANY of such measures.

3.7.1.3 The CONTRACTOR shall use all reasonable and prudent means and practices to prevent and control at all times fires, explosions, pollution of the environment and damages and to protect all PERSONNEL, the environment, the COMPANY GROUP's

property and equipment and the HELICOPTER.

3.7.1.4 If in COMPANY's sole opinion, actual or potential risks exist, including blow-out, explosion, fire, pollution, the COMPANY reserves itself the right to direct in detail the emergency procedures required to regain full control of the well and/or to overcome the situation.

3.7.2 Compliance with APPLICABLE LAWS relative to Safety and Environment

The CONTRACTOR shall comply, and ensure compliance by the CONTRACTOR GROUP, with all APPLICABLE LAWS relative to safety and environment and COMPANY's SSHE requirements as specified in Exhibit D.

3.7.3 CONTRACTOR's SSHE Organization

3.7.3.1 The CONTRACTOR shall ensure that his functional organization and corresponding resources satisfy the requirements mentioned in sub-articles 3.7.1 and 3.7.2 above.

3.7.3.2 The CONTRACTOR shall appoint a SSHE representative for the CONTRACT who shall be responsible on behalf of the CONTRACTOR for all SSHE aspects including for identification of potential hazards associated with the performance of the SERVICES, the preparation of the SSHE procedures, and the control of their implementation.

3.7.3.3 The CONTRACTOR shall provide the COMPANY with copies of the CONTRACTOR's SSHE procedures and manuals and/or made available to all the PERSONNEL on the OFFSHORE LOCATIONS.

3.7.4 CONTRACTOR's PERSONNEL SSHE Awareness and Training

3.7.4.1 In order to enhance safety performance and to avoid delays while performing the SERVICES, the CONTRACTOR, before the commencement of the SERVICES, shall carry out and provide to the COMPANY the OFFSHORE LOCATIONS survey to assess working and safety conditions, to identify hazards and to optimize the lay out of the HELICOPTER and the COMPANY GROUP's property and equipment.

3.7.4.2 The CONTRACTOR shall ensure that all CONTRACTOR's PERSONNEL present on the OFFSHORE LOCATIONS attend a SSHE induction meeting.

3.7.4.3 During the course of the performance of the SERVICES, the CONTRACTOR shall ensure that:

- (a) the SSHE awareness of the CONTRACTOR's PERSONNEL is continuously maintained and enhanced. In this respect, the CONTRACTOR shall conduct in co-ordination with the COMPANY REPRESENTATIVE, regular SSHE meetings and drills to review SSHE procedures and their implementation. SSHE meetings and drills shall also be recorded on the SSHE register mentioned in sub-article 3.7.9;
- (b) a hot work permit has been established before any welding, burning or spark-producing work is performed, that a work permit has been established before any work is performed on lifting/handling the CONTRACTOR's equipment, on pressurized enclosures, on electrical systems, on safety systems and for handling hazardous or toxic materials. The list of qualified CONTRACTOR's PERSONNEL and specific procedures for the work performed shall be attached to such permits; and
- (c) no smoking takes place in the non-smoking areas, galley and dining room.

3.7.5 Safety Training

The CONTRACTOR shall ensure that all CONTRACTOR's PERSONNEL scheduled to work offshore have carried out training courses in the field and position they occupy (including as relevant basic training in offshore survival and firefighting techniques and any other safety courses as required by the GOVERNMENT) and have been certified in this respect by an internationally recognized agency acceptable to the COMPANY and/or to the GOVERNMENT. Certificates shall be made available to the COMPANY upon its request.

3.7.6 Handover of Safety Information

The CONTRACTOR shall ensure that all relevant information concerning safety with respect to the performance of the SERVICES are properly handed over from shift to shift and at the time of the periodical relief of the CONTRACTOR REPRESENTATIVE and formally recorded.

3.7.7 Provision of Personal Protective Equipment

The CONTRACTOR shall at his own costs, provide CONTRACTOR's PERSONNEL involved in the performance of the SERVICES with all items of equipment and clothing contained in the COMPANY's SSHE requirements (Exhibit D) which are necessary for the safe and healthy conduct of the SERVICES. Such items shall be maintained in good condition or replaced and shall be worn as indicated by notices, instructions and good oil and gas field practices.

3.7.8 Picking and Cargo Handling

The CONTRACTOR shall comply with all applicable transport, packing and labeling regulations associated with both cargo handling/lifting the CONTRACTOR's equipment and means of shipment.

3.7.9 SSHE Register

The CONTRACTOR shall maintain a SSHE register recording the results and dates of all the SSHE meetings and drills and the periodical tests and inspections of his safety equipment performed on OFFSHORE LOCATIONS. The SSHE register shall be made available to the COMPANY upon its request.

3.7.10 Medical Services and First Aid Facilities

In the event of accident or search and rescue in respect of the CONTRACTOR GROUP's PERSONNEL, the COMPANY hereby will make its reasonable efforts, to assist victims amongst the CONTRACTOR GROUP's PERSONNEL, and the CONTRACTOR shall indemnify, defend and hold harmless each member of the COMPANY GROUP from any CLAIM arising out of or in relation to providing, failing or inability to provide such assistance and/or the performance of these search and rescue operations. Without prejudice to the foregoing, the provisions of article 9 shall apply with respect to CLAIMS arising out of or in connection with the performance of such assistance and/or search by the COMPANY.

The COMPANY during those search and rescue operations will make all reasonable efforts:

- (a) to provide first aid on the OFFSHORE LOCATIONS pursuant to APPLICABLE LAWS and safety regulations in force;
- (b) to provide or allow to be used any available communication means; and/or
- (c) to provide or allow to be used, any transportation vehicles / craft available for the search and rescue and carrying of casualties from the OFFSHORE LOCATIONS to the nearest hospital.

The costs of such search and rescue operations, transportation and hospital services performed for CONTRACTOR GROUP's PERSONNEL, shall be reimbursed to the COMPANY by the CONTRACTOR.

The decision to evacuate the CONTRACTOR GROUP's PERSONNEL as a result of illness or injury shall be taken by the COMPANY's authorized person.

3.7.11 Hazardous and Toxic Materials

The CONTRACTOR shall submit for the COMPANY's review, written procedures (including manufacturer's safety data sheets and any other hazard information, transportation procedures, storage precautionary measures for such hazardous or toxic materials) for any SERVICES involving the handling or use of hazardous or toxic materials. Such review shall in no way be construed as relieving the CONTRACTOR of any of his obligations, responsibilities and liabilities under the CONTRACT or at law, including but not limited to obtaining relevant licenses and permits prior to commencement of SERVICES. Failure to comply with this requirement shall entitle the COMPANY to reject the said materials.

3.7.12 Housekeeping

The CONTRACTOR shall ensure that good housekeeping is maintained at all times on the OFFSHORE LOCATIONS or OPERATING BASE in respect of the performance of the SERVICES. Due regard shall be given to cleanness, tidiness and disposal of waste.

3.7.13 Cleaning-up of the OFFSHORE LOCATIONS, and OPERATING BASE

3.7.13.1 Throughout the performance of the SERVICES, the CONTRACTOR shall keep the OFFSHORE LOCATIONS, and OPERATING BASE, his access, egress and surroundings, tidy, clean and free from obstructions resulting from the performance of the SERVICES.

3.7.13.2 Upon completion of the performance of the SERVICES on the OFFSHORE LOCATIONS, and OPERATING BASE or termination of the CONTRACT, the CONTRACTOR shall promptly remove FACILITIES and any surplus of materials, wreck, and debris, resulting from the performance of the SERVICES from such the OFFSHORE LOCATIONS, and OPERATING BASE.

3.7.13.3 If the CONTRACTOR fails to satisfy the above requirements, the COMPANY, following appropriate notification to the CONTRACTOR, shall have the right to perform (or have performed) clean-up operations at the CONTRACTOR's expense, at any time.

3.7.14 Signaling of the SERVICES in progress

Throughout the performance of the SERVICES, the CONTRACTOR shall provide and maintain in good operating conditions on the OFFSHORE LOCATIONS, OPERATING BASE, FACILITIES, lights, guards, marks, signals, fences and other appliances for the safety and convenience of third parties as required by the APPLICABLE LAWS and the COMPANY's regulations and/or instructions.

3.7.15 Accident, Near Miss and Dangerous Occurrence Reports

3.7.15.1 The CONTRACTOR shall immediately report to the COMPANY all accidents, near miss and other dangerous occurrences resulting in or having the potential to cause PERSONNEL injury or death, property damage or loss (including damage or loss of

HELICOPTER, FACILITIES, and/or OPERATING BASE) and shall provide the COMPANY with copies of report made to and/or required by any government.

3.7.15.2 The CONTRACTOR shall inform the COMPANY by the quickest and most expedient method available of any signs which might indicate a dangerous situation for all PERSONNEL present on the HELICOPTER, FACILITIES, OFFSHORE LOCATIONS, OPERATING BASE, the environment, COMPANY GROUP's property and equipment and shall take immediately all measures consistent with good oil and gas field practices and/or in accordance with safety and environment APPLICABLE LAWS.

3.7.16 Health - Medical Examination

The CONTRACTOR shall ensure prior to the commencement of the SERVICES and for the duration of the CONTRACT that all CONTRACTOR's PERSONNEL employed on the FACILITIES, OFFSHORE LOCATIONS, OPERATING BASE, and HELICOPTER for the performance of the SERVICES are medically fit for the job they are assigned to. Medical fitness certificates issued by a recognized authority APPROVED by the COMPANY shall be made available to COMPANY upon its request.

3.7.17 Environmental Protection

3.7.17.1 At all time during the performance of the SERVICES, the CONTRACTOR shall take all necessary measure in order to prevent and/or to limit within the levels authorized by APPLICABLE LAWS and/or the COMPANY's SSHE requirements (Exhibit D), any discharge from any source under his care, custody or control whatsoever into the atmosphere, the ground and any body of water of any substance which might cause pollution or be deleterious to life or environment such as smoke, dust, oil, radio-active products or other atmospheric, ground or liquid pollutants.

3.7.17.2 The CONTRACTOR shall be responsible for disposal of all waste from any source under his care, custody or control and generated through the performance of the SERVICES. The CONTRACTOR shall provide the COMPANY with a written statement of how and where such waste has been disposed of.

3.7.18 COMPANY's Alcohol and Drug Policy

The CONTRACTOR acknowledges that he has been advised and is subject to, and agrees that he shall advise the CONTRACTOR's PERSONNEL that they are subject to the following:

- (a) it is the policy of the COMPANY that the use, sale, transfer, purchase, possession, and/or presence in one's system of a controlled substance(s) or of alcoholic beverages by any person, and/or the presence of firearms on any OFFSHORE LOCATIONS, OPERATING BASE, FACILITIES, HELICOPTER or the COMPANY's property is prohibited;
- (b) entry onto any OFFSHORE LOCATIONS, OPERATING BASE and/or the COMPANY's property constitutes consent to (i) an inspection of one's person, personal effects and vehicle at any time while entering, on, or leaving the COMPANY's property, and (ii) laboratory or onsite testing (by witnessed urinalysis or otherwise) of the chemical in one's system to confirm the absence of any controlled substances, and/or alcohol content, if such testing is requested by the COMPANY;
- (c) any person who is found in violation of the aforesaid policy, or who refuses to permit such inspection, or submit to such testing, shall be removed from the COMPANY's

property and/or the OFFSHORE LOCATIONS, and/or OPERATING BASE and may be barred at the discretion of the COMPANY; and

- (d) all CONTRACTOR's PERSONNEL shall be subject to such testing.

The CONTRACTOR shall allow access during normal business hours to his offices, property, and records for the COMPANY and/or any governmental representative with appropriate jurisdiction for the purpose of maintaining compliance with any relevant laws and regulations relating to such testing.

3.7.19 Security

The CONTRACTOR shall co-operate with the COMPANY on all security matters and shall promptly comply with any security requirement. The CONTRACTOR shall immediately report to the COMPANY any incidents with respect to security matters on the OFFSHORE LOCATIONS, OPERATING BASE, FACILITIES, HELICOPTER including losses, thefts, vandalism and/or unexplained disappearances.

3.7.20 Emergency Response Plan

The CONTRACTOR shall prepare comprehensive Emergency Response Plans including medevac planning for CONTRACTOR GROUP's PERSONNEL and search and rescue if one of their assets is missing. Such plans shall be subject to review by the COMPANY prior to start-up of operations and shall be in compliance with and bridge effectively to the COMPANY Emergency Response and Crisis Management frame works and plans. Copies of the plans shall be filed with CONTRACTOR's area and field management, and COMPANY's Field Representative. Copies of the Plans will be prominently displayed in the field office, medical center, and other appropriate locations.

In the event of any injury or occupational illness, the CONTRACTOR shall demonstrate adequate arrangements for medevac (including international medevac) and medical treatment of CONTRACTOR GROUP's PERSONNEL.

3.8 **Licenses**

The CONTRACTOR warrants that he currently holds and shall continue to hold and keep valid during the term of this CONTRACT all licenses, certificates, permits and approvals required under APPLICABLE LAWS that will enable him to legally perform his obligations under the CONTRACT.

3.9 **Local Resources**

In the performance of the SERVICES, to the extent practical and lawful, the CONTRACTOR shall ensure that he and/or his SUBCONTRACTOR use local resources (including labor, materials, equipment and services) that are available in the country where the SERVICES will be performed, provided that prices (including transportation and taxes), qualities and delivery conditions remain competitive.

ARTICLE 4 - COMPANY'S RIGHTS AND OBLIGATIONS

4.1 **COMPANY's Obligations**

Unless otherwise specified in Exhibit A, the COMPANY shall use its reasonable endeavors to fulfil the responsibilities set out below:

- 4.1.1 Provide suitable landing facilities at the OFFSHORE LOCATIONS.

- 4.1.2 Provide safety and operational facilities at the OFFSHORE LOCATIONS in accordance with COMPANY standards including:
 - (a) Fire-fighting equipment;
 - (b) First aid equipment;
 - (c) Crash/rescue equipment;
 - (d) Windsock (capable of being illuminated);
 - (e) Landing area lighting;
 - (f) Obstruction lights;
 - (g) Equipment for weighing passengers;
 - (h) Helideck net (correctly tensioned); and
 - (i) HELICOPTER tie-down points.
- 4.1.3 Provide radio communication equipment and navigational beacon at the OFFSHORE LOCATIONS as follows:
 - (a) VHF (AM) Transceiver;
 - (b) MF Radio Beacon (Non Directional).
- 4.1.4 Provide competent personnel to load and offload the HELICOPTER at the OFFSHORE LOCATIONS.
- 4.1.5 Provide, as appropriate, accommodation and subsistence for CONTRACTOR's PERSONNEL at OFFSHORE LOCATIONS, when SERVICES provided under the terms of the CONTRACT involve flights to and from OFFSHORE LOCATIONS.
- 4.1.6 Provide competent personnel to maintain a radio flight watch at OFFSHORE LOCATIONS.

4.2 COMPANY REPRESENTATIVE

The COMPANY may, by notice to the CONTRACTOR, appoint a person that may exercise or perform the COMPANY's functions, discretions, powers or rights under the CONTRACT, except for the amendment of any provisions of the CONTRACT. The COMPANY may replace the COMPANY REPRESENTATIVE at any time.

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 or inspecting agencies.

4.3 Increasing and Decreasing the Number of HELICOPTER

- 4.3.1 The COMPANY may at any time during the term of the CONTRACT and upon giving one hundred twenty (120) days' written notice via a VARIATION ORDER requesting the CONTRACTOR to increase the number of CALL-OFF HELICOPTER. The CONTRACTOR agrees to provide such CALL-OFF HELICOPTER at rates in accordance with Exhibit B.
- 4.3.2 Subject to sub-articles 14.2 and/or 15.2, the COMPANY at any time during the term of this CONTRACT shall be entitled to request the CONTRACTOR to decrease the number of PERMANENT HELICOPTERS and/or CALL-OFF HELICOPTER by giving thirty (30) days' written notice via a VARIATION ORDER to the CONTRACTOR.

4.4 Audit Rights

The COMPANY or its authorized representatives shall have unrestricted access to, audit, or inspect at all reasonable times the HELICOPTER, FACILITIES, CONTRACTOR's PERSONNEL and records to review and audit any or all of the technical, safety and environmental policies, procedures and

operations undertaken by CONTRACTOR or SUBCONTRACTOR(s) in the performance of the SERVICES.

The CONTRACTOR shall ensure that all members of the CONTRACTOR GROUP maintain all records related to compliance and/or non-compliance of the obligations set forth under the CONTRACT and/or the performance of the CONTRACT for a period of twenty-four (24) months following the termination or expiration of the CONTRACT.

4.5 Key Performance Indicators (KPIs)

The COMPANY shall have a right to evaluate CONTRACTOR's performance of the SERVICES by using KPIs as detailed in of Exhibit C. Upon instruction of the COMPANY, the CONTRACTOR shall immediately improve his performance to meet the KPIs and failure of which may result in suspension and/or termination according to sub-articles 14 and 15.

ARTICLE 5 - CONTRACTOR'S PERSONNEL

5.1 General

The CONTRACTOR shall make his own arrangements for the engagement of CONTRACTOR's PERSONNEL, whether on permanent, temporary or contract basis. Unless the CONTRACT provides otherwise the CONTRACTOR shall be solely responsible for all costs associated with such PERSONNEL including their transportation, housing, board, lodging, maintenance, salary, compensations, severance pay, welfare, benefits and any other payments.

For the operation of HELICOPTER, the CONTRACTOR shall provide competent, fully trained and licensed crew, maintenance CONTRACTOR's PERSONNEL and such CONTRACTOR's PERSONNEL as are needed to perform the SERVICES envisaged in the CONTRACT. The licenses and qualifications of such CONTRACTOR's PERSONNEL shall be provided by the CONTRACTOR to the COMPANY prior to the relevant COMMENCEMENT DATE.

5.2 CONTRACTOR REPRESENTATIVE

The CONTRACTOR shall designate on a full-time basis and during the performance of the SERVICES, an experienced CONTRACTOR REPRESENTATIVE acceptable to the COMPANY who shall be fully knowledgeable in all aspects of the CONTRACT and the SERVICES, have full charge of all operations of CONTRACTOR in respect of the SERVICES and full authority to represent the CONTRACTOR in all matters related to the performance of the CONTRACT.

Such authority shall include the power to agree on behalf of the CONTRACTOR to any VARIATION ORDERS. Any communication or notice given to the CONTRACTOR REPRESENTATIVE by the COMPANY shall be considered as given to the CONTRACTOR.

The CONTRACTOR REPRESENTATIVE shall fully co-operate with the COMPANY REPRESENTATIVE and be responsible for the following:

- (a) notifying the COMPANY REPRESENTATIVE as soon as he becomes aware of any matter affecting the performance of the SERVICES;
- (b) making and considering proposals aiming at avoiding or reducing the consequences of the hereabove notified matters;
- (c) ensuring the co-ordination to optimize utilization of HELICOPTER, FACILITES and other resources associated with the SERVICES;
- (d) provide all management information as required by COMPANY; and
- (e) act as the focal point for all commercial and operational matters associated with the SERVICES.

5.3 List of CONTRACTOR's PERSONNEL

The CONTRACTOR shall, within fourteen (14) days before the COMMENCEMENT DATE, submit for APPROVAL a list of the names of all the CONTRACTOR's PERSONNEL who are managers, pilots, flight safety officer, licensed engineers, together with details of their experience and qualifications. Any proposed changes to the CONTRACTOR's PERSONNEL shall be subject to APPROVAL before they are implemented. Additionally, the CONTRACTOR shall produce a list identifying the numbers of staff, broken down by role e.g. administration, pilots, engineers, check-in staff, ramp, security, drivers etc. assigned to the CONTRACT.

5.4 COMPANY's Instructions

Subject to APPLICABLE LAWS, CONTRACTOR's PERSONNEL shall comply with COMPANY's instructions concerning use of the HELICOPTER.

The CONTRACTOR must ensure that there are sufficient PERSONNEL available to satisfy any requirements for SERVICES at any time, either day or night.

The CONTRACTOR shall fully co-operate to ensure that sufficient CONTRACTOR's PERSONNEL are available to meet any additional COMPANY's requirements.

5.5 Performance

If the COMPANY has reason to be dissatisfied with the conduct of any of CONTRACTOR's PERSONNEL employed, it shall provide CONTRACTOR with particulars of any complaint in this respect and the CONTRACTOR, upon receiving particulars of the complaint shall at his sole expense promptly investigate the matter and take any disciplinary action deemed necessary and practicable by the CONTRACTOR including replacement.

5.6 Substitution of CONTRACTOR's PERSONNEL at COMPANY's Request

In the event of default, shortcoming, illness, injury, professional inadequacy, serious misconduct or error, or negligence, or non-compliance with discipline or SSHE obligations or procedures, incompetence in the performance of duties, engagement in activities which are contrary or detrimental to the interests of the COMPANY by any of the CONTRACTOR's PERSONNEL, the CONTRACTOR shall promptly replace at his sole cost and expense, such PERSONNEL. The same provision shall apply where the behavior of any of the CONTRACTOR's PERSONNEL is liable to jeopardize the relations between the COMPANY and the GOVERNMENT. The CONTRACTOR shall provide a suitable replacement for any such person at no extra cost to the COMPANY within twenty-four (24) hours.

5.7 Work Permit and License

The CONTRACTOR shall ensure that all CONTRACTOR's PERSONNEL comply with APPLICABLE LAWS including immigration law and where required are in possession of a valid work permit, residence permit, licenses and any other permits required by CONTRACTOR's PERSONNEL engaged in the performance of the SERVICES in the country of OPERATIONAL AREA for the duration of the CONTRACT.

5.8 English Fluency

The CONTRACTOR shall ensure that CONTRACTOR's PERSONNEL involved in the management and execution of the SERVICES including the flight crew, instructors, examiners, radio operators and line check airmen shall read, write and speak fluent English.

5.9 Commander's Responsibilities

The commander of HELICOPTER shall at all times have authority on matters having to do with the safety of flight, including but not limited to the generality of the foregoing, the weight and storage of any cargo to be carried by HELICOPTER, the suitability of weather conditions for flight and the suitability of landing sites.

5.10 Accommodation and Catering

Unless otherwise specified herein, the CONTRACTOR shall at his sole cost and expense provide the accommodation, food and local transportation of CONTRACTOR GROUP's PERSONNEL.

5.11 Professional Secrecy

The CONTRACTOR undertakes that neither he nor any member of CONTRACTOR GROUP including CONTRACTOR's PERSONNEL shall at any time, except with the prior written consent of the COMPANY, make any reference publicly to or disclose any information as to the contents of the CONTRACT or to the operations or interest of the COMPANY and/or its AFFILIATES and/or its CO-VENTURERS to any persons who is not directly concerned with the performance of the operations envisaged in the CONTRACT.

Upon expiry or termination of the CONTRACT, CONTRACTOR's PERSONNEL shall immediately deliver to the COMPANY all correspondence, documents specifications and all other papers and property belonging to the COMPANY which may be in their possession or under their control.

5.12 Particular Responsibilities of CONTRACTOR's PERSONNEL

CONTRACTOR's PERSONNEL shall be ultimately responsible for:

- (a) preparation of cargo and particularly weight-checking;
- (b) loading, stowing, unloading of cargo;
- (c) refueling of HELICOPTER; and
- (d) all other activities required to perform the SERVICES at OPERATING BASE and as specified in Exhibit A and/or VARIATION ORDERS.

5.13 Flight Records

The CONTRACTOR shall ensure that a flight crew member keeps daily records of every HELICOPTER's flight for each day of operation, which record shall show the time of take-off and landing, the origin route and destination, of the general area of flight, the purpose of the flight, type of flight, names of passengers, type and amount of cargo carried, and the number of hours flown, or any reason for not flying. Such records certified by CONTRACTOR shall be daily submitted to COMPANY and kept permanently at COMPANY's disposal on the OPERATING BASE. Invoices presented by the CONTRACTOR shall be accompanied by such certified records covering all charges made.

ARTICLE 6 - AVAILABILITY AND DELAY

6.1 AVAILABILITY

6.1.1 Other than as a result of a FORCE MAJEURE event and/or a reason outside of the CONTRACTOR's control, if after COMMENCEMENT DATE and during the NORMAL

OPERATING HOURS any HELICOPTER is not AVAILABLE (provided that such non-AVAILABILITY shall not occur due to fault attributable to the CONTRACTOR), the SERVICES rates shall be reduced as calculated in accordance with the Exhibit B.

The term “outside of the CONTRACTOR’s control” shall be limited to the following occurrences:

- (a) weather conditions outside the limits of operation stated in the CONTRACTOR’s operations manual;
- (b) any act, law, regulation or directive of the GOVERNMENT (coming into force after the EFFECTIVE DATE) making flight operations impossible. This includes Airworthiness Directives (AD) of regulatory authorities, however the rectification period as per the announced AD shall be agreed by the COMPANY;
- (c) the issuance of a recommendation to suspend or the suspension of the operation of the HELICOPTER on the advice of HELICOPTER’s manufacturer or regulatory authority;
or
- (d) any act of prevention by the COMPANY.

6.1.2 The CONTRACTOR shall inform the COMPANY the MAJOR MAINTENANCE schedule for at least one (1) month in advance. Such MAJOR MAINTENANCE schedule shall be mutually agreed by the PARTIES. On any occasion where the CONTRACTOR conducts MAJOR MAINTENANCE longer than the agreed period, such delay shall be considered as unavailability (hours) unless downtime allowance is applied. Such unavailability (hours) shall be deducted from the Monthly Standing Charge (MSC) in accordance with Exhibit B. The amount calculated under this sub-article is in addition to any other rights or remedies of the COMPANY under the CONTRACT or at law.

6.1.3 On any occasion where the CONTRACTOR is unable to make the HELICOPTER AVAILABLE within one (1) hour after receiving the COMPANY’s notification to perform medevac flight, the delay in making HELICOPTER AVAILABLE within one (1) hour shall be counted as unavailability (hours). Such unavailability (hours) shall be deducted from the MSC in accordance with Exhibit B. The amount calculated under this sub-article is in addition to any other rights or remedies of the COMPANY under the CONTRACT or at law.

6.1.4 The CONTRACTOR shall be allowed a maximum downtime allowance of twenty-four (24) hours during NORMAL OPERATING HOURS per month per PERMANENT HELICOPTERS for maintenance and/or rectification and/or repair in addition to the time allowed for scheduled MAJOR MAINTENANCE. Any unused monthly downtime allowances are not cumulative. Any downtime during NORMAL OPERATING HOURS in excess of twenty-four (24) hours shall be considered as unavailability (hours). Such unavailability hours shall stop counting if unavailable HELICOPTER is replaced by replacement HELICOPTER acceptable to and APPROVED by the COMPANY at no additional charge to the COMPANY during the replacement period. Such unavailability (hours) shall be deducted from the MSC in accordance with Exhibit B. The amount calculated under this sub-article is in addition to any other rights or remedies of the COMPANY under the CONTRACT or at law.

6.1.5 If any HELICOPTER is not AVAILABLE while undergoing scheduled maintenance, including MAJOR MAINTENANCE, for more than seven (7) days, the CONTRACTOR shall provide replacement HELICOPTER acceptable to and APPROVED by the COMPANY at no additional charge to the COMPANY during those periods of scheduled maintenance, including MAJOR MAINTENANCE.

6.1.6 In the event of an accident resulting in a ditching, or total or constructive total loss of the HELICOPTER, the CONTRACTOR shall use his best endeavors to replace it immediately but in no event later than seven (7) days with HELICOPTER acceptable to and APPROVED by the

COMPANY. During such a period the Monthly Standing Charge (MSC) set out in Exhibit B shall cease from the day following the ditching, loss or the constructive total loss until the replacement HELICOPTER is AVAILABLE. No additional charge including mobilization charges shall apply to the replacement HELICOPTER.

- 6.1.7 If any HELICOPTER is not AVAILABLE for more than seven (7) days for whatever reason, except for the case specified in sub-articles 6.1.5 and 6.1.6 the CONTRACTOR shall use his best endeavors to replace, with his own cost and expense, such HELICOPTER at the earliest possible time with HELICOPTER acceptable to and APPROVED by the COMPANY.
- 6.1.8 If in accordance with sub-articles 6.1.5, 6.1.6 and 6.1.7 above, such HELICOPTER shall be replaced with the same type of helicopter in accordance with the specifications in Annex 2 of Exhibit C with rates and prices set out in Exhibit B.
- 6.1.9 If no suitable and APPROVED replacement HELICOPTER is AVAILABLE within seven (7) days, the COMPANY may at its sole option terminate the CONTRACT in whole or in part. If the CONTRACT is terminated under this sub-article 6.1.9, the CONTRACTOR shall not be entitled to any compensation, including the demobilization fee as set out in Exhibit B, or any other cost associated with the repatriation and/or recovery of the HELICOPTER.

6.2 Liquidated Damages

- 6.2.1 The CONTRACTOR acknowledges that time is of essence under the CONTRACT and hereby guarantees the timely performance of the CONTRACT.
- 6.2.2 Without prejudice to any other rights the COMPANY may have under the CONTRACT, the CONTRACTOR shall pay the COMPANY liquidated damages amount calculated as per Exhibit B if the CONTRACTOR fails to comply with his obligation(s) set out in this CONTRACT.
- 6.2.3 All amounts of liquidated damages for which the CONTRACTOR may become liable are agreed as a genuine pre-estimate of the losses which may be sustained by the COMPANY in the event that the CONTRACTOR fails to meet the relevant requirements under this CONTRACT; and such liquidated damages shall not be deemed a penalty. Payment of such liquidated damages shall not relieve the CONTRACTOR from any of his obligations or liabilities under the CONTRACT or at law. The COMPANY reserves its right to call upon such amount from bank guarantee, demand such amount from the CONTRACTOR, and/or deduct such amount from the payment(s) made to the CONTRACTOR.

ARTICLE 7 - FINANCIAL CONDITIONS

7.1 General

- 7.1.1 In consideration of the performance of the SERVICES, the COMPANY shall pay the CONTRACTOR the amounts due and calculated according to the applicable rates and prices set out in Exhibit B.
- 7.1.2 Unless expressly provided otherwise in the CONTRACT, all rates and prices stated in the CONTRACT are:
 - (a) fixed and firm and shall not be subject to any adjustment, revision or escalation during the CONTRACT term; and
 - (b) deemed to be inclusive of everything necessary for the complete performance of the

CONTRACT.

7.1.3 The CONTRACTOR shall not be entitled to receive any remuneration hereunder during any period of suspension of the performance of the SERVICES resulting from strikes by CONTRACTOR's PERSONNEL.

7.2 Invoicing and payment

Invoicing and payment procedures set out hereinafter shall apply to the amounts becoming due under the CONTRACT, including those resulting from VARIATION ORDERS and CONTRACT amendments.

7.2.1 Issuance of Invoice

- (a) The CONTRACTOR shall on a monthly basis each all amounts that become due to the CONTRACTOR by the COMPANY for SERVICES performed during the preceding month. All invoices shall be supported by copies of the relevant parts of the HELICOPTER FLIGHT AND TECHNICAL LOG and Fight Records and/or any other supporting documentation, and shall be APPROVED by the COMPANY REPRESENTATIVE.

The mobilization charge shall be invoiced after the actual COMMENCEMENT DATE provided that the HELICOPTER and the FACILITIES are in accordance with the provisions of the CONTRACT. The demobilization charge shall be invoiced after the COMPLETION DATE.

- (b) All invoices shall be supported by appropriate documentation and duly approved by the COMPANY REPRESENTATIVE.
- (c) The CONTRACTOR shall submit separate invoices for the mobilization charge, monthly standing charges, FLYING HOURS charges, the demobilization charge and any additional SERVICES charges provided for in Exhibit B.
- (d) Invoices for reimbursements of local purchases and/or additional items shall be issued and paid in the currency originally paid by the CONTRACTOR, unless otherwise agreed.

Unless otherwise advised by the COMPANY in writing CONTRACTOR shall submit complete set of invoices together with supporting documents in accordance with the specified procedure in Exhibit B.

7.2.2 Payment

7.2.2.1 All payments payable under the CONTRACT shall be made:

- (a) in the currency set out in Exhibit B; and
- (b) by bank transfer to a bank account advised by the CONTRACTOR.

7.2.2.2 All properly established invoices received by the COMPANY in its office from the 1st to the 15th of each month 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, will be paid within 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.

7.2.2.3 Notwithstanding sub-article 7.2.2.1(a),

- (a) 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
- (b) subject to sub-article 7.2.2.3(a), payment for reimbursements of costs and expenses under the CONTRACT shall be made in the currency originally paid by the CONTRACTOR unless otherwise agreed.

7.2.2.4 Any payment by the COMPANY is made on the condition that the COMPANY reserves the right to subsequently challenge the validity of any invoiced amounts. In particular, the COMPANY's:

- (a) payment for, or acceptance of, any SERVICES;
- (b) payment of, or objection or failure to object to, any invoice; or
- (c) payment or settlement in resolution of any dispute, or any combination thereof shall not be construed as the COMPANY's acceptance;
- (d) unsatisfactory or defective SERVICES; or
- (e) the accuracy or justification of the CONTRACTOR's invoices, and shall not constitute a waiver of the COMPANY's rights pursuant to the CONTRACT or otherwise at law.

7.3 Deduction of Amounts Due

The COMPANY may deduct or set off any debt or money due from the CONTRACTOR to the COMPANY under the CONTRACT from any monies that may be, or may become, payable to the CONTRACTOR by the COMPANY pursuant to the CONTRACT. The COMPANY shall give the CONTRACTOR notice of its intention to deduct or set off any monies as aforesaid, and shall furnish the CONTRACTOR with reasons therefore. This sub-article 7.3 shall not limit the COMPANY's right to recover these amounts from the CONTRACTOR in any other way. This provision shall survive expiration or termination of this CONTRACT.

Payment due to the CONTRACTOR may be withheld by the COMPANY on account of unsatisfactory performance of the CONTRACT, the filing of claims against the COMPANY caused by acts or omissions of the CONTRACTOR or failure of the CONTRACTOR to pay amounts when due for labor or materials used by the CONTRACTOR in performing the SERVICES or amounts due to SUBCONTRACTOR for the SERVICES. The COMPANY shall release such withheld payment to CONTRACTOR until such default by the CONTRACTOR has been rectified and satisfied by the COMPANY.

7.4 Disputes Invoices

7.4.1 If the COMPANY disputes all or part of any invoice, the COMPANY shall return the invoice to the CONTRACTOR specifying in writing the reasons for its rejection within three (3) weeks of the receipt of the invoice. The CONTRACTOR may then:

- (a) send back any revised invoice to the satisfaction of the COMPANY; or
- (b) issue a credit note to the satisfaction of the COMPANY referring to the disputed invoice;

or

- (c) send back an invoice covering the non-disputed part. The invoice for the disputed part may be sent, as the case may be, after the settlement of the dispute.

The COMPANY shall be obliged to pay only the undisputed part of a disputed invoice in accordance with sub-article 7.2.1.

7.4.2 If any other dispute connected with the CONTRACT exists between the PARTIES, the COMPANY may withhold from payment of any money which becomes payable under the CONTRACT the amount which is the subject of the dispute. On settlement of any dispute the CONTRACTOR shall submit an invoice for sums due and the COMPANY shall make the appropriate payment in accordance with sub-article 7.2.1.

7.5 Rights of COMPANY on Paid Invoices

Payment of any invoice shall not prejudice the right of the COMPANY to contest in writing any sum(s) improperly paid to the CONTRACTOR. Any CLAIM so exercised and as justified by the COMPANY shall result in an immediate reimbursement by the CONTRACTOR.

7.6 Limit of Time for Invoicing

The COMPANY reserves the right to refuse any invoice submitted by the CONTRACTOR more than three (3) months after the date at which it should have been invoiced in accordance with the terms of the CONTRACT.

7.7 CONTRACTOR's CLAIMS

Any CLAIM of the CONTRACTOR shall be notified at the time of the occurrence of the originating event and at the latest within one (1) month of the commencement of such event, failing which the CONTRACTOR shall be debarred from any entitlement to submit such a claim.

7.8 Audit of CONTRACTOR's Accounts by COMPANY

7.8.1 The CONTRACTOR shall keep proper books, records and accounts of the CONTRACT during the CONTRACT term and for a period of five (5) years following the termination or expiration of the CONTRACT.

7.8.2 The COMPANY may conduct an audit of such books, records and accounts for verification of any sum payable under the CONTRACT. The CONTRACTOR shall assist the COMPANY in conducting an audit by granting access, at all reasonable times, to the books, records and accounts maintained by the CONTRACTOR.

7.8.3 Should the audit show that any sum or sums have been improperly paid by the COMPANY to the CONTRACTOR, such sums shall be reimbursed to the COMPANY by the CONTRACTOR within thirty (30) days following such discovery.

7.9 COMPANY's Invoices

If the COMPANY at any time incurs costs which, under the provisions of the CONTRACT, the COMPANY is entitled to recover from the CONTRACTOR, the COMPANY may invoice the CONTRACTOR for such costs, provided always that the COMPANY may deduct the amount of such costs from any amount due, or that may become due to the CONTRACTOR under the CONTRACT. The CONTRACTOR shall pay the COMPANY within thirty (30) days of receipt of invoice any such sums outstanding after such deduction.

7.10 Bank Guarantee

- 7.10.1 The CONTRACTOR shall, within thirty (30) days after the EFFECTIVE DATE, provide the COMPANY with an irrevocable bank guarantee (in the form set out in Annex 2) payable on first demand of the COMPANY to guarantee his performance, obligations and liabilities under the CONTRACT. The COMPANY shall not be obliged to make any payments to the CONTRACTOR under the CONTRACT until it has received the bank guarantee pursuant to this sub-article 7.10.
- 7.10.2 The bank guarantee shall be issued by a bank or a bank branch located in Thailand and approved by the COMPANY to provide a bank guarantee.
- 7.10.3 The CONTRACTOR hereby agrees that the bank guarantee shall remain valid and undertakes to extend the validity hereof until the completion of the performance of the CONTRACT (including the warranty period for the SERVICES, if any) or the date on which this CONTRACT has been terminated pursuant to its terms whichever occurs first, plus one hundred and twenty (120) days in view to allow claim under the bank guarantee, if any. Should at any time and for any reason such bank guarantee expires or is proven unenforceable, the COMPANY shall be entitled to suspend any and all payments to the CONTRACTOR until CONTRACTOR has provided COMPANY with a new and satisfactory bank guarantee.
- 7.10.4 The bank guarantee shall be established in the same currency as the CONTRACT prices. The amount of the bank guarantee provided by the CONTRACTOR to the COMPANY:
- (a) For the period until the COMMENCEMENT DATE specified in sub-article 2.2.1, shall be equal to US Dollars (USD) which is ten percent (10%) of the ESTIMATED CONTRACT VALUE as specified in Exhibit B; and
 - (b) From the date after the COMMENCEMENT DATE specified in sub-article 2.2.1 onwards, shall be equal to US Dollars (USD) which is ten percent (10%) of the annual ESTIMATED CONTRACT VALUE as specified in Exhibit B.
- 7.10.5 In the event that the CONTRACT is amended increasing the ESTIMATED CONTRACT VALUE (for avoidance of doubt, including the event that the COMPANY issues VARIATION ORDER for CALL-OFF HELICOPTER), the CONTRACTOR shall ask the bank to increase the value of the bank guarantee (or to issue an additional bank guarantee) to cover the portion of the ESTIMATED CONTRACT VALUE that is increased within the reasonable period as specified by the COMPANY.
- 7.10.6 The COMPANY will only make a claim under the bank guarantee if the CONTRACTOR fails to perform any of his obligations or to fulfil any liability arising out of, or in connection with, the CONTRACT.

7.11 Rates Conflict

The CONTRACTOR agrees that, in a case where two or more rates could apply to a given situation, the CONTRACTOR shall be paid by the COMPANY at the lowest applicable rate.

ARTICLE 8 - TAXES

8.1 Responsibility of CONTRACTOR

- 8.1.1 Except for Thai Value Added Tax (hereinafter referred to as “VAT”) which the CONTRACTOR

is required under APPLICABLE LAWS and sub-article 8.1.2 to charge on the provision of SERVICES of this CONTRACT, The CONTRACTOR shall assume full and exclusive liability for payment of all taxes, duties, stamp duties, levies, charges and fiscal contributions and other charges including but not limited to withholding taxes, personal income taxes, property taxes, capital gain taxes, turn over taxes and/or corporate taxes (including penalties and interest thereon) for which the CONTRACTOR is liable and/or that are from time to time imposed on the CONTRACTOR by:

- (a) any GOVERNMENT of any country in which the SERVICES are being performed;
or
- (b) any other fiscal or other authority whatsoever in respect of:
 - (i) the performance of the CONTRACT;
 - (ii) noncompliance with the CONTRACT by the CONTRACTOR;
 - (iii) CONTRACTOR's PERSONNEL (whether or not such taxes, levies, charges and contributions are measured by wages, salaries and/or other remunerations);
and/or
 - (iv) the income, profits, dividends, turnover and gains of the CONTRACTOR and his SUBCONTRACTORS arising directly or indirectly out of the performance of the obligation prescribed by this CONTRACT.

The CONTRACTOR shall, and shall request his SUBCONTRACTORS to, report and pay all such taxes, levies, charges and/or contributions directly to the appropriate authorities and otherwise comply with any APPLICABLE LAWS and regulations.

8.1.2 When CONTRACTOR is registered in Thailand for Value Added Tax (VAT), he will invoice COMPANY accordingly for the SERVICES. The CONTRACTOR shall provide the COMPANY with a copy of his VAT registration certificate on or before the issuance of the first invoice to the COMPANY. Failing to provide such certificate will entail withholding of payment of invoices.

8.1.3 The CONTRACTOR shall be liable and shall indemnify, defend and hold each member of the COMPANY GROUP harmless from and against any and all CLAIMS, arising out of, related to or in connection with any of the above taxes, duties, levies, charges, fiscal contributions and other charges (including penalties and interest thereon), which by the terms of this article 8 the CONTRACTOR and CONTRACTOR's PERSONNEL 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 or an act or a non-payment by the CONTRACTOR and/or CONTRACTOR's PERSONNEL.

The CONTRACTOR represents and warrants that he has taken into account in establishing the rates and fees set out in this CONTRACT, all taxes for which he is liable in accordance with the present article 8.

8.2 Statutory Deductions

8.2.1 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 CONTRACTOR. The COMPANY shall pay over or deal with any amount so deducted in accordance with the APPLICABLE LAWS.

8.2.2 The COMPANY shall within three (3) months of such deduction hand over to the CONTRACTOR receipts evidencing payment of such deduction or withholding if so requested by the CONTRACTOR.

8.2.3 Where the CONTRACTOR claims to be exempted from any statutory deductions pursuant to APPLICABLE LAWS, he shall inform the COMPANY and provide any 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 CONTRACTOR or any other person or body in the event that the COMPANY applies the statutory deduction according to the APPLICABLE LAWS.

8.3 Import, Export/Re-Export

8.3.1 The CONTRACTOR shall comply with all APPLICABLE LAWS including all customs requirements and procedures to obtain customs clearance for the importation, exportation or re-exportation of his HELICOPTERS, FACILITIES and property of CONTRACTOR's PERSONNEL.

8.3.2 The CONTRACTOR is responsible for obtaining the necessary import-export licenses (if required) in the name of the CONTRACTOR for HELICOPTERS, FACILITIES and property of CONTRACTOR's PERSONNEL. The CONTRACTOR shall be responsible for importing and/or exporting HELICOPTERS, FACILITIES and property of CONTRACTOR's PERSONNEL required for the performance of the SERVICES and to pay any import duties, port dues including brokerage fees and other similar import or export/re-export charges imposed incurred thereby.

8.3.3 The CONTRACTOR shall indemnify, defend and hold harmless the COMPANY from and against all CLAIMS arising out of, related to, or in connection with any failure of the CONTRACTOR to comply with this sub-article 8.3.

ARTICLE 9 - LIABILITY

9.1 Liability for Breach of APPLICABLE LAWS

The CONTRACTOR shall be solely liable for, and shall indemnify, defend and hold harmless each member of the COMPANY GROUP from and against, all CLAIMS and/or all other consequences resulting from the breach of APPLICABLE LAWS by any member of the CONTRACTOR GROUP.

9.2 Personal Injury

9.2.1 The 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 personal injury (including illness, death or disease) to any:

- (a) member of the CONTRACTOR GROUP regardless of cause, including negligence, breach of duty or other fault of any member of the COMPANY GROUP; and
- (b) THIRD PARTY to the extent attributable to the negligence, breach of duty or other fault of any member of the CONTRACTOR GROUP.

9.2.2 The COMPANY shall be solely liable for, and shall indemnify, defend and hold harmless each member of the CONTRACTOR GROUP from and against, all CLAIMS that relate to personal injury (including illness, death or disease) to any:

- (a) member of the COMPANY GROUP regardless of cause, including negligence, breach of duty or other fault of any member of the CONTRACTOR GROUP; and
- (b) THIRD PARTY to the extent attributable to the negligence, breach of duty or other fault of any member of the COMPANY GROUP.

9.3 Property Damage

9.3.1 The 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 loss of, or damage to:

- (a) HELICOPTERS or FACILITIES or any other property owned, hired or leased by any member of the CONTRACTOR GROUP, regardless of cause, including negligence, breach of duty or other fault of any member of the COMPANY GROUP; and
- (b) any property of any THIRD PARTY to the extent attributable to the negligence, breach of duty or other fault of any member of the CONTRACTOR GROUP.

9.3.2 The COMPANY shall be solely liable for, and shall indemnify, defend and hold harmless each member of the CONTRACTOR GROUP from and against, all CLAIMS that relate to loss of, or damage to, any property:

- (a) owned, hired or leased by any member of the COMPANY GROUP, regardless of cause, including negligence, breach of duty or other fault of any member of the CONTRACTOR GROUP; and
- (b) of any THIRD PARTY to the extent attributable to the negligence, breach of duty or other fault of any member of the COMPANY GROUP.

9.4 OPERATIONAL CONTROL

Notwithstanding sub-articles 9.2 and 9.3, during OPERATIONAL CONTROL, the CONTRACTOR shall be responsible for and shall save, indemnify, defend and hold harmless each member of the COMPANY GROUP from and against all CLAIMS in respect of:

- (a) loss of or damage to any property of the CONTRACTOR GROUP, or the COMPANY GROUP, provided that such property is on board and/or under care and custody of the CONTRACTOR, arising from or relating to the performance or non-performance of the CONTRACT, regardless of cause including negligence, breach of duty or other fault of any member of the COMPANY GROUP.
- (b) personal injury including death or disease to any passenger or crew on board, arising from or relating to any member of the CONTRACTOR GROUP's act or omission.

9.5 CONSEQUENTIAL LOSS

Without prejudice to any liquidated damages or other compensation provisions stipulated for delay, non-performance, mis-performance or otherwise under this CONTRACT:

- (a) the COMPANY shall be solely liable for, and shall indemnify, defend and hold harmless each member of the CONTRACTOR GROUP from, CONSEQUENTIAL LOSS suffered by any member of the COMPANY GROUP as a result of, or in any way connected with, the performance or non-performance of the CONTRACT, regardless of cause, including negligence, breach of duty or other fault of any member of the CONTRACTOR GROUP; and
- (b) the CONTRACTOR shall be solely liable for, and shall indemnify, defend and hold harmless each member of the COMPANY GROUP from, CONSEQUENTIAL LOSS suffered by any member of the CONTRACTOR GROUP as a result of, or in any way connected with, the performance or non-performance of the CONTRACT, regardless of cause, including negligence, breach of duty or other fault of any COMPANY GROUP.

9.6 CONTRACTOR Responsibility for Pollution

The CONTRACTOR shall be responsible for and shall save, indemnify, defend and hold harmless each member of the COMPANY GROUP, from and against all CLAIMS, arising from pollution and/or contamination, including the control and removal thereof, originating from or relating to the performance of the CONTRACT where such pollution and/or contamination:

- (a) occurs on the OPERATING BASES; or
- (b) emanates from HELICOPTERS or FACILITIES or any part thereof or items carried thereon including fuels, oils etc.

9.7 Indemnity for INTELLECTUAL PROPERTY

The CONTRACTOR shall save, indemnify, defend and hold harmless each member of the COMPANY GROUP from and against all CLAIMS, arising out of any alleged or actual infringement of INTELLECTUAL PROPERTY rights, arising out of or in connection with the performance of the CONTRACT.

Subject to the above, the COMPANY shall save, indemnify, defend and hold harmless each member of the CONTRACTOR GROUP from all CLAIMS arising out of any alleged or actual infringement of INTELLECTUAL PROPERTY rights arising out of information, instructions or materials or equipment supplied by the COMPANY.

9.8 Holding Harmless

- 9.8.1 Whenever the COMPANY is pursued in respect of any CLAIM for which the CONTRACTOR is liable under the provisions of this article 9, the latter shall defend, indemnify and hold harmless the former.
- 9.8.2 Whenever the COMPANY shall have been led to pay, pursuant to a judgment or an arbitration award, a sum for which the CONTRACTOR is wholly or partly liable under the provisions of this article 9 the latter shall reimburse and indemnify the former without delay.
- 9.8.3 The CONTRACTOR shall be responsible for the defense of any CLAIM brought against any member of COMPANY GROUP in relation to any CLAIM in respect of which CONTRACTOR is liable under the provisions of the article 9 and shall satisfy any judgment against any member of the COMPANY GROUP resulting therefrom.

The COMPANY may however participate in the defense of any CLAIM to which it is a party without relieving the CONTRACTOR of his responsibility for the defense of the CLAIM. The COMPANY shall forthwith, upon receiving notice of any CLAIM brought against it, deliver to the CONTRACTOR full particulars thereof and shall render all reasonable assistance requested by the CONTRACTOR in the defense of the CLAIM.

- 9.8.4 The provisions of sub-articles 9.8.3 shall apply conversely in case of a CLAIM against any member of the CONTRACTOR GROUP on account of any CLAIM in respect of which COMPANY is liable under the provisions of the CONTRACT.
- 9.8.5 All indemnities under the CONTRACT shall be full and primary and be fully enforceable irrespective of any separate right of indemnity or contribution.
- 9.8.6 If the CONTRACTOR becomes aware of any incident likely to give rise to a CLAIM under the above indemnities, he shall notify COMPANY immediately and shall co-operate fully in investigating the incident.

9.8.7 The provisions of this article 9 shall survive termination or expiration of the CONTRACT.

9.9 Waivers of Recourse and Indemnities

The CONTRACTOR shall sign the counterpart of the “Mutual Indemnity and Waiver of Recourse Agreement” (Version for the CONTRACTOR) attached hereto as Annex 1.A. The CONTRACTOR shall also obtain from his SUBCONTRACTOR, the signature of like counterparts of the “Mutual Indemnity and Waiver of Recourse Agreement” (Version for CONTRACTOR’s SUBCONTRACTOR) attached hereto as Annex 1.B.

9.10 Exclusion of Limitation

The indemnities specified in this article 9 are, subject to sub-article 9.5, unlimited in scope and shall apply without limitation, notwithstanding any international convention or statute (“International Convention”) to the contrary. The CONTRACTOR therefore agrees that:

- (a) he will not rely on the defenses available to operators in those International Conventions;
- (b) the limitations in respect of types of damage recoverable under the International Conventions shall not apply;
- (c) the limitations in respect of the cause of damage recoverable under the International Conventions shall not apply; and
- (d) the monetary caps on recoverability under those International Conventions shall not apply.

9.11 Removal of Property and Debris

9.11.1 The CONTRACTOR shall be responsible for and shall indemnify and hold harmless each member of the COMPANY GROUP from and against all CLAIMS in respect of all costs of and associated with recovering any HELICOPTER damaged in connection with the performance of the SERVICES, including all wreckage or debris arising therefrom (whether or not such HELICOPTER is declared to be a total and constructive loss).

9.11.2 The CONTRACTOR shall notify the COMPANY of any occurrence likely to give rise to a CLAIM under any of the above as soon as possible and in any event within fifteen (15) days of such occurrence. In the event of death, injury, or major property damage CONTRACTOR shall give immediate notice to the COMPANY in accordance with sub-article 3.7.15.

9.12 GROSS NEGLIGENCE

Except for sub-articles 9.5,

- (a) the exclusions, limitations and indemnities given by the COMPANY under the CONTRACT shall not apply to the extent that there is GROSS NEGLIGENCE by any member of the CONTRACTOR GROUP; and
- (b) the exclusions, limitations and indemnities given by the CONTRACTOR under the CONTRACT shall not apply to the extent that there is GROSS NEGLIGENCE by any member of the COMPANY GROUP.

9.13 Liability due to CONTRACTOR’s abandonment of SERVICES

If the CONTRACTOR does not perform any and all SERVICES hereunder, the CONTRACTOR shall be liable to the COMPANY pursuant to sub-article 15.1 and compensate the COMPANY the actual losses and/or damages that is directly incurred due to the CONTRACTOR’s abandonment of SERVICES.

9.14 **Labor CLAIM**

All CONTRACTOR's PERSONNEL are under exclusive direction and control of the CONTRACTOR. Accordingly, the 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 CONTRACTOR's PERSONNEL.

ARTICLE 10 - INSURANCE

10.1 **Policies and Limits**

Without limitation of his obligations and responsibilities the CONTRACTOR shall at his own cost provide and maintain in full force and effect for the duration of the CONTRACT the following insurances, placed with insurers acceptable to the COMPANY and with the COMPANY endorsed as additional insured for their respective rights and interests:

- (a) **Workman Compensation and Employer's Liability Insurance**; as prescribed by APPLICABLE LAWS where the SERVICES are performed and, where applicable, the states, provinces and/or countries where CONTRACTOR's PERSONNEL perform the SERVICES.
- (b) **Comprehensive General Liability or Aviation Liability Insurance** covering contractual liability and legal liability for death, bodily injury, personal injury and loss of or damage to property (including liability to THIRD PARTIES and/or passengers and for baggage and/or cargo and/or premises and/or hanger keepers and/or products) and other damage resulting from fire, explosion or accident arising out of ownership or operation of any HELICOPTER, up to a combined single limit of not less than seventy-five million (USD 75,000,000) United States Dollars for any one occurrence, but with personal injury liability to passengers up to a limit of not less than twelve million (USD 12,000,000) United States Dollars for any one occurrence or one million (USD 1,000,000) United States Dollars per passenger seat for any one occurrence and baggage/cargo liability up to a limit of not less than one hundred and fifty thousand (USD 150,000) United States Dollars for any one occurrence. This insurance must include Hull War and Allied Risks as excluded by the War, Hijacking and other Perils Exclusion Clause (AVN48B) for War, Hijacking and other Perils (including terrorism).

This policy shall include additional coverage for cost of removal of debris of the HELICOPTER for at least fifteen million (USD 15,000,000) United States Dollars any one occurrence if the CONTRACT provides for work offshore and five million (USD 5,000,000) United States Dollars for any one occurrence if the CONTRACT is for work onshore, when such removal is made compulsory under any APPLICABLE LAWS or when the COMPANY is liable for removal of such debris under a contract with the GOVERNMENT or when such debris interferes with COMPANY's normal operation.

- (c) **Helicopter and Equipment Insurance**, including Hull All Risks Insurance in respect of damage to or loss of any HELICOPTER however caused up to the full replacement value thereof, and Equipment insurance to insure the CONTRACTOR in respect of damage or a loss of any equipment, tools and spare parts and other property provided by the CONTRACTOR under this CONTRACT however caused up to the full replacement value thereof.
- (d) Any other insurances as may be required by APPLICABLE LAWS.

The above insurances shall be maintained in full force and effect throughout the duration of this CONTRACT.

10.2 **Special Provision with respect to Policies Placed by the CONTRACTOR**

10.2.1 The CONTRACTOR adheres that insurance certificates shall comply with the following requirements:

(a) For all insurance:

(i) waive their rights of subrogation

The CONTRACTOR's insurances shall contain provisions whereby the insurers waive their rights of subrogation against the COMPANY GROUP, other parties bound by the "Mutual Indemnity and Waiver of Recourse Agreements" referred to under article 9 and their respective insurers in accordance with the liabilities assumed by the CONTRACTOR under the provision of article 9.

(b) For liabilities insurances:

(i) Additional insured parties

The liability insurance policies of the CONTRACTOR specially listed in sub-article 10.1 shall include the COMPANY GROUP as additional insured parties in so far as the COMPANY GROUP is held liable to pay for CLAIMS which according to the CONTRACT have to be borne by the CONTRACTOR.

(ii) Primary Insurance

The liability insurance policies are primary insurance, to the extent of the liabilities assumed by the CONTRACTOR under the CONTRACT, for all additional insured parties and other insurance carried by the COMPANY and its CO-VENTURER shall not be called upon to contribute or participate on the basis of contributing, concurrent, double insurance or otherwise.

(iii) Cross Liabilities

The liability insurance policies shall contain a cross liability clause so that the COMPANY and the CONTRACTOR are regarded as the third parties to each other.

10.2.2 The limits specified in sub-article 10.1 are minimum requirements and not limits of liability. They should not be construed as the COMPANY's consent to substitute its financial liability in excess of the limits specified above except as otherwise agreed in the CONTRACT.

10.2.3 All deductibles applicable to the CONTRACTOR's insurances with or without the specific consent of the COMPANY shall be for the account of the CONTRACTOR.

10.2.4 As soon as the CONTRACTOR is aware of any circumstance which may engage the responsibility of the COMPANY and which may give rise to a CLAIM under his liability insurances, including Employer's Liability Insurance, the CONTRACTOR shall give written notice of such circumstance to his insurers with copy to the COMPANY. Such notification shall make reference to the provision that the COMPANY is an additional insured in respect of CLAIMS made against the COMPANY GROUP arising out of liabilities accepted by the CONTRACTOR under the CONTRACT.

10.2.5 The CONTRACTOR represents and warrants that all insurances pertaining to the CONTRACT

comply with this article 10.

10.2.6 The provision of insurance certificates to the COMPANY shall not fix the COMPANY with the contents thereof and shall not be a defense to any CLAIMS by the COMPANY against the CONTRACTOR GROUP.

10.2.7 Articles 9 and 10 shall be applicable to the SUBCONTRACTORS. The CONTRACTOR shall ensure that each SUBCONTRACTOR is properly insured for its liabilities.

Such insurance shall be compatible with the terms of articles 9 and 10 hereof where appropriate and shall in particular take into account the application of the Mutual Indemnity and Waiver of Recourse Agreement in the case of each SUBCONTRACTOR.

Any deficiency in the coverage, amounts, policy limits or provisions of any SUBCONTRACTOR's insurance shall be the sole responsibility of the CONTRACTOR.

10.3 Before the commencement of the SERVICES under the CONTRACT, the CONTRACTOR shall furnish the COMPANY with certificates of insurance and thereafter renewals thereof to comply with the requirements set out in this article 10 within 45 days.

ARTICLE 11 - UTILISATION BY THIRD PARTIES

11.1 The CONTRACTOR shall not add any THIRD PARTY passengers or freight to any flight undertaken under the CONTRACT without the prior written permission of the COMPANY and then only subject to any terms and conditions stipulated by the COMPANY.

11.2 The CONTRACTOR may with the prior written consent of the COMPANY charter the HELICOPTER to a THIRD PARTY if the HELICOPTER is not required by the COMPANY and at the COMPANY's sole discretion in each individual case. In the event that permission is granted then the CONTRACTOR shall reimburse the COMPANY at the rate mutually agreed by both PARTIES.

11.3 As more fully set out in sub-article 8.3, in case the CONTRACTOR charters the HELICOPTER to a THIRD PARTY under sub-article 11.2 above, the CONTRACTOR may not receive the benefit of importing the HELICOPTER and/or FACILITIES tax free into the Kingdom of Thailand under APPLICABLE LAWS including the Petroleum Act B.E.2514 and any of its amendments. He shall be responsible for importing and/or exporting HELICOPTER, FACILITIES and belongings of CONTRACTOR's PERSONNEL required for the performance of the SERVICES and to pay for all charges, taxes and duties incurred thereby.

The CONTRACTOR shall comply with all APPLICABLE LAWS including all customs requirements and procedures to obtain customs clearance for the importation, exportation or re-exportation of the HELICOPTER, FACILITIES and belongings of CONTRACTOR's PERSONNEL.

ARTICLE 12 - ASSIGNMENT - SUBCONTRACTS

12.1 The COMPANY shall be entitled to assign the CONTRACT, or any part of it, or any benefit or interest under it, to its CO-VENTURER or its AFFILIATE without the consent of the CONTRACTOR. In addition, the COMPANY may make any such assignment to any third party subject to the prior agreement of the CONTRACTOR, which agreement shall not be unreasonably withheld or delayed.

Assignment of the CONTRACT by the COMPANY shall not relieve the CONTRACTOR of any of his obligations or liabilities and the CONTRACTOR hereby agrees, in the event of such assignment, to continue to perform all his duties and obligations under the CONTRACT.

Unless subject to prior APPROVAL, the CONTRACTOR shall not assign, encumber, or subcontract any rights, duties or interests arising under this CONTRACT, in whole or in part, voluntarily, by operation of law or otherwise. No such APPROVAL shall be asked for by nor given to the CONTRACTOR if the CONTRACTOR has not obtained from potential subcontractors and remitted to the COMPANY a signed copy of the "Mutual Indemnity and Waiver of Recourse Agreement" attached hereto as Annex 1.B.

APPROVAL of any SUBCONTRACTOR shall not create any contractual relationship whatsoever between COMPANY and such SUBCONTRACTORS.

Neither the granting of such assignment nor subcontract shall absolve the CONTRACTOR from any of his obligations and liabilities in respect of the CONTRACT.

- 12.2 The CONTRACTOR shall ensure that any and all potential SUBCONTRACTORS are solvent and sufficiently experienced in those activities necessary to satisfy the requirements of the CONTRACT.

Notwithstanding anything to the contrary in the CONTRACT, the CONTRACTOR shall indemnify and hold harmless the COMPANY against all acts or omissions of SUBCONTRACTORS, and against any consequence of use of SUBCONTRACTORS, to the same extent as the CONTRACTOR is liable to the COMPANY under the CONTRACT.

The CONTRACTOR shall ensure that subcontracts bind SUBCONTRACTORS such that the COMPANY's rights and the CONTRACTOR's obligations in accordance with this CONTRACT are extended to apply at least as fully with respect to SUBCONTRACTORS by means of the subcontract. In case of any SUBCONTRACTOR not performing the SERVICES in accordance with the provisions of the CONTRACT, the CONTRACTOR shall immediately remove any such SUBCONTRACTOR and without undue delay replace same with a competent APPROVED substitute at no extra cost to the COMPANY.

The CONTRACTOR shall be solely responsible for all direct and indirect costs and expenses due to subcontracting and arising therefrom, and for any and all consequences including delays.

The CONTRACTOR undertakes not to make any claim or request whatsoever for price adjustment and/or time extension due to subcontracting.

- 12.3 The CONTRACTOR shall ensure that the SUBCONTRACTOR and CONTRACTOR's PERSONNEL 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.

ARTICLE 13 - FORCE MAJEURE

- 13.1 If any PARTY hereto is prevented, hindered or delayed from performing all or any of its obligations hereunder as a result of a FORCE MAJEURE event, such prevention, hindrance or delay shall not be considered as a breach of the CONTRACT and that PARTY shall be relieved from such obligations for the duration of such FORCE MAJEURE event (but for no longer period), provided however that there is a direct relation between such prevention, hindrance or delay and the FORCE MAJEURE event.

- 13.2 The PARTY claiming FORCE MAJEURE shall promptly notify the other PARTY with the evidence of the occurrence of the related event and shall give prompt notice once the end of the FORCE MAJEURE situation is foreseeable.

In the event of FORCE MAJEURE, the PARTIES shall do their utmost to remedy the situation as

quickly as possible.

- 13.3 During the period of FORCE MAJEURE there shall be no charge to the COMPANY; neither shall any charges accrue to the COMPANY during this period.
- 13.4 In the event of FORCE MAJEURE preventing operations beyond fifteen (15) days or if in the COMPANY's reasonable opinion the FORCE MAJEURE conditions are anticipated to last more than fifteen (15) days, the COMPANY shall be entitled to terminate the CONTRACT or any part thereof or any particular HELICOPTER or SERVICES by notice to the CONTRACTOR, without having to pay any indemnity, with effect at the date at which the appropriate notice of termination has been received by the CONTRACTOR and neither PARTY shall have any claim against the other.

The CONTRACTOR shall remain responsible for his obligations:

- (a) to demobilize whenever feasible, at his own cost, the CONTRACTOR's PERSONNEL and the CONTRACTOR's equipment, HELICOPTER and FACILITIES from OPERATING BASE and/or OFFSHORE LOCATIONS as the case may be;
- (b) to comply with the provisions of sub-article 3.7.13 and, whenever feasible, with the safety requirements under this CONTRACT; and
- (c) to return whenever feasible to the COMPANY, the COMPANY's property and the COMPANY's equipment in good conditions, normal wear and tear excepted.

ARTICLE 14 - SUSPENSION

Except on the order of the COMPANY in accordance with this article 14, or in respect of safety critical issues identified by the CONTRACTOR, or as otherwise provided in the CONTRACT, the CONTRACTOR shall in no circumstances be entitled to suspend performance of the SERVICES or any part thereof.

14.1 Suspension attributable to CONTRACTOR

If the CONTRACTOR fails to comply with the requirements of the CONTRACT, after receipt of COMPANY's notice concerning fault or deficiency of the CONTRACTOR, the COMPANY shall have the right at any time and at its sole option, to order the CONTRACTOR to suspend the SERVICES, or any part thereof, until such time as the CONTRACTOR has remedied the fault or deficiency or until all measures he intends to implement have been APPROVED, and the CONTRACTOR shall immediately suspend SERVICES as instructed by the COMPANY. The CONTRACTOR shall promptly resume performance of suspended SERVICES upon receipt of notice to continue from the COMPANY and to the extent required therein.

The CONTRACTOR shall not be entitled to any additional compensation regardless of costs, expenses and delays incurred by the CONTRACTOR in remedying such fault or deficiency and/or due to suspension of SERVICES. Such suspension shall not relieve the CONTRACTOR from any of his obligations under the CONTRACT.

14.2 Suspension at COMPANY's convenience

The COMPANY shall be entitled to suspend the CONTRACT or any part thereof by thirty (30) days written notice to the CONTRACTOR at any time for its sole convenience, and the CONTRACTOR shall immediately suspend SERVICES as instructed by the COMPANY. The CONTRACTOR shall resume performance of suspended SERVICES within seven (7) days upon receipt of notice to continue from COMPANY and to the extent required therein.

If such event occurs then the COMPANY shall be entitled to possession of all properties to which it has title, and the CONTRACTOR shall be entitled to receive the amount of money then due under the CONTRACT up to the date of suspension. Further, the CONTRACTOR shall be entitled to receive suspension rate as specified in Exhibit B. The foregoing amount shall be sole remedy of the CONTRACTOR for the suspension for COMPANY's convenience.

ARTICLE 15 - TERMINATION

15.1 Termination attributable to the CONTRACTOR

15.1.1 Without prejudice to any other rights under this CONTRACT or at laws, the COMPANY shall at its sole option have the right to terminate the CONTRACT or any part thereof or any particular HELICOPTER by written notice to the CONTRACTOR at any time:

- (a) if the CONTRACTOR fails to provide CALL-OFF HELICOPTER within the COMMENCEMENT DATE specified in sub-article 2.2.2;
- (b) if the CONTRACTOR fails, neglects, refuses or becomes unable to carry out or complete any part of the SERVICES as required by the CONTRACT or otherwise abandons the SERVICES;
- (c) if the CONTRACTOR fails to comply with sub-article 6.1.9 for replacement of HELICOPTER;
- (d) if the CONTRACTOR fails to comply with any APPLICABLE LAWS, and/or SSHE obligations as stipulated in the CONTRACT;
- (e) if the CONTRACTOR fails to take out the insurances prescribed in article 10 or such insurances become invalid;
- (f) if the CONTRACTOR, in the COMPANY's opinion, through act or omission, seriously delays or impedes the performance of the SERVICES or endangers the COMPANY's operations or is likely to bring the COMPANY into disrepute;
- (g) if the CONTRACTOR breaches any of his obligations under the CONTRACT;
- (h) in case of the CONTRACTOR's GROSS NEGLIGENCE;
- (i) in case of the CONTRACTOR's deception or fraud;
- (j) in case of the CONTRACTOR violates business ethics provisions as stipulated in article 19 (Business Ethics and Human Rights);
- (k) in case of bankruptcy, liquidation, take-over or CHANGE OF CONTROL in relation to the CONTRACTOR;
- (l) if the CONTRACTOR fails to remedy the event or circumstance which has caused a suspension pursuant to sub-article 14.1 within period of time notified by the COMPANY;
- (m) if the CONTRACTOR, HELICOPTER and/or CONTRACTOR's PERSONNEL do not meet the requirements as set out in the CONTRACT or are incapable of or unreliably perform the SERVICES;
- (n) if the CONTRACTOR due to his negligent act or omissions, causes the total or constructive total loss of a material item of the COMPANY GROUP's property (whether owned, hired, leased to or otherwise provided by the COMPANY GROUP), including a platform, pipeline, riser or wellhead, to such an extent that it is no longer feasible to continue drilling operations within a reasonable period of time;
- (o) if the CONTRACTOR fails to provide the bank guarantee within thirty (30) days of the EFFECTIVE DATE and thereafter maintain the bank guarantee in accordance with the sub-article 7.10;

- (p) due to other reasons as specified in the CONTRACT;
- (q) if the CONTRACTOR fails to obtain and/or maintain throughout the period of the CONTRACT, all necessary government authorizations, including but not limited to an Air Operator Certificate (“AOC”) approved by CAAT and valid for the operation of the HELICOPTER(s).

15.1.2 The COMPANY shall have a right to terminate the CONTRACT in whole or part thereof upon the occurrence of an event of default as set out in this sub-article 15.1.1, if the CONTRACTOR fails to remedy the default within seven (7) days as from receipt of the COMPANY’s notification or any period notified by the COMPANY (save for defaults pursuant to sub-article 15.1.1 (b), (c), (d), (h), (k), (l) (n) and (q), whereby the COMPANY shall have a right to terminate the CONTRACT in whole or part thereof immediately upon the occurrence of such event).

For avoidance of doubt, in case the event of default occurs, and the CONTRACTOR fails to remedy such default within the period notified by the COMPANY, regardless of before or after termination and in addition to liquidated damages, the COMPANY shall have right without prejudice to other rights under this CONTRACT to hire any third party to perform the SERVICES. The CONTRACTOR shall reimburse the COMPANY for all additional costs and expenses incurred by the COMPANY in doing so.

15.1.3 If such event of default occurs then the COMPANY shall be entitled to possession of all property to which it has title. The CONTRACTOR shall be entitled to receive the amount of money then due under the CONTRACT up to the date of termination less any additional sums that the COMPANY may incur as a result of having the SERVICES satisfactorily completed by third party, and the CONTRACTOR shall reimburse the COMPANY for any sums already paid related to any SERVICES not performed as a result of such termination plus all the associated costs incurred by the COMPANY.

No demobilization fee shall be paid, the CONTRACTOR shall remain responsible:

- to demobilize at his own cost the HELICOPTER, FACILITIES, and CONTRACTOR’S PERSONNEL from the OPERATING BASE within five (5) days from the receipt of the notice of termination by the COMPANY; and
- to return to the COMPANY, the COMPANY’S property, in good conditions, normal wear and tear excepted.

15.1.4 Without prejudice to the provisions of this CONTRACT hereunder or at law, the COMPANY shall be entitled to claim the bank guarantee provided in accordance with sub-article 7.10 as an initial compensation for such termination attributable to CONTRACTOR’S default, and shall retain such amount until the actual loss incurred by the COMPANY as a result of the CONTRACTOR’S breach of CONTRACT has been assessed.

After the actual loss has been assessed, the COMPANY shall:

- (a) refund to the CONTRACTOR the retained amount in excess of the actual loss incurred by the COMPANY without any interest; or
- (b) demand from the CONTRACTOR the actual loss incurred by the COMPANY in excess of the retained amount.

The actual loss shall include any additional costs in hiring a third party to perform the outstanding SERVICES in excess of the amount which the COMPANY would have paid to the CONTRACTOR for the SERVICES.

15.1.5 For the purpose of sub-article 15.1.1, CHANGE OF CONTROL shall mean (i) a PERSON

acquires direct or indirect control of CONTRACTOR where no PERSON previously had direct or indirect control of CONTRACTOR; or (ii) the Ultimate Parent Entity ceases to have direct or indirect control of that CONTRACTOR; or (iii) a PERSON acquires direct or indirect control of the Ultimate Parent Entity of that CONTRACTOR. For this purpose, direct and indirect control shall have the same meaning as set out in the definition of AFFILIATE.

15.2 Termination at COMPANY's convenience

The COMPANY shall at its sole option be entitled to terminate the CONTRACT or any part thereof or any particular SERVICES at any time for its sole convenience by providing thirty (30) days prior written notice to the CONTRACTOR. If such event occurs then the COMPANY shall be entitled to possession of all property to which it has title, and the CONTRACTOR shall be entitled, as a sole remedy, to receive:

- (a) the amount of money then due under the CONTRACT up to the date of termination; and
- (b) Early Termination Fee as specified in Exhibit B of this CONTRACT, and the CONTRACTOR shall not be entitled to receive any other or further payment or damages in whatsoever form resulting from this termination including but not limited to any rental fees or any costs resulting from commitments between the CONTRACTOR and any third party, any direct and indirect investment costs and expenses in HELICOPTER, or any costs and expenses in connection with CONTRACTOR's PERSONNEL,

provided that all supporting evidence are made available for COMPANY's verification. The COMPANY shall not be liable for any cost claimed without supporting evidence. To avoid doubt, the amount in sub-article 15.2 (a) and/or (b) shall be considered a sole and exclusive remedy for the CONTRACTOR and the CONTRACTOR agrees to waive all rights under this CONTRACT and at law.

15.3 Termination on the COMMENCEMENT DATE

The CONTRACT shall be automatically terminated in full on the COMMENCEMENT DATE specified in sub-article 2.2.1 without requiring the COMPANY to notify the termination to the CONTRACTOR, if on the COMMENCEMENT DATE specified in sub-article 2.2.1:

- a) The CONTRACTOR fails to provide all or any PERMANENT HELICOPTERS; or
- b) All or any PERMANENT HELICOPTERS do not conform with the requirements of the CONTRACT; or
- c) All or any PERMANENT HELICOPTERS are not ready to perform the SERVICES for any reason; or
- d) The CONTRACTOR fails to complete all findings in PRE-AWARD AUDIT and OPERATION READINESS AUDIT as agreed by the PARTIES.

If the CONTRACT is terminated in accordance with this sub-article 15.3, sub-articles 15.1.3 and 15.1.4 shall apply mutatis mutandis. For avoidance of doubt, the CONTRACTOR is not entitled to any mobilization charge (if any) from the COMPANY.

ARTICLE 16 - GOVERNING LAW AND SETTLEMENT OF DISPUTES

16.1 Governing Law

This CONTRACT shall be governed by, construed, interpreted and enforced in accordance with the substantive laws of Thailand, to the exclusion of any conflicts of law rules that would refer the matter to the laws of another jurisdiction.

16.2 Settlement of Disputes

- 16.2.1 The PARTIES shall attempt to resolve any dispute or difference arising out of or relating to this CONTRACT through negotiations between representatives of the PARTIES, who have authority to settle the same.
- 16.2.2 If the dispute is not resolved by negotiation, the dispute may be referred to arbitration by any PARTY subject to sending seven (7) days prior notice to the other PARTY. The seat of arbitration shall be Bangkok, Thailand. The language of the arbitration shall be English. The arbitration shall be governed by the Arbitration Rules of the Thai Arbitration Institute, Office of the Judiciary applicable at the time of submission of the matter to arbitration and the conduct of the arbitration thereof shall be under the auspices of the Thai Arbitration Institute.
- 16.2.3 The award of arbitral tribunal shall be final and binding. Judgement on the award of the arbitral tribunal may be entered and enforced by any court of competent jurisdiction.
- 16.2.4 Nothing in this article 16 shall be construed as prohibiting a PARTY from applying to a court for interim injunctive relief.
- 16.2.5 The commencement of arbitration proceeding shall not cause any stoppage or delay in the performance of the CONTRACT.

ARTICLE 17 - APPLICABLE LAWS – CUSTOMS – REGULATIONS – AUTHORISATION

17.1 Compliance with APPLICABLE LAWS

- 17.1.1 The CONTRACTOR shall in all respect observe, be bound and comply with all APPLICABLE LAWS, having jurisdiction over the PARTIES, the SERVICES and the OPERATIONAL AREA.
- 17.1.2 The CONTRACTOR shall ensure that the CONTRACTOR GROUP, in all respects, observes, is bound by and complies with all APPLICABLE LAWS applicable to the SERVICES, to any CONTRACTOR's PERSONNEL and to property employed by him hereunder.
- 17.1.3 In case the COMPANY is considered as a government agency under certain laws, including but not limited to the anti-corruption laws of Thailand, and/or is listed in the Stock Exchange of Thailand, the CONTRACTOR where applicable shall comply with all APPLICABLE LAWS. It is the sole responsibility of the CONTRACTOR to familiarize himself and fully comply with the laws.

17.2 Compliance with the COMPANY's Regulations and Procedures

The CONTRACTOR shall observe and comply with all COMPANY's regulations and procedures, which shall have been notified to the CONTRACTOR.

17.3 Obtaining Authorizations by the COMPANY

The COMPANY shall be responsible for obtaining all permits and authorizations as can only be obtained by the COMPANY, including permits and authorizations in respect of the OPERATIONAL AREA access. The CONTRACTOR shall, however, remain responsible for providing the COMPANY with any necessary documentation required by the COMPANY in support of applications for such permits and authorizations.

17.4 Obtaining Authorizations by the CONTRACTOR

The 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 its obligations hereunder (including but not limited to, an Air Operator Certificate (“AOC”) approved by CAAT and valid for the operation of the HELICOPTER) unless expressly stated elsewhere in the CONTRACT as being obtained by the COMPANY. On COMPANY’s request, the CONTRACTOR shall produce all relevant documents and certificates. The COMPANY shall have no liability whatsoever in respect thereof. However, should it be necessary for CONTRACTOR’s applications, the COMPANY shall provide such certificates as it is empowered to issue, it being understood that the CONTRACTOR shall remain liable to inform the COMPANY with sufficient advance notice of 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, way leave permits, resident and work permits and any applicable license for CONTRACTOR’s PERSONNEL.

17.5 Modification of Law

17.5.1 Subject to the provision of sub-article 17.5.2, the COMPANY shall compensate the CONTRACTOR in respect of an increase, if any, in the cost of performing the SERVICES which shall arise out of any new law and/or regulation, or amendment to any APPLICABLE LAWS, of the GOVERNMENT of the Kingdom of Thailand, enacted and coming into effect after EFFECTIVE DATE and which the CONTRACTOR could not have reasonably been aware of prior to EFFECTIVE DATE, provided such increase is properly supported by documentation satisfactory to the COMPANY and that the CONTRACTOR shall have requested the COMPANY’s APPROVAL prior to making any related commitment. Any decrease arising from such circumstances shall conversely result into a corresponding decrease in the CONTRACT’s rates and fees quoted in Exhibit B.

In case under such circumstances the performance of the SERVICES is prevented by decisions of the GOVERNMENT, articles 13, 14 and 15 shall apply until an agreement can be reached in order to resume the performance of the SERVICES.

17.5.2 Notwithstanding the above sub-article 17.5.1, the CONTRACTOR shall solely bear the effects of or benefit from any changes in taxes assessed against profits, dividends, corporate income, CONTRACTOR’s PERSONNEL income, customs duties on the CONTRACTOR’s PERSONNEL belongings, and the evidence of any fluctuations or decisions of any authority regarding exchange rates, as well as any expenses (including taxes) resulting from subcontracting and expenses resulting from any CONTRACTOR’s decision to make any commitment related to sub-article 17.5.1 above in contradiction with or without COMPANY’s opinion.

ARTICLE 18 - CONFIDENTIALITY

18.1 The 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.

18.2 The CONTRACTOR shall only use, reproduce or copy the CONFIDENTIAL INFORMATION solely for the purpose of facilitating the performance of the CONTRACT.

18.3 The obligations under sub-articles 18.1 and 18.2 shall not apply to the CONFIDENTIAL INFORMATION that:

- (a) is or becomes available to the public domain through no fault of the CONTRACTOR;
- (b) was in the possession of the CONTRACTOR prior to the 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.
- 18.4 The CONTRACTOR may, without the prior written consent of the COMPANY, disclose the CONFIDENTIAL INFORMATION:
- (a) to the SUBCONTRACTOR and the CONTRACTOR's PERSONNEL that reasonably require it for the performance of the CONTRACT, provided the 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 18; or
- (b) in order to comply with APPLICABLE LAWS.
- 18.5 All information provided by the CONTRACTOR to the COMPANY that the 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 SERVICES are to be performed or if required by APPLICABLE LAWS.
- 18.6 The 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 the 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 the CONTRACT:
- (a) the COMPANY shall be 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 18;
- (b) the CONTRACTOR shall not oppose the granting of an injunction; and
- (c) the CONTRACTOR shall reimburse the COMPANY for all costs, including reasonable legal fees, incurred by the COMPANY.
- 18.7 The obligations of the PARTIES under this article 18 shall survive for five (5) years after the expiry of the CONTRACT terminates or the termination of the CONTRACT or any longer period as required by the GOVERNMENT, whichever is longer. For the avoidance of doubt, the obligations under this article in relation to sub-surface information if any, shall survive the termination and expiration of the CONTRACT.

ARTICLE 19 - BUSINESS ETHICS AND HUMAN RIGHTS

19.1 Business Ethics

- 19.1.1 The PARTIES shall uphold the highest standards of business ethics in the performance of the CONTRACT. Honesty, fairness and integrity shall be paramount principles in the dealings between the PARTIES.
- 19.1.2 Neither PARTY shall knowingly involve itself/himself in any business in connection with, or use information arising from, the CONTRACT, in any manner which conflicts with the interests of the other PARTY.
- 19.1.3 Each PARTY, with regard to the SERVICES or other matters which are the subject of the CONTRACT:
- (a) warrants that it/he, and the other members of the COMPANY GROUP or the CONTRACTOR GROUP (as applicable), has not made, offered or authorized; and
- (b) agrees that it/he, and the other members of the COMPANY GROUP or the CONTRACTOR GROUP (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.

19.2 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.

19.3 Audit and Investigation

19.3.1 The CONTRACTOR shall ensure that his PERSONNEL and SUBCONTRACTOR shall fully comply with the obligations set forth in this article 19. The CONTRACTOR shall allow the COMPANY to audit or investigate any related information or documentation to ensure the compliance of this article 19 by the CONTRACTOR.

19.3.2 The CONTRACTOR shall promptly notify the COMPANY upon learning of any investigation or any legal proceeding initiated against any member of the CONTRACTOR GROUP by any authorities resulting from the breach of this article 19.

ARTICLE 20 - LIENS

20.1 Liens on COMPANY's Property

The CONTRACTOR undertakes not to create or do anything (including by act or omission) which could result in the creation of any lien on the COMPANY's property, and the CONTRACTOR hereby declares that he has not created any such lien or done anything as hereinabove before entering the CONTRACT.

20.2 Waiver and Hold Harmless

The CONTRACTOR shall protect, indemnify and hold each member of the COMPANY GROUP harmless from and against any and all CLAIMS, for the discharge of any lien claimed against COMPANY's property if created or caused (by any act, omission or negligence) by the CONTRACTOR GROUP.

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, the COMPANY shall forthwith notify the CONTRACTOR who shall promptly refund the COMPANY for all costs incurred, and in the event of the CONTRACTOR not so refunding the COMPANY, the COMPANY shall have the right to deduct from any sum due or becoming due to the CONTRACTOR, such amounts as necessary to discharge such lien or CLAIM and connected expenses, unless the CONTRACTOR satisfactorily evidences forthwith that such lien is not valid.

20.3 Liens on FACILITIES

The CONTRACTOR undertakes not to create or do any act, deed or thing which would result in the creation of any lien on FACILITIES preventing (or that could in any way prevent) the CONTRACTOR from performing the SERVICES diligently and in accordance with the CONTRACT and/or which could hamper the proper exercise by the COMPANY of its rights under take-over provisions for CONTRACTOR's default.

ARTICLE 21 - PROVISIONS SURVIVING CONTRACT

Termination or expiration of the CONTRACT shall not release the PARTIES from obligations, which expressly or by their nature survive the termination or expiration of the CONTRACT.

ARTICLE 22 - STATUS OF COMPANY

The COMPANY enters into the CONTRACT for itself and on behalf of the other CO-VENTURERS. Notwithstanding the above:

- a) subject to the provisions of this article 22 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 the CONTRACTOR;
- b) the CONTRACTOR agrees to look only to PTTEP for the due performance of this CONTRACT insofar as it is related to the Arthit Consortium and nothing contained in this CONTRACT shall impose any liability on, or entitle the CONTRACTOR to commence any proceedings against any CO-VENTURERS in the Arthit Consortium;
- c) the CONTRACTOR agrees to look only to PTTEPI for the due performance of this CONTRACT insofar as it is related to G8/50 Consortium 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 G8/50 Consortium;
- d) Not applicable;
- e) the CONTRACTOR agrees to look only to PTTEP ED for the due performance of this CONTRACT insofar as it is related to the G1/61 Consortium 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 Consortium;
- f) the CONTRACTOR agrees not to look to PTTEP for the due performance of this CONTRACT insofar as it is related to Blocks G8/50, G1/61 Consortium and/or G2/61;
- g) the CONTRACTOR agrees not to look to PTTEPI for the due performance of this CONTRACT insofar as it is related to Arthit Concession, Production Sharing Contract for G1/61 and/or Production Sharing Contract for G2/61;
- h) the CONTRACTOR agrees not to look to PTTEP ED for the due performance of the CONTRACT insofar as it is related to Arthit Concession and/or G8/50 Concession;
- i) the 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 CONTRACTOR to commence any proceedings against, any CO-VENTURERS other than the COMPANY;
- j) 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 CONTRACTOR and to make any CLAIM any CO-VENTURER may have against the CONTRACTOR; and

- k) 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 CONTRACTOR under this CONTRACT.

Notwithstanding the foregoing generality, in the event of any dispute initiated by the CONTRACTOR against the COMPANY and/or CO-VENTURER, each CO-VENTURER shall only be liable to the 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.

ARTICLE 23 - PUBLIC RELATIONS - PUBLICITY - AND INDUSTRIAL RELATIONS

The CONTRACTOR shall make all reasonable efforts to maintain goodwill among the various regulatory bodies and with the general public. The COMPANY shall act as prime initiator in contacts with any GOVERNMENT departments or agencies or any other THIRD PARTIES on any matters relating to the CONTRACT.

The CONTRACTOR shall make no publicity releases or announcements concerning the CONTRACT or the SERVICES without the prior written agreement of the COMPANY.

The CONTRACTOR shall use all reasonable endeavors to maintain good industrial relations and shall keep the COMPANY fully informed of any industrial relations matters that may affect the performance of the SERVICES under the CONTRACT, or that may have an impact on other activities of the COMPANY or COMPANY OTHER CONTRACTOR performing other works for the COMPANY.

ARTICLE 24 - NOTICES

24.1 All notices or communications of any kind (hereinafter referred to as “NOTICE”) to be given under this CONTRACT shall be:

- (a) in writing in the English language; and
- (b) delivered or sent by prepaid registered post or by email to the address or email address as specified in sub-article 24.2 or to such other address or email address as a PARTY notifies to the other PARTY.

24.2 The address and email address of each PARTY are:

- (a) COMPANY:

PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED

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

Email:
Phone:
Attention:

PTTEP ENERGY DEVELOPMENT COMPANY LIMITED

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

Email:
Phone:
Attention:

PTTEP INTERNATIONAL LIMITED

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

Email:
Phone:
Attention:

(b) CONTRACTOR:

Address: CONTRACTOR's name
.....
Email:
Phone:
Attention:

24.3 Unless a later time is specified in it, a NOTICE shall take effect from the time it is received.

24.4 A NOTICE shall be deemed to be received:

- (a) if sent by prepaid registered post, within three (3) working days of posting unless the contrary is proved; or
- (b) if sent by email, when the sender receives an automated message confirming delivery or two (2) hours after the time sent (as recorded on the device from which the sender sent the email) unless the sender receives an automated message the email has not been delivered.

ARTICLE 25 - OWNERSHIP AND INTELLECTUAL PROPERTY

25.1 All results of the SERVICES, including information, logs, drawings, reports, charts, test results, data and all related documents or electronic, magnetic or optical supports issued by the CONTRACTOR, shall as from the commencement of the SERVICES thereon, exclusive property of the COMPANY and/or any person COMPANY may designate at its sole discretion become COMPANY's exclusive property and shall be delivered to the COMPANY immediately upon request.

25.2 If either PARTY provides or uses INTELLECTUAL PROPERTY that it/he owns and that is in existence prior to the EFFECTIVE DATE for a purpose connected with the performance of the CONTRACT, then that PARTY remains the owner of that INTELLECTUAL PROPERTY (and any improvements to that INTELLECTUAL PROPERTY created during the course of the SERVICES) and the other PARTY does not acquire any proprietary rights in it and shall not use it for any purpose unrelated to the SERVICES.

25.3 Subject to sub-article 25.1, any INTELLECTUAL PROPERTY that the CONTRACTOR already owns or develops in the course of carrying out the SERVICES shall be the property of the CONTRACTOR, provided the CONTRACTOR grants the COMPANY an irrevocable, royalty free and non-exclusive license to use that INTELLECTUAL PROPERTY in connection with its operations and the right to extend that license to any successor operator.

25.4 If the CONTRACTOR acquires INTELLECTUAL PROPERTY from a person for the purpose of carrying out the SERVICES and for which the COMPANY reimburses the CONTRACTOR, then the COMPANY is the owner of that INTELLECTUAL PROPERTY and the CONTRACTOR shall take all reasonable steps to transfer ownership to the COMPANY. The CONTRACTOR shall not use that INTELLECTUAL PROPERTY for any purpose not related to the SERVICES.

25.5 If any member of the COMPANY GROUP acquires any INTELLECTUAL PROPERTY during the performance of the CONTRACT, then the CONTRACTOR shall not acquire any proprietary

rights in that INTELLECTUAL PROPERTY and shall not use it for any purpose unrelated to the SERVICES.

25.6 Not Applicable.

25.7 This article 25 shall survive the termination of the CONTRACT.

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 CONTRACTOR

For COMPANY

Signature:

Signature:

Name:

Name:

Position:

Position:

Witnessed by:

Witnessed by:

Signature:

Signature:

Name:

Name:

Position:

Position:

<p style="text-align: center;">Annex 1 Mutual Indemnity and Waiver of Recourse Agreements</p>

Annex 1.A - Mutual Indemnity and Waiver of Recourse Agreement (Version for the CONTRACTOR)

Annex 1.B - Mutual Indemnity and Waiver of Recourse Agreement (Version for SUBCONTRACTOR)

Annex 1.A

Mutual Indemnity and Waiver of Recourse Agreement (Version for the CONTRACTOR)

Whereas PTT Exploration and Production Public Company Limited, PTTEP Energy Development Company Limited, and PTTEP International Limited (hereinafter referred to as “**COMPANY**”) has entered into the contract THC21-5493 dated/...../..... with (hereinafter referred to as “**UNDERSIGNED PARTY**”) regarding the performance of the services for COMPANY’s operations in connection with, related to, or in support of Provision of 5-Year Helicopter Services for Offshore Operating Assets (hereinafter referred to as “**OPERATIONS**”);

and 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 Agreements (all the signatories of such Agreements relating to the OPERATIONS being hereafter designated as “**SIGNATORIES**”);

and whereas the SIGNATORIES wish to organize their relationship in order to 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 the other SIGNATORIES and their insurers for damage to 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 another 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 waives all rights of recourse against and shall indemnify and hold the other SIGNATORIES and their insurers 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 of an other SIGNATORY.
4. The UNDERSIGNED PARTY undertakes to obtain from its insurers a waiver of rights of subrogation against all other SIGNATORIES and their insurers in accordance with the provisions of this Agreement governing the mutual liability of the SIGNATORIES with regard to the OPERATIONS.
5. Notwithstanding paragraphs 1, 2 and 3, in the event any property of the UNDERSIGNED PARTY or of its personnel is lost or damaged in the course of transportation by aircraft or in the event of injury to or disease or death of its personnel on board the aircraft or in the course of any of the operations of embarking or disembarking and a SIGNATORY is the carrier, the UNDERSIGNED PARTY shall be entitled to compensation from such SIGNATORY in accordance with applicable national law or international conventions.

6. The UNDERSIGNED PARTY shall, except with prior written approval of the COMPANY, have those of its subcontractors who are involved in the OPERATIONS to become SIGNATORIES and shall forthwith furnish the COMPANY with the original counterpart of this Agreement executed by its subcontractors.
7. This Agreement shall inure to the benefit of and become binding upon the UNDERSIGNED PARTY as to any other SIGNATORY 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.

8. 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 its relations with the COMPANY.
9. This Agreement may be executed in any number of counterparts as necessary but all such counterparts shall together constitute one legal instrument.
10. The performance and the interpretation of this Agreement shall be governed by the laws of Thailand.

This Agreement is entered into this day of

Signed for the UNDERSIGNED PARTY by

Witnessed for the COMPANY by

Signature:

Signature:

Name:

Name:

Position:

Position:

Annex 1.B

Mutual Indemnity and Waiver of Recourse Agreement (Version for SUBCONTRACTOR)

Whereas (hereinafter referred to as “**CONTRACTOR**”) has entered into the contract THC21-5493 dated/...../..... with PTT Exploration and Production Public Company Limited, PTTEP Energy Development Company Limited, and PTTEP International Limited (hereinafter referred to as “**COMPANY**”) regarding the performance of the services for COMPANY’s operations in connection with, related to, or in support of Provision of 5-Year Helicopter Services for Offshore Operating Assets (hereinafter referred to as “**OPERATIONS**”);

and whereas the CONTRACTOR has subcontracted wholly or partly the performance of such services to (hereinafter referred to as “**UNDERSIGNED PARTY**”);

and whereas the COMPANY, the 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 Agreements (all the signatories of such Agreements relating to the OPERATIONS being hereafter designated as “**SIGNATORIES**”);

and whereas the SIGNATORIES wish to organize their relationship in order to 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 the other SIGNATORIES and their insurers for damage to 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 another 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 waives all rights of recourse against and shall indemnify and hold the other SIGNATORIES and their insurers 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 of an other SIGNATORY.
4. The UNDERSIGNED PARTY undertakes to obtain from its insurers a waiver of rights of subrogation against all other SIGNATORIES and their insurers in accordance with the provisions of this Agreement governing the mutual liability of the SIGNATORIES with regard to the OPERATIONS.
5. Notwithstanding paragraphs 1, 2 and 3, in the event any property of the UNDERSIGNED PARTY or of its personnel is lost or damaged in the course of transportation by aircraft or in the event of injury to or disease or death of its personnel on board the aircraft or in the course of any of the operations of

embarking or disembarking and a SIGNATORY is the carrier, the UNDERSIGNED PARTY shall be entitled to compensation from such SIGNATORY in accordance with applicable national law or international conventions.

6. The UNDERSIGNED PARTY shall, except with specific written approval of the COMPANY, have those of its subcontractors who are involved in the OPERATIONS to become SIGNATORIES and shall forthwith furnish the COMPANY with the original counterpart of this Agreement executed by its subcontractors.
7. This Agreement shall inure to the benefit of and become binding upon the UNDERSIGNED PARTY as to any other SIGNATORY 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.

8. 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 its relations with the COMPANY.
9. This Agreement may be executed in any number of counterparts as necessary but all such counterparts shall together constitute one legal instrument.
10. The performance and the interpretation of this Agreement shall be governed by the laws of Thailand.

This Agreement is entered into this day of

Signed for the UNDERSIGNED PARTY by

Witnessed for the CONTRACTOR by

Signature:

Signature:

Name:

Name:

Position:

Position:

Annex 2
Form of Bank Guarantee

Annex 2

**Form of Bank
Guarantee**

- I. We, the Undersigned (1) (hereinafter referred to as “GUARANTOR”), established at (2) represented by (3) have taken notice of the Contract No. (4) ((5) effective on the (6) day of 20... (hereinafter referred as “CONTRACT”), between (7) a company registered under the laws of Thailand, with its registered office at Energy Complex Building A, Floors 6, 19-36, 555/1 Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand (hereinafter referred to as “COMPANY”) and (8), a company registered under the laws of, whose registered office is at (9), (hereinafter referred to as “CONTRACTOR”).
- II. The GUARANTOR hereby irrevocably guarantees that in the event of any default or failure on the part of CONTRACTOR to abide by its obligations, indemnities and liabilities under the CONTRACT, the GUARANTOR undertakes on behalf of CONTRACTOR to pay to COMPANY any sum or sums not exceeding This guarantee is given at the request of CONTRACTOR made to the GUARANTOR in accordance with the CONTRACT.
- 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 of any change in the above address.
- IV. Each demand under paragraph III above shall indicate the breach of CONTRACTOR’s obligations under the CONTRACT or CONTRACTOR’s failure to fulfil any obligations, indemnities or liability arising out of, or in connection with, the CONTRACT.
- V. The GUARANTOR shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by CONTRACTOR. The GUARANTOR shall not (i) require COMPANY to justify the breach or failure indicated in its demand for payment and (ii) have any recourse against COMPANY in respect of any payment demanded hereunder. The obligation of the GUARANTOR under this guarantee includes a guarantee of payment and not of collection.
- VI. The GUARANTOR shall pay any sum demanded by COMPANY hereunder within fifteen (15) days after the date of receipt of COMPANY’s demand.
- VII. The amount of this guarantee as established pursuant to paragraph II above shall be reduced by the amount of any payments made by GUARANTOR to COMPANY hereunder.
- VIII. No alteration in the terms of the CONTRACT made by agreement between CONTRACTOR and COMPANY nor any failure by COMPANY to insist on proper performance of the CONTRACT or to pursue all remedies available to it against

CONTRACTOR shall in any way release the GUARANTOR from all or any part of its liabilities under this guarantee.

- IX. This guarantee shall remain valid from the effective date of the CONTRACT until [*the date the performance of the CONTRACT is completed (including the warranty period for SERVICES, if any plus one hundred and twenty (120) days*] (hereinafter referred to as “EXPIRY DATE”). After the EXPIRY DATE, all rights of COMPANY under this guarantee shall be forfeited. For avoidance of doubt, if for any reason, the duration of the CONTRACT should extend beyond this EXPIRY DATE, the guarantor agrees on the request of the COMPANY or the CONTRACTOR to extend the validity of this guarantee accordingly.
- X. This guarantee shall be interpreted in accordance with the laws of the Kingdom of Thailand.
- XI. The GUARANTOR represents that this 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.
- XII. The benefit of this Bank Guarantee may be assigned by COMPANY.
- XIII. 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 CONTRACTOR and approved by COMPANY
- (2) GUARANTOR’s address
- (3) GUARANTOR’s authorized representative
- (4) CONTRACT’s number
- (5) CONTRACT’s title
- (6) Effective date of the CONTRACT
- (7) Name of COMPANY
- (8) Name of CONTRACTOR
- (9) CONTRACTOR’s address
- (10) Bank address for notice

EXHIBIT A

SCOPE OF SERVICES

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EXHIBIT A **SCOPE OF SERVICES**

1. The SERVICES

1.1. The COMPANY reserves the right to conduct and complete OPERATION READINESS AUDIT tentatively two (2) weeks prior to the COMMENCEMENT DATE as specified in sub-article 2.2.1 of the AGREEMENT at COMPANY's OPERATING BASE by giving notification to the CONTRACTOR two (2) days in advance in order to:

- To verify that the findings raised and agreed by the PARTIES in the PRE-AWARD AUDIT, which the CONTRACTOR shall update the progress of all raised findings to the COMPANY in weekly basis, are closed.
- To verify the readiness of operation on the COMMENCEMENT DATE specified in sub-article 2.2.1 of the AGREEMENT including HELICOPTER technical inspection, base set-up, manpower and others.

The scope of OPERATION READINESS AUDIT shall include but not limited to;

- Verification of the closure of all PRE-AWARD AUDIT findings;
- Engineer management including resource, engineer qualification and experience, medical fitness and duty time policy;
- Aircrew management including resource, crew qualification & experience, medical fitness, crew duty & flight time, training policy, training matrix / record /follow-up;
- Aircraft inspection including aircraft specification and documentation i.e. aircraft certificate, insurance, weight and balance, OMs, QRH, MEL, technical logbook and charts/maps/plates;
- Facility / equipment requirements specified in the CONTRACT in order to commence the SERVICES on the COMMENCEMENT DATE;
- Procedure & documentation including Operation Manual (OM), MEL, passenger handling, fight following system, Safety & Quality Management System, Helicopter Flight Data Monitoring (HFDM) manual, Health Usage Monitoring System (HUMS) manual;
- Airworthiness management including policy, maintenance forecast, maintenance record & control;
- Production including manuals, task management, tool control & calibration, HUMS analysis and records, facility, GSE, storage, part management and fuel control;
- All licenses, certificates, and permits to commence the SERVICES required by APPLICABLE LAWS and regulations of related regulatory authorities including but not limited to Air Operating License (AOL), Air Operator Certificate (AOC), Certificate of Registration (C of R), Certificate of Airworthiness (C of A), Block Permit (to operate in Arthit, G1/61, and G2/61 areas) and Radio License.

After the completion of OPERATION READINESS AUDIT, the COMPANY shall notify the CONTRACTOR in writing the gaps (if any) to further rectify and fulfill its obligations under the CONTRACT by the COMMENCEMENT DATE specified in sub-article 2.2.1 of the AGREEMENT.

1.2. The CONTRACTOR shall provide the PERMANENT HELICOPTERS, crews and associated support SERVICES, as required by the COMPANY. The CONTRACTOR shall commence the SERVICES for the PERMANENT HELICOPTERS on the COMMENCEMENT DATE as follows;

PERMANENT HELICOPTERS (two (2) HELICOPTERS) on 16th October 2022.

The COMPLETION DATE of the SERVICES for PERMANENT HELICOPTERS shall be on 15th October 2027.

- 1.3. The CONTRACTOR shall provide sufficient crews, maintenance and support staff for flying up to 260 hours per month per PERMANENT HELICOPTERS throughout the duration of this CONTRACT unless otherwise instructed by the COMPANY to efficiently achieve the task of moving passengers between the OPERATING BASE and the COMPANY’S OFFSHORE LOCATIONS in the Gulf of Thailand.
- 1.4. During the CONTRACT period, the COMPANY may change number of HELICOPTER in according with the COMPANY operations requirement, as per article 4.3 of the AGREEMENT.
- 1.5. OFFSHORE LOCATIONS include but not limited to the following;

OFFSHORE LOCATIONS	Distance from OPERATING BASE (VTSH) (NM)	T- Value (Tons)	D-Value (Meter)	Latitude	Longitude
AQP	131	9.3	24	N 08 15.38	E102 31.28
BQP	114	7.1	20	N 08 01.43	E102 18.54
QPS	121	9.3	22	N 07 29.30	E102 36.53
FSO2	116	5.8	16	N 08 04.01	E102 20.06
EFSO2	121	12.8	21	N 09 06.46	E101 13.15
ERLQ2	121	12	22	N 09 04.35	E101 18.38
PLLQ2	158	12.8	22	N 09 41.48	E101 24.32
FULQ	120	12	22	N 08 56.04	E101 35.36
SALQ	135	12	22	N 09 17.17	E101 24.73
9 Drilling Rigs*	117-135	9.3	22	TBC	TBC

*The distance to drilling rigs shown above is the average distance since it is subject to change due to its actual location.

The COMPANY has the right to increase/decrease OFFSHORE LOCATIONS as per the COMPANY’S operational requirements.

- 1.6. Such HELICOPTER shall be in accordance with the specification as set out in EXHIBIT C – COMPANY’S Minimum Standards for HELICOPTER Operations.
- 1.7. The SERVICES to be performed by the CONTRACTOR shall be for any purpose required by the COMPANY in connection with or associated to the support of the COMPANY’S offshore activities. The SERVICES shall include, but not be limited to:-
 - a) The transportation of personnel and freight for the COMPANY or any other party on the instructions of the COMPANY. The CONTRACTOR shall be capable of operating rotary wing offshore operations to the OFFSHORE LOCATIONS from OPERATING BASE in Songkhla.
 - b) Twenty-four (24) hours per day and seven days per week for Medical Evacuation Flight Services.
- 1.8. The CONTRACTOR shall ensure that the HELICOPTER are AVAILABLE in accordance with Section 8 - “AVAILABILITY” of this EXHIBIT A: SCOPE OF SERVICES.

2. The CONTRACTOR's Responsibility

- 2.1. The CONTRACTOR shall be deemed to have satisfied himself, before entering into the CONTRACT, as to the extent and nature of the SERVICES including but not limited to the HELICOPTER type, AVAILABILITY of HELICOPTER, SPARE PARTS, SERVICES, the CONTRACTOR PERSONNEL, materials, equipment, plant and FACILITIES required for provision of the SERVICES; the correctness and sufficiency of the rates and prices stated in EXHIBIT B; the operating environment particularly the effects of pollution, the climate and weather conditions; general and local conditions including immigration, community relations, customs clearing times, taxes and duties and all other matters which could affect progress or performance of the SERVICES.
- 2.2. Any failure by the CONTRACTOR to take account of matters that affect the SERVICES will not relieve the CONTRACTOR from his obligations under the CONTRACT.
- 2.3. The CONTRACTOR shall, except as hereinafter otherwise provided and at his expense, provide, maintain and operate the HELICOPTER for the exclusive use of the COMPANY, its partners, agents, servants, the CONTRACTOR, as instructed by the COMPANY, and carry out all flight operations for the carriage of the COMPANY's authorized passengers and goods throughout the COMPANY's OPERATIONAL AREA to meet the COMPANY's scheduled and ad-hoc/call-off air transport support requirements. Scheduled flights, which shall generally provide for DAYLIGHT operations only during NORMAL OPERATING HOURS shall be drawn up in advance by the COMPANY and agreed with the CONTRACTOR. The final decision having taken into consideration, amongst others, the weather conditions, routes to be flown, acceptable loads, suitability of landing sites, alternates, availability of fuel and other conditions prevailing at the time, as to the manner of performing operations under this CONTRACT and whether or not a flight shall be undertaken, rests with and shall be made by the Pilot in command.
- 2.4. In the event that NORMAL OPERATING HOURS extend into NIGHT then schedules may be flown at NIGHT provided the HELICOPTER is fully dual equipped for Instrument Flight Rules (IFR) flight, is manned by a crew of two and the crew is rated for NIGHT and instrument flying. For emergency support flights at NIGHT outside NORMAL OPERATING HOURS, flight following arrangements must be in place.
- 2.5. Pilots operating HELICOPTER at NIGHT or rostered to respond to an emergency at NIGHT must be current for night flying operations and as a minimum must meet the requirements specified in EXHIBIT C.
- 2.6. The scheduled departure time of the HELICOPTER shall be as instructed by the COMPANY and shall not be varied unless otherwise authorized by the COMPANY REPRESENTATIVE.
- 2.7. The crew and HELICOPTER may be subject to overnight stops at any of the OPERATING BASE / or away from the OPERATING BASE.
- 2.8. The CONTRACTOR shall ensure that all support provided under this CONTRACT shall meet the requirements herein; and that all flight crews, service personnel, dispatchers, and aviation maintenance personnel meet the experience, training, workday limits, and requirements of this CONTRACT. Flight hour limits, flight duty day limits, and maintenance duty day limits shall be observed at all times. Variance from these requirements requires authorization (written or electronic) from the COMPANY REPRESENTATIVE, who shall be identified in writing to the CONTRACTOR.

3. Operations

- 3.1. The CONTRACTOR shall ensure that all HELICOPTER provided under this CONTRACT:
- 3.1.1 comply with the COMPANY's Minimum Standards for HELICOPTER Operations as detailed in EXHIBIT C and the IOGP Aircraft Management Guidelines version 2 (Report No. 590 dated May 2017)
 - 3.1.2 are airworthy in accordance with the current regulations laid down by the Civil Aviation Authority of Thailand ("CAAT") and shall maintain the HELICOPTER in that condition for the duration of the CONTRACT. Compliance with the Civil Aviation Authorities regulations shall be at the expense of the CONTRACTOR.
- 3.2. The CONTRACTOR shall be in possession of an Air Operator Certificate ("AOC") approved by CAAT and valid for the operation of the HELICOPTER for the period of this CONTRACT, shall ensure that the HELICOPTER are operated in accordance with the Standards as laid down in the current Thai Air Navigation Act and any other APPLICABLE LAWS or regulations and conduct its maintenance and servicing operations to the standards required for the granting of an operating permit.
- 3.3. The HELICOPTER shall be operated at all times in accordance with the Helicopter Flight Manual and the CONTRACTOR's Operations Manual (which shall include procedures specific to local operational conditions) both of which said manuals shall have been made available to the COMPANY. The duties of each crew member at all stages of flight shall be clearly defined in the appropriate section of the CONTRACTOR's Operations Manual and Helicopter Checklists covering normal operations and abnormal and emergencies shall be carried in the HELICOPTER.
- 3.4. Flight Time and Duty limitations shall be in accordance with the CONTRACTOR's Operations Manual as approved by CAAT but shall not exceed those limitations specified in EXHIBIT C.

4. Management Systems

- 4.1. General
- 4.1.1. The CONTRACTOR shall have a functioning management system that has continuity throughout the organization, and provides positive control of the operation.
 - 4.1.2. The CONTRACTOR shall have a system of documentation that provides for the dissemination of published information that is accurately represented and written in a language that can be understood by all CONTRACTOR's PERSONNEL or others who relevant to the operation, and is in accordance with applicable Regulatory requirements.
 - 4.1.3. The CONTRACTOR shall have a system to ensure that there are published operating manuals (or policy and procedures manuals) for all safety critical areas of the organization.
- 4.2. Safety and Quality Management
- 4.2.1. The CONTRACTOR shall formally and actively commit to a corporate policy that designates safety and quality as a fundamental priority throughout the operation.
 - 4.2.2. The CONTRACTOR shall have a flight safety management plan, incorporated within a Safety Management System ("SMS"), which describes the philosophy, structure, responsibilities, resources and processes in place to prevent accidents and achieve safe operations. This should include helicopter maintenance and

airworthiness, together with all supporting activities within the operation which impact safety of flight.

- 4.2.3. The CONTRACTOR, his management and the CONTRACTOR's PERSONNEL, shall have a program to ensure that action is taken to correct and prevent safety and quality Non-conformities.
- 4.2.4. The CONTRACTOR shall have a process for the investigation of helicopter accidents and serious and high potential incidents.
- 4.2.5. The CONTRACTOR shall have a safety reporting system that permits feedback from PERSONNEL regarding hazards and safety related concerns, and includes analysis and action by the management as appropriate to identify and address safety deficiencies.
- 4.2.6. The CONTRACTOR shall have a program to ensure that the CONTRACTOR's PERSONNEL who perform work affecting the safety and quality of the operation maintain their competence on the basis of continued education and training, and, if applicable for a particular position, continue to meet specific regulatory requirements.
- 4.2.7. The CONTRACTOR shall have a process to ensure regular and periodic management reviews of significant and relevant safety issues arising from the accident prevention and flight safety program.
- 4.2.8. The CONTRACTOR shall have a formal, documented program for hazard analysis and risk assessment that has the flexibility to focus on aspects of unacceptable risk specific to flight safety.
- 4.2.9. Where the necessary equipment has been fitted to the HELICOPTER, the CONTRACTOR shall have programs for the systematic download and analysis of electronically recorded HELICOPTER flight data for the purpose of identifying hazards, evaluating the operating environment, validating operating criteria and establishing training effectiveness. Such programs include but not limited to Helicopter Flight Data Monitoring ("HFDM") and Health Usage Monitoring System ("HUMS") which should be non-punitive and contain adequate safeguards to protect data sources.

4.3 Quality Assurance

- 4.3.1 The CONTRACTOR shall have an internal evaluation program that ensures the conduct of organization-wide internal audits encompassing all safety and quality critical operations, and includes planned auditing of processes, procedures, documentation, training and records. Results of previous audits, including implementation and effectiveness of corrective action, should be included within the scope of the program.
- 4.3.2 The CONTRACTOR's Quality Assurance program shall ensure that audit activities are scheduled and conducted at planned intervals to establish conformity with regulatory and management system requirements.

5. OPERATIONAL CONTROL

- 5.1. The HELICOPTER and its crews shall at all times remain under the OPERATIONAL CONTROL of the CONTRACTOR.
- 5.2. Notwithstanding any other provisions of this CONTRACT, HELICOPTER shall not be flown or continue to be flown at any time when the pilot in command of the HELICOPTER considers it operationally unsafe to do so and at all times the final decision as to the operational suitability of any landing or take-off site or as to the route, speed or height of any flight made for the purpose of this CONTRACT shall rest with the said pilot.

- 5.3. The COMPANY may notify the CONTRACTOR of landing or take-off sites which the COMPANY considers suitable for use during the course of flights undertaken under this CONTRACT. In agreeing to the use of any such landing or take-off sites as aforesaid, the CONTRACTOR shall be solely responsible for ensuring that any or all such sites can safely be used by the HELICOPTER. The COMPANY shall incur no liability whatsoever and howsoever arising either directly or indirectly out of the selection and use of any such landing or take-off site as aforesaid by the CONTRACTOR.
- a) Helidecks on all mobile and fixed facilities shall be inspected by the CONTRACTOR prior to the first passenger flight to the said helideck and shall be re-inspected annually. The inspections shall confirm compliance with the requirements of ICAO Annex 14 Volume II / CAP 437 / CAAT unless otherwise instructed by the COMPANY. The CONTRACTOR shall be responsible for all costs in connection with validating flights to OFFSHORE LOCATIONS before the COMMENCEMENT DATE. After the COMMENCEMENT DATE, if there are additional OFFSHORE LOCATIONS to be validated prior to the first passenger flight, the validating flights shall be REVENUE FLIGHTS and the FLYING HOURS Charge of such validating flights shall be paid by the COMPANY in accordance with Section 2.1 of Exhibit B.
 - b) In the event a helideck does not comply with ICAO Annex 14 Volume II / CAP 437 / CAAT, including firefighting and crash rescue equipment and if applicable the refueling facilities, the deficiencies identified shall be recorded in a deficiency log and a deficiency report shall be raised and passed onto the COMPANY for follow-up. The CONTRACTOR shall be responsible for deciding if a HELICOPTER can still operate to a helideck with the deficiencies and shall identify and confirm that appropriate measures have been taken to allow the safe operation of the HELICOPTER.
- 5.4. The CONTRACTOR shall manage and maintain a NOTAM system covering all landing sites in the area of operations, which are not covered under the NOTAM service provided by CAAT.
- 5.5. The CONTRACTOR shall manage and maintain Offshore Helideck Plates which include Helideck Limitation List (HLL) covering all landing sites in the area of operations.

6. Maintenance

- 6.1. The CONTRACTOR shall at all times:
- a) Maintain, service, repair and overhaul the HELICOPTER and shall provide such maintenance, servicing, repair and overhauling facilities as required to keep AVAILABLE the number and type of HELICOPTER in a properly equipped and serviceable condition for flights in accordance with Section 8 – AVAILABILITY. Ground support equipment appropriate for the maintenance tasks being undertaken shall be serviceable and shall include stands and working platforms to facilitate working from height. The HELICOPTER are strictly maintained in accordance with;
 - i) The HELICOPTER Manufacturer's Maintenance Manual and,
 - ii) The CONTRACTOR's Standard Procedures as approved by CAAT and each shall be available for inspection by the COMPANY at the OPERATING BASE.
 - b) Provide and maintain at the OPERATING BASE such adequate stock holding of SPARE PARTS, equipment, consumables and HELICOPTER's special tools and test equipment to ensure that the HELICOPTER are maintained in a fully serviceable condition and AVAILABLE for flight (if not actually flying) in accordance with Section 8 – AVAILABILITY. The stock holding of SPARE PARTS shall include all items in Category A of the CONTRACTOR's Minimum Equipment List (MEL) approved by CAAT.

- c) Ensure that any MAJOR MAINTENANCE (or Major Inspections) on the HELICOPTER, which is scheduled for more than three (3) days, shall not take place during the first two (2) months of this CONTRACT.
- d) Use his best endeavors to carry out maintenance and inspections during the period of non-utilization of the HELICOPTER in order to avoid or minimize any interruption to his obligations under this CONTRACT.
- e) Maintain the HELICOPTER in accordance with the requirements of Annex 3 – Program of Scheduled Major and Other Maintenance and ensure that the requirement covering duplicate inspections further defined in Section 7 - Maintenance Requirement under EXHIBIT C are met.
- f) Maintain a computerized maintenance planning system to record all maintenance on the HELICOPTER providing an accurate record of the technical integrity of the HELICOPTER at all times.
- g) Maintain a daily husbandry log to record the condition of the interior and exterior of the HELICOPTER. Any damage or defect shall be recorded and all entries, including “no damage or defect found”, shall be supported by a signature from Qualified Engineer and dated. HELICOPTER are to be kept in a presentable condition throughout the course of the CONTRACT. The exterior of the HELICOPTER shall be washed with a soft soap solution at least once in every three (3) days and the interior shall be cleaned every day or more frequently if necessary.

7. Fuel

- 7.1. The COMPANY shall be responsible for the provision and cost of fuel as required for the REVENUE FLIGHTS excluding Return-to-Base flights due to technical issues.
- 7.2. The CONTRACTOR shall provide fuel management services at each OPERATING BASE as required for the SERVICES. These include but are not limited to the following:
 - a) Carry out quality control testing of fuel supplied for the HELICOPTER, and ensure that all fuel delivery equipment and fuel storage facilities whether provided by the CONTRACTOR or by the COMPANY into HELICOPTER are fit for the delivery of clean and dry fuel to the HELICOPTER. This includes quality control testing of fuel supplied for the COMPANY’s offshore transportable fuel tanks when the refueling process is performed at the OPERATING BASE. Appropriately trained and certified fuel quality control engineers shall inspect all delivery equipment once every (12) months at the CONTRACTOR’s expense. Quality control testing, storage facilities and equipment shall comply with at least the standards laid down in the IOGP Aircraft Management Guidelines version 2 (Report No. 590 dated May 2017). Quality control records and records of inspections shall be retained and made available to the COMPANY on request.
 - b) Ensure appropriately trained and qualified CONTRACTOR’s PERSONNEL are used for the refueling of HELICOPTER and ensure the result of the quality control check is recorded.
 - c) The CONTRACTOR shall be responsible for the quality of all fuel used by the HELICOPTER. The COMPANY has the right to inspect quality check record after giving reasonable notice.
 - d) The CONTRACTOR shall supply Shell Water Detector at every refueling station including OFFSHORE LOCATIONS.

8. AVAILABILITY

- 8.1. The CONTRACTOR shall, at the COMMENCEMENT DATE of the SERVICES and during NORMAL OPERATING HOURS; make HELICOPTER AVAILABLE Monday to Sunday (including Bank and National Holidays) and ready for take-off from the OPERATING BASE

within one (1) hour after receiving notification from the COMPANY to perform medevac flight. Additionally, the CONTRACTOR shall ensure that outside NORMAL OPERATING HOURS that one (1) fully serviceable HELICOPTER shall be AVAILABLE on NIGHT standby support and that within one (1) hour from notification the HELICOPTER will be ready for take-off from the OPERATING BASE. The CONTRACTOR's Authority to Launch Procedures will apply.

8.2. The NIGHT standby service will cover:

- (i) Disaster
- (ii) Medical Emergency
- (iii) Risk of Disaster

The COMPANY shall determine at their absolute discretion when any of the events listed above occur. Authorization of such flights shall only be made by the COMPANY REPRESENTATIVE.

8.3. In the event that the COMPANY requests the CONTRACTOR crew a COMPANY contracted HELICOPTER for 24-hour operations, the CONTRACTOR will work with the COMPANY to ensure no service gaps exist during maintenance periods. This will be accomplished by coordinating maintenance periods between HELICOPTER to ensure one HELICOPTER is available during the night-time period.

8.4. A program of scheduled maintenance is set out in Annex 3 – Program of Scheduled Major and Other Maintenance and lists the check cycle and anticipated downtime. The CONTRACTOR shall use his best endeavors to carry MAJOR MAINTENANCE only one HELICOPTER at a time.

8.5. The COMPANY shall however have the right, at any time, to alter the normal AVAILABILITY under Section 8.1 and the corresponding times of AVAILABILITY of PERMANENT HELICOPTERS pursuant to Section 8.2 (NIGHT standby support) herein provided always that where any such alteration is not practicable within the constraints imposed by the existing manpower levels then such alteration shall be the subject of VARIATION ORDERS in accordance with sub-article 3.3 of the AGREEMENT.

9. Flight Monitoring Systems

9.1. The CONTRACTOR shall:

- a) provide and maintain APPROVED flight monitoring systems with satellite communication capability;
- b) ensure flight monitoring in the OPERATIONAL AREA is maintained continuously by means of real time systems, either satellite tracking, GPS or VHF based, whenever HELICOPTER are airborne.
- c) grant permission at least 40 accounts to the COMPANY for access to the COMPANY's contracted HELICOPTER flight position information through the CONTRACTOR's satellite position tracking service at the CONTRACTOR's expenses. The CONTRACTOR shall provide at his own expense access to satellite tracking position information at each OPERATING BASE, at the dispatcher workstation, where appropriate internet capability is available.

10. TEST, TRAINING AND PROFICIENCY FLIGHTS

10.1. The CONTRACTOR shall be responsible for all costs in connection with all TEST, TRAINING AND PROFICIENCY FLIGHTS.

10.2. The CONTRACTOR shall be responsible for all costs in connection with every positioning flight unless such flights are specifically requested by the COMPANY.

11. Salvage

The CONTRACTOR shall be solely responsible for any necessary salvage or recovery of the HELICOPTER.

12. Documentation

The CONTRACTOR shall ensure that:

- 12.1. Records with adequate information relating to each FLYING HOUR including unavailability hours shall be kept and attached to the monthly invoice. In addition, a monthly report is to be forwarded to the COMPANY REPRESENTATIVE in a format as directed by the COMPANY.
- 12.2. Passenger manifests and multi-sector load sheets shall be used and made available to the COMPANY REPRESENTATIVE at the termination of each flight sector.
- 12.3. If flights take place between two (2) or more countries which are signatories to the Warsaw Convention, the CONTRACTOR must comply with the requirements of the Convention which include an obligation on the CONTRACTOR to issue passenger tickets and carry out baggage checks.
- 12.4. The COMPANY shall have access to the CONTRACTOR's policies, rules, instructions, procedures, manuals and reports relevant to flight operations, maintenance and performance of the SERVICES under this CONTRACT including flight safety reports and support information related to HELICOTPER.

13. OPERATING BASE

The CONTRACTOR shall provide FACILITIES, equipment and SERVICES at the OPERATING BASE as detailed in Annex 1 - OPERATING BASE and Annex 2 - Passenger Briefing Material.

14. CONTRACT Management and Support

- 14.1. The CONTRACT Steering Group shall be responsible for agreeing and disseminating all aspects of CONTRACT Development as required. As a minimum, the CONTRACT Steering Group shall comprise:

COMPANY	CONTRACTOR
Air Transportation Manager	Operations Director or equivalent
Heliport Supervisor	Base Manager or equivalent
COMPANY REPRESENTATIVE	CONTRACTOR REPRESENTATIVE

The CONTRACT Steering Group will meet on a monthly basis either at OPERATING BASE or via online meeting, the Chairmanship of such meetings shall be Heliport Supervisor and minutes taken by the CONTRACTOR will be copied and verified by the COMPANY prior distributing to the CONTRACT Steering Group.

- 14.2. The Weekly Performance Review Panel shall comprise as a minimum:

COMPANY	CONTRACTOR
Heliport Supervisor	Base Manager or equivalent

15. Emergency Response

- 15.1. The CONTRACTOR shall have a comprehensive, organization-wide Emergency Response Plan (ERP), containing defined interfaces with the COMPANY's ERP, to facilitate the effective management of accidents and/or serious incidents, with the purpose of mitigating any impact on PERSONNEL and operations.
- 15.2. The CONTRACTOR's ERP shall assign responsibilities to specific individuals; provide emergency procedures; control the notification of outside agencies; nominate channels and centers of communication (publishing a structured Rota of key staff to act as a Focal Point for out of hours contact for Emergency Response and routine operational matters, who shall be contactable twenty four (24) hours per day seven (7) days per week); co-ordinate humanitarian assistance to affected passengers, crew, PERSONNEL and their families; provide, in-house Emergency response and effective liaison with accident investigators and outside emergency SERVICES.
- 15.3. The COMPANY and the CONTRACTOR shall develop a clear statement of the interfaces between their Emergency Response Plans prior to commencement of operations under this CONTRACT. This statement will clearly identify the individual and mutual responsibilities with respect to notification of outside agencies, channels and centers of communication, co-ordination of humanitarian assistance to affected passengers, crew, PERSONNEL and their families, and process for liaison with accident investigators and outside emergency SERVICES.
- 15.4. The CONTRACTOR shall ensure that the ERP is rehearsed regularly (at least annually), both to familiarize the PARTIES' PERSONNEL and to reveal any deficiencies. Following the annual exercise, a lessons learned summary shall be published and actions to resolve shortfalls closed as soon as reasonably practicable.

16. Shipping Instruction
Not Applicable.

Annex 1 – OPERATING BASE

1. Onshore FACILITIES at Songkhla Provided by COMPANY

The COMPANY shall provide the following Onshore FACILITIES in as-is condition at the COMMENCEMENT DATE to the CONTRACTOR who shall adapt/adjust to suit with operational requirements / regulations compliance and maintain such FACILITIES in good order / serviceable conditions at all times:

- 1.1. The existing approximately-500-sq.m.-Hangar 1 and the approximately 800-sq.m.-CONTRACTOR office space. The layout of Hangar 1 and CONTRACTOR office space can be seen in Figure 1-3 below:

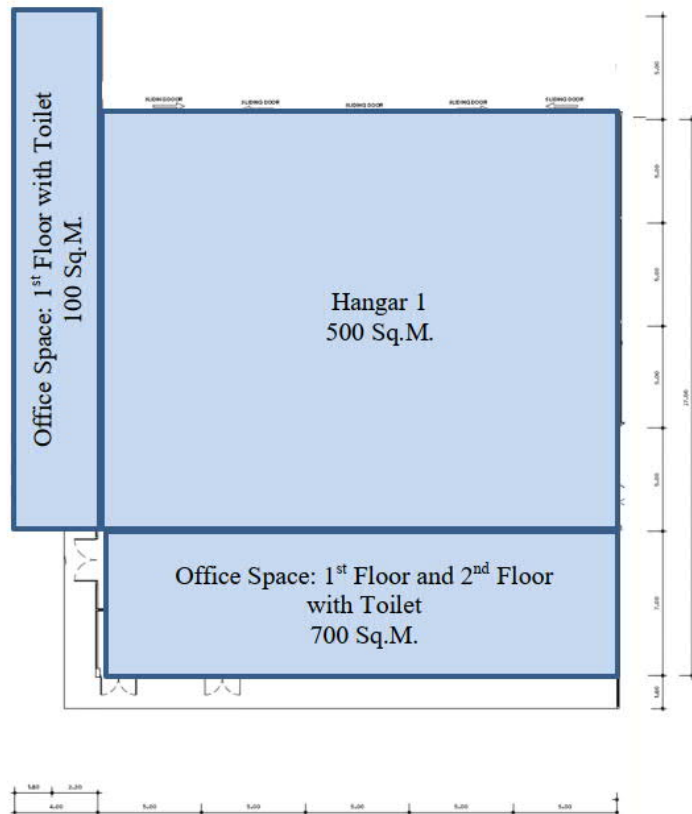


Figure 1: Layout of Hangar 1 and CONTRACTOR Office Space Provided by COMPANY

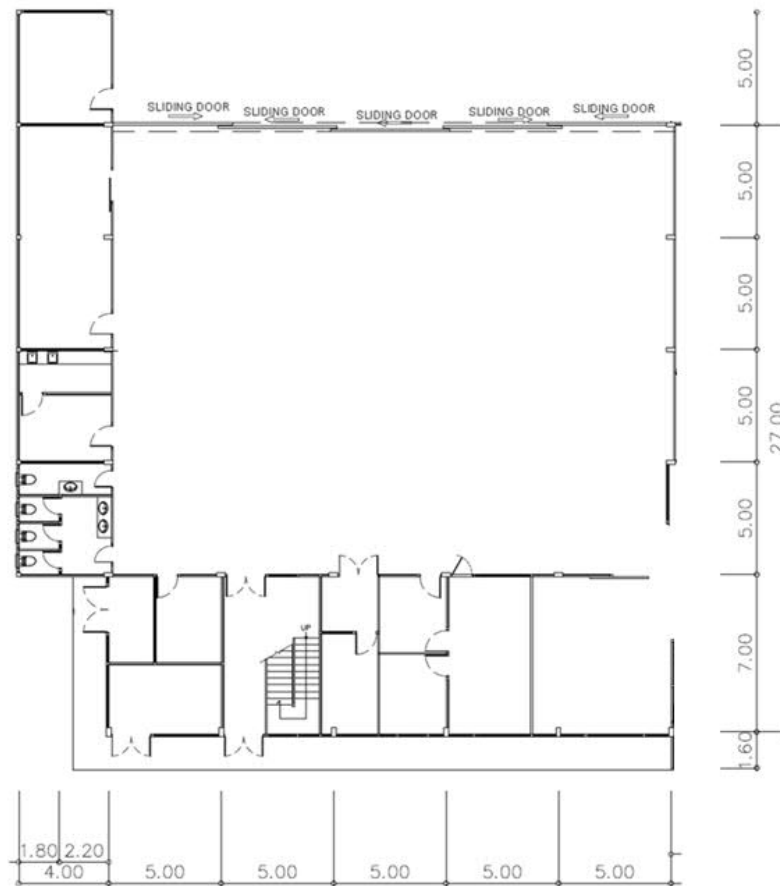


Figure 3: Hangar 1 Space – 500 sq.m.

- 1.2. Passenger check-in facilities complete with passenger and baggage security search facilities, calibrated equipment for weighing passengers and freight reading in lbs or kilograms and space for the CONTRACTOR's computerized flight management and passenger tracking system;
- 1.3. Customs and Immigration facilities to Customs & Immigration Authority's requirements;
- 1.4. Air-conditioned video briefing rooms, free of any distractions, suitably equipped for showing appropriate Helicopter Safety Briefing Video provided by the CONTRACTOR;
- 1.5. Secure storage space for screened baggage;
- 1.6. Secure storage space for incoming and outgoing freight, segregated and Customs approved;
- 1.7. Secure storage space for documents, labels, mobile phones and confiscated items etc. adjacent to passenger search area;
- 1.8. Male and female toilets;
- 1.9. Jet A-1 refueling facilities;
- 1.10. Calibrated alcohol breathalyzer; and
- 1.11. Calibrated thermometer.

Note: Item No. 1.2 - 1.11 can be shared with other air operator(s).

2. Onshore FACILITIES at Songkhla Provided by CONTRACTOR

- 2.1. Flight crews, maintenance staff, security and support staff;
- 2.2. All ground support equipment required for the operation of the HELICOPTER;

- 2.3. A Flight Following Service manned by trained and experienced radio operators using two VHF transceivers and satellite flight following equipment;
- 2.4. Serviceable lifejackets for all passengers, of a standard acceptable to the COMPANY;
- 2.5. Ear plugs and clean headsets for all passengers and all other items including consumables and minor assets as required to operate the HELICOPTER from the OPERATING BASE;
- 2.6. Helicopter Safety Briefing Video & Cards and communication posters as required;
- 2.7. Baggage handlers and trolleys;
- 2.8. First aid equipment and minimum of one registered / professional nurse and one designated professional Safety Officer in addition to Safety Manager during NORMAL OPERATING HOURS;
- 2.9. A wind indicating system (illuminated wind sock) that is clearly visible to the pilot and provides an indication of wind speed and direction, Helicopter landing lights, obstruction lights, hardstand, and aircraft safety equipment;
- 2.10. Crash rescue and fire cover, firefighting facilities;
- 2.11. Monthly public utility cost including electricity and water for onshore FACILITIES at Songkhla provided by the COMPANY. For the sharing onshore FACILITIES at Songkhla provided by the COMPANY with other air operator(s), monthly public utility cost including electricity and water shall be shared based on the proportion of number of flights performed by the CONTRACTOR and total number of flights performed by all air operators.

3. Onshore SERVICES

3.1. Passenger Handling Services

At OPERATING BASE, the CONTRACTOR shall provide the following SERVICES including all necessary CONTRACTOR's PERSONNEL to:

- a) Manage check-in including registration, alcohol testing and temperature measurement in accordance with the COMPANY procedures and obtain route, passenger and freight information from local scheduling system in order to compile flight plan;
- b) Process the passengers from check-in facility to the HELICOPTER and vice versa for an incoming and outgoing flights, including the escorting of passengers between the passenger terminal and the HELICOPTER;
- c) At his own expense, supply baggage destination labels and if necessary "Fragile" stickers for use at OPERATING BASE and for OFFSHORE LOCATIONS, passenger boarding pass for use at OPERATING BASE,
- d) At his own expense, supply and maintain all office furniture, equipment, hardware, consumable items such as paper, photocopier toner and any other office supplies associated with the SERVICES;
- e) Provide sufficient the CONTRACTOR's PERSONNEL certified by CAAT to be responsible for ensuring that all passengers, baggage and freight are screened.
- f) Be responsible for ensuring that necessary staff, equipment and back-up equipment are provided to ensure an uninterrupted service and shall be responsible for their performance. No distinction is made in the CONTRACT between the CONTRACTOR's own staff and SERVICES and the CONTRACTOR's SUBCONTRACTOR's staff and SERVICES in terms of responsibility for the SERVICES or conditions of the CONTRACT.

3.2. Air Freight Handling Service

At OPERATING BASE, the CONTRACTOR shall provide the following SERVICES, or arrange for the provision of such SERVICES, including all necessary CONTRACTOR's PERSONNEL to:

- a) Receive and sign for all cargo in accordance with the COMPANY inward and outward shipping manifest procedures and any APPLICABLE LAWS, National Regulatory, and CAAT standards;

- b) Allocate airfreight onto appropriate flights and input details into the COMPANY's system in accordance with the COMPANY procedures;
- c) The acceptance, processing and administration of all incoming and outgoing freight including any item intercepted at check-in, inclusive of customs clearance, x-raying, security clearance and IATA Dangerous Goods by Air Requirements;
- d) Properly pack and weigh cargo including sticker pasting on cargo in accordance with applicable national/international requirements including the COMPANY requirements before loading;
- e) Book actual cargo weights in the COMPANY's system;
- f) All manpower, secure vehicle and lifting equipment capable of transporting and loading/unloading single items of freight of up to 300 kg weight on and off the HELICOPTER. All baggage and cargos must be secured with restraint net or other approved means;
- g) An airfreight handling service where requested during NORMAL OPERATING HOURS;
- h) The sorting of newspapers and mail and the transportation of newspapers and mail from heliport to the OFFSHORE LOCATIONS as required;
- i) The timely reporting of any non-conformities concerning freight issues to the COMPANY REPRESENTATIVE.
- j) The CONTRACTOR shall be responsible for ensuring that necessary staff, equipment and back-up equipment is provided to ensure an uninterrupted service and shall be responsible for their performance. No distinction is made in the CONTRACT between the CONTRACTOR's own staff and SERVICES and the SUBCONTRACTOR's staff and SERVICES in terms of responsibility for the SERVICES or conditions of the CONTRACT.

3.3. Security Services

Additionally, the CONTRACTOR shall provide the following Security Services:

- a) Sufficient security guards qualified by CAAT for all CONTRACTOR occupied facilities including buildings, hangars, workshop, etc;
- b) Sufficient security measures to deny access of unauthorized PERSONS and to protect the property and interests of the COMPANY, his officers, employees and agents at all times; and
- c) All CONTRACTOR occupied facilities shall be made secure when not in use.

3.4. Flight Operations Services

3.4.1 Flight Operations Services – General

At each OPERATING BASE, the CONTRACTOR shall provide, all necessary CONTRACTOR's PERSONNEL and equipment to oversee flight operations on a day-to-day basis. The Flight Operations Unit shall operate one (1) hour prior to commencement of the first flight and during NORMAL OPERATING HOURS. The Flight Operations Unit's prime responsibility is to execute the COMPANY's flight schedules prepared by the COMPANY and to provide necessary actions to ensure safe and efficient flight operation. Flight Operation Services shall include but not be limited to:

- a) Coordinate and communicate for daily flying operations in the following aspects;
 - (i) Coordinating and communicating with OFFSHORE LOCATIONS' representatives and airport's authorities for operation related issues including but not limited to departure time, arrival time, flight related information;
 - (ii) Advising COMPANY REPRESENTATIVE at OPERATING BASE in case of delays and impact;
 - (iii) Communicating OFFSHORE LOCATIONS' representatives for fuel stops in case of deviation from original flight plan;

- (iv) Liaising with COMPANY REPRESENTATIVE at OPERATING BASE for passenger handling, freight/baggage handling and refueling operations;
- b) Arrange additional flights and inter-field flights as required, including:
 - (i) Special flights for personnel/cargo transfer, management flights and so on.
 - (ii) Transfer flights for infectious disease person under investigation. The CONTRACTOR shall establish the procedure for infectious disease person under investigation transfer flight, which shall be APPROVED by the COMPANY.
- c) Liaise and agree with Air Traffic Control (“ATC”) / helicopter operators (if any) / OFFSHORE LOCATIONS on alternative destinations to the plan due to:
 - (i) General platform alarms;
 - (ii) Helideck restrictions;
 - (iii) Fuel stops;
 - (iv) Helicopter separation.
- d) Reschedule the flying program in response to changes;
 - (i) Weather and compliance with the CONTRACTOR’s Operations Manuals;
 - (ii) HELICOPTER technical issues;
 - (iii) PERSONNEL / freight;
 - (iv) Airport and HELICOPTER problems.
- e) Implement and monitor inter-field flights;
 - (i) Liaise with OFFSHORE LOCATIONS’ representative
- f) Emergency Response;
The CONTRACTOR shall appoint a trained Duty Officer who is fully conversant with the CONTRACTOR’s Emergency Response Procedures and who shall be readily available to deal with the COMPANY out of hours requests and act as Focal point in the Emergency Response Plan as required by the COMPANY.
- g) The Duty Officer(s) must be equipped with mobile phones at the CONTRACTOR’s expense;
- h) A monthly Duty Roster must be lodged with the COMPANY, which must provide names and addresses of Duty Officers, together with mobile phone and home telephone numbers (if any);
 - (i) The Duty Officer shall be contactable seven (7) days a week for twenty (24) hours and be presented at the OPERATING BASE within thirty (30) minutes after being notified by the COMPANY;
 - (ii) Co-ordinate air support;
 - (iii) Provide aviation advice and operational SERVICES as required.
- i) Maintain a flight watch and listening brief throughout the flights;
- j) Meteorological information;
 - (i) Receive and interpret aviation weather reports;
 - (ii) Monitor weather conditions and comply with the CONTRACTOR’s Operations Manuals;
 - (iii) Monitor and inform air crews with regard to weather status.
- k) Administration
 - (i) Record daily operational data/flight times;
 - (ii) Record fleet performance;
 - (iv) Record fuel consumption;

- (v) Produce activity reports;
- (vii) Record any information as required by the COMPANY.

- l) Customer Care duties including:
 - (i) Passenger welfare and catering requirements during delays in accordance with APPLICABLE LAWS;
 - (ii) Monitor and compliance of drugs and alcohol abuse policy;
 - (iii) Monitor compliance of clothing and baggage policies.

3.4.2 Flight Operation Services - Management Plan

- a) The CONTRACTOR shall provide Flight Operation Services to ensure optimum safe and efficient offshore HELICOPTER transportation with minimal cost to the COMPANY.
- b) The CONTRACTOR shall be responsible for ensuring that necessary staff, equipment and back-up equipment is provided to ensure an uninterrupted service and shall be responsible for their performance. No distinction is made in the CONTRACT between the CONTRACTOR's own staff and SERVICES and the CONTRACTOR's SUBCONTRACTOR's staff and SERVICES in terms of responsibility for the SERVICES or conditions of the CONTRACT.
- c) In accordance with a) and b) above the CONTRACTOR shall submit a detailed management plan for providing Flight Operation Services to the COMPANY. The Flight Operation Services management plan, including any subsequent proposed amendments, requires prior APPROVAL.

3.5. Helideck Acceptance Services

3.5.1 Flight Safety Officer

The CONTRACTOR shall provide at the OPERATING BASE one (1) Flight Safety Officer with the proposed candidate shall be subject to the APPROVAL. The duties of the Flight Safety Officer shall include but not be limited to the following:

- a) Carry out periodic inspections;
- b) Conduct Helicopter Landing Officer and Helideck Assistant training and assessments at either OFFSHORE LOCATIONS or OPERATING BASE in accordance with the COMPANY's requirements;
- c) Advise on the COMPANY policy and standards relating to helideck operations and maintenance, helideck manning, and offshore aviation fuel facilities;
- d) Assist in the revision of the COMPANY helideck manuals and documentation and attend relevant meetings of regulatory and industry bodies as required by the COMPANY;
- e) Ensure the safe flight operation e.g. flight safety data monitoring & analysis, maintain safety base of flight operation, monitor quality assurance perspective for flight operation activities, being part of incident investigation team, etc.
- f) Monitor the validity of all OFFSHORE LOCATIONS' helideck licenses approved by CAAT.

The minimum qualification of Flight Safety Officer shall be referred to Exhibit C.

4. Offshore Services

4.1. Fuel - OFFSHORE LOCATIONS

The CONTRACTOR shall manage efficient execution of the following SERVICES required offshore at his sole cost and expense. These include but are not limited to the following:

- a) The CONTRACTOR shall be responsible for arranging annual inspections of offshore fuel dispenser units in compliance with applicable local statutory and industry standards including the co-ordination of associated travel requirements of inspectors and maintenance PERSONNEL.
- b) The CONTRACTOR shall be responsible for the quality of all fuel used by the HELICOPTER at offshore facilities;
Any fuel provided offshore at OFFSHORE LOCATIONS shall only be used in support of the COMPANY's own operations;
- c) The CONTRACTOR shall agree with the COMPANY a management plan for the provision of subject SERVICES including Scope of SERVICES and associated inspection regimes with the COMPANY. The CONTRACTOR shall submit an inspection and testing schedule of offshore fuel dispenser units for APPROVAL. Subsequent proposed changes to the CONTRACTOR's management plan and maintenance schedule shall be submitted to the COMPANY REPRESENTATIVE for APPROVAL;
- d) The CONTRACTOR shall be responsible for ensuring that necessary staff, equipment and back-up equipment is provided to ensure an uninterrupted service and shall be responsible for their performance. No distinction is made in the CONTRACT between the CONTRACTOR's own staff and SERVICES and the CONTRACTOR's Sub-CONTRACTOR's staff and SERVICES in terms of responsibility for the SERVICES or conditions of the CONTRACT.

5. Locations of OPERATING BASE

Locations of OPERATING BASE can be added and terminated as requested by the COMPANY by giving upon 60 days in advance notice via a VARIATION ORDER.

The CONTRACTOR shall propose schedule and expenses incurred due to addition and/or termination of OPERATING BASE for APPROVAL.

This section excludes emergency case in which the scope of SERVICES and rates shall be mutually agreed between PARTIES.

Annex 2 – Passenger Briefing Material

1. General

The CONTRACTOR shall provide to the COMPANY the following items:

- a) High-Resolution helicopter passenger safety briefing video in both Thai and English;
- b) Helicopter safety briefing cards for all passengers in both Thai and English.

The above helicopter safety briefing materials shall include provision of special requirements such as shuttle versions, addition of non-standard equipment, inclusion of the COMPANY specific procedures, etc.

2. Updating

The CONTRACTOR warrants that the contents of the briefing materials either helicopter safety briefing video, helicopter safety briefing card or safety poster shall be APPROVED by the COMPANY and meet the requirements of the relevant Air Navigation Act and/or CAAT or ICAO or IOGP.

The CONTRACTOR shall update at no cost to the COMPANY, briefing materials which no longer meet the requirements of APPLICABLE LAWS and are thus unsuitable for their purpose.

3. Defects and Accidental Damage

The CONTRACTOR shall replace free of charge to the COMPANY any briefing material which is defective while in the possession of the COMPANY as soon as reasonably practicable.

4. Notification to the CONTRACTOR

The COMPANY shall immediately notify the CONTRACTOR of:

- a) any defect or damage to or loss of any briefing materials supplied;
- b) any change to the location or its name at which any briefing materials supplied are to be located and used.

Annex 3 – Program of Scheduled Major and Other Maintenance
(To be provided by CONTRACTOR)

EXHIBIT B

SCHEDULE OF RATES

**EXHIBIT B
 SCHEDULE OF RATES**

1. General

- 1.1 The CONTRACT price shall consist of only such items as specified within this EXHIBIT B: Schedule of Rates which shall be full compensation to the CONTRACTOR for all costs, expenses, taxes and duties, charges, insurance and profits associated with the provision of HELICOPTER SERVICES and for fulfilling all other obligations and liabilities of the CONTRACTOR under the CONTRACT, except Value Added Tax (VAT) in Thailand.
- 1.2 The rates and prices in this Schedule of Rates shall remain fixed and firm in all respects for the duration of the CONTRACT except where expressly stated otherwise.
- 1.3 The CONTRACT price of this CONTRACT is in USD currency.
- 1.4 The COMPANY shall be responsible for the provision and cost of fuel for REVENUE FLIGHTS as required for the SERVICES as stated in EXHIBIT A.
- 1.5 No other expenditure than expressly stated in this EXHIBIT B shall be paid to the CONTRACTOR.
- 1.6 The ESTIMATED CONTRACT VALUE for this CONTRACT is USD _____.

The annual ESTIMATED CONTRACT VALUE for this CONTRACT is USD _____.

The ESTIMATED CONTRACT VALUE and the annual ESTIMATED CONTRACT VALUE shall be used for the purposes of calculating the amounts of bank guarantee, stamp duty and/or any other calculation which requires the ESTIMATED CONTRACT VALUE and the annual ESTIMATED CONTRACT VALUE. The ESTIMATED CONTRACT VALUE and the annual ESTIMATED CONTRACT VALUE shall not create any contractual or non-contractual obligations between the PARTIES nor shall the PARTIES rely on this ESTIMATED CONTRACT VALUE and this annual ESTIMATED CONTRACT VALUE for any purposes other than those expressly described herein.

2. SERVICES Rates

2.1 The SERVICES Rates for the HELICOTPER

The COMPANY shall pay the CONTRACTOR the SERVICES rates for each actual number of HELICOPTER during the CONTRACT period from the COMMENCEMENT DATE of the SERVICES of each HELICOPTER as follows:

Description/Type of Helicopter	Monthly Standing Charge (MSC) (USD/helicopter/month)	FLYING HOURS Charge (FHC) (USD/flying hour)	Mobilization Charge (USD/helicopter)	Demobilization Charge (USD/helicopter)
... to fill in to fill in to fill in to fill in to fill in ...

The SERVICES rates shall be included, but shall not be limited to the followings:-

2.1.1 The Monthly Standing Charge (per calendar month)

The Monthly Standing Charge (MSC), or prorata part thereof, shall be due from the COMMENCEMENT DATE and for each month thereafter of AVAILABILITY of the HELICOPTER within the OPERATIONAL PERIOD.

As specified hereafter, the MSC shall be due for those periods which HELICOPTER is AVAILABLE to be used by the COMPANY. The MSC shall include all expenses, costs, and profits incurred by the CONTRACTOR in performing the SERVICES, which shall include but not limited to the followings:-

- HELICOPTER lease/depreciation costs,
- Crew – all pilots, engineers, and other necessary crew to provide the SERVICES under this CONTRACT,
- All training for crews and engineers,
- Hangar/facilities – public utility cost at OPERATING BASE, cost to repair and maintain the hangar/facilities to meet with required standards and regulations. Any increasing of these rates shall be inclusive. The COMPANY shall not be responsible to pay any increasing of these costs during the duration of this CONTRACT,
- Systems – Computerized maintenance / operational,
- SPARE PARTS, tooling and Ground Service Equipment (GSE),
- Ground facilities / manpower,
- Ground handling services,
- Insurance cost, and
- Shell Water Detector (SWD).

2.1.2 The FLYING HOURS Charge

The FLYING HOURS Charge (FHC) shall be an hourly rate due for each hour of flight, or prorata thereof, performed by the HELICOPTER for the COMPANY's operations. The FHC shall not include the cost of the fuel.

The FHC charged to the COMPANY shall be the air time i.e. the time when the HELICOPTER is airborne. The time when the HELICOPTER is on ground or on helideck with rotors running is not charged to the COMPANY.

The FHC shall not include any time related to TEST, TRAINING AND PROFICIENCY FLIGHTS and Return-to-Base flights due to technical issues except any special flights requested by the COMPANY.

The FHC shall include all expenses, costs, and profits incurred by the CONTRACTOR in flying the HELICOPTER, which shall include but not limited to the followings;

- Power by the Hour (PBH) for maintenance,
- Any mature maintenance/engine restoration,
- Consumables,
- Luggage tag,
- Navigation charge,
- Landing charge, and
- Parking charge.

2.1.3 Mobilization/Demobilization

- 2.1.3.1 Mobilization and Demobilization place of HELICOPTER shall be at OPEARTING BASE in Songkhla. One-time mobilization charge on the COMMENCEMENT DATE of the SERVICES and one-time demobilization charge on the COMPLETION DATE of the SERVICES shall be charged as per Section 2.1.
- 2.1.3.2 Refer to Section 5 of Annex 1 of EXHIBIT A, in case of adding OPERATING BASE within Thailand (if any), mobilization and demobilization charges in Section 2.1 shall not apply but the cost of adding the OPERATING BASE within Thailand shall be mutually agreed.
- 2.1.3.3 In case that the COMPANY instructs the CONTRACTOR to decrease the number of HELICOPTER before the COMPLETION DATE of the SERVICES as per Section 2.3 of this EXHIBIT B, the demobilization charge shall be applied.
- 2.1.3.4 The entitlement to any mobilization charge, as applicable, shall not apply in the event of replacement HELICOPTER provided by the CONTRACTOR in accordance with the applicable clauses in this CONTRACT.
- 2.1.3.5 The entitlement to any demobilization charge, as applicable, shall not apply in the event:
- a) of any HELICOPTER becoming a total loss,
 - b) of HELICOPTER being replaced by the CONTRACTOR in accordance with the applicable clauses in CONTRACT,
 - c) of termination or suspension of SERVICES attributable to the CONTRACTOR which shall subject to sub-Article 14.1 and sub-Article 15.1 of the AGREEMENT.

2.2 Increasing the Number of HELICOPTER

For the CALL-OFF HELICOPTER as specified in article 4.3.1 of the AGREEMENT, the MSC, FHC, mobilization and demobilization charge of the CALL-OFF HELICOPTER shall be mutually agreed between the PARTIES.

The SERVICES rates of CALL-OFF HELICOPTER shall include but not limited to HELICOPTER, sufficient flight crews and engineers, costs, expenses, charges, insurance, taxes, duties, profits, spare parts, and import and export fees to make CALL-OFF HELICOPTER AVAILABLE.

2.3 Decreasing the Number of HELICOPTER

For decreasing the number of HELICOPTER as specified in article 4.3.2 of the AGREEMENT, the early termination of the HELICOPTER shall result in an Early Termination Fee calculated as follows:

Early Termination Fee = % of the MSC at the termination period x the total number of remaining month(s)

% of the MSC shall be referred the following table:

	Termination Period after the COMMENCEMENT DATE of the Terminated HELICOPTER			
	Within 0-12 Months	Within 13-36 Months	Within 37-48 Months	After 48th Months including Any Extension Period(s)
% of the MSC	40%	30%	20%	10%

The total number of remaining month(s) for PERMANENT HELICOPTER compensated, or prorata part thereof, shall be the actual remaining month(s) from the effective date of termination until the COMPLETION DATE of the SERVICES but in any event shall be limited to maximum 12 months.

The total number of remaining months for CALL-OFF HELICOPTER compensated shall be the actual remaining months from the effective date of termination until the COMPLETION DATE of the SERVICES of such CALL-OFF HELICOPTER written in VARIATION ORDER as required in article 4.3.1 of the AGREEMENT but in any event shall be limited to maximum 12 months. The COMMENCEMENT DATE of CALL-OFF HELICOPTER shall be the date specified in VARIATION ORDER.

2.4 Reimbursement

Additional SERVICES performed by third party: In case that the CONTRACTOR is requested by the COMPANY to purchase the materials and/or services from third party, the COMPANY shall reimburse the CONTRACTOR such materials and/or services at reasonable actual cost with supporting documents. The prior approval from the COMPANY shall be required before purchasing such materials and/or services.

3. Reduction of SERVICES Rates

3.1 Suspension of SERVICES

The CONTRACTOR shall be paid for suspension situation under sub-article 14.2 of the AGREEMENT at eighty percent (80%) of the MSC stated in Section 2.1 of this EXHIBIT B.

3.2 Non AVAILABILITY of SERVICES

In the event, any HELICOPTER is not AVAILABLE as more fully described under article 6 of the AGREEMENT, the MSC payable to CONTRACTOR shall be reduced with deducted amount calculated as follows:

- a. For HELICOPTER

$$\text{Reduction to the MSC} = (\text{Unavailability (hours)} \times \text{the MSC}) / 360 \text{ (hours)}$$
- b. The CONTRACTOR shall be allowed a maximum cumulative downtime allowance of twenty-four (24) hours in any month, per PERMANENT HELICOPTERS, for maintenance and/or rectification/repair in addition to the time allowed for scheduled MAJOR MAINTENANCE in accordance with Annex 3 of EXHIBIT A. Any unused monthly allowances are not cumulative.

4. Liquidated Damages

If the CONTRACTOR fails to commence the SERVICES of CALL-OFF HELICOPTER within one hundred and twenty (120) days after receiving the VARIATION ORDER from the COMPANY for any reason except a FORCE MAJEURE event or an act of prevention 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 CONTRACTOR shall pay to the COMPANY liquidated damages for such failure at Twenty Three Thousand USD Dollar (USD 23,000) per one (1) CALL-OFF HELICOPTER for each day of delay from the COMMENCEMENT DATE notified in the VARIATION ORDER until the actual COMMENCEMENT DATE of the SERVICES of CALL-OFF HELICOPTER.

The amount of these liquidated damages under this CONTRACT shall be limited to ten percent (10%) of the ESTIMATED CONTRACT VALUE.

5. Invoicing

- 5.1 The CONTRACTOR's invoices shall include:
 - A. The number and title of the CONTRACT;
 - B. Full details of the SERVICES provided during the invoice period; and
 - C. The CONTRACTOR's bank account.

- 5.2 The CONTRACTOR shall submit all invoices under the CONTRACT via the COMPANY's online invoice billing system as specified by the COMPANY (hereinafter referred to as the "System"). It is the CONTRACTOR's sole responsibility to familiarize himself and to ensure that he can access and use the System.

- 5.3 In order to fully comply with the record keeping requirements under APPLICABLE LAWS, after the CONTRACTOR has completed the invoice submission in the System, the CONTRACTOR shall deliver hard copies of the below documents which shall be the exact same version as submitted via the System to the COMPANY within 5 business days:
 - A. Billing Cover Sheet as generated from the System;
 - B. One copy of tax invoice (if any); and
 - C. One complete set of invoice documents as follows:
 1. Original invoice with the CONTRACTOR's authorized signature and reference to CONTRACT number, including the CONTRACTOR's bank account details;
 2. Original tax invoice with the CONTRACTOR's authorized signature;
 3. Original debit note and/or credit note with CONTRACTOR's authorized signature including one copy of such debit note and/or credit note (if any);
 4. Original monthly report as specified in Section 12.1 of EXHIBIT A with signature of CONTRACTOR PERSONNEL approved by the COMPANY;
 5. Extract content from the CONTRACT which specifies scope or SERVICES, including payment term;
 6. Original receipt with signature of CONTRACTOR PERSONNEL as a recipient (if any); and
 7. Other supporting documents as specified in CONTRACT (if any).

- 5.4 The CONTRACTOR shall deliver the documents listed under Section 5.3 of EXHIBIT B via either one of the following procedures:

A. By Hand

Location: Energy Complex Building, 1st Floor, Car Park Building A
(Parking 2)
Date & Time: Tuesday and Thursday during 09.00 AM - 12.00 PM
(excludes public holidays & COMPANY's holidays)

B. Postal Service

For ARTHIT

PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED
(ARTHIT Concession)
Energy Complex Building A, Floors 6th, 19th - 36th,
555/1 Vibhavadi Rangsit Road,
Chatuchak, Bangkok 10900, Thailand

Attention: Payment Section (Invoice Billing)

For Block G8/50

PTTEP INTERNATIONAL LIMITED
(G8/50 Concession)
Energy Complex Building A, Floors 6th, 19th - 36th,
555/1 Vibhavadi Rangsit Road,
Chatuchak, Bangkok 10900, Thailand

Attention: Payment Section (Invoice Billing)

For Block G1/61

PTTEP Energy Development Company Limited
(Block G1/61)
Energy Complex Building A, Floors 6th, 19th - 36th,
555/1 Vibhavadi Rangsit Road,
Chatuchak, Bangkok 10900, Thailand

Attention: Payment Section (Invoice Billing)

For Block G2/61

PTTEP Energy Development Company Limited
(Block G2/61)
Energy Complex Building A, Floors 6th, 19th - 36th,
555/1 Vibhavadi Rangsit Road,
Chatuchak, Bangkok 10900, Thailand

Attention: Payment Section (Invoice Billing)

- 5.5 In case that the CONTRACTOR is not capable of using the System and would like to submit hard copies of invoice documents only, the CONTRACTOR shall notify via email to AccountPayableTeam@pttep.com for the COMPANY's acknowledgement at least 15 business days before the intended invoice submission date. Upon receiving of the COMPANY's acknowledgement email, the CONTRACTOR shall submit complete set of invoice documents as required under Section 5.3 of EXHIBIT B above (except for Billing)

Cover Sheet in Section 5.3A of EXHIBIT B) to the address as prescribed in Section 5.4 of EXHIBIT B accordingly.

- 5.6 Invoices submitted via the System shall be deemed as properly established invoices received by the COMPANY on the submission date in the System, provided the COMPANY has verified that all the submitted information is complete and accurate and all billing procedures stated herein are fully complied with. For invoices submitted only with hard copies under Section 5.5 of EXHIBIT B, they will be deemed as properly established invoices received by the COMPANY only after the COMPANY’s verification of correctness and completeness of the submitted hard copies.
- 5.7 If the CONTRACTOR has any enquiry or requires further information, please contact (+662) 537-5545 during office hours (09.00 AM – 05.00 PM) or email to AccountPayableTeam@pttep.com.
- 5.8 The information (name, address, tax registration ID) for invoice billing documents in relation to the COMPANY is as follows:

COMPANY	Address	Tax Registration ID
PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED	Energy Complex Building A, Floors 6 th , 19 th - 36 th , 555/1 Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand	0107535000206
PTTEP INTERNATIONAL LIMITED	Energy Complex Building A, Floors 6 th , 19 th - 36 th , 555/1 Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand	0105533109209
PTTEP ENERGY DEVELOPMENT COMPANY LIMITED	Energy Complex Building A, Floors 6 th , 19 th - 36 th , 555/1 Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand	0105561079971

EXHIBIT C

COMPANY's MINIMUM STANDARDS FOR HELICOPTER OPERATIONS

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EXHIBIT C
COMPANY’S MINIMUM STANDARDS FOR HELICOPTER OPERATIONS

1. General

1.1 The CONTRACTOR shall ensure compliance with APPLICABLE LAWS which are to be observed in the execution of the SERVICES to be carried out under this CONTRACT and provided that the application of the following requirements remain within the APPLICABLE LAWS agrees to apply the following COMPANY standards where the COMPANY requirements are more restrictive.

2. HELICOPTER Specification and Equipment Fit

2.1 The CONTRACTOR shall ensure that:

- a) All HELICOPTER comply strictly with the specification and minimum equipment fit set out in Annex 2 – HELICOPTER Technical Description.
- b) CALL-OFF HELICOPTER and replacement HELICOPTER that does not meet the specifications set out in Annex 2 – HELICOPTER Technical Description shall not be used unless the COMPANY has granted specific written dispensations in advance.

3. Line Operations

3.1 The CONTRACTOR shall ensure that all policies, rules, instructions and procedures relevant to flight crew are described in the applicable parts of the Operations Manuals (OM) or in the flight crew bulletins (directives).

3.2 The CONTRACTOR’s Operations Manual (OM) or other documents accessible to the flight crew should describe:

- a) The responsibilities of the flight crew with regard to the Minimum Equipment List (MEL) and Air Technical Log (ATL);
- b) The use of the MEL and ATL.

3.3 The CONTRACTOR shall ensure that a HELICOPTER which has a defect that has not been processed in accordance with the MEL, shall not be permitted to depart.

3.4 The CONTRACTOR is required to submit to COMPANY the Pilot in Command (“PIC”) reports on every flight, in the ATL, all known or suspected defects affecting the HELICOPTER. The CONTRACTOR shall provide crews with non-normal/emergency policies, procedures and checklists.

3.5 The CONTRACTOR shall use procedures and checklists developed and provided by the HELICOPTER manufacturer or shall have a process for modification of those procedures and checklists for implementation by the CONTRACTOR. Such a modification process should ensure consideration and incorporation of human factors principles.

3.6 The CONTRACTOR shall require flight crew members, including instructors, examiners and line check airmen, whose native language is not the common language of the CONTRACTOR, to demonstrate a level of proficiency in the common language of the CONTRACTOR to ensure effective communication during the performance of duties.

- 3.7 The CONTRACTOR shall have procedures that require the use of checklists and compliance with operating procedures.
- 3.8 The CONTRACTOR shall outline CRM principles and state its commitment to the application of these principles by flight crew.
- 3.9 The CONTRACTOR shall provide guidance on the handling of Flight Data Recorders (FDR), Flight Data Monitoring (FDM) and Cockpit Voice Recorders (CVR) (where fitted), to include the following:
 - a) The FDR should not be intentionally switched off;
 - b) The CVR should not be intentionally switched off, unless essential to preserve accident or serious incident-related data.
- 3.10 The CONTRACTOR shall have a policy and procedure(s) that address flight crew incapacitation, including communications/co-ordination with cabin crew (where carried).
- 3.11 The CONTRACTOR shall provide procedures to enable flight and cabin crew members to deal with on-board medical emergencies.
- 3.12 The CONTRACTOR shall provide guidance to enable flight crew to determine minimum flight altitudes for all phases of flight.
- 3.13 The CONTRACTOR shall have a collision avoidance policy (“see and avoid”) that encourages the flight crew to maintain vigilance for conflicting visual traffic.
- 3.14 The CONTRACTOR shall specify when descent below the minimum safety altitude is permitted.
- 3.15 The CONTRACTOR shall provide information to enable flight crew to determine that airports, airstrips, heliports and/or helidecks of intended use are adequate, to include but not limited to:
 - a) Applicable performance requirements;
 - b) Runway/helideck characteristics;
 - c) Air Traffic Service and communications;
 - d) Traffic Advisories;
 - e) Navigational aids and lighting as applicable;
 - f) Weather reporting and forecasts;
 - g) Emergency Services, including temporary periods of reduced Rescue and Fire-Fighting (RFF).
- 3.16 The CONTRACTOR shall have a Civil Aviation Authority of Thailand (CAAT) approved Training Manual, which includes training, programs and syllabus. The content of the Training Manual should be updated to reflect current procedures and all operations PERSONNEL should have easy access to the applicable sections of the current Training Manual. Curriculum should include: ground training, simulator training, HELICOPTER training, examination and certification, Line Flying under Supervision, Line Oriented Flight Training (LOFT), and any specialized training.
- 3.17 The organizational structure of the CONTRACTOR shall require that all flight crew are trained and objectively examined according to published standards developed by the CONTRACTOR

and approved by CAAT. Objectivity and integrity should be maintained by the CONTRACTOR by ensuring that:

- a) Training and examinations are conducted by separate organizations or by different individuals within the same organization;
- b) Instructors, Examiners, and Line Check Airmen are able to perform their work without inappropriate interference from management and/or external organizations.

3.18 The CONTRACTOR shall ensure that training facilities, devices and course materials shall reasonably reflect the configuration of the fleet for which the respective training is being conducted.

4. Qualified PERSONNEL – Aircrew

4.1 The CONTRACTOR shall ensure that the flight crew provided shall always be certified and qualified in accordance with applicable regulatory requirements, to include:

- License(s)/certification.
- Medical fitness
- Recency of experience
- The use of equipment (e.g. TCAS/ACAS, GPWS/EGPWS)
- Initial training and checking/Line check/Proficiency check/Recurrent Training and checking
- Right/left seat qualification
- Type qualification
- Airport and route competence (including helidecks and vessels)
- Instructor/examiner/line check airman qualification
- Crew Resource Management (CRM)/Human Factors
- Dangerous Goods
- Security
- First Aid
- Fire Fighting
- Water Survival Training

4.2 Captains and Co-pilots shall, as a minimum, be qualified and meet the levels of experience as detailed at Annex 3 – CONTRACTOR Experience and Qualification Levels. Freelance pilots may only be engaged following COMPANY agreement in writing in the Co-pilot role and the CONTRACTOR shall ensure that prior to their first flight in a HELICOPTER operated on CONTRACT to the COMPANY that they have successfully carried out full base and line proficiency checks conducted to the CONTRACTOR's standards by the CONTRACTOR's Senior Training Captain or his designee and are fully indoctrinated in the CONTRACTOR's procedures.

4.3 The CONTRACTOR shall require that all Instructors, Examiners, Line Check Airmen and flight crew, whether employed or subcontracted, are qualified and standardized for their assigned tasks, and are certified by the COMPANY and approved by CAAT when required.

4.4 The CONTRACTOR shall provide CAAT approved Ground, Flight Training and where applicable Examination programs approved by CAAT, which require that all Instructors, Examiners, Line Check Airmen and flight crew (whether employed or subcontracted), are trained for their assigned tasks. Ground and Flight Training programs should include:

- a) Initial;
- b) Recurrent;
- c) Transition (conversion);
- d) Re-qualification;
- e) Upgrade to Commander;
- f) Recency;
- g) Familiarization;
- h) Differences or other specialized training.

4.5 The CONTRACTOR shall have a process to support the introduction of:

- a) New policies, rules, instructions and procedures;
- b) New HELICOPTER types, systems and fleet modifications/upgrades.

4.6 The CONTRACTOR shall establish a system of periodic audits of the training organization to include all contracted training provisions (e.g. facilities, personnel, programs).

4.7 The CONTRACTOR shall monitor the results of all successful and unsuccessful Ground and Flight Training examinations and should use trend analysis for training program improvement.

4.8 Maximum Age Limits for Crew

4.8.1 Maximum Age Limits for Pilot

A pilot on reaching the age of sixty (60) shall not be permitted to act as a pilot in a HELICOPTER operated for the COMPANY except that such pilot is a member of a multi pilot crew and provided no more than one pilot in the crew has reached the age of sixty (60).

On reaching the age of sixty-five (65), a pilot shall not be permitted to act as a pilot in a HELICOPTER operated for the COMPANY.

4.8.2 Maximum Age Limits for other Flight Crew

A flight crewmember, on reaching the age of sixty-five (65), shall not be permitted to act as a crewmember in a HELICOPTER operated for the COMPANY.

4.9 Medicals for Pilots and Flight Crew

All pilots are to hold a valid medical certificate appropriate to their age, class of license and as determined by CAAT and / or the CONTRACTOR's policy. Flight crew actively engaged on flying duties shall undergo periodic medical examinations appropriate to their duties and on reaching the age of forty (40) shall also undergo a medical examination including an Electro-Cardiogram (ECG) evaluation every twelve (12) months.

4.10 Pilots Flying More than One HELICOPTER Type

With the exception of Training Captains carrying out crew proficiency checks, pilots operating HELICOPTER on contract to the COMPANY shall only fly one HELICOPTER type in any duty period. However, in exceptional circumstances and with the prior agreement of the COMPANY, pilots may fly two (2) types provided they do not operate in Command of the second type operated during the duty period and they are to have flown each type within the preceding twenty-eight (28) days.

- 4.11 The CONTRACTOR shall require that all flight crew are trained in non-normal procedures, to include instructions in the use of all emergency and life-saving equipment required to be carried, co-ordination among crew members, and drills in the emergency evacuation from the HELICOPTER.
- 4.12 The CONTRACTOR shall require that all flight crew are trained and demonstrate proficiency in procedures for HELICOPTER upset and abnormal/unusual attitude recovery.
- 4.13 The CONTRACTOR shall require that all flight crew are trained and demonstrate proficiency, as applicable, in:
- a) Procedures to properly respond to TCAS/ACAS alerts;
 - b) Terrain awareness procedures, including GPWS/EGPWS;
 - c) The avoidance of Controlled Flight Into Terrain (CFIT).
- 4.14 The CONTRACTOR shall require that all flight crew are trained in:
- a) Adverse weather operations;
 - b) CRM/ADM using specially trained facilitators during initial and recurrent training;
 - c) The recognition of Dangerous Goods;
 - d) Emergency drills.
- 4.15 The CONTRACTOR shall require that all Captains have completed a Command Training Program.
- 4.16 Flight Crew Training and Proficiency Checks
The CONTRACTOR shall arrange, and at no additional costs to the COMPANY for pilots assigned to the Contract to undergo the following training and proficiency checks.
- i. Annual Checks embracing:
 - a) An Instrument Rating Renewal
 - b) Line / Route Check
 - c) Emergency and Survival checks.
 - d) Questionnaires (written) covering all aspects of technical and operational knowledge.
 - e) VFR only operations – to include an instrument check, recovery from unusual attitudes, inadvertent entry into IMC, and tracking to and from ground based navigational aids.
 - ii. Six Monthly Checks embracing VFR and IFR base checks
 - iii. NIGHT Proficiency:
 - a) Pilots shall be proficiency checked at NIGHT on the HELICOPTER prior to being assigned to either operate the HELICOPTER as a crewmember at NIGHT or to provide NIGHT standby cover. Each pilot shall carry out either three (3) NIGHT take-offs and landings every ninety (90) days and three (3) instrument approaches in the same period. The flights must be to an actual helideck. If a simulator is used for every other/alternate night training flight (i.e. every 180 days) approval needs to be obtained in advance in writing from COMPANY following a justification explanation.

- b) For NIGHT operations offshore pilots are to have successfully established competency by carrying out initial offshore deck landing training, both day and NIGHT, and are to maintain competency by carrying out at least two NIGHT take-offs and landings on OFFSHORE LOCATIONS every ninety (90) days. Additionally, at least one NIGHT deck landing per year on an actual helideck (not simulator) is to be assessed by a Base or a Line Training Captain.

iv. Recency Checks After Absence:

Recency checks for all pilots are to be carried out by a suitable Senior/Line Check Captain, the Chief Pilot or Training Captain after twenty-eight (28) or more days absence from flying. For Captaincy the following limitations will apply:

Time of absence	Requirement
3 - 4 weeks	1 flight as Co-Pilot
4 - 6 weeks	2 flights as Co-Pilot
6 - 12 weeks	1 flight with an Instructor plus 1 flight as Co-Pilot
12 weeks or more	1 Flight with a Training Captain plus 1 flight as Co-Pilot plus 1 flight with Check Pilot or 2 flights with Instructor and base check if due

v. Emergency and Survival Training shall include the following:

- a) HELICOPTER emergency evacuation, wet dinghy drill, and first aid which shall be conducted every 4 years.
- b) Dry dinghy drill which shall be conducted annually.

vi. Crew Resource Management (CRM):

All aircrew engaged on the CONTRACT shall undergo Crew Resource Management (CRM) training. CRM refresher training for aircrew shall be completed every 12 months. All costs associated with CRM training and refresher training shall be to CONTRACTOR's account.

vii. Simulator Training and Line Oriented Flight Training (LOFT):

- a) All pilots are to undergo recurrent simulator training sessions every twelve (12) months on a Level C or D Full Flight Simulator (FFS) that replicates the model of HELICOPTER being flown as closely as possible. The simulator used shall be representative of the HELICOPTER, recognised by the manufacturer of the HELICOPTER, and endorsed by the appropriate aviation authority.
- b) Exercises to be covered are to include HELICOPTER systems and equipment failure, practice IFR procedures including an Instrument Rating Renewal test, CRM, and LOFT.

viii. Helicopter Underwater Escape Training (HUET):

All aircrew engaged on the CONTRACT shall complete a Helicopter Underwater Escape Training (HUET) course and be in possession of a valid certificate dated within the last four (4) years. All costs associated with attending such courses shall be to CONTRACTOR's account.

4.17 Qualified PERSONNEL – Flight Safety Officer

Flight safety officer shall meet the following qualifications;

- Shall have completed an OPITO approved (or equivalent) Helicopter Landing Officer (HLO) course;
- Shall have a minimum of one year experience conducting and documenting helideck inspections;
- Shall be familiar with ICAO Annex 14 Volume II (Heliports);
- Shall be familiar with UK CAP 437;
- Shall be familiar with IOGP Report 590, Appendix 590-F;
- Shall be familiar with CAAT regulations for helideck operations and inspections;
- Shall be familiar with the OPITO Helicopter Landing Officer Handbook;
- Shall be familiar with the Helicopter Safety Advisory Conference (HSAC) Recommended Practice Nbr 163 - Inspection Maintenance and Operation of Offshore Helidecks - 2nd Edition

5. Qualified PERSONNEL – Engineers

5.1 The CONTRACTOR shall ensure that PERSONNEL authorized to sign Certificates of Release to Service (CRS) hold valid and appropriate licenses and endorsements, are fully qualified in their respective capacities; experienced and in current practice to perform the SERVICES. The qualifications and levels of experience for engineers are detailed at Annex 3 – CONTRACTOR's Experience and Qualification Levels. The CONTRACTOR shall ensure that whenever on-the-job training is given to trainee HELICOPTER maintenance engineers, technicians or mechanics that the supervisor is experienced in the work being supervised. All formal training must be provided by an approved training organization. The CONTRACTOR shall ensure that at least one (1) airframe Licensed Aircraft Engineer and one (1) avionic Licensed Aircraft Engineer on duty in each shift shall hold valid Tropical Basic Offshore Safety Induction & Emergency Training (T- BOSIET) certificate.

5.2 Maximum Age Limits for Engineers

An engineer, on reaching the age of sixty-five (65), shall not be actively and directly engaged in HELICOPTER maintenance under this CONTRACT.

5.3 Medicals for Engineers

The CONTRACTOR shall have in place a policy and a medical scheme whereby all staff engaged in maintenance activities under this CONTRACT shall undergo periodical medical examinations. All maintenance staff engaged in tasks during flight tests and any maintenance staffs, over the age of sixty (60), undergo a medical examination at least every twelve (12) months.

5.4 Initial Training for Maintenance Staff

The CONTRACTOR shall ensure that all maintenance PERSONNEL receive formal training and complete a minimum of six (6) months experience on type prior to issue of licenses or type approvals for the types of HELICOPTER provided under this CONTRACT.

5.5 Continuation and Human Factors Training

Continuation and Human Factors training for maintenance PERSONNEL shall be arranged biennially. The training will, as a minimum, cover changes in the relevant regulatory requirements, changes in organizational procedures and the modification standard for the products being maintained and human factors issues identified from any internal or external analyses of incidents.

5.6 The CONTRACTOR shall ensure that prior to promoting engineers and supervisors to senior positions that they receive formal instruction in the CONTRACTOR's procedures, are given management training appropriate to the task, and that they are fully aware of their roles and responsibilities in the organization.

6. Qualified Personnel – Safety Manager

The CONTRACTOR shall have a well-organized and structured program to ensure that quality and safety of both maintenance and operations shall be properly and fully implemented at COMMENCEMENT DATE of this CONTRACT. It shall include detailed and operations specific Quality and Safety Manuals and the provision of qualified and trained Safety Personnel.

The Safety Manager's main responsibilities are to ensure safety and quality system is established, implemented and maintained in conformance with the standards and meet the requirements of the regulations, and to implement SMS protocol to COMPANY's SSHE.

The Safety Manager shall be full-time on site and meet the qualifications, as specified below:

- Male or female
- Academic Qualifications and Professional Certificates
 - Minimum Bachelor's Degree in any field (Bachelor's Degree in Occupational Safety & Health preferable)
- Experience/ Exposure
 - Minimum of five (5) years in SSHE in aviation industry with minimum of two (2) years in working at supervisory level
- Knowledge and Skills Required
 - General: MS Office, Report Writing, Presentation Skills and meeting with clients.
 - Technical: In-depth understanding of Occupational Health and Safety (OSH), CAAT and other related regulatory requirements.
- Personal Attributes
 - Strong interpersonal skills
 - Able to work independently
 - Team player
 - Leader
 - Managerial background

7. Maintenance Requirements

- 7.1 The CONTRACTOR shall ensure that any maintenance organizations used by the CONTRACTOR employ the necessary PERSONNEL to manage, plan, perform, supervise, inspect and release the work to be performed, and have procedures acceptable to the State of Registry/CAAT granting the approval that ensure proper maintenance practices and compliance with all relevant requirements.
- 7.2 The CONTRACTOR shall ensure that the Maintenance Data and Maintenance Programs used by its Maintenance Organization are approved according to the CONTRACTOR's State of Registry/CAAT requirements.
- 7.3 The CONTRACTOR shall ensure that its maintenance organization has a process to ensure the availability of FACILITIES, data, equipment, supplies and SPARE PARTS needed to control all required maintenance.
- 7.4 The CONTRACTOR shall provide all applicable maintenance and operation PERSONNEL with a Maintenance Management Manual (MMM) or General Maintenance Manual acceptable to the State of Registry/CAAT and should have a process to ensure that all amendments to the MMM are approved by the State of Registry/CAAT and are furnished promptly to all organizations, personnel and end users to whom the maintenance program has been issued. (e.g. Line Stations, suppliers, others).
- 7.5 If maintenance is contracted to outside organizations, the CONTRACTOR shall have a process to ensure that the MMM, which may be issued in separate parts, contains details of the maintenance agreement that exists between the CONTRACTOR and the contracted Approved Maintenance Organization.
- 7.6 The CONTRACTOR shall have a process to identify the current revision status of all applicable technical data and documentation.
- 7.7 The CONTRACTOR shall have a current list of organizations approved to perform maintenance on the CONTRACTOR's HELICOPTER, engines, components, or parts.
- 7.8 The CONTRACTOR shall have a control process to ensure that no PERSON performs maintenance on the CONTRACTOR's HELICOPTER, engines, components, or parts, unless:
- a) The PERSON has adequate FACILITIES and PERSONNEL available at the site where the maintenance is to be performed;
 - b) The PERSON holds an Approved Maintenance Organization or a Repair Station Certificate or equivalent.
- 7.9 The CONTRACTOR shall have a system for the surveillance and regular periodic auditing of contracted maintenance.
- 7.10 The CONTRACTOR shall have a process to ensure it does not operate a HELICOPTER unless it is maintained to an approved maintenance program and released to service by an Approved Maintenance Organization. The design and application of the maintenance program should observe human factors principles.

- 7.11 The CONTRACTOR shall have a procedure for ensuring that maintenance releases are completed and signed to certify that the work performed has been completed satisfactorily and in accordance with the procedures described in the applicable MMM.
- 7.12 The CONTRACTOR shall have procedures for maintenance control and technical dispatch to ensure that HELICOPTERS are not operated unless they are:
- a) Airworthy;
 - b) Appropriately equipped, configured and maintained for their intended use;
 - c) Maintained in accordance with the Approved Maintenance Program and CONTRACTOR's MMM.
- 7.13 The CONTRACTOR shall have a process to ensure that MEL/Configuration Deviation List (CDL) restricted items are being tracked and corrected within the required time intervals.
- 7.14 The CONTRACTOR shall have a process to obtain and assess continuing airworthiness information such as Airworthiness Directives (ADs), Alert Service Bulletins and recommendations from the organizations responsible for the type design and should implement the resulting actions considered necessary, in accordance with a procedure acceptable to the State of Registry/CAAT.
- 7.15 The CONTRACTOR shall have a process to ensure all modifications and repairs carried out comply with airworthiness requirements acceptable to the State of Registry/CAAT and that procedures are established to ensure that technical records supporting compliance with the airworthiness requirements are retained.
- 7.16 The CONTRACTOR shall ensure that the defect recording system includes a method to clearly highlight recurring defects to flight crews and the maintenance organization at all bases where the HELICOPTER is operated. The CONTRACTOR is responsible for identifying defects as recurring defects and notifying maintenance PERSONNEL, in order to avoid the duplication of unsuccessful attempts at rectification.
- 7.17 The CONTRACTOR shall have a system for forecasting and tracking required maintenance activities and for tracking hours, cycles, and calendar time for HELICOPTER, engines and life limited components.
- 7.18 The CONTRACTOR shall have a procedure for reporting significant defects / un-airworthy conditions as required to the State of Registry/ CAAT.
- 7.19 The CONTRACTOR's Maintenance Exposition or Procedures Manual shall include a requirement for Independent Duplicate / Required Inspection Item (RII) inspections which shall be made and certified by two (2) appropriately qualified engineers following any disturbance or dis-assembly of a HELICOPTER control system or vital point in the HELICOPTER, including electrically activated fly-by-wire systems and their connections as well as mechanical linkages. The CONTRACTOR shall ensure that sufficient PERSONNEL, appropriately qualified as detailed at Annex 3 – CONTRACTOR's Experience and Qualification Levels are available at the OPERATING BASE to meet this requirement.
- 7.20 Minimum Equipment Lists (MEL) or Minimum Departures Standard (MDS) for the HELICOPTER operated under this CONTRACT and approved by the airworthiness authority are to be immediately available to pilots and engineers for reference. The MEL/MDS shall include serviceability requirements for special equipment such as HUMS and FDR/CVR. Other

than in the event of an emergency and approval by COMPANY, HELICOPTER is not to be dispatched from base with an unserviceable CVR or FDR.

8. Avoidance of Fatigue In Maintenance PERSONNEL

- 8.1 The CONTRACTOR shall ensure that the following minimum standards are applied to prevent fatigue in all engineering staff assigned to the SERVICES.
- 8.2 **Total work period** - Total work periods should not exceed twelve (12) hours in any 24-hour period. Where, exceptionally, it is essential that the working period is extended; the Head of Maintenance should approve it on a case- by-case basis.
- 8.3 **Night Shifts** Where shifts are regularly rostered with a heavy maintenance workload to be completed through the night, the length of the duty period may be reduced from the twelve (12) hour maximum. Ideally, if night maintenance is necessary, the bulk of work should be completed by the shifts on duty up to midnight with the residue completed by a swing shift covering the period from approximately 2300 to 0700 hrs. In this case, a verbal briefing as well as a written handover sheet must be completed at the end of each shift detailing the work completed and that which needs to be completed by the incoming shift.
- 8.4 **Rest** Each full working shift should be followed by a minimum 8-hour rest period. When working 24-hour split shifts on line operations, at least 6 hours rest should be provided excluding travel. The entitlement for days off should be a minimum of 7 per month of which at least four (4) should be in a minimum of two (2) day periods. When the location or climate is arduous then this should be increased to minimize fatigue.
- 8.5 **Remote locations** On remote locations where it is not feasible to provide other than the bare accommodation necessities, a regular “time on site, time off site” routine should be set up to ensure that maintenance personnel working under these conditions do not stay in the field for prolonged periods. The minimum recommended ratio of time on site to time off site is considered to be 2:1 with a maximum period on site not to exceed two (2) months.

9. Quality System

- 9.1 The CONTRACTOR shall ensure that the QA program is under the sole control of the Quality Manager or the PERSONNEL to whom the management function for the program has been assigned and should have a system for ensuring that the QA program includes the use of control processes that are sufficiently detailed to ensure that all maintenance functions are audited and evaluated.
- 9.2 The CONTRACTOR shall ensure that Quality Assurance/Quality Control (QA/QC) departmental procedures, duties, responsibilities, and reporting relationships are described in either the MMM or a separate QA/QC manual referred to in the MMM.
- 9.3 The CONTRACTOR shall have a process to ensure that maintenance organizations used by the CONTRACTOR have a documented auditor training/qualification program and conduct internal audits that are subject to review by the CONTRACTOR.
- 9.4 The CONTRACTOR shall have a process to ensure that no new or used part is installed on an aeronautical product, unless the part meets the applicable standards of airworthiness that can be traced back to its origin during the contract period.

- 9.5 The CONTRACTOR shall have a program which ensures that a HELICOPTER logbook or an approved equivalent is maintained for all HELICOPTER operations. Any aircraft logbook in use shall have sequentially numbered pages unique to that specific logbook.
- 9.6 The CONTRACTOR shall have a process to ensure that entries in the HELICOPTER logbook are current and cannot be erased. Errors that are corrected shall remain readable and provable. The CONTRACTOR shall maintain records of Airworthiness Directives (ADs) and Service Bulletins (SBs) or equivalents accomplished in accordance with the applicable requirements prescribed in the organizations MMM.
- 9.7 The CONTRACTOR shall have a process for maintaining records of the total time in service of the HELICOPTER, engines and life-limited components.
- 9.8 The CONTRACTOR shall have a process / system to record and rectify audit findings conducted by COMPANY within the agreed timeline.

10. Maintenance Training Program

- 10.1 The CONTRACTOR shall have a system for ensuring that any maintenance organization carrying out work for the CONTRACTOR provides all maintenance PERSONNEL with initial, continuation and any additional training appropriate to their assigned tasks and responsibilities. The initial cycle for continuation training should be reviewed and revised through a QA program assessment, but this interval shall not exceed three years.
- 10.2 The CONTRACTOR shall have a procedure for ensuring that PERSONNEL signing a maintenance release are qualified in accordance with the applicable State of Registry/ CAAT licensing requirements.
- 10.3 The CONTRACTOR shall have a documented training program ensuring that PERSONNEL with technical responsibilities have sufficient knowledge of applicable regulations, standards and procedures, as described in the MMM.
- 10.4 The CONTRACTOR shall have a system for ensuring that the training program established by the maintenance organization includes training in knowledge and skills related to human performance, including co-ordination with other maintenance PERSONNEL and flight crew.

11. Tooling and Calibration System

- 11.1 The CONTRACTOR shall have a process to ensure that any maintenance organization used by the CONTRACTOR has procedures to control and document the calibration and records of all tools, including PERSONNEL own tools
- 11.2 The CONTRACTOR shall have a tool control program that ensures all personal and COMPANY owned tools are subject to a control process to identify its user, the tool's whereabouts, and the aircraft concerned. The process shall include a reconciliation of all tools at the end of any shift change, daily, or prior to releasing an aircraft for service, whichever comes first.

12. Materials, Housing and Facilities

- 12.1 The CONTRACTOR shall have a process to ensure that any maintenance organisation used by the CONTRACTOR has adequate facilities and an appropriate working environment for the task to be performed.
- 12.2 The CONTRACTOR shall have a procedure for maintaining detailed information on the various locations where HELICOPTER maintenance is to be performed. The scope of work to be performed at each of the facilities shall be included in the MMM.
- 12.3 Unless maintenance is contracted to an approved maintenance organization, the CONTRACTOR shall have facilities appropriate to the maintenance program for the storage of parts, equipment, tools and material. Those storage conditions should be secure and prevent the deterioration and damage of stored items.
- 12.4 The CONTRACTOR shall have a process to ensure that any maintenance organisation used by the CONTRACTOR has a shelf-life program for applicable stored items that includes a requirement for the shelf-life limit to be controlled and displayed.
- 12.5 The CONTRACTOR shall have a process to ensure that the maintenance organisation used by the CONTRACTOR has a secure quarantine area for rejected parts and materials awaiting disposition.
- 12.6 The CONTRACTOR shall have a process to ensure that all HELICOPTER components and parts are shipped in suitable containers which ensure protection from damage.

13. Crew Flying Hour & Flying Duty Periods (FDP) – Maximum

- 13.1 The CONTRACTOR shall ensure that no member of the flight crew works for periods in excess of those set out in the CONTRACTOR’s current Operations Manual which shall be approved by CAAT and available for inspection by the COMPANY at the OPERATING BASE.
- 13.2 The CONTRACTOR shall select and provide sufficient pilots for the efficient and safe accomplishment of the SERVICES to be performed under this CONTRACT. A Flight Duty Period (FDP) means a period which a crew member commences the duty that includes a flight or a series of flights, start counting 1 hour before the Scheduled Departure Time and stop counting 30 minute after last landing plus any time spent on administrative duties. The on-site establishment shall be sufficient to ensure that the following limitations as detailed in Tables 1-2 below can be met.

Table 1 - Duty and Flight Time Limitations HELICOPTERS

HELICOPTERS Local time of start	TWO PILOTS per 24 hours	
	Max FDP	Max Fly Hours
0600-0659	10	7
0700-0759	11	8
0800-1359	12	8
1400-2159	10	7
2200-0559	9	6

Table 2- Maximum Cumulative Flying Hours

Category	HELICOPTER
365 consecutive days	1000
28 consecutive days	110
7 consecutive days	34

- a) The flying schedule for offshore pilots working in high ambient temperatures and involving continuous flying in excess of four and a half (4½) hours shall include provisions for a break, free of duty, of at least thirty (30) minutes. This period shall not include the thirty (30) minutes for immediate post and pre-flight duties. The break shall be scheduled prior to exceeding a total of 6 hours flying.
- b) Rest periods shall normally be a minimum of twelve (12) hours but may be reduced to eleventh (11) hours where accommodation is close to the place of work. The CONTRACTOR shall ensure the compliance with CAAT’s regulation.
- c) Crews shall not work more than seven (7) consecutive days between days off.
- d) Crews shall be rostered to have not less than two (2) consecutive days off in fourteen (14) days and should average at least eight (8) days off in each consecutive five (5)-week period averaged over three (3) such periods.
- e) For split duties with less than two (2) hours rest within the FDP then no extension is allowed. With two to three (2-3) hours rest, the FDP may be extended by one hour and with three to ten (3-10) hours rest, the FDP may be extended to half the consecutive hours rest, which must not include the time for post and pre-flight duties. With more than six (6) hours consecutive rest, suitable accommodation must be provided.

13.3 These limitations apply to all flying duty periods and FLYING HOURS during these periods irrespective of the fact that the pilot may be on standby, flying or may have flown a HELICOPTER for another client.

13.4 Pilots shall maintain records showing the above cumulative totals and these records shall be available for inspection by the COMPANY.

14. Night Standby Duty

14.1 The CONTRACTOR shall, in addition to the requirements specified under Section 3 of this EXHIBIT, ensure that the requirements of the regulatory authority for flight and duty limitations are met and the maximum FDP/Flying Hours specified are observed.

14.2 After a day duty period, each pilot shall have a minimum of 12 hours rest prior to being rostered for night standby duty.

14.3 If the pilots nominated for night standby duty (at their place of rest) are not used for such, then they may be considered available for duty on the following day period.

14.4 If utilized for night flights, pilots must be given a minimum of 12 hours rest after completion of their FDP.

15. Weather Criteria And Visibility Limitations

15.1 The CONTRACTOR shall not operate any HELICOPTER in weather conditions more severe than the weather criteria for the HELICOPTER as set out in the manufacturers Flight Manual and the CONTRACTOR's current Operations Manual which shall be approved by CAAT, and available for inspection by the COMPANY at the OPERATING BASE. Operation of the HELICOPTER may also be generally limited by the COMPANY or when applying its Adverse

Weather Working Policy. Such policy shall be part of a Bridging Document, both of which shall be made available by the COMPANY.

16. Weather

16.1 The CONTRACTOR shall require that flight crews monitor available weather information

16.2 Whilst en-route, to include the following:

- a) Destination;
- b) Destination alternate (if applicable);
- c) En-route alternate(s) (if applicable).

16.3 The CONTRACTOR should have policies and provide instructions on adverse weather operations, including, but not limited to:

- a) Thunderstorms, microbursts, and other adverse atmospheric conditions;
- b) Lightning avoidance (the CONTRACTOR shall have in place systems and procedures to minimize the exposure to the HELICOPTER from lightning strikes in the vicinity of thunderstorms and shall issue instructions describing procedures to be adopted when lightning activity is forecast for the area in which a flight is to be conducted.);
- c) Turbulence;
- d) Sea state;

16.4 The CONTRACTOR shall provide instructions/procedures for wake turbulence avoidance, where applicable.

17. Fuel Planning

17.1 The CONTRACTOR shall ensure that fuel planning shall be carried out in accordance with the CONTRACTOR's Operations Manual which shall be approved by CAAT. In the event that the parameters in Section 17.1.1 and 17.1.2 below are more restrictive than the CONTRACTOR's Operations Manual, the requirements of Section 17.1.1 and 17.1.2 shall, as a minimum, apply.

17.1.1 IFR Flight Plan

Fuel shall be sufficient for the leg to destination plus the leg to an alternate, plus 10% of the above as a navigation contingency, plus 30 minutes holding fuel. A contingency is also to be allowed for start-up and taxi.

Note: Fuel computations for the leg to the alternate should be calculated at the low altitude cruise fuel consumption if this is likely to be the case. Holding fuel is computed at holding speed.

17.1.2 VFR Flight Plan

Fuel shall be sufficient for the proposed route plus 5% of the route fuel, plus 20 minutes at the cruising speed consumption. A contingency is also to be allowed for start-up and taxi.

Note: The above requirements are in addition to unusable fuel as listed in the HELICOPTER Flight Manual.

18. Alternates

- 18.1 The CONTRACTOR shall ensure that prior to using offshore alternates that the procedures and limitations are published in the Operations Manual which shall have been approved by CAAT.
- 18.2 Planning to use an offshore alternate landing site by the CONTRACTOR shall only occur if approved by the COMPANY.
- 18.3 For an IFR flight departing to a destination which is forecast to be below the heliport operating minima, two destination alternates should be selected: the first should be at or above the heliport operating minima for destination; the second should be at or above the heliport operating minima for alternate.
- 18.4 The planned landing mass of the HELICOPTER including crew, passengers, baggage, cargo plus thirty (30) minutes of final reserve fuel, shall be calculated from graphs provided in the relevant part of the Operations Manual and shall not exceed the one engine inoperative (OEI) landing mass at the time of approach to the offshore helideck. The HELICOPTER must be able to achieve (OEI) in ground effect (IGE) hover at an appropriate power rating at the offshore alternate. Where the surface of the offshore alternate helideck, or prevailing conditions (especially wind velocity), precludes an OEI, IGE, hover, OEI out of ground effect (OGE) hover performance shall be used to compute the landing mass.

19. Wearing of Lifejackets and Homing Devices

- 19.1 The CONTRACTOR shall ensure that for all overwater flights in a HELICOPTER that all PERSONS on board shall wear lifejackets. Crew life jackets shall also be fitted with a homing device capable of transmitting on the appropriate international and/or national aeronautical distress frequencies, which includes 406 Mhz.

20. Motion Limits for Landing on Moving Decks

- 20.1 The CONTRACTOR shall ensure that the CONTRACTOR's Operations Manual shall include a section specifying the pitch, roll and heave motion limits for the HELICOPTER. The limitations are to take into consideration operating limits for day and NIGHT operations and any variations applicable to the type of vessel being considered (e.g. drilling ships with differential positioning systems, semi-sub, large ship, small ship, oil tanker mooring buoy), and the location of the helideck (e.g. on small ships the bow deck, stern deck or amidships). The HELICOPTER limits and any special procedures shall be made available to the vessel operator and the COMPANY.

21. HELICOPTER Rotor Brake

- 21.1 The CONTRACTOR shall ensure that for flights to OFFSHORE LOCATIONS the rotor brake is serviceable. CONTRACTOR's PERSONNEL shall be made fully aware that except for flights back to base for rectification, an unserviceable rotor brake is not an acceptable deferred defect. This item shall be captured in the MEL/MDS/CDL for the HELICOPTER.

22. Pilots Remaining at the Controls of the HELICOPTER

- 22.1 The CONTRACTOR shall ensure that the CONTRACTOR's Operations Manual includes a section prohibiting pilots from leaving the controls of the HELICOPTER unattended while either the engines are running or the rotors are turning and allowing passengers and crew

disembarking the HELICOPTER before the rotors have stopped turning after the engines have shutdown.

23. Refueling

23.1 The CONTRACTOR shall have a published procedure for fueling with passengers embarking, on board or disembarking that includes provisions for ensuring passenger safety and egress (if necessary) after a spillage or fire. The procedure should ensure two-way communication is maintained, either by the HELICOPTER intercommunication system or other suitable means, between the ground crew supervising the refueling and qualified PERSONNEL on board the HELICOPTER.

23.2 The CONTRACTOR shall ensure that if it is an operational requirement to carry out rotors running refueling the CONTRACTOR's Operations Manual shall include written procedures covering pressure (closed system) refueling and gravity refueling and that all CONTRACTOR's PERSONNEL involved have formal training. Rotors running gravity refueling should only be used if the HELICOPTER is unable to accept pressure refueling and where local legislation permits.

23.3 During rotors running refueling on offshore helidecks, the crew shall ensure that a fireguard wearing full fire protection clothing and equipped with a portable foam or dry powder extinguisher is readily available to assist in the event of a fire during the refueling operation.

24. Flight Following

24.1 The CONTRACTOR shall provide satellite tracking for the purpose of flight following in all proposed aircraft along with a monitoring ground station and sufficiently trained surveillance personnel.

24.2 The onboard equipment shall be capable of automatically transmitting position of the aircraft at predetermined intervals at no less than 2 minutes, with 30 second intervals preferred.

24.3 The precise position of the aircraft shall be displayed on a monitor and subject to constant surveillance during the entire flight.

24.4 The onboard equipment shall be capable of reporting if the aircraft is in distress and the ground base system shall be able to detect and provide visual notification of missed transmissions from the onboard equipment.

24.5 The CONTRACTOR personnel providing surveillance shall be completely familiar with the CONTRACTOR's and the COMPANY's Emergency Response Plan and call-out procedures.

25. Radio Operators

25.1 The CONTRACTOR shall ensure that whenever a radio flight watch is maintained, that the radio operators shall be able to communicate in English, hold the appropriate radio license, be completely familiar with aviation R/T terminology and have experience in HELICOPTER operations and procedures. They shall be completely familiar with the CONTRACTOR's and the COMPANY's emergency and call-out procedures and shall maintain a radio watch log whenever the HELICOPTER is airborne; intervals between position reports shall not exceed fifteen (15) minutes. Position reports may alternatively be obtained by automatic satellite flight following equipment and associated monitoring procedures.

26. Training for Dispatchers, And Load Masters

26.1 The CONTRACTOR shall provide dispatchers and load masters that these CONTRACTOR's PERSONNEL shall be fully trained including the following:

a) Dispatchers/ Traffic Clerks

CONTRACTOR's PERSONNEL assigned to these tasks shall be qualified as per CAAT's requirements (if any) and completely familiar with the operation of HELICOPTER, including a good understanding of basic weight and balance problems and manifest documentation.

b) Load Masters

Load Masters shall be qualified as per CAAT's requirements (if any) and have completed a formal and recorded course of training covering: Safety Equipment; First Aid; Helicopter Knowledge; Emergency Procedures; Loading Procedures; Documentation and the Handling of Dangerous Goods. Where Load Masters are used to calculate and supervise the loading, they must be trained for load and balance on the HELICOPTER type in use and if carried on the HELICOPTER they are to be trained as crew and to be given crew status. The CONTRACTOR may conduct part of the training provided the course syllabus is available for reference and training is formally recorded.

27. Operation of Portable Electronic Devices

27.1 The CONTRACTOR shall ensure that passengers do not operate portable electronic devices in the cabin of the HELICOPTER unless permission has been granted by the flight crew. Passenger operated devices specifically prohibited include any transmitting device which intentionally radiates radio frequency signals and transmitters that remotely control devices.

28. Passenger and Baggage Mass Values

28.1 The procedures for the calculation of passenger and baggage mass shall be contained in the CONTRACTOR's Operations Manual or, in a separate operations instruction if contrary to the normal operating procedures. Actual passenger and baggage mass shall be used. The CONTRACTOR shall ensure that passenger's personal belongings and hand baggage are included. The weighing scales provided by COMPANY must be calibrated and located adjacent to the check-in desk. All checked-in baggage and cargo must be held in a secure and controlled area with access granted only to authorized PERSONS.

29. Carriage of Freight with Passengers

29.1 Wherever possible, both routine and urgent cargo shall be carried in a compartment which is separated by a strong bulkhead from the passenger cabin and equipped with an independent fire and smoke monitoring and extinguishing system.

29.2 The CONTRACTOR may permit the carriage of cargo with passengers in the HELICOPTER cabin provided that:

- 29.2.1 the cargo has been secured with approved means by manufacturer and in position by the CONTRACTOR's authorised aviation PERSONNEL;
- 29.2.2 the cargo will not break loose during an accident or turbulence;
- 29.2.3 the maximum number of exits shall remain available for use in the immediate

vicinity of passengers; and the cargo does not impede the effective egress of passengers during normal and emergency egress conditions.

30. First Aid Kits

30.1 Suitable and comprehensive first aid kits are to be carried on the HELICOPTER. The kits shall be serviced as part of the HELICOPTER role equipment, ideally every six (6) months, but not exceeding one year. Use of the kit shall be reported through the normal defect reporting systems to ensure that used items may be replenished prior to the next flight.

31. Passenger Briefings

31.1 The CONTRACTOR shall ensure that the following topics are covered during the passenger preflight safety briefing:

- a) Use of normal exits and seat belts.
- b) Use of survival suit, hoods, gloves and re-breather (where applicable).
- c) Requirement to wear and use lifejackets.
- d) Brace position for emergency landing.
- e) Position and use of emergency exits.
- f) Position and use of externally mounted liferafts.
- g) Position of the briefing cards, to be read.
- h) Position of the first aid kit and fire extinguisher.
- i) Position of portable ELT.
- j) No smoking or use of e-cigarettes.
- k) Use of portable computers, telephones and electronic equipment.
- l) Carriage of dangerous cargo.
- m) Danger of engine jet efflux/rotors and how to approach/leave the HELICOPTER. Draw attention to "NO STEP" areas.

31.2 The validity of the HELICOPTER safety briefing shall be twenty-four (24) hours, assuming that the type of HELICOPTER utilized remains the same type as originally briefed. Where a video briefing has been provided by other than the crew of the HELICOPTER, then the commander shall ensure that the passenger manifest has been signed to certify that passengers have received the appropriate briefing.

32. HELICOPTER Performance

32.1 The CONTRACTOR shall provide guidance to the flight crew for determining HELICOPTER performance for all phases of the flight.

32.2 The CONTRACTOR shall obtain data for all departure, destination and alternate airports/heliports/helidecks, to include:

- a) Maximum structural weights
- b) Maximum D-value
- c) Obstacles and hazards
- d) Elevation;

32.3 The CONTRACTOR shall ensure that HELICOPTER performance calculations consider all significant factors during all phases of flight, including:

- a) HELICOPTER weight (mass);
 - b) Operating procedures;
 - c) Pressure altitude;
 - d) Temperature (ISA+15C);
 - e) Wind;
 - f) Turbulence;
 - g) Obstacle data;
 - h) NOTAMS (including airport NOTAMS);
 - i) Minimum Equipment List (MEL)/Configuration Deviation List (CDL) information (If applicable)
 - j) HELICOPTER configuration/operation.
- 32.4 The CONTRACTOR shall provide en-route HELICOPTER performance data to include a service ceiling such that the mass of the HELICOPTER permits a rate of climb of at least one hundred and fifty (150) ft/min with the critical power unit inoperative at an altitude of at least one thousand (1000) ft above all obstacles along the route within ten (10) nm on either side of the intended track.
- 32.5 HELICOPTERS with a passenger-seating configuration of minimum twelve (12) seats shall be operated in Performance Class 1. Performance Class 2 operations are only permitted with approval by the COMPANY.
- 32.6 Where operations are conducted to Performance Class 1, the take-off mass of the HELICOPTER shall not exceed the maximum take-off mass specified for the procedure to be used and a rate of climb of one hundred (100) ft/min at sixty (60) m (two hundred (200) ft) and one hundred- fifty (150) ft/min at three (300) m (one thousand(1,000) ft) above the level of the heliport with the critical engine inoperative and the remaining power units operating at an appropriate power rating.
- 32.7 Where operations are conducted to Performance Class 2 the mass of the HELICOPTER at take-off shall not exceed the maximum take-off mass specified for a rate of climb of one hundred and fifty (150) ft/min at three hundred (300) m (one thousand (1,000) ft) above the level of the heliport with the critical power-unit inoperative and the remaining power units operating at an appropriate power rating.
- 33. Key Performance Indicators (KPIs)**
- 33.1 The KPIs are as set out in Appendix 1.
- 33.2 The KPIs target shall be reviewed on an annual basis and revised to reflect the principle of continuous improvement.
- 33.3 Performance against KPIs shall be discussed and agreed with COMPANY on a monthly basis.
- 33.4 If it is found that the KPIs selected are unworkable, problematic or fail to add value they may by mutual consent be redefined quarterly.
- 33.5 Closeout of any KPI quarterly period will be deemed final and cannot subsequently be re-opened.
- 33.6 The COMPANY has the right to audit all KPI information supplied by CONTRACTOR.

ANNEX 1: Key Performance Indicators (KPIs)

KPI	Strategic Area	Definition	Parameters	Target	Measure	Time Base
HELICOPTER Availability	Service Level	Percentage of hours where a helicopter was actually available versus the contractual availability.	Recorded daily Reported monthly by helicopter & total contracted fleet	96%	% of total hours available	Month
On Time Flight Dispatch	Service Level	<p>Dispatch reliability shall be the % of flights that taxi for departure within fifteen (15) minutes of the STD as per the announced flight schedule.</p> <p>In calculating this metric the CONTRACTOR shall be accountable for technical and other delays arising from the CONTRACTOR’s internal process where that process is within their direct control.</p> <p>The CONTRACTOR shall not be accountable for delays arising from weather, third parties or third party processes beyond the CONTRACTOR’s direct control or delays incurred at COMPANY request or by COMPANY processes.</p> <p>Aircraft technical failure after taxi but before airborne are defined as late, not Return To Base (RTB)</p>	Recorded daily Reported monthly by total contracted fleet	96%	% of total flights	Month
Audit Close Out	Quality & Safety Systems	Completion of audit finding closure issued by COMPANY’s auditor or COMPANY’s third party auditor within the agreed timeline.	Reported monthly after receiving findings from COMPANY’s auditor or COMPANY’s third party auditor.	100%	% close out of items due within the agreed timeline	Month

ANNEX 2: Helicopter Technical Descriptions

The HELICOPTER used for this CONTRACT shall comply with the following specifications and be equipped with the following equipment:

1. The age of HELICOPTER shall not exceed 10 years counting from manufacturing date to COMMENCEMENT DATE.
2. The type of HELICOPTER shall have minimum 12 seats capacity.
3. The type of HELICOPTER shall have 'D' Value not more than 20 m and shall have 'T' Value not more than 7.1 tonnes.
4. The HELICOPTER shall have ability to carry passengers and baggage not less than 827 kg at ISA+15°C in Zero wind condition using Hat Yai International Airport as an Alternate landing area and with IFR standard fuel reserves at land-on on the 131 Nm sector between Main Operating Base (Songkhla Airport) and offshore installation (Arthit living quarter platform).
5. The type of HELICOTPER shall have years in service after receiving Type Certificate by **Federal Aviation Administration (FAA) or European Union Aviation Safety Agency (EASA)** at least 2 years and commercial flying hours after receiving Type Certificate by **Federal Aviation Administration (FAA) or European Union Aviation Safety Agency (EASA)** at least 1,000 hours.
6. The HELICOPTER shall be offshore oil & gas configuration with IFR certified.
7. The type of HELICOPTER shall demonstrate compliance to the FAR/JAR Part 29 Amendment 45 standard.
8. The HELICOPTER shall be operated at all times by two qualified pilots.
9. The HELICOPTER shall have air conditioning installed.
10. The HELICOPTER shall be equipped with the following:

No	Equipment in HELICOPTER
1	Two primary VHF Transceivers
2	Mode S Transponder
3	Personnel Locator Beacon (PLB) including voice capability radio for each crew member
4	One Automatic Direction Finder (ADF) (Two required if ADF is only navigation source)
5	Radio Altimeter with audio/visual alert
6	Altitude Voice Alert Device (AVAD)
7	Health and Usage Monitoring System (HUMS) supported by the aircraft manufacturer
8	Flight Data Monitoring System (FDM) with onboard equipment to facilitate download
9	Instantaneous Vertical Speed Indicator (IVSI)
10	Color Weather Radar (with 2.5 nm scale)
11	Intercom / Public Address System
12	Enhanced Ground Proximity Warning System/Terrain Awareness and Warning System (EGPWS/TAWS)
13	Two VHF Omnidirectional Range / Instrument Landing System (VOR/ILS) & Distance Measuring Equipment (DME)
14	Traffic Collision Avoidance System (TCAS I at a minimum)
15	Cockpit Voice Recorder (CVR) and Flight Data Recorder (FDR) or combined Cockpit Voice and Flight Data Recorder (CVFDR)
16	Four-Axis autopilot system
17	Two GPS (IFR Technical Standard Order (TSO))
18	First Aid Kit
19	Fire Extinguishers
20	Externally mounted reversible or self-righting life rafts fitted with an Emergency Locator Transmitter certified to Sea State 6.
21	Automatically deployable emergency flotation gear (certified up to Sea State 6)

22	Underwater locator beacon with a battery life of at least 90 days.
23	Automatically Deployable Emergency Locator Transmitter (ADELT) conforming to TSO 126.
24	Helicopter Emergency Egress Lighting (HEEL)
25	High Visibility Strobe/Pulse Lights
26	Satellite Flight Following equipment
27	Be capable of carrying at least 1 stretcher securely attached to the airframe.
28	Energy attenuating seat
29	four-point harness with individual straps for all seats
30	Screen between cockpit and cabin to reduce the risk of infection between pilots and passengers

The COMPANY has right to inspect HELICOPTER and its records prior to acceptance for use.

Annex 3: Contractor's Qualification and Experience Levels

1. Pilots Experience and Qualifications shall refer to IOGP Aircraft Management Guidelines report 590 version 2, dated May 2017.
2. Engineer Experience and Qualifications shall refer to IOGP Aircraft Management Guidelines report 590 version 2, dated May 2017.

Notes:

Exceptions to the above requirements may be agreed by the COMPANY in regard to the new aircraft types are being introduced. Reference is to be made to the COMPANY in all such cases. Exceptions to the above requirements shall be subjected to CAAT regulations and may be agreed by the COMPANY.



EXHIBIT D

SSHE CONTRACT REQUIREMENTS



SSHE CONTRACT REQUIREMENTS

**FOR CONTRACT: PROVISION OF 5-YEAR
HELICOPTER SERVICES FOR OFFSHORE
OPERATING ASSETS**

CONTRACT MODE: 2



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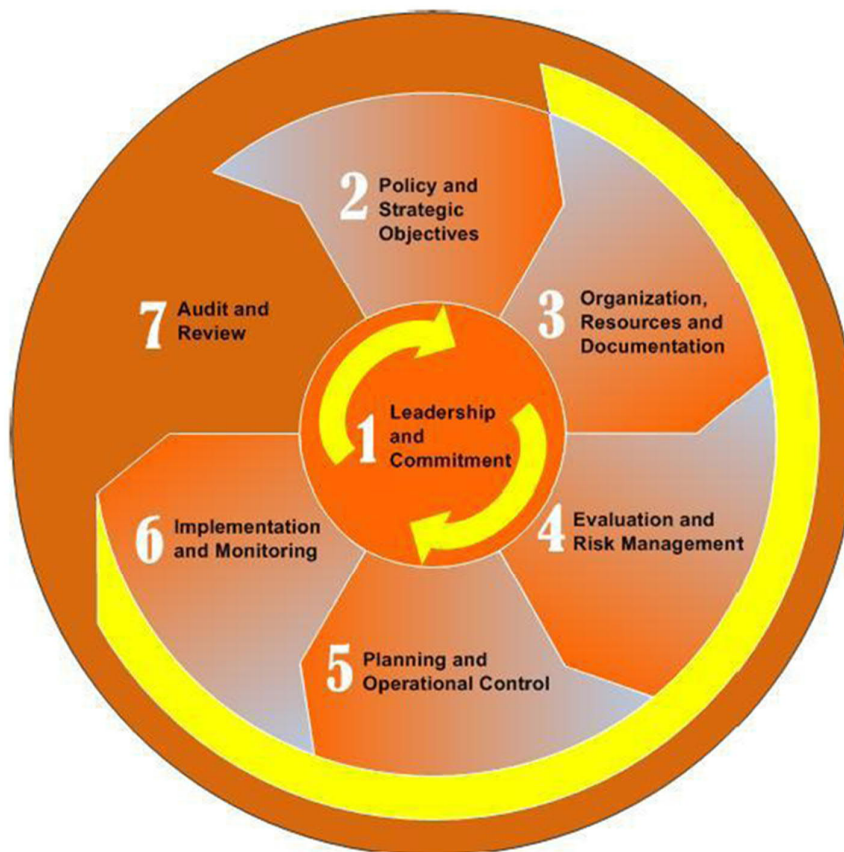
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PART 1: SSHE-MS REQUIREMENTS

1. LEADERSHIP AND COMITMENT

1.1 INTRODUCTION

COMPANY manages SSHE in accordance with its Safety, Security, Health and Environment Management System (SSHE-MS). All work must therefore be carried out in accordance with the intent and spirit of the COMPANY's SSHE Commitment and Policy statement which is shown below:





Safety, Security, Health and Environment (SSHE) Policy

SSHE is a core value for PTTEP. Adherence to safe operating standards is required to ensure the safety and health of everyone involved in our operations and communities where we operate, environmental protection and the security of our people and assets. A lifecycle SSHE management approach is required. A generative SSHE culture will help to achieve our vision of being incident free with the key objective of sustainable development.

PTTEP shall:

- Work to achieve and sustain a generative SSHE culture driven by accountable leadership and involvement of all employees and contractors. Fundamentally SSHE performance is a line management accountability.
- Set measurable SSHE objectives, key performance indicators and targets that are used for continuous improvement for top quartile performance.
- Recognise compliance obligations with all applicable SSHE laws wherever we operate or the requirements of the PTTEP SSHE management system, whichever is the most stringent.
- Manage personal and process safety risks by identifying, analyzing, evaluating and treating them using the as low as reasonably practical principle (ALARP).
- Work with contractors and suppliers to achieve PTTEP's SSHE requirements.
- Continuously reinforce employees and contractors right to use of the Stop Work Authority (SWA).
- Apply Management of Change principles to administrative, organizational and engineering changes to ensure risks remain as low as reasonably practical (ALARP).
- Improve SSHE performance by investigating and learning from incidents and implementing audits and reviews.
- Plan and prepare for emergencies and crises by providing resources, training and holding regular drills and exercises.
- Promote employee and contractor's health as part of an effective health management system.
- Apply a drugs and alcohol free workplace program to all employees and contractors. The use or possession of drugs and alcohol while working or driving are strictly prohibited.
- Reduce greenhouse gas emissions aligned with the pathway to a low carbon future.

The successful implementation of this Policy requires total commitment from PTTEP employees and contractors at all levels.

(Phongstorn Thavisin)
President and Chief Executive Officer
Date... 20/05/2020

11038-PCY-SSHE-001-R07, Effective Date: May 2020



CONTRACTOR's undertaking work on COMPANY's behalf must work to the same, if not higher, SSHE standards. Sub-Contractors are also required to meet the same standards, and CONTRACTOR is made responsible for ensuring their Sub-Contractors comply with the COMPANY SSHE Policy.

Since the COMPANY personnel and CONTRACTOR's are the most important resources, COMPANY will continually strive to achieve the ultimate goal of Target Zero from this point onward, where **“Everybody returns home safely and nobody gets hurt”**.

1.2 KEY REQUIREMENTS

- CONTRACTOR personnel working on or visiting COMPANY Facility or Work Site is to act in accordance with the COMPANY's SSHE Policy.
- The CONTRACTOR shall at all times comply with the requirements of the COMPANY's SSHE Rules and Regulations.
- Entry to COMPANY's facilities is controlled. All personnel must comply with current regulations regarding identity cards / gate passes / security checks, etc. and with instructions given on warning signs.
- No personnel shall attend work whilst impaired by alcohol, drugs or other substances.
- Special controls are in place covering sources of ignition (matches, lighters, cameras, mobile telephones, gasoline powered vehicles, etc.)
- The specific site Emergency Response procedures on the COMPANY's locations are to be followed.

1.3 TENDER REQUIREMENTS

Contracted services will be under the COMPANY's SSHE contract Mode 2 definition which means the CONTRACTOR executes all aspects of the job under its own SSHE Management System, provides the necessary instructions and supervision and verifies the proper functioning of its SSHE Management System. The COMPANY is responsible for verifying the overall effectiveness of the SSHE management controls put in place by the CONTRACTOR, and assuring that both the COMPANY's and the CONTRACTOR's SSHE-MS are appropriately compatible.

1. CONTRACTOR shall read and comply with all requirements as stated in this SSHE CONTRACT REQUIREMENTS.
2. CONTRACTOR to familiarize itself with the COMPANY's SSHE-MS as described in 11038-STD-SSHE-000-R05, COMPANY SSHE Management System Manual.
3. CONTRACTOR shall describe to Company
 - a. How the Contractor will ensure its staff is competent for their tasks.
 - b. How the Contractor will maintain its equipment in good working order as per manufactures design intent.
 - c. How the Contractor will manage SSHE during Pre-Mobilization, Execution and De-Mobilization.



4. CONTRACTOR shall develop and submit a **Draft of CONTRACT SSHE MANAGEMENT PLAN and Draft of CONTRACT BRIDGING DOCUMENT** for this tender describing the specific actions, programs and procedures that will be implemented by Contractor to manage hazards associated with the execution of the Services under the Contract. The Contract SSHE management plan shall cover all Contract phases from mobilization through execution, demobilisation and site restoration.
5. COMPANY has reviewed the content of the Services to be provided under the Contract and has identified the activities and hazards that, as a minimum, should be considered by Contractor when developing / reviewing the Contract SSHE management plan. **See Section 4.1 HAZARDS AND EFFECTS MANAGEMENT PROCESS**
6. CONTRACTOR shall submit the completed CONTRACT SSHE MANAGEMENT PLAN to the Contract Holder for approval after contract has been awarded to successful bidder.
7. CONTRACTOR shall review COMPANY's Risk assessment and demonstrate to Company that all hazards have been identified and all activities have had the hazards reduced to ALARP (As Low As Reasonably Practicable).
8. The requirements specified in this document "SSHE CONTRACT REQUIREMENTS" apply regardless of the status of an activity (e.g. standing by or demobilised). CONTRACTOR shall ensure that any person, admitted to the Site(s) by CONTRACTOR or its SUB-CONTRACTOR shall comply with the relevant SSHE Specifications herein.

1.4 PRE-MOBILIZATION REQUIREMENTS

CONTRACTOR shall have an agreed CONTRACT SSHE MANAGEMENT PLAN covering all activities from start of mobilization to the end of demobilization. CONTRACTOR shall submit the completed **CONTRACT SSHE MANAGEMENT PLAN and CONTRACT BRIDGING DOCUMENT** to the Contract Holder for approval after awarding.

The approved **CONTRACT SSHE MANAGEMENT PLAN and CONTRACT BRIDGING DOCUMENT** shall become an appendix of the contract. CONTRACTOR shall obtain formal approval from the Contract Holder for any proposed deviations from or amendments to its CONTRACT SSHE MANAGEMENT PLAN and CONTRACT BRIDGING DOCUMENT.

1.5 START / SUSPENSION OF WORK OR SERVICES

CONTRACTOR shall cooperate with COMPANY to audit CONTRACTOR on completion of the activities undertaken in the mobilization period as per the agreed CONTRACT SSHE MANAGEMENT PLAN and fill in the SSHE Commencement Certificate where required.

COMPANY will sign off the SSHE Commencement Certificate (**Appendix 1**) when satisfied with CONTRACTOR's effort and compliance with the requirements as written in this document.

CONTRACTOR shall not commence the Services until COMPANY has issued the SSHE Commencement Certificate, as part of the procedure within SSHE Contractor Management Procedure.

COMPANY reserves the right to delay the start of the work or services and/or withhold payments until such time as it is satisfied that the CONTRACTOR has properly addressed all SSHE aspects. Similarly, the



COMPANY shall have the right to suspend the work or services if the CONTRACTOR does not observe the SSHE requirements. Any costs resulting from such delay or suspension will be borne by the CONTRACTOR.

2. POLICY AND STRATEGIC OBJECTIVES

COMPANY's mission is to conduct the business efficiently with good corporate governance and being a good corporate citizen to protect the environment and improve the quality of life of the communities by ensuring the COMPANY long-term sustainable growth. For that reason, COMPANY is committed to ensuring that the working conditions in COMPANY's supply chain are safe, people are treated equally with respect and dignity, and the operating processes are environmentally responsible.

COMPANY's Objectives:

COMPANY will be an organization that strives to achieve excellence and a position of Leadership by being an injury free workplace, a leader in security and health management whilst committed to demonstrate environmental responsibilities.

CONTRACTOR shall support COMPANY in achieving its objective.

CONTRACTOR's personnel will be working under COMPANY's SSHE MS and SSHE Policy and Objectives.

2.1 LEGALISATION, COMPANY AND INDUSTRY REQUIREMENTS / STANDARDS

CONTRACTOR shall ensure all works and services are governed and realized in a manner complying with the following, in order of precedence:

1. Works and Services shall comply with all applicable Thailand Laws.
2. CONTRACTOR shall commit themselves to uphold the human rights of workers and to treat them with dignity and respect as understood by international norms which include:
 - a) **Freely Chosen Employment:** COMPANY's suppliers/CONTRACTORs shall not engage or employ people against their own free will.
 - b) **Child Labor Avoidance:** COMPANY's suppliers/CONTRACTORs shall not employ children below the age where the law of the country permits employment. Young workers may also be barred from performing night work or hazardous work.
 - c) **Wages and Benefits:** Compensation paid to workers shall comply with all applicable wage laws, including those relating to minimum wages, overtime hours and legally mandated benefits.
 - d) **Non-Discrimination:** COMPANY's suppliers/CONTRACTORs shall not engage in discrimination based on sexual orientation, race, color, religion, age, marital status, pregnancy, political affiliation, or disability in hiring and employment practices.
 - e) **Human Treatment:** COMPANY's suppliers/CONTRACTORs shall respect worker's rights and shall ensure no harsh and inhumane treatment, including any mental or physical coercion or verbal abuse of workers.



-
- f) **Freedom of Association:** COMPANY's suppliers/CONTRACTORS shall recognize that employees are entitled to be, or refrain from being, union members.
3. For works or services in Thailand particular attention is drawn to the maximum number of working hours allowed for onshore and offshore operations, and the maximum duration of stay offshore per rotation, as defined by Thai Legislation (Edition 7, article 1, clause 2 of Labour Protection Act BE 2541 date 19th August 1998).
4. Works and services shall generally comply with relevant industry standards and internationally recognized codes of practice issued by organizations such as, but not limited to:
- International Oil and Gas Producers (IOGP) Report 590 Aircraft Management Guidelines, Version 2, dated May 2017
 - NSL – The International Rigging and Lifting Handbook
5. COMPANY's Documents:
- COMPANY SSHE Policies
 - COMPANY SSHE Requirement for Contractors
 - COMPANY SSHE Standard and Procedures
 - COMPANY Crisis and Emergency Response Plan
 - COMPANY Waste Management Plan
 - COMPANY Incident Management
 - Site Standing Instructions and Operating / Maintenance Procedures

Exceptions to these SSHE Requirements for Contractors may be requested in writing by CONTRACTOR. Such requests are to be addressed to the COMPANY Representative justifying why they are being made and providing alternative arrangements to ensure an equivalent SSHE standard is maintained. Subject to acceptance by the COMPANY Representative in the first instance, such exceptions will be referred to the COMPANY SSHE Department for review and approval.

2.2 STOP WORK AUTHORITY (SWA)

COMPANY reserves the right to direct CONTRACTOR to stop, or not proceed with, any work that in COMPANY opinion is unsafe. If directed to do so such actions will not prejudice any other conditions of CONTRACT as established.

CONTRACTOR is required to have in place a STOP work system where all employees and sub-contractors are encouraged and empowered to intervene and stop any work at any time to discuss the hazards and risks.

3. ORGANIZATION, RESOURCES AND DOCUMENTATION

3.1. ORGANIZATION

CONTRACTOR(s) shall prepare a contract-specific organization chart showing personnel responsible for the implementation of SSHE objectives.



All SUB-CONTRACTORS shall be evaluated for the SSHE Management Capabilities and the requirements as stated in this document are applicable to them.

CONTRACTOR shall allocate sufficient resources at all levels to effectively manage SSHE.

3.2. ROLES AND RESPONSIBILITIES

The CONTRACTOR is to demonstrate its commitment in SSHE through:

(a) Management of SSHE:

- Decisions consistent with its SSHE policy and objectives.
- Deliberations of SSHE matters in every management meeting.
- Report, investigation & follow-up of every SSHE incident appropriate to its potential outcome or consequence.
- Efforts for continuous improvement in all aspects of SSHE performance.
- Clearly defined SSHE requirements and Standards.
- Cascading of SSHE responsibility to Leads, Managers, Supervisors and workers.
- Effective Sub-Contractor Management in meeting SSHE requirements.
- Effective Risk Control and Contingency preparedness.

(b) Monitoring and Follow-up:

- Monitoring the implementation of the CONTRACT SSHE MANAGEMENT PLAN, SSHE MONITORING PROGRAM and SSHE Standards, taking steps as appropriate towards compliance.
- To visit all work areas for inspections and audits defined in the CONTRACT SSHE MANAGEMENT PLAN and SSHE MONITORING PROGRAM.
- Follow up on implementation of action items arising from incident reports and investigations, inspections and audits.
- Contractor shall prepare annual contract SSHE PREFORMACE REPORT providing feedback to Company Management on the overall SSHE performance of the Contractor and any Sub-Contractors. Report shall be submitted Contract Holder and SSHE representative.

CONTRACTOR shall submit clear job descriptions for all positions in the organisation describing the positions roles and responsibilities and demonstrate how they are socialised to the Project / Work Organisation.

CONTRACTOR shall provide sufficient number of qualified SSHE personnel to be employed on the Contract, describe their roles and responsibilities and provide CVs for the contract SSHE personnel.

Expected responsibilities of Contractor SSHE personnel are:



-
- Preparing and monitoring progress of Contract SSHE Plans
 - Hazard identification and risk assessment
 - Formulating SSHE rules / instructions
 - SSHE communication to and participation of contractor workforce in SSHE matters
 - SSHE training for contractor personnel
 - Sub-contractor assessment
 - Environmental and health monitoring (if required)
 - Incident investigation and anomaly reporting
 - Emergency response preparedness
 - SSHE statistics and performance monitoring/reporting,
 - Inspections and audits, and
 - Implementation and monitoring of SSHE Improvement plans

Contractor SSHE personnel shall not be responsible for line management and supervision or SSHE implementation. SSHE personnel shall have a role of facilitator / advisor.

Minimum Competence for Contractor SSHE Personnel

CONTRACTOR shall provide competent and experience SSHE Personnel and comply with the followings.

- Ability to communicate effectively at all levels of the Contractor's organization
- Ability to communicate in written and spoken English
- Training ability in incident prevention
- Ability to conduct incident investigations and identify underlying causes
- Knowledge of SSHE hazards identification and risk assessment for preventing and recovering from accident situation
- Ability to facilitate and develop SSHE Management Plans
- Ability to conduct and report SSHE audits.

CONTRACTOR shall propose organization for approval by COMPANY with appropriate ratio of workforce, supervisor and SSHE Personnel depending on risk and complexity of contract work scope. CONTRACTOR will dedicate the SSHE functions to the project/contract work scope and once approved not change them or reassign duties unless approved by COMPANY.



3.3. TRAINING AND PERSONNEL COMPETENCY LEVEL

CONTRACTOR is responsible for providing personnel, with the skills and SSHE trainings to work in a safe, secure, healthy and environmentally and responsible manner.

CONTRACTOR shall provide competent personnel as per provided Job Descriptions.

The skills of the personnel shall be such that they are capable of playing a full role in management of the hazards presented by the work.

The CONTRACTOR will submit CV's of key staff for COMPANY approval and may be requested to provide staff for interview at COMPANY's discretion.

The CONTRACTOR shall record the information in support of the above requirements.

3.3.1 SSHE TRAINING REQUIREMENTS

CONTRACTOR shall develop SSHE Training Matrix in line with COMPANY SSHE Training Matrix for approval by CONTRACT HOLDER in accordance with the minimum SSHE training requirements listed in Table 1 Mandatory SSHE Trainings Matrix.

CONTRACTOR shall provide the training to CONTRACTOR and SUB-CONTRACTOR personnel (including refresher training) in accordance with the requirements of the SSHE Training Matrix at the sole cost of the CONTRACTOR.

CONTRACTOR shall maintain an up-to-date list of all personnel employed under the Contract, and details of the training courses they have attended, including the attendance date.

All CONTRACTOR's personnel shall have completed the training listed in Table 1 Mandatory SSHE Training Matrix before commencement of the Services, unless stated otherwise in Table 1 Mandatory SSHE Training Matrix or unless otherwise approved by the Contract Holder in writing.

CONTRACTOR and COMPANY shall plan for the training to be undertaken prior to the mobilization phase of the contract.

TABLE 1 MANDATORY SSHE TRAININGS MATRIX

Training Course	Required	Arranged By	Refresh Frequency (Year)	Position				Remark
				Management / Supervisor Level	Master / Chief Officer / SSHE Officer	All Staffs	Selected Person	
Basic SSHE or SSHE orientation training (Thai Labor Law)	B	Contractor	-	-	-	✓	-	
Basic fire fighting	B	Contractor	-	-	-	✓	-	
Basic First aid	B	Contractor	3	-	-	✓	-	
Safety observation and communication	A	Contractor	-	-	-	✓	-	
Job Safety Analysis (JHA or JSA)	B	Contractor	3	-	-	✓	-	All operation personnel
Safety Officer, Management Level (จป.บริหาร)	B	Contractor	-	✓	-	-	-	Personnel identified by law as Management (Thai law requirement)
Safety Officer, Supervisor Level (จป.หัวหน้างาน)	B	Contractor	-	✓	✓	-	-	Personnel identified by law as Supervisor (Thai law requirement)
Safety Officer, Professional Level (จป.วิชาชีพ)	B	Contractor	-	-	✓	-	✓	Persons appointed by Contractor (Thai law requirement)
Emergency Preparedness	B	Contractor	-	-	-	✓	-	
Heli-port Emergency Response Procedure	B	Contractor	-	-	-	✓	-	
Tropical Basic Offshore Safety Induction & Emergency Training (T-BOSIET)	B	Contractor	4	-	-	-	✓	One who has attended from OPITO certified is accepted. Selected person(s) mean staff that require to go offshore.
Crane, Lifting, Slings, Rigging and Fork Lift Operations	B	Contractor	-	-	-	-	✓	For who require follow Thai law and regulation.
High pressure gas cylinder handling	B	Contractor	-	-	-	-	✓	For who handle high pressure gas cylinder.
Work at Height	B	Contractor	-	-	-	-	✓	For who working at high more than 1.8 m.
Safe Handling of dangerous goods and chemicals	B	Contractor	2	-	-	✓	✓	For who handles chemical and Dangerous goods
Incident investigation	A	Contractor	-	✓	✓	-	✓	Selected person is investigator
PTTEP SSHE Induction	B	COMPANY	-	✓	✓	✓	-	
PTTEP Permit to Work (PTW)	B	COMPANY/ Contractor	-	-	✓	-	✓	For who has to handle PTW



Legend: **B** – Required **B**efore work commencing at site;

A - Required to attend within 2 months **A**fter contract commencement date.

Note 1: Any additional SSHE training required by Company to the above mentioned, the cost shall be borne by Company.

Note 2: Any additional SSHE training required by **Law** to the above mentioned, the cost shall be borne by Contractor.

3.3.2 COMPETENCY

CONTRACTOR shall ensure that all employees (including sub-contractors) are competent to perform their work tasks, that relevant SSHE training is provided, and that SSHE requirements are incorporated into competency assessment and assurance programs.

CONTRACTOR shall be capable of demonstrating to COMPANY that all its staff and SUBCONTRACTOR(s) are competent for the position they will be filling for the execution of the services under contract.

CONTRACTOR shall ensure that all employees (including SUBCONTRACTOR(s)) are competently supervised.

4. EVALUATION AND RISK MANAGEMENT

4.1. HAZARDS AND EFFECTS MANAGEMENT PROCESS (HEMP)

COMPANY aims to manage all the SSHE risks that are associated not only with its own activities but also those of its CONTRACTORS. Key to this process is to follow the formal “Hazard and Effect Management Process” HEMP.

The process requires a structured examination of the activities required in the execution of any particular item of work in the following manner:

Identify	Identify the activities and associated hazards
Assess	Assess the risks involved (including the level of risk)
Control	Verify that adequate controls are in place such that risks are minimized
Recover	In the event that the control measures are unsuccessful how is recovery achieved.

COMPANY has reviewed the content of the Services to be provided under the Contract and has identified the hazards related to the activities under the tender. COMPANY has also highlighted which Company documents shall be followed to reduce the risk to ALARP.

CONTRACTOR shall prepare safety cases report and review the listing of activities, based on the information provided in the Contract Scope of Works and the SSHE Contract Requirements for completeness and shall highlight where CONTRACTOR has specific procedures it has to manage the risks.



CONTRACTOR shall fully describe the manpower that will be applied to the SSHE management of the Contract, including names, qualifications and experience. Copies of each individual CV will be included in the Tender documentation for the SSHE Contract Requirements.

CONTRACTOR shall cover all Contract Phases from mobilization through execution, demobilization and site restoration.

CONTRACTOR shall clearly indicate the policy, procedures and standards to be adopted during each phase of the Contract.

4.2. RISK ASSESSMENT

All work shall have a documented risk assessment with a Job Safety analysis (JSA) / Job Hazard Analysis (JHA) as a minimum. Risk assessments shall be an integral part of Permit to Work (PTW) System and be attached to the PTW.

Before commencing work CONTRACTOR shall undertake a full SSHE risk assessment of the work. CONTRACTOR may use their own risk assessment techniques e.g. Job Hazard Analysis, or request workshop review attendance from Contract Holder and COMPANY SSHE Department.

CONTRACTOR shall ensure their personnel at the work site are aware of the risk assessment and follow any precautions identified.

Risk assessments performed must include environmental and community impacts of CONTRACTOR's work e.g. spill prevention/response, waste management, prevention of external complaints etc.

CONTRACTOR must establish a robust system for tracking status and close out of Risk / Hazard findings actions and not commence work until it is demonstrated that actions have been satisfactorily completed.

4.3. SSHE INCIDENTS

CONTRACTOR shall report an incident in accordance with the COMPANY's Incident Management Standard. COMPANY shall review all work-related SSHE incidents.

4.4. EMERGENCY RESPONSE

CONTRACTOR shall use own emergency response plan and procedure including taking part in drills and exercises. CONTRACTOR shall develop emergency response plan to align with COMPANY emergency response plan in Bridging Document.

In case where COMPANY provides emergency including medical emergency support then it reserves the right to back charge CONTRACTOR for response arrangements including follow up treatment and transportation as necessary.

CONTRACTOR shall ensure its employees have sufficient insurance coverage for its staff to be treated in the COMPANY nominated Hospitals otherwise the treatment cost for injury from work shall be responsible by CONTRACTOR for CONTRACTOR or SUB-CONTRACTOR personnel.



5. PLANNING AND OPERATIONAL CONTROL

5.1. CONTRACT SSHE MANAGEMENT PLAN

Contract SSHE Management Plan is mandatory, shall be specific to each individual contract, and shall reflect the nature of the work to be performed and the specific hazards presented by the work.

CONTRACTOR shall develop the Contract SSHE Management Plan and submit this with the tender submission. This document shall be used to evaluate the contractor's SSHE Management capabilities and after the award the Contract SSHE Management Plan will be reviewed with Contractor and upgraded using the Contract SSHE Guideline.

The Contract SSHE Management Plan shall cover all Contract Phases from mobilization through execution, demobilization and site restoration, details provided shall fully describe the manpower, equipment for the Contract. The Contractor will fully describe the manpower that will be applied to the SSHE management of the Contract, including names, qualifications and experience in Tender Documents.

The Contract SSHE Management Plan should include details of SSHE activities implementation and frequencies based on 7 elements of the SSHE-MS and include such items as:

- Worksite visits by CONTRACTOR Management
- SSHE Meetings
- CONTRACTOR SSHE targets and key performance indicators.
- Risk management programs
- SSHE training for CONTRACTOR and sub-contractors
- Medical check-up programs CONTRACTOR employees
- Liaison between both CONTRACTOR REPRESENTATIVE and COMPANY REPRESENTATIVE for SSHE issues
- Emergency and Contingency Plans including Drills and Exercises
- Security Arrangements
- Equipment Certification and Third party approvals
- Waste and Environmental Programs
- Incident Management
- SSHE Audit and Inspection Plan by CONTRACTOR
- Etc.

CONTRACTOR shall strictly implement the Contract SSHE Management plan throughout the contract phase.

CONTRACTOR shall implement the Contract SSHE Management Plan for this CONTRACT and highlighting its activities and performance SSHE monitoring program.



Contractor shall develop SSHE Monitoring Program in order to monitor progress of SSHE implementation in place and prepare the SSHE performance report for updating the status of SSHE Monitoring Program to CONTRACT HOLDER on monthly basis.

Contractor shall develop the annual SSHE Performance Report to update the overall SSHE performance to CONTRACT HOLDER.

Note: Mobilization can only commence if Contract Holder has signed off on the Contract SSHE Management Plan.

5.2. OPERATIONAL CONTROL

COMPANY and CONTRACTOR shall establish HEMP (HAZARDS for Hazard Identification) to manage the identified risks to ALARP.

Further specifications have been identified and their requirements are listed under section 8.

LIFE SAVING PROGRAM - The COMPANY Life Saving Program is adapted from IOGP - Life Saving Rules. It aims to help COMPANY's employees and contractors comply with company-wide rules covering the activities of highest safety risk. The Standard set out to meet the following objectives:

- Prevent harm to COMPANY's employees and contractors.
- Improve compliance with the safety standards/rules and enhance "Culture of Compliance"
- Achieve LTI Free and Injury Free organization by eliminating incidents / injuries caused by non-compliance with the Life-Saving Standard
- Support Behavioural Based Safety culture where believing that no fatalities and no incidents that harm people is possible

This Standard applies to all CONTRACTORS. It requires COMPANY and CONTRACTORS working for COMPANY to implement the Life Saving Program to minimize and/or eliminate serious incidents which are harmful to people, improve SSHE culture of all personnel in their area and to support COMPANY's ultimate goal of being an Injury Free Organization.

5.3. APPLICABLE DOCUMENTS

The following COMPANY controlled documents are applicable to the activities as described in the work scope and have been referenced in the HEMP process.

- 1) CONTRACTOR shall adhere to the documents listed below.
- 2) CONTRACTOR shall ensure it has access to these documents and any updates thereto.
- 3) CONTRACTOR shall request COMPANY to provide (access to) these documents if this is not the case.
- 4) CONTRACTOR will monitor updates to these documents and inform COMPANY of such updates.
- 5) In the event that COMPANY decides to implement any update to the documents listed below, COMPANY will issue an instruction to CONTRACTOR.



- 6) CONTRACTOR shall ensure that hardcopies or electronic copies of the documents listed below are readily available to all staff for which they are relevant, including on the Site, and that all staff for which they are relevant are fully familiar with their content.
- 7) All documents listed in the table below and are available on site and are provided on a DVD, once the Contract has been effective.

COMPANY's CONTRACT Specific SSHE Document:

Ref. No.	Doc. Code	Title	Remarks
	11038-STD-SSHE-305-R05	SSHE Training and Competency Standard	
	11038-STD-SSHE-401-R06	SSHE Risk Management Standard	
	11038-STD-SSHE-420-008-R03	Safety Case Standard	
	11038-STD-SSHE-503-R02	Environmental Management Standard	
	11038-STD-SSHE-508-R06	Management of Change Standard	
	11038-STD-SSHE-595-013-R01	Life Saving Rules Standard	
	11038-STD-SSHE-600-011-R06	Incident Management Standard	
	SSHE-106-STD-500	Emergency and Crisis Management Standard	
	SSHE-106-STD-540	Operational Safety Management Standard	
	SSHE-106-STD-560	Occupational Health Management Standard	
	11003-PDR-SSHE-561-002-R01	Medical Assessment of Fitness to Work for Domestic Offshore Workers Procedure	
	11038-PDR-SSHE-562-006-R00	Work Related Injury, Illness Case Management Procedure	
	12148-PDR-SSHE-505/01-R01	Lifting Operation Safety Procedure	
	12148-PDR-SSHE-505/38-R00	Chemical Management Procedure	
	12148-PDR-SSHE-505/42-R00	Permit to Work Procedure	
	11003-GDL-SSHE-501-003-R02	Medical Emergency Management Guideline	
	SSHE-106-PDR-502	Emergency Management Plan	
	SSHE-106-PDR-521	Waste Management Procedure	
	11003-GDL-SSHE-561-005-R01	Fitness to Work Guideline	
	12148-GDL-SSHE-401/00/08-R01	Job Safety Analysis (JSA) Guideline	
	12148-GDL-SSHE-540/09-023-R01	Working at Height Safety Guideline	
	12148-GDL-SSHE-602-024-R01	Incident Investigation Guideline	
	12148-GDL-SSHE-603/00/01-R01	5S (Sorting, Setting in Order, Systematic Cleaning, Standardizing, Sustaining) Guideline	
	SSHE-106-GDL-564	Drugs and Alcohol Guideline	
		Company SSHE Handbook	
	10012-GDL-SSHE-620-001-R01	Stop Work Authority	



Site Specific SSHE Documents

Ref. No.	Doc. Code	Title	Remarks
	10009-OLG-STD-4201	Aviation Standard	
	10009-OLG-GDL-4201	Aviation Management Guideline	
	11017-PDR-LOG-4204-R00	Helicopter Landing Officer Procedure	
	10011-PDR-SSHE-501.07-R16	Tropical Cyclone Plan	
	SSHE-13234-PDR-502.01	ART Emergency Response Plan	
	SSHE-13227-PDR-502.01	GBN Emergency Response Plan	
	13231-PDR-SSHE-502.01-40-R01	GBS EMERGENCY RESPONSE PLAN(GBS)	

CONTRACTOR shall provide similar listing of CONTRACTOR controlled documents that are applicable to the activities in the work scope and that have been referenced in the HEMP process.

CONTRACT DOCUMENTS

CONTRACTOR shall provide similar listing of CONTRACTOR controlled documents that are applicable to the activities in the work scope and that have been referenced in the HEMP process and develop specific procedures, policies and instructions are required to bridge with COMPANY and Contract references SSHE Standards.

6. IMPLEMENTATION AND MONITORING

CONTRACTOR shall support COMPANY in achieving its SSHE performance KPI's and shall report on the CONTRACTOR's Leading and Lagging Indicator performance during the duration of contract on a weekly and monthly basis.

Item	Description	Unit	Target
1	Number of Fatality	Number of case	0
2	Lost Time Injury case	Number of case	0
3	Total Recordable Injury case	Number of case	0
4	Major Accident Event case	Number of case	0
5	Air craft Accident (Significant (3) Level up + HPI)	Number of case	0
6	Environmental Spill	Tons	0
7	SSHE Plan	% Completion	100



6.1 SSHE COMMUNICATION

CONTRACTOR shall list the typical communication techniques used to make contract personnel aware of SSHE issues in the Contract SSHE Management Plan. Examples include:

- Meetings (Including sub-contractors)
- Notice boards (indicate locations)
- Newsletters (indicate frequency of issue)
- Describe typical methods of SSHE promotion during contracts, e.g.:
 - small 'give away' with SSHE message
 - competitions and quizzes
 - achievement of SSHE milestones
 - promotion of SSHE anomaly reporting and ideas
 - safe completion of high risk activities
 - driver awards to promote safe driving

CONTRACTOR's personnel will actively participate in tool box talks prior to the execution of activities.

6.2 SSHE MEETINGS

In the Contract SSHE Management Plan, CONTRACTOR shall describe a typical schedule for contract specific SSHE meetings to review and communicate SSHE issues to all level of the contract specific organization and between COMPANY, the CONTRACTOR and Subcontractors, including (as appropriate):

- Pre-Project / Pre-Mobilization SSHE Kick Off Meeting
- COMPANY / CONTRACTOR SSHE meetings
- CONTRACTOR /Sub-contractor SSHE meetings
- CONTRACTOR SSHE Committee meetings (with workforce involvement)
- General SSHE meeting
- Pre-Tour Safety meeting
- Pre-Job Safety meetings / Toolbox meetings.

CONTRACTOR shall hold weekly safety meetings and minute the meeting covering staff attendance, topic discussed and topics raised.

CONTRACTOR shall assign senior staff and/or safety officer responsible under this contract to participate in COMPANY Safety Meetings.



6.3 PERFORMANCE MONITORING AND REPORTING

CONTRACTOR shall ensure that all Unsafe Acts/Conditions, Incidents/Accidents and Pollution/Spills are reported without delay to COMPANY. CONTRACTOR shall also have in place a Behavior Based System program for positive reinforcement.

CONTRACTOR shall ensure full cooperation in any investigations required to identify root causes and actions to prevent recurrence. This includes providing relevant documentation, personnel interviews, membership of investigation teams etc.

COMPANY policy is to operate a "no blame" reporting culture. CONTRACTORS are encouraged to report Unsafe Acts/Conditions and Incident/Accidents and establish an observation reporting system for utilization by its work groups.

CONTRACTOR shall monitor SSHE performance as agreed in Contract SSHE Monitoring Program and shall complete and submit **Appendix 2 – SSHE Statistics - Monthly Return**, on a monthly basis.

7. AUDITING AND REVIEW

CONTRACTOR shall initiate a schedule for SSHE audit and inspections and COMPANY will audit the CONTRACTOR's performance as agreed in the CONTRACT SSHE Management Plan and SSHE Monitoring Program.

CONTRACTOR shall provide resources to implement timely remedial actions following the audits.

CONTRACTOR shall include management review of SSHE performance in the Monthly and Annually SSHE Performance Report.

8. ADDITIONAL SSHE MS REQUIREMENTS

8.1. SSHE NON-COMPLIANCE PENALTIES

CONTRACTOR shall accept the below requirements for SSHE Non-Compliance.

1. Repeated failure by CONTRACTOR to comply with the Contract SSHE obligations may result in the removal from Site of the relevant CONTRACTOR's supervisory and/or managerial Personnel.
2. In the event that COMPANY considers that CONTRACTOR has failed to comply with the latest approved Contract SSHE management plan, or other Contract SSHE requirements, then COMPANY shall issue CONTRACTOR with an SSHE default notice.
3. An SSHE default notice is any written notification issued by COMPANY detailing specific aspects of the Services that do not comply with either the latest approved Contract SSHE management plan or other Contract SSHE requirements.
4. Where repeated SSHE default notices are served by COMPANY relating to the same SSHE default then the following remedies are available to COMPANY:



SSHE Default	Penalty
Repeated Occurrence (two or more default notices for the same default)	Increased supervision by COMPANY of CONTRACTOR at the cost of CONTRACTOR
Persistent non-conformance (three or more default notices for the same default)	Suspension of CONTRACTOR and suspension of CONTRACTOR's registration for the relevant service group of the Contract

8.2. CONTRACTOR'S REPRESENTATIVE

The CONTRACTOR's Representative is responsible for:

- Ensuring that all COMPANY SSHE requirements are taken into account during all stages of the CONTRACT
- Ensuring that all legal and COMPANY SSHE requirements are complied with during execution of work
- Carrying out periodic checks to ensure CONTRACTOR personnel at worksite are complying with COMPANY SSHE requirements, such as Weekly SSHE Management walkthrough.
- Acting as focal point for discussions on SSHE issues with COMPANY and monthly chairing of SSHE Meeting with COMPANY
- Ensuring CONTRACTOR's tools & equipment complies with COMPANY SSHE requirements and are inspected before sending to worksite.
- Ensuring that medical response is conducted upon the interest of the patient
- Ensuring risk control and mitigation and Emergency Response and Contingency
- Cascading of SSHE responsibilities to all personnel and monitoring performance
- Managers and Supervisors lead by SSHE example and promote safety as their first priority
- Ensuring effective competency control and training arrangements
- Ensuring minimum SSHE arrangements and provisions for personnel giving due regard to their health and welfare.

8.3. CONTRACTOR'S SAFETY / SSHE REPRESENTATIVE

CONTRACTOR shall ensure compliance with the following requirements:

If the CONTRACTOR is supplying more than 50 personnel to work on site then CONTRACTOR must appoint a full time competent SSHE Representative and to be based on site. This SSHE Representative shall report directly to the most senior contractor's representative on site.



For over 100 persons there shall be at least 2 full time SSHE Representatives on site and this ratio shall be maintained as numbers increase.

Qualifications of the CONTRACTOR's SSHE Representative(s) shall be approved by CONTRACT HOLDER, including personnel replacement, in consultation with COMPANY SSHE Department.

8.4. WORKING CONDITIONS

CONTRACTOR shall maintain a low turnover rate of personnel. Any more than this and COMPANY shall be informed. Replacements are subject to COMPANY approval and CV's shall be submitted in advance.

Handover is important and written handover notes shall be provided from shift to shift and for key personnel from rotation to rotation.

CONTRACTOR shall ensure that drinking water and welfare facilities are adequately provided to CONTRACTOR personnel such as toilets, accommodation and shelter from the weather, washing facilities, PPE storage and laundry in line with COMPANY and international standards such as ILO and OSHA.

8.5. SITE SSHE INDUCTION

CONTRACTOR shall provide SSHE Induction to personnel working on CONTRACTOR work site which adequately covers but not limited to the followings:

- COMPANY and CONTRACTOR's SSHE Policy
- SSHE Rules and Regulations
- COMPANY Life Saving Programs
- Site Specific SSHE and Operational Procedures
- Security systems as applicable
- Smoking, Drugs, Alcohol and Health Reporting
- Reporting Incidents, Near Misses and Anomalies
- Emergency Procedures and what to do in event of Fire, Injury etc.
- Housekeeping, Waste management, Environmental Management
- Permit to Work and JSA requirements
- Scope of Work
- Associated Hazards

In addition to basic SSHE induction, all supervisors shall attend a further induction on the following subjects.

- Accident/Incident investigation
- SSHE Inspection
- SSHE Monitoring Program
- Permit to work



- Job Safety/Hazard Analysis (JSA/JHA)

Records shall be maintained of all inductions undertaken.

8.6. DISCIPLINE OF CONTRACTOR'S PERSONNEL

CONTRACTOR personnel shall comply with COMPANY including site specific rules and regulations. In addition, no horseplay, fighting, gambling or fishing is permitted. An appropriate standard of cleanliness and dress is required. Smoking is permitted only at designated areas.

The possession of drugs (except prescription drugs) and alcohol offshore is strictly forbidden. Prescription drugs must be notified to the COMPANY SITE Doctor or medic upon arrival at remote onshore sites.

COMPANY reserves the right to test personnel when on COMPANY SITES for drug and/or alcohol use either by site random test, cause test or immediately post-accident.

Any persons found in possession of drugs and/or alcohol, or to have used drugs and/or alcohol on COMPANY SITES will be removed from SITE immediately, and in the case of controlled drug possession/use will be subject to investigation and reporting to the local authorities as necessary.

COMPANY reserves the right to direct CONTRACTOR to remove personnel from the COMPANY work site or CONTRACTORS area of work, whom, in COMPANY opinion, are guilty of misconduct, incompetence, or negligence. If required, CONTRACTOR must take such action immediately.

As necessary CONTRACTOR shall ensure SSHE Rules are developed and established in appropriate languages considering the environment, activities of work local customs and communities who may be impacted by activities. As necessary these rules shall be agreed, approved by COMPANY and shall effectively cover or refer to COMPANY Life Saving Program.

8.7. FITNESS TO WORK

CONTRACTOR shall ensure that CONTRACTOR (and SUB-CONTRACTORS) personnel are medically fit for working onshore in line with COMPANY Fitness to Work Guideline (11003-GDL-SSHE-561-005).

- Ensure that medical examination (pre-employment and annual medical check-up) has been conducted by recognized medical centers and shall compared all tests and examinations required to perform the work according to age, sex and work location.
- Specific jobs or working conditions listed below require a specific medical evaluation of fitness to work for that task.
 - Breathing apparatus (BA) work
 - Firefighting and Rescue team work
 - Crane driving
 - Professional driving
 - Personnel who work at remote location
- The medical fitness certificate must be issued by a duly authorized doctor and must specify the tests undertaken and confirm that the person is medically fit to work onshore. Any queries concerning an individual's fitness for work offshore shall be referred to COMPANY Medical Advisor whose decision is final.



- Employee has access to worksite as long as his medical certificate is valid.
- Upon request COMPANY may request to see original certificate; this shall be returned in due course.
- Medical examination and Fitness Certificate is at CONTRACTOR's own cost.
- Medical reports are strictly confidential and shall be communicated to COMPANY Doctors only.
- Whenever a person has been absent from work for more than 3 days due to illness or injury, CONTRACTOR shall arrange for a medical examination to be performed before the person is allowed to return to work. The medical certificate must be submitted to COMPANY medical advisor and must state that the person is medically fit before they are allowed to return to work. COMPANY also reserves the right to request medical examination of CONTRACTOR'S personnel at its discretion.



APPENDIX 1: SSHE COMMENCEMENT CERTIFICATE

	COMPANY		
SSHE COMMENCEMENT CERTIFICATE			
Contract Title:			
Contractor:		Contract No:	
Sub-Contractors:			
Note: Pls. put "N/A" with not concerned item and added the concern item in the table.			
Contract Plan Activity	Date Completed	Exceptions	
Contract SSHE Management Plan Approved			
Contract Bridging Document Approved			
Safety case report Approved			
Post Award Meeting Held			
Pre-Mobilization Audit Held			
Kick-off Meeting Held			
Industrial Site Accepted			
Vehicle/Plant Accepted			
Training Completed as per training matrix			
Training Completed Required to attend within 2 months			
Essential Audit Items Completed			
Fitness to work approved by Company Medical Team			
Equipment, tools inspected and certified as company requirements. Equipment, tools provided are in good condition and comply with company standards			
PPE provided are in good condition and complies to companies standards			
Notes:			
On behalf of the Contractor I confirm that the activities stated above have been carried out and we are capable of performing the work in a healthy, safe and environmentally responsible manner.			
Name	Ref. Ind.	Responsibility	Signature
		Contractor	
We hereby agree that the SSHE status of this Contract allows work to proceed, subject to the above exceptions.			
Name	Ref. Ind.	Responsibility	Signature
		Company Site Representative	
		Contract Holder	



APPENDIX 2: MONTHLY CONTRACT SSHE PERFORMANCE REPORT

CONTRACTOR shall prepare the Monthly Contract SSHE Performance Report and submit to the COMPANY Site Representative, Contract Holder (CH) and Department SSHE within the first week of the next month (Ex. SSHE performance report on June has to submit within 1st week of July).

This report shall contain factual information on the SSHE performance of CONTRACTOR. The sequences of Monthly Contract SSHE Performance Report are:

Return for the month of:		
Monthly Contract SSHE Performance	Status As of.....	Evidence
No. of Employees working on the month of report		
No. of Man-Hours worked (Including any overtime) in the month		
No. of Fatality / Permanent disabilities in the month		
No. of Lost Workday Cases in the month (LWDC)		
No. of Restricted Work Cases in the month (RWDC)		
No. of Medical Treatment Cases in the month (MTC)		
No. of First Aid Cases in the month (FAC)		
No. of Near Misses in the month		
No. of Occupational Illnesses in the month		
No. of Spill Cases in the month (Display spill volume)		
No. of SOC/ HRC card submission in the month		
% SSHE Monitoring Plan Completion		
No. of Air craft Incident in the month (Display flight hours)		

SSHE Statistics	Unit	Target (Year)	Actual (As of.....)
Lost Time Injury Frequency Rate (LTIF)	No./ MM man hours	0	
Total Recordable Injury Rate (TRIR)	No./ MM man hours	0	
Major Accident Rate (MAR)	No./ MM man hours	0	

Additional information for SSHE performance report:

Report prepare by: _____ **Position:** _____

Date: _____

Report verified by: _____ **Position:** _____

Date: _____



Terminology	Description
ALARP	To reduce a risk to a level 'as low as reasonably practicable'(ALARP) involves balancing reduction in risk against the time, trouble, difficulty and cost of achieving it. This level represents the point, objectively assessed, at which the time, trouble, difficulty and cost of further reduction measures become unreasonably disproportionate to the additional risk reduction obtained.
COMPANY	The COMPANY that issues a contract to a CONTRACTOR
Contract	An agreement between two parties by which both are bound in law and which can therefore be enforced in court or other equivalent forum.
CONTRACTOR(s)	An individual or a COMPANY carrying out work under a written or verbally agreed contract for COMPANY
Sub-CONTRACTOR	An individual or COMPANY performing some of the work within a contract, and under contract to either the original COMPANY or CONTRACTOR.
Contract Holder	COMPANY staff who has authority on signing the contract pursuant to the COMPANY Delegation of Authority (or DAS), including his/her higher line management/ authority if any.
COMPANY Site Representative	Individual appointed by the Contract Holder with single point responsibility for the activity management of the Contract and verification that the control mechanisms are in place.
CONTRACTOR Representative	Individual appointed by the CONTRACTOR with single point responsibility for the activity management and execution works as stipulated in the Contract.
Hazard	An object, physical effect, or condition with the potential to harms people, the environment or property.
High Risk Contract	Contract has potential for incidents for which the combination of potential consequences and probability are assessed to be in the Red shaded area of the RAM. High Risk Incidents can be incidents that result in injuries, illnesses or damage to assets, the environment or COMPANY reputation, or they can be near misses. Drilling, Well services, Construction, Maintenance and Logistic activities are by definition high risk
Independent Audit	Audit by auditors independent of the Asset, process or facility audited.
Medium Risk Contract	Contract has potential for incidents for which the combination of potential consequences and probability are assessed to be in the Yellow shaded area of the RAM.
Low Risk Contract	Contract has potential for incidents for which the combination of potential consequences and probability are assessed to be in the Green shaded area of the RAM.
NON-ACCIDENTAL DEATHS	Any case of death of a person either: - where there is no identifiable incident or trauma involved, or - which is the result of an apparent suicide.
SSHE MS	Safety, Security, Health and Environment Management System

EXHIBIT E

QUALITY MANAGEMENT

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EXHIBIT E QUALITY MANAGEMENT

1. General Requirements

- 1.1 All standards referred to by this EXHIBIT are referenced in their current revision status; these also reflect the requirements of ISO 9000-2000, as well as those required by JAR Ops 3 or any newer EU Regulations for the operation of HELICOPTER.
- 1.2 The CONTRACTOR shall keep up to date with revisions to the national standards (or the equivalent international standards) as referenced to, and cited in, this EXHIBIT as being applicable to the SERVICES.

2. System Requirements

- 2.1 The CONTRACTOR shall use a formalised Quality Management System (QMS) to assure the SERVICES.
- 2.2 The CONTRACTOR shall have a Quality Assurance Plan in place, for the COMPANY further APPROVAL.

A Quality Assurance Plan shall fulfill the requirements of EASA Part 145, Part M and JAR OPS 1/3. By exception, if the CONTRACTOR is not operating under EASA Part 145 and JAR OPS 1/3 requirements, their QMS shall be included in their bid a description of their QMS which in turn must be acceptable by the COMPANY.

3. Quality Management System Structure

- 3.1 Unless otherwise agreed in writing with the COMPANY the QMS used to control the SERVICES shall consist of:
 - a) Quality policy supported by a statement of business principles;
 - b) A definition of measures adopted by the CONTRACTOR in order to comply with the requirements of this EXHIBIT including procedures to:
 - I. Identify and assure critical processes and;
 - II. Control activities that span organisational interfaces.
 - c) A Quality Assurance Plan that:
 - I. Clearly defines those elements of any corporate higher level QMS that prevail over, and interfaces with, the QMS which will be used to assure the SERVICES;
 - II. Contains an organisation chart, which includes reporting relationships for those PERSONS who are responsible for controlling the quality of the SERVICES and includes interfaces between site and base location employees. The chart shall also indicate whether staff are assigned full or part time to the CONTRACT;
 - III. Descriptors of the activity;
 - IV. Defines responsibilities and authorities of individuals with specific regard to execution of the SERVICES;
 - V. Identifies risks to the planned execution of the SERVICES along with measures to mitigate the possible effects along with follow-up of mitigation measures to ensure their effectiveness;
 - VI. Incorporates a plan to identify and achieve the timely acquisition of all Regulatory Certification as necessary in order to meet the Certification requirements;
 - VII. Plans for the timely acquisition of resources to complete the SERVICES in accordance with CONTRACT's requirement;
 - VIII. Incorporates the internal and subcontractor audits within a programme;
 - IX. Identifies the critical processes that are to be assured through audit;

- X. Includes a programme of compliance monitoring that, as a minimum, meets the requirements of EASA Part 145 65B and assesses during the application of critical processes the achievability of the procedure and the systematic compliance with that procedure, seeking to understand why any variances to the defined process exist and if these are acceptable;
 - XI. Includes a process to manage corrective actions;
 - XII. Details how the Management Review Board process is to be followed;
 - XIII. Defines the procedure to be used for controlling the SERVICES;
 - XIV. Specifies the verifying records to be produced.
- 3.2 All procedures, as identified in Section 3.1 above, shall be established prior to commencing the SERVICES and shall;
- a) Detail their scope of application;
 - b) Define responsibilities and authorities of individuals;
 - c) Identify the records to be maintained as objective evidence of compliance with the requirements of this CONTRACT;
 - d) Detail the provisions for liaison with third parties as applicable to the SERVICES;
- 3.3 Service arising from ad-hoc requirements during the execution of the CONTRACT shall:
- a) Have responsibilities for the completion of the work formally defined;
 - b) Be defined by a formal work scope;
 - c) Be monitored to completion.

4. Business Processes

- 4.1 The QMS shall contain a description of the key processes, that control and support service delivery, in the following terms:
- a) Mission and objectives;
 - b) The CONTRACTOR line management ownership and accountabilities;
 - c) Definition covering boundaries, interfaces, inputs and outputs and the natural flow of the process;
 - d) Controls surrounding critical activities;
 - e) Performance criteria, (Key Performance Indicators [KPIs] on which the process is assessed, including audit and management review).
- 4.2 The QMS shall contain a description of the mechanisms whereby the agreed CONTRACT requirements and the general company policies, standards, conditions etc. are communicated to all who participate in the execution of the SERVICES.

5. Continuous Improvement

- 5.1 The CONTRACTOR shall use structured formalised mechanisms in order to effect continuous improvement of service and service delivery, and produce an annual Quality Assurance report highlighting the areas identified for continuous improvement and, where applicable, those improvements already in place and working.

6. Quality Management of Subcontractors

- 6.1 The CONTRACTOR shall ensure, through the application of formal procedures, that each SUB-CONTRACTOR operates an effective QMS in accordance with the CONTRACTOR's QMS Manual. The CONTRACTOR shall maintain records that demonstrate this objective is achieved.

- 6.2 The existence of these systems shall not relieve the CONTRACTOR of the responsibility for the quality of the SERVICES.
- 6.3 The SUB-CONTRACTOR's control procedures shall address:
- a) The criteria to be used for specifying all standards including Quality Management standards for a particular part of the SERVICES under the SUB-CONTRACT;
 - b) The criteria to be used for requesting, evaluating and approving SUB-CONTRACTOR's Quality Plans and Quality Control Plans;
 - c) Provisions for monitoring the compliance of SUB-CONTRACTORS with these CONTRACT requirements.

7. Audit by the CONTRACTOR

- 7.1 The CONTRACTOR is required to regularly and systematically perform self-audits and SUB-CONTRACTOR audits and shall provide access to COMPANY for such audit reports.

8. Audit by the COMPANY

- 8.1 The COMPANY may assess the effectiveness of the QMS implemented by the CONTRACTOR by either:
- a) Performing quality surveillance, reviews of documentation, COMPANY audits or;
 - b) Participating in CONTRACTOR led audits or surveillance activities in accordance with the QMS audit and quality control plan.
- 8.2 The COMPANY or its authorised representatives, shall have unrestricted access at all reasonable times to the FACILITIES, PERSONNEL and records of the CONTRACTOR and the SUB-CONTRACTOR(s) to audit their respective QMS(s). The CONTRACTOR shall implement all agreed recommendations arising from the audits within a mutually agreed time scale.

9. Independent Audit or Surveillance

- 9.1 The results of any audit or surveillance, which has been performed by Regulatory Bodies having statutory rights of access for the purposes of verifying aspects of the SERVICES, shall be notified to the COMPANY within seven (7) working days of receipt by the CONTRACTOR.

10. Quality Records

- 10.1 The CONTRACTOR shall maintain, and make available to the COMPANY as required during the execution of the SERVICES, records that provide objective evidence that all QMSs, including those of SUB-CONTRACTORS, involved in the SERVICES have been effective and that the product and or service complies with the specified requirements.

11. Integration With Other Management Systems

- 11.1 The CONTRACTOR shall ensure that the QMS is integrated within the CONTRACTOR's corporate management process and any other management systems.

12. De-Brief Report

- 12.1 Upon CONTRACT closure the CONTRACTOR shall supply a de-brief report highlighting those areas where improvements in business performance may be mutually realised in future similar contracts.

EXHIBIT F

COMPANY'S RULES AND REGULATIONS

EXHIBIT F.1

PTTEP's AVIATION STANDARD



PTT Exploration and Production Public Company Limited





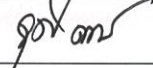



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1.0 PURPOSE

This document is intended to set the minimum requirements to provide safe and effective aviation transport services for PTTEP operations. It also establishes the basis for the standards, procedures and guidelines used for the selection, contracting and delivery of aviation transport services.

2.0 SCOPE

This standard applies to all PTTEP air travel, including the transportation of passengers and cargoes, aerial survey and medical evacuation. It includes the use of commercial and private aircrafts, and helicopters.

This standard applies to all PTTEP employees, consultants and contractors undertaking the activities described above.

This document is intended to provide guidance considered best aviation practice in the oil and gas industry. Whilst every effort has been made to ensure the accuracy of the information contained in this publication, legal obligations and standards vary with time and in different jurisdictions; PTTEP does not have the capacity to keep it permanently up to date. PTTEP therefore does not warrant its accuracy and assumes no responsibility or liability for any foreseeable or unforeseeable use made thereof.

It is emphasized that nothing in this document is intended to contravene national or international regulations. Compliance with this standard will not necessarily mean compliance with legal obligations and it is the responsibility of the aircraft operator to ensure that these obligations are fulfilled.

3.0 REFERENCE

The following documents are referred in this standard;

- SSHE-106-STD-310: SSHE Contractor Management Standard
- 10009-OPC-STD-1001: Management of Contractor and Supplier Standard
- 13121-PDR-001: Helicopter Landing Officer Manual
- IOGP Aircraft Management Guide (Report No. 390 July 2008, updated August 2013)
- IOGP Report 410 (Recommended Practices for Contracted Air Operations, June 2008.
- ICAO Annex 6 – Aircraft Operations, Maintenance and General Aviation.
- ICAO Annex 14 Volume I – Aerodromes
- ICAO Annex 14 Volume 2 – Heliports
- ICAO Doc 9625 - Manual of Criteria for the Qualification of Flight Simulation Training Devices Volume 1 – Aeroplanes Volume 2 – Helicopters.
- UKCAA CAP 437 - Standards for Offshore Helicopter Landing Areas 7th Edition dated February 2013.
- The International Chamber of Shipping Guide to Helicopter/Ship Operations

4.0 DEFINITIONS

Abbreviation	Definition
ACAS	Airborne Collision Avoidance System
ADM	Aeronautical Decision Making
AGL	Above Ground Level
ALARP	As low as reasonably practicable
AMG	Aircraft Management Guideline
AMO	Authorized Maintenance Organization
AOC	Air Operator Certificate
ASAM	Airline Safety Assessment Mechanism
CAP	Civil Air Publication
CFR	Code of Federal Regulations
CRM	Crew Resource Management
DAS	Delegation of Authority & Signature
DCA (CAAT)	Department of Civil Aviation (also known as Civil Aviation Authority of Thailand)
EASA	European Aviation Safety Agency
EGPWS	Enhanced Ground Proximity Warning System
ELT	Emergency Locator Transmitters
ERP	Emergency Response Plan
FFS	Full Flight Simulator
FOD	Foreign Object Debris
FSTD	Flight Simulation Training Device
FW	Fixed Wing
GPWS	Ground Proximity Warning System
HGS	Head-up guidance system
HLO	Helicopter Landing Officer
HUET	Helicopter Under Water Egress Training
IAGSA	International Geophysics Safety Association
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rule
IOGP	International Association of Oil & Gas Producer (also known as OGP)
IS-BAO	International Standard for Business Aircraft Operations
KPI	Key Performance Indicator
LOFT	Line Oriented Flight Training
LVP	Low Visibility Procedure

Abbreviation	Definition
MMM	Maintenance Management Manual
MODU	Mobile Offshore Drilling Unit
OEI	One Engine Inoperative
OM	Operating Manual
OPITO	Offshore Petroleum Industry Training Organization
QA	Quality Assurance
RVSM	Reduced Vertical Separation Minimum
RW	Rotary Wing
SAR	Search and Rescue
SMS	Safety Management System
TCAS	Traffic Collision Avoidance System
UKCAA	UK Civil Aviation Authority
VFR	Visual Flight Rule
VMC	Visual Meteorological Conditions

5.0 ROLES & RESPONSIBILITIES

Authority related to aviation can be referred to Company's Delegation of Authority & Signature (DAS). Logistics Department shall have overall responsibility for the provision of aviation support services.

The Logistics Department responsibilities are:

- The safe and effective management of all aviation operations.
- Establishing, developing and maintaining policies, standards and guidelines.
- Liaison with the aircraft operator, Corporate Aviation Advisor and regulatory bodies.
- Ensuring the requirements of this document are applied to all aircraft operations or to authorize exceptions.
- Ensuring compliance with all relevant guidelines and legislation.

6.0 AVIATION STANDARD

This standard is to be binding for all aviation operations over which PTTEP has direct control. Any exceptions must be submitted in advance to the Logistics Department for approval, providing justification for the exception and a documented risk assessment, including any proposed mitigating measures. There should also be a statement of how the standard is eventually to be complied with, including a timescale.

Whenever practicable, any aviation operations involving PTTEP personnel over which the company does not have direct control (such as in a joint venture) should also comply with this standard. The relevant contents of this document should be made available to a partner administering the contract for aircraft services, as well as the aircraft operator.

6.1 AVIATION RISK MANAGEMENT

With all business driven to get the most possible value from each and every expenditure investments in safety should be guided by risk assessment and a structured process to ensure that the funds are spent on the things that will do the most good to improve safety and manage risks to a level as low as reasonably practicable (ALARP).

Aviation services are the most expensive modes of transport in term of cost per passenger –mileage. Nevertheless, it is sometimes the most appropriate way of transportation especially in restricted area e.g. offshore operating units, onshore locations whereby other modes of transportation cannot be accessed, or can be accessed with long journey with high risk exposure.

The decision to use aircraft should be weighed against the alternatives of using other forms of travel, taking full account of operational, economic and, safety implications.

A documented assessment of potential risks and their respective mitigations shall be conducted before commencing operations for any new aviation activity. This assessment shall be conducted to identify and evaluate aviation risks and their control measures for:

- Routine flights – defined as a flight by an approved charter aircraft operator between the normal operating base and a PTTEP installation that is regularly scheduled.
- Non-routine flights.
- Changes to:
 - A routine flight schedule.
 - Regulatory or other requirements.
 - Environmental and/or operational conditions.
 - The aircraft type.

Risk assessments shall be conducted by a team that, at a minimum, includes an Aviation Advisor, the Logistics Department and the aircraft operator; other relevant personnel may be included as required. The outcome of risk assessments shall be reviewed and approved by the Logistics Department.

6.1.1 SCHEDULED AIRLINE TRAVEL

When travelling on business, PTTEP employees and contractors shall only use recognized commercial airlines. Personnel wishing to use non-commercial airlines for business travel may seek advice from the Logistics Department or through a suitable Aviation Advisor, who may conduct or arrange a “safety assessment” in accordance with the IOGP’s Airline Safety Assessment Mechanism (ASAM).

6.1.2 USE OF NON-SCHEDULED AIRCRAFT

When travel by non-scheduled aero plane or helicopter is deemed appropriate, this may be on dedicated contract aircraft, by spot charter or on aircraft of joint venture partners. Except in the case of aircraft contracted directly by PTTEP, advice should be sought from the Logistics Department and/or Aviation Advisor regarding the status of the aircraft operator and aircraft type, and the qualifications of the pilots to be used, with respect to PTTEP’s policies and requirements.

6.1.3 PRIVATE AND PUBLIC SECTOR AIRCRAFT

Private and/or military aircraft shall not be used without the approval of assigned authority as per DAS.

6.2 SELECTION AND ENGAGEMENT OF AVIATION SPECIALISTS

PTTEP engages aviation specialists to provide aviation assurance, advice, and technical support or to conduct studies, inspections and audits as required. Aviation consultants and specialists must be approved by the Logistics Department before being engaged.

6.3 DRUG AND ALCOHOL POLICY

6.3.1 CONTRACTORS AND SUB-CONTRACTORS

Formally documented policies on the use/abuse of alcohol, medical drugs and narcotics are required. Guidance is also to be provided on what the company considers to be acceptable by way of alcohol consumption. Additionally, guidance should be given to staff on which commonly available medical drugs, prescribed or otherwise, may impair an individual's ability to perform in the cockpit or workplace. In all cases the air operator shall comply with any national legislation/guidelines.

6.3.2 PASSENGERS

Personnel under the influence of alcohol or drugs must not be allowed to board any aircraft unless under suitable medical supervision. Check in staff must be trained to recognize the signs of substance abuse and procedures should be in place to carry out testing if necessary.

6.4 AVIATION AUDIT

6.4.1 GENERAL

All contracted and ad hoc aviation service provider shall be subject to regular audits by competent aviation advisor or logistics department. Audits shall normally occur annually unless otherwise agreed by the Logistics Department. However, the period between audits shall not exceed 24 months.

6.4.2 AUDIT PURPOSE

The purpose of an audit of an aircraft operator is to determine its suitability in terms of safety and capability and, where appropriate, to make recommendations for improvements. Any interfaces provided by PTTEP, such as airfields, passenger services, flight following, helidecks, refueling equipment, scheduling arrangements, etc., will also be reviewed. Audits will be carried out in accordance with defined terms of reference and the standards applied will be those established by PTTEP, except where the requirements of the National Aviation Regulations of the air operator concerned are more restrictive or otherwise exceed PTTEP's requirements.

6.4.3 ONE TIME ACCEPTANCES

GENERAL

Where a service provider is engaged to provide a single or multiple flights for a specific requirement, and where no existing audited aircraft charter operator is

available, a “one-off” acceptance may be granted in limited circumstances, subject to qualification by, and approval from, the Logistics Department.

APPLICABILITY

Approval shall only be granted for those flights required to complete one specific mission.

FURTHER USE

Additional use of the operator shall require completion of an audit in accordance with section 6.4.1 of this Standard.

6.5 FLIGHT SHARING

Flight sharing with other parties to PTTEP or non-PTTEP operated sites/installations requires the following to be performed prior to commencement:

- A detailed risk assessment of the operation, which as a minimum is to be reviewed by Aviation Advisor and approved by Logistics Department.
- Demonstrate site/installation compliance with this Standard.
- Assessment of adequate search and rescue (SAR) and emergency response capabilities.
- Approval by PTTEP internal authorities as per DAS and local authorities.

6.6 THIRD-PARTY AIRCRAFT CONTRACTS

This clause relates to aircraft operating for PTTEP and provided through third-parties as a “turnkey” contract operation for other services such as seismic, barge, geophysical survey, cargo, mobile offshore drilling units (MODUs), etc.

PTTEP personnel on company business who are expected to use aircraft owned by other companies or chartered by third parties/other companies in the course of their work should exercise caution and should consult with the Aviation Advisor and Logistics Department before using the aircraft.

Third-party aircraft shall meet standards of safety/technical quality comparable to those of PTTEP and they should provide an adequate level of liability coverage. The crew/staff should meet PTTEP’s standards for competence and experience.

While emergency situations may not allow sufficient notice for advance evaluation, employees shall liaise with Aviation Advisor or Logistics Department whenever possible.

Reviews of the aviation contractor by Aviation Advisor or Logistics Department should still be required, whether or not a turnkey contract is in place.

Supervision of the aviation services should be maintained and the aviation contractor’s performance shall be continuously monitored.

An approved Aviation Advisor’s review of the contractor must also specifically cover the local PTTEP staff’s ability to monitor and maintain standards.

6.7 PROCUREMENT

In all situations where aviation service is required (excluding one-off flights, use of airline travel, flight sharing, and third-party aircraft contracts), a contract shall be put in place

between company and aircraft operator. Procurement and contract process can refer to 10009-OPC-STD-1001: Management of Contractor and Supplier Standard.

Prior to commencing procurement and contract process, scope of services needs to be developed by considering the following factors as the minimum;

- The aircraft operating environment including but not limited to the following;
 - Flying distance to designated location(s)
 - Number of passengers
 - Overall project development plan
 - Standard safety features of helicopter
 - Maintenance and supply source
 - Enforced local regulation(s)
 - Aircraft's technology
 - Reputation of aircraft model and aircraft operator
- Size or weight restriction or limitation imposed by the design/construction of company owned or operated airfield, airstrip, helicopter landing area or helideck.
- Requirement for night time, emergency or search and rescue operations.
- The provision of any refueling services to support offshore or remote locations.
- Reporting requirements and timeframe for: flying hours, taxi time, fuel consumption, fuel uplifted, passenger and cargo movements, delays, incidents and accidents etc.
- List of company's aviation documents that require contractor compliance.
- Requirement to furnish additional services (flight scheduling, security, manifest) or personnel.

Aforementioned scope of services may require technical input from an Aviation Advisor and logistics department to ensure the right requirements are incorporated in the contract.

6.8 CONTRACT MANAGEMENT

PTTEP will appoint a suitable focal point to take on the role of an Air Operations Supervisor responsible for overseeing aviation activities in accordance with this Standard and the advice contained in the IOGP Aircraft Management Guide. Typically, the Heliport Supervisor will take on this role and be responsible for routine liaison with PTTEP's designated aircraft operator.

The contract should include clearly defined Key Performance Indicators (KPIs) which should be reported to PTTEP management through the Air Operations Supervisor on a regular basis.

6.9 AIRCRAFT SPECIFICATION

GENERAL

The Operator should ensure that all aircraft on long-term contract (12 months or more) comply with the specification and minimum equipment fit set out in Appendix 7 of the IOGP AMG.

DESIGN STANDARDS

Where there exists an opportunity to enhance airworthiness and safety by selection of aircraft types, preference should be given to aircrafts which meet the later amendment standards of the 14CFR/EASA design requirements, as shown in their Type Certificate Data Sheets.

AIRCRAFT SELECTION

Multi-turbine-engine aircraft crewed by two qualified pilots shall be used for all aviation activities, except that:

- Single-turbine-engine helicopter, piston-engine fixed wing, or single pilot operations shall only be conducted for specific projects or charters following the completion of a detailed risk assessment, in a non-hostile environment, and conducted in daylight conditions under Visual Meteorological Conditions (VMC). Such use must be approved in advance by the Logistics Department.
- The use of piston-single-engine helicopters is prohibited.

AIRCRAFT AGE LIMITATION

Age limitation of aircraft shall be depended upon enforced regulation(s) announced by local authorities of operated country.

SIDE FACING SEATS

When chartering fixed-wing aircraft, those without sideways facing seats are to be preferred; the use must be approved in advance by the Logistics Department. If the seats cannot be repositioned in either the forward or aft position, use of these seats should be avoided during take-off and landing, unless shoulder restraints are used and tightened properly, passengers are briefed accordingly and this is an approved modification or configuration.

LONG RANGE INTERNATIONAL FLIGHTS

If the Operator conducts long-range international flights, the Operator should ensure aircraft that operate such flights are equipped with a minimum of 2 Emergency Locator Transmitters (ELTs) with transmitters that operate on 121.5 MHz and 406 MHz simultaneously.

INTERNATIONAL FLIGHTS OVER LAND

If the Operator conducts international flights over land areas where search and rescue would be especially difficult, as designated by the state, the Operator shall ensure aircraft that operate such flights are equipped with a minimum of one ELT with transmitter that operate on 121.5 MHz and 406 MHz simultaneously.

FIRST AID KITS

Suitable first aid kits shall be carried on the aircraft. The kits shall be serviced as part of the aircraft role equipment at a period not exceeding one year.

FIRE PROTECTION

The Operator shall ensure that only fire blocking materials shall be used to upholster seat cushions, seat covers, carpets and floor coverings as well as the internal trim. Seat cushions shall be re-treated prior to use after cleaning.

PASSENGER TRANSPORT

For passenger transport, the use of multi-engine aircraft with a two-pilot crew is mandatory.

6.10 REQUIREMENTS FOR CONTRACTED AIR OPERATORS

6.10.1 MINIMUM REQUIREMENTS

EQUIPMENT AND SYSTEMS

Aircraft operating companies chartered by PTTEP shall use equipment, employ personnel, and establish management processes in accordance with the relevant requirements of this Standard.

PEOPLE

Aircrew and other relevant personnel working for aircraft companies chartered by PTTEP shall agree to comply with the requirements of this Standard.

ACCREDITATION

The aircraft operator must hold an air operator certificate (or equivalent document) and its associated operations specifications, which define the operations for which an operator is authorized.

MAINTENANCE

Where an aircraft operator conducts maintenance, the organization shall have an Authorized Maintenance Organization Certificate (AMO) issued by the appropriate aviation regulatory authority. All maintenance shall be conducted within the conditions and limits of the AMO

6.10.2 AIR OPERATOR'S CERTIFICATE

The aircraft operator must hold a valid air operator's certificate (AOC) as specified in ICAO Annex 6 (or equivalent document) as well as other documents required by Department of Civil Aviation (DCA). This must contain at least the following:

- The State of the Operator and the issuing authority.
- The air operator certificate number and its expiration date.
- The operator name, trading name (if different) and address of the principal place of business.
- The date of issue and the name, signature and title of the authority representative.
- The location, in a controlled document carried on board, where the contact details of operational management can be found.

6.10.3 OPERATIONS SPECIFICATIONS

For each aircraft model in the operator's fleet, identified by aircraft maker, model and series, the following list of authorizations, conditions and limitations shall be included:

- Issuing authority.
- Contact details, operator name and AOC number
- Date of issue and signature of the Authority representative.
- Aircraft model, types and area of operations
- Special limitations and authorizations.

6.10.4 MANAGEMENT SYSTEMS

As a minimum, the aircraft operator shall have in place:

- Effective management systems that ensure good control over the operations.
- A system to ensure that there are published operating manuals (or policy and procedures manuals) for all safety critical areas of the organization. These include:

- A Safety Management System that is appropriate to the size, nature and complexity of the operations authorized to be conducted under its operations certificate, and the hazards and safety risks related to the operations.
 - A Quality Management System for internal evaluation.
 - A Maintenance Manual or Maintenance Management Organization Exposition.
 - An operations manual that details sound procedures and practices.
- An Emergency Response Plan that caters for aircraft missing or involved in an accident.
 - An adequate insurance policy that meets PTTEP requirements.

6.10.5 PERSONNEL

The aircraft operator shall:

- Ensure that their employees when abroad are familiar with the relevant laws, regulations and procedures of the State(s) in which their aircrafts are operated.
- Ensure that all members of the flight crew are familiar with the relevant regulations and procedures pertinent to their duties in the operation of the aircraft.
- Provide suitably trained, qualified and experienced ground crew and aircrew.
- Perform periodic maintenance in accordance with an approved maintenance schedule provided by trained and licensed aircraft mechanics using comprehensive workshop facilities.
- Provide support aircraft and Aircraft Maintenance Engineers to undertake aircraft repair offshore in the event of an aircraft becoming unserviceable.

6.10.6 OPERATIONS MANUALS

The aircraft operator shall ensure that all policies, rules, instructions and procedures relevant to flight crew are described in the applicable parts of the Operations Manuals (OM) or in the flight crew bulletins (directives).

6.10.7 SAFETY MANAGEMENT SYSTEMS

REGULATORY REQUIREMENTS (ICAO GRANT OF AOC)

PTTEP and its contracted aircraft operators shall comply with applicable national safety management system regulations, as these relate to air operators and associated air operations infrastructure.

PTTEP REQUIREMENTS

However, as a minimum or where national regulations have not yet been mandated for safety management systems, PTTEP requires its contracted aircraft operators to fulfil the requirements in the table below.

Table 1 SMS Requirements for Owned and Contracted Aircraft Operators

Services	Exposure	SMS Requirement
Helicopter: <ul style="list-style-type: none"> Personnel and cargo transport onshore and offshore; External load carriage including Heli-Assist Seismic and Helirig operations; Pipeline survey and other inspection and survey operations onshore and offshore; Geophysical survey; Helicopter External Transport Service (HETS) Class D helicopter evacuation; Medical evacuation (Medevac). 	Standard Contract Total flight exposure to an operator for single or combined Business Units of 100 hrs or more per year for all RW and for FW survey ops and 200hrs or more per year for FW passenger ops.	An SMS that as a minimum contains the functional elements detailed in section 3.3 and a Hazard/Risk Management process i.a.w. paragraph 3.4 covering the contracted and related aviation activities, implemented effectively within 6 months of contract award or as specified. Additionally: Airborne Geophysical Survey complete and document a project specific IAGSA Risk Assessment for review by the OGP Member prior to commencing operations. Seismic, Helirig, or HETS , complete and document a project specific OGP Risk Assessment for review by the OGP Member prior to commencing operations. Pipeline Survey complete and document a project specific hazard assessment that includes location, route and type/activity specific content for review by the OGP Member prior to commencing operations. For Business Executive Jet Charter Operations a SMS/Hazard Assessment meeting IS-BAO requirements is acceptable.
Fixed-wing: Personnel and cargo transport; <ul style="list-style-type: none"> Pipeline survey and other inspection and survey operations; Geophysical survey; Medical evacuation (Medevac) 	Call Off contract Total flight exposure to an operator for single or combined Business Units. Less than 100hrs per year for RW and FW survey ops and less than 200hrs per year for FW passenger ops.	A corporate SMS, including a Hazard/Risk Management process i.a.w. paragraph 3.4 shall be preferred when selecting an operator, but recognising the possible short term use of the operator and low exposure, a commitment to develop an SMS, with sustained progress, measured through the audit process, is acceptable. Airborne Geophysical Survey, Pipeline Survey, Seismic, Helirig, or HETS requirements as stated above.
	One Time Charter	Corporate SMS, with Hazard/Risk management process i.a.w. paragraph 3.4 preferred, but not required. A robust flight safety program will be assessed alongside the other requirements for One Time charter.

ELEMENTS

The following elements and relationships will always be required:

- *Leadership Commitment* – Active SMS involvement and support from an informed company leadership.
- *Policy, accountabilities & KPIs* – A defined HSE policy, based on a “Just” culture, defined responsibilities for safety management and Key Performance Indicators (KPIs).
- *Documented Procedures* - Documented, detailed procedures covering all SMS activities and processes and more broadly, documented procedures for safety critical tasks related to aircraft operations, including flight operations, aircraft maintenance and ground operations.
- *Personnel & Competence* – Appointment of key safety personnel, with defined competence requirements. Sufficient resources to manage and operate an effective SMS.
- *Safety Communications* – A range and hierarchy of safety communication processes to enable an effective, two-way flow of safety information throughout the company.
- *Safety Reporting & Investigation* – Safety reporting procedures covering regulatory required reports and lower level incidents and occurrences and an investigation process to generate and follow to closure, internal recommendations.
- *Management of Change* – A defined procedure to manage the risks associated with significant change related to aircraft operations, including key personnel.

- *Hazard/Risk Management*
- *Quality Assurance (QA)* – An internal process focused on providing confidence that the risk controls specified through regulation, company operating procedures and the risk management process are effective within all flight operations, maintenance and ground operations activities.
- *Senior Management Review* – A management review process based on a defined meeting schedule, that gives senior managers visibility of the SMS activity, in particular safety reporting, hazard management and QA issues.

6.10.8 HAZARD/RISK MANAGEMENT

The Hazard/Risk Management process must identify and address both generic, mission specific and location specific hazards. The hazards should be recorded in a hazard register in a format that:

- shows the risk assessment score assigned to each hazard;
- links the hazards to specific controls and (bowtie) recovery measures;
- provides a document reference for the control and recovery measure and assigns a responsible individual to each control.

The Hazard/Risk Management process should be demonstrably linked to the operator's Safety Reporting and Investigation process, its Management of Change process, and to the QA function.

6.10.9 QUALITY ASSURANCE

PTTEP requires its aircraft operators to develop, document and implement a quality assurance system to provide confidence that the risk controls specified through regulation, company operating procedures and the risk management process are effective. Its scope should cover flight operations, ground operations and maintenance activities and should include:

- An internal evaluation/audit program encompassing all safety and quality critical activities within flight operations, ground operations and maintenance.
- Auditing of processes, procedures, documentation, training and records.
- Audit activities should be scheduled and conducted at planned intervals to establish conformity with regulatory and management system requirements. Results of previous audits, including implementation and effectiveness of corrective action, should be included within the scope of the program.
- The program should be managed at the local operational level and be subject to periodic review by the air operator's management. QA departmental procedures, duties, responsibilities, and reporting relationships should be described in the Operations Manual, Maintenance Management Manual (MMM), Management System Manual or a separate QA manual as appropriate.

6.10.10 INCIDENT AND ACCIDENT REPORTING

GENERAL

Aviation incidents and accidents must be reported and investigated in accordance with PTTEP Incident Management Standard and take account of any requirement by the local regulator.

REPORTING

Notwithstanding the air operator's regulatory, local and/or national legislative Mandatory Occurrence Reporting obligations, PTTEP requires that contracted aircraft operators provide notification and relevant available details in the event of the following occurrences within 24 hours:

- Aircraft Accident
- Serious or Significant Incident
- Near Miss
- Air Safety Reports (having imminent Airworthiness or Safety of Flight implications)

6.10.11 ENVIRONMENTAL MANAGEMENT

GENERAL

Environmental management controls should at all times be in compliance with local and or national regulatory requirements.

NOISE

Contracted aircraft operators shall demonstrate how the hazard of aircraft noise is effectively managed to an acceptable level within their operations.

6.10.12 EMERGENCY RESPONSE MANAGEMENT

A contracted air operator must have a comprehensive, organization-wide Emergency Response Plan (ERP), containing defined interfaces with PTTEP's ERP, to facilitate the effective management of accidents and/or serious incidents, with the purpose of mitigating any impact on personnel and operations.

The ERP of the Operator should assign responsibilities to specific individuals; provide emergency procedures; control the notification of outside agencies; nominate channels and centers of communication; co-ordinate humanitarian assistance to affected passengers, crew, personnel and their families; provide 'in-house' emergency response and effective liaison with accident investigators and outside emergency services.

The Operator should ensure that the ERP is rehearsed regularly, both to familiarize personnel and to reveal any deficiencies. More details of ERP can be found in section 6.10: Emergency Response Plan.

6.10.13 INSURANCE

WAIVER OF SUBROGATION

To the extent necessary to reflect indemnities given by an aircraft operator under the contract, insurers should waive rights of action/subrogation against PTTEP and PTTEP should be named as an additional insured under the policy.

CROSS LIABILITY COVERAGE

Liability insurance should contain a severability clause (Cross Liabilities).

6.10.14 SUB-CHARTERING AIRCRAFT

GENERAL

Sub-chartering by the aircraft operator from a third party for PTTEP flights shall not occur unless:

- A documented agreement has been established with the contracting charter operator
- An audit of the third party has been conducted to establish its conformance with this standard.
- The operator has been approved by the Logistics Department.

OPERATION

Regardless of ownership, aircraft shall be operated and controlled in accordance with the provisions and limitations of the AOC under which they are operated.

6.10.15 FACILITIES AND RELEVANT SERVICES

Where appropriate, PTTEP or its nominated contractor may provide:

- Certified landing areas (i.e. helidecks) on offshore installations as well as required permits & licenses complying with relevant legislation.
- Certified offshore fuelling systems with personnel trained in system maintenance, aircraft fuelling procedures including the mandatory testing of fuel to comply with specifications.
- Comprehensive radio communication facilities both onshore and offshore with trained personnel to provide communications with all aircraft and ships in the area as well as with the aircraft base. This includes an alerting service to monitor and track aircraft flights and communications.
- Offshore support personnel (i.e. helideck crew) trained in all aspects of helicopter landing and take-off and in emergency response procedures in the event of an aircraft emergency on the helideck.
- Personnel both onshore and offshore trained in the necessary procedures for the processing and documentation of passengers and freight and the transportation of dangerous goods by air.
- Appropriate hangar and maintenance facilities.
- Passenger processing facilities.

6.11 EMERGENCY RESPONSE PLAN (ERP)

6.11.1 GENERAL

A documented emergency response plan commensurate with the flight(s) to be conducted shall be developed for each operation by the local PTTEP management team and shall include at least the following:

- Projected survival time compared to expected rescue times
- Defined roles and responsibilities of PTTEP and aircraft operator personnel responsible and accountable for aviation activities and who are directly involved in an emergency response to a major aviation incident or accident.
- Documented lines of communications between PTTEP management and the aircraft operator.
- Local Search and Rescue (SAR) capabilities with special attention to night capability.

6.11.2 DRILLS

Scenario-based emergency drills with specific objectives should be conducted within 30 days of a new project start and annually, as a minimum, for ongoing operations.

6.11.3 INTERFACES

PTTEP and the aircraft operator should develop a clear statement of the interfaces between their Emergency Response Plans (ERP) prior to commencement of the operations under contract. This statement should clearly identify the individual and mutual responsibilities with respect to notification of outside agencies, channels of communication, coordination of humanitarian assistance to affected passengers, crew, personnel and their families, and process for liaison with accident investigators and external emergency services.

6.12 EMERGENCY AND MEDICAL EVACUATION FLIGHTS (MEDEVAC)

Approval for a medevac flight shall be a team decision involving the medic at the facility requesting the medevac, a doctor familiar with medevacs by air (if the medic is not a doctor), the Facility Manager, the Duty Manager, and the aircraft operator's Operations Manager or Chief Pilot as well as the flight crew. Clear line of communication should be established to ensure that time is not wasted in approving the flight.

Due to the increased risks associated with flying at night, consideration must be given as to whether the patient can be stabilized and remain on board the installation until first light, or should be evacuated as soon as possible.

Pilots should undergo an initial and annual refresher course which is designed to increase their awareness of the differences between normal and medevac flights (see IOGP AMG 12.4.5.1).

All medical equipment shall be properly secured to prevent it moving in the event of turbulence or an accident. The stretcher shall be secured to the aircraft tie down points using sufficient means to ensure it is totally restrained. The patient shall be secured in the stretcher using a 5 point harness (injuries permitting).

The Logistics Department shall be notified within 24 hours of any medical emergency flight.

6.13 AIRCRAFT OPERATIONS

6.13.1 AIRCRAFT PERFORMANCE

TURBINE POWERED AEROPLANES

Where turbine powered multi-engine aero-planes are operated, they shall be capable of sustaining a 1% net climb gradient at or above lowest safe altitude with One Engine Inoperative (OEI) and flown using two pilots.

PISTON POWERED AEROPLANES

If it is necessary to contract piston powered aero-planes, aircraft loading shall be restricted to ensure a net take-off flight path to clear obstacles by not less than 35 feet to a height of 1500 feet above the landing aerodrome, assuming the loss of an engine on achieving V-Broc (VY) (speed for best rate of climb) with retraction of the undercarriage and flaps complete and the propeller on the inoperative engine feathered. En-route performance planning for all flights shall ensure the capability of maintaining the minimum safe altitude for IFR flight over the route to be flown or any diversion from it, with one power unit inoperative.

6.13.2 PILOTS QUALIFICATION AND EXPERIENCE LEVELS

Pilots flying on contract to PTTEP shall comply with the qualification and experience levels detailed in Appendix 5A of the IOGP Aircraft Management Guide.

At the discretion of the Logistics Department, offshore helicopter pilots who do not meet these criteria may be approved to fly for PTTEP if they fully meet the requirements laid down in Appendix 5B of the IOGP AMG.

6.13.3 FLIGHT CREW TRAINING

GENERAL

The Operator should ensure that the flight crew are always certified and qualified in accordance with applicable regulatory requirements, to include:

- License(s)/certification.
- Medical fitness.
- Recency of experience.
- Specific qualifications where appropriate (LVP, RVSM, others)
- The use of equipment (e.g. TCAS/ACAS, GPWS/EGPWS, HGS).
- Initial training and checking/Line check/Proficiency check/Recurrent Training and checking.
- Right/left seat qualification where appropriate.
- Type qualification (including operation on more than one type or variant).
- Airport and route competence (including helidecks and special airports).
- Instructor/examiner/line check airman qualification.
- Crew Resource Management (CRM)/Human Factors.
- Dangerous Goods.
- Security

FLIGHT SIMULATION TRAINING DEVICES (FSTDs)

Where the use of an FSTD is practicable for the type, the Operator should require all flight crew to undertake training on an FSTD that replicates the model of aircraft being flown as closely as possible. It is preferred that the device be a full flight simulator (FFS) Level C or D (or for helicopters, a Type III, IV or V as defined in ICAO Doc 9625 Volume 2, the Manual of Criteria for the Qualification of Flight Simulation Training Devices).

The syllabus should include practice in handling emergencies that cannot be practiced in the air, the development of Crew Resource Management (CRM) for multi-crew aircraft (or Aeronautical Decision Making (ADM) for single pilot aircraft), including practice of CRM/ADM principles. When appropriate, this should be in the form of Line Oriented Flight Training (LOFT), the exercises for which shall be developed between the aircraft and the simulator operators themselves to provide 'real time' exercises using simulated local operational, weather and environmental conditions.

6.13.4 MAINTENANCE PERSONNEL

LICENSES AND ENDORSEMENTS

Personnel carrying out aircraft maintenance should hold appropriate Licenses and Endorsements. These should permit them to carry out aircraft maintenance or act in a supervisory or management capacity of an approved Maintenance organization as required by the regulatory authority of the jurisdiction in which operations are being conducted.

LOCAL APPROVALS

In addition, a system of local approvals should exist whereby the operator or maintenance organization systematically approves the individual to exercise the privileges granted by the license &/or endorsements held on the range of equipment operated or maintained by that organization.

TRAINING

The Operator should have a system for ensuring that any maintenance organization carrying out work for the Operator provides all maintenance personnel with initial, continuation and any additional training appropriate to their assigned tasks and responsibilities.

6.13.5 MAINTENANCE REQUIREMENTS

DUPLICATE INSPECTIONS

After any disturbance or dis-assembly of a control system or vital point in an aircraft, independent inspections are to be made and certified by two appropriately qualified persons (normally a licensed engineer, technician or equivalent with a type approval for maintaining the engines and airframe of the aircraft concerned), before the next flight. The inspections are to include correct assembly, locking, and free and correct movement of control systems over the full range. Such requirements extend to electrically activated "fly-by-wire" systems and their connections as well as to mechanical linkages.

The operator or maintenance organization is to ensure that sufficient persons appropriately qualified are available at all main operating &/or maintenance bases.

6.14 HELICOPTER OPERATIONS

6.14.1 HELICOPTER STANDARDS

Multi-engine helicopters capable of sustaining a 1% net climb gradient at or above the lowest safe altitude with one engine inoperative (OEI) and flown with two pilots should be used when any of the following conditions exist:

- The environment is hostile.
- Any portion of the flight is performed at night.
- Any portion of the flight will be in instrument (non-visual) conditions.

6.14.2 HELICOPTER PERFORMANCE STANDARDS

- Helicopters shall be operated in performance Class 1 or 2; preference will be given to those which are capable of operating in Performance Class 1 in the anticipated conditions for any operation.
- Where operations are conducted to Performance Class 1, the take-off mass of the helicopter shall not exceed the maximum take-off mass specified for the procedure to be used and a rate of climb of 100 ft/min at 60 m (200 ft) and 150 ft/min at 300 m (1,000 ft) above the level of the heliport with the critical engine inoperative and the remaining power units operating at an appropriate power rating.
- Where operations are conducted to Performance Class 2 the mass of the helicopter at take-off shall not exceed the maximum take-off mass specified for a rate of climb of 150 ft/min at 300 m (1,000 ft) above the level of the heliport with the critical power-unit inoperative and the remaining power units operating at an appropriate power rating.

6.14.3 FUEL PLANNING

IFR FLIGHT PLAN

Fuel shall be sufficient for the leg to destination plus the leg to an alternate plus 10% trip fuel plus 30 minutes. An allowance should also be made for start-up and taxi.

Note: Fuel computations for the leg to the alternate should be calculated at the low altitude cruise fuel consumption if this is likely to be the case.

VFR FLIGHT PLAN

Fuel should be sufficient for the proposed route plus 30 minutes at the cruising speed consumption. An allowance should also be made for start-up and taxi.

6.14.4 USE OF OFFSHORE ALTERNATES

Offshore installations are not to be used as alternates, unless the onshore alternative is equally unacceptable. Such use must be approved in advance by the Logistics Department in order to establish the best course of action.

6.14.5 COMPOSITION OF FLIGHT CREW

HELICOPTER TYPES AND CREWING

For helicopters, the authorized type and composition of the corresponding crew depend on the flown-over areas and the conditions of flight. These criteria are summarized in the following table:

	VFR	IFR and Night
Single engine	1 (Note 1)	Not permitted for PTTEP operations
Multi-engine <5,700kg (12,500lbs)	2	2
Multi-engine >5,700kg (12,500lbs)	2	2

Note: Exceptionally, one pilot may be used for operations in a “non-hostile” environment provided the aircraft is certified for single pilot operations and performance/requirements dictate. All cases of proposed single pilot operation should be referred to the Logistics Department.

SINGLE PILOT OPERATIONS

Where aircraft is certified for single pilot operations and this is deemed safe and practical by the Logistics Department, supported by an approved Aviation Advisor, then this mode of operation may be considered. The factors affecting the decision will include:

- Task and workload.
- Flight Conditions.
- The terrain and environment.
- Traffic density.
- Aircraft equipment (and the interface with approach and en-route aids) and whether an operative approved autopilot system is fitted.
- Length and nature of intended flights.

TWO PILOT OPERATIONS

Two pilot operations will always be required for:

- IFR or night operations.
- Operations into an offshore “hostile” environment
- Where the maximum approved passenger seating configuration is more than nine (9).

6.14.6 FLIGHT AND DUTY TIMES

Pilots should not fly in excess of the maximums listed below or those listed in mission specific portions of this guide, including time that might be flown in support of other companies/customers. If the local regulator imposes stricter limits, they should be followed.

Single Pilot:

- 8 hours daily flight time constitutes a flight period.
- 45 hours in any 7 consecutive day period.
- 100 hours in any 28 consecutive day period.
- 1,000 hours in any 365 consecutive day period.

Dual pilot:

- 10 hours daily flight time constitutes a flight period.
- 60 hours in any 7 consecutive day period.
- 120 hours in any 28 consecutive day period.

- 1,200 hours in any 365 consecutive day period.

6.14.7 ADVERSE WEATHER POLICY

The local PTTEP entity and the helicopter operator will develop an adverse weather policy that complies with the guidance in Appendix 6 of the IOGP AMG including, but not limited to:

- Thunderstorms, strong winds and other adverse atmospheric conditions.
- Lightning avoidance
- Turbulence
- Contaminated landing surfaces, including the effect of type and depth of contaminants on performance.
- Sea state, where applicable
- Cold and hot weather operations.

6.14.8 VISUAL FLIGHT RULES (VFR) WEATHER MINIMA

The VFR weather minima in the table below are to be used unless the local regulator has established more stringent limits.

Flight Regime	Minimum Operating Height (1)	Cloud Base (feet)	Visibility (SM) (4)	Requirements to fly given these VFR weather minimums (2)
Offshore - Day	500 Feet (3,4)	600 Feet	3 SM (3,4)	
	400 Feet	500 feet	1/2 SM	Offshore helicopter interfield use only if visual contact is maintained with other facilities.
Overland - Day	500 Feet (3)	600 Feet	3 SM (3)	
All Night Ops (3)	Night Flights will be flown using only IFR procedures and minimums where available, otherwise the VFR minimum shall be a cloud base of 1000 feet with 100 feet of vertical cloud clearance and 3 SM visibility.			Twin-engine IFR certified helicopter with dual IFR-night current crew. All night flights should utilise IFR cockpit procedures for takeoffs and landings.

Notes:

- 1) The minimum operating height refers to the height Above Ground Level (AGL) for overland flights, and the height Above Mean Sea Level (AMSL) for offshore flights.
- 2) VFR Flights may not depart or continue if the weather conditions at departure, en-route or the destination are below the above stated minimum.
- 3) Minimum operating height for Day VFR less than a ceiling to 600 feet (inclusion of 100 feet of cloud clearance) and visibility to 2 SM may be allowed if the procedures are authorized by the appropriate authority.
- 4) When lower minimums are used, only twin-engine IFR certified helicopters with a dual pilot IFR current crew may be used.

6.14.9 BRIDGING DOCUMENT

A bridging document shall be developed for each operation that describes the individual responsibilities and actions of both the local PTTEP entity and the helicopter operator.

6.14.10 HELICOPTER UNDERWATER EGRESS TRAINING (HUET)

All aircrew and frequent flying offshore passengers shall complete HUET training using an underwater escape simulator at intervals not to exceed 3 years if engaged in floatplane or offshore helicopter operations. This training should be completed in conjunction with wet dingy drills using emergency equipment similar to that installed on the aircraft. The syllabus should be complying with the current OPITO HUET training standard.

6.14.11 LIFE JACKETS, RE-BREATHERS, AND SURVIVAL SUITS

LIFE JACKETS

The Operator shall ensure that for all over-water flights all persons on board shall wear constant wear-type lifejackets. Crew life jackets should also be fitted with a homing device capable of transmitting on the appropriate international and/or national aeronautical distress frequencies.

REBREATHERS

Where deemed necessary by a full risk assessment, passengers shall wear Emergency Breathing Systems that meet Category 'A' of the specification detailed in CAP 1034 in order to increase underwater survival time.

SURVIVAL SUITS

The Operator shall ensure that for offshore flights when the sea temperature will be less than 10°C during the flight, or when the estimated rescue time exceeds the calculated survival time, as determined by the Risk Assessment/Safety Case, all persons on board should wear a survival suit approved for helicopter use. In some cases, a thermal liner may be necessary, as determined by sea temperature.

6.14.12 TRANSPORTATION OF DANGEROUS GOODS

PROCEDURES

The aircraft operator shall have appropriate procedures and trained personnel for the carriage and acceptance of dangerous goods. Carriage of dangerous goods shall comply with International Air Transport Association (IATA) guidance (or similar guidance such as ICAO DOC 9284: Technical Instructions for the Safe Transport of Dangerous Goods by Air).

TRAINING

Check in staff and aircrew shall complete dangerous goods awareness training at intervals not exceeding two years.

PRESCRIPTION DRUGS

Prescription drugs may have to be surrendered at check-in for safe-hand carriage, record and re-issue on installation with a similar procedure for passengers returning onshore.

KNIVES

Knives which are tools of trade (e.g. chefs and divers) must be declared at check-in.

6.14.13 AIRFIELD, HELIPORT AND HELIDECK DESIGN

GENERAL

ICAO Annex 14, Aerodromes, Volumes I & II, should be used as the basic reference documents in all new airbase design considerations, construction or major rework of existing airbases where no local guidance is available.

OFFSHORE HELIDECKS

Offshore helidecks shall comply with the guidance published in CAP 437, 'Standards for Offshore Helicopter Landing Areas' and requirements from local authority including but not limited to Department of Civil Aviation (DCA).

6.14.14 HELIDECK INSPECTIONS

INITIAL INSPECTIONS

Prior to commencing operations to a new helideck, or with a new operator to an existing helideck, experienced and qualified personnel from the aircraft operator shall perform an inspection and brief all relevant offshore personnel on the safe operating practices and procedures for the helicopter type being used. The briefing shall also include actions to be taken in the event of any helicopter emergency occurring on the helideck.

REPEAT INSPECTIONS

Helidecks shall be inspected at least annually by an appropriately qualified aviation specialist or the aircraft operator. Documented findings and action plans resulting from any inspection shall be retained by the HLO and the local PTTEP entity.

DAILY INSPECTIONS

Daily and pre-landing inspections shall be conducted by the HLO with particular regard to defective equipment and FOD. Any deficiencies shall be reported to the helicopter operator or pilot in advance of landing.

6.14.15 HELIDECK REFUELLING SYSTEM INSPECTIONS

GENERAL

If the offshore installation contains refueling equipment and storage, an inspection shall be conducted separately and refueling procedures shall be developed. Particular attention shall be placed on daily sampling of the fuel prior to arrival of the helicopter as well as sampling procedures immediately prior to helicopter refueling.

REPEAT INSPECTIONS

Helideck refueling installations shall be inspected initially, and annually thereafter by a qualified fuel specialist designated by the aircraft operator or the Logistics Department. The inspection schedule shall include a review of refueling procedures that includes daily testing, sampling and sample retention practices. Records of inspections shall be maintained.

6.14.16 NIGHT FLYING

Night flying must be risk assessed, considered operationally necessary, and approved prior to commencement. This includes night medical evacuations which must only be conducted in life threatening situations that cannot wait until first light as determined by the offshore installation manager in consultation with medical staff. Search and rescue availability, capability and survival times must be included in the risk assessment. The Logistics Department must be involved in night flying risk assessments and will determine the approval process on a case by case basis.

6.14.17 SECURITY

PROCEDURES

PTTEP and the aircraft operator shall implement security procedures to ensure that only approved and manifested personnel, baggage and freight are carried. Security checks shall include, but not be limited to the use of metal detectors for passengers

and x-ray equipment or manual searches to inspect personal baggage. Once passengers, baggage and freight have passed through the security process they shall be quarantined to maintain security integrity.

ACCESS TO AIRCRAFT

The aircraft operator shall ensure that access to the aircraft prior to flight is strictly controlled to prevent access by unauthorized personnel.

SECURITY CONTROLS

The Aircraft operator shall have effective security controls to prevent prohibited items and substances from being taken on board the aircraft. These security checks shall cover all passengers, baggage, and freight.

Procedures shall be implemented to ensure control of the following items:

- Electronic devices such as laptops, mobile phones, PDAs, CD and MP3 players shall be switched off and secured in checked baggage prior to security checks.
- All laptop computers shall be powered off (not in standby/sleep mode) and removed from baggage prior to passing through any x-ray equipment.
- Baggage shall be secured. Plastic bags are not permitted for transportation of freight or used for personal baggage.
- Procedures shall be in place to identify and require removal of any intoxicated or disruptive passengers prior to their boarding the aircraft.

7.0 APPENDIX:

7.1 REFERENCE TO IOGP

Section No.	Section Title	IOGP reference
6.1	Aviation Risk Management	IOGP AMG APP1
6.1.1	Scheduled Airline Travel	IOGP AMG 4.2.1
6.1.2	Use Of Non-Scheduled Aircraft	IOGP AMG 4.2.2
6.1.3	Private And Public Sector Aircraft	IOGP AMG 4.2.3, 4.2.4
6.3	Drug And Alcohol Policy	IOGP AMG 4.6
6.4.3	One Time Acceptances	IOGP AMG 2.2
6.6	Third-Party Aircraft Contracts	IOGP AMG 4.1.4
6.8	Contract Management	IOGP AMG 4.1.1, 4.1.2
6.9	Aircraft Specification	IOGP AMG APP7, 410 2.1-2.6
6.10	Requirements For Contracted Air Operators	IOGP AMG 2.1
6.10.4	Management Systems	IOGP 410 1.2 – 1.4
6.10.6	Operations Manuals	IOGP 410 3.1
6.10.7	Safety Management Systems	IOGP 410 1.5-1.13
	PTTEP Requirements	IOGP AMG 3.2
	Elements	IOGP AMG 3.3
6.10.8	Hazard/Risk Management	IOGP AMG 3.4, 410 1.12
6.10.9	Quality Assurance	IOGP AMG 3.6, 410 1.14-15
6.10.10	Incident And Accident Reporting	IOGP AMG 3.5
6.10.11	Environmental Management	IOGP AMG 3.7
6.10.12	Emergency Response	IOGP AMG 410 1.16-1.19
6.10.13	Adverse Weather Policy	IOGP 410 3.30, AMG APP 6
6.10.14	Insurance	IOGP AMG 4.1.3
6.11	Emergency Response Plan (ERP)	IOGP AMG Sect 12
6.12	Emergency And Medical Evacuation Flights (Medevac)	IOGP AMG 4.2.5, 12.4.1
6.13.1	Aircraft Performance	IOGP 410 4.1-4.11
6.13.2	Pilots Qualification And Experience Levels	IOGP AMG 4.3
6.13.3	Flight Crew Training	IOGP 410 5.2-5.5
	Flight Simulation Training Devices (FSTDS)	IOGP AMG 8.1.2 IOGP 410 5.15-5.17
6.13.4	Maintenance Personnel	IOGP AMG 4.4, 410 6.32-6.35
6.13.5	Maintenance Requirements	IOGP AMG 4.5, 410 6.1-6.3
6.14.1	Helicopter Standards	IOGP AMG 5.1
6.14.2	Helicopter Performance Standards	IOGP AMG 5.2
6.14.3	Fuel Planning	IOGP AMG 5.3, 410 3.27
6.14.4	Use Of Offshore Alternates	IOGP AMG 5.4, 410 3.28
6.14.5	Composition Of Flight Crew	IOGP AMG 5.5
6.14.6	Flight And Duty Times	IOGP AMG 5.6
6.14.7	Adverse Weather Policy	IOGP AMG A6.5
6.14.8	Visual Flight Rules (VFR) Weather Minima	IOGP AMG A6
6.14.10	Helicopter Underwater Egress Training (HUET)	IOGP AMG 8.1.8



6.14.11	Life Jackets, Re-Breathers, And Survival Suits	IOGP 410 3.43
6.14.12	Transportation Of Dangerous Goods	IOGP AMG 9.2.3
6.14.13	Airfield, Heliport And Helideck Design	IOGP AMG Section 11

EXHIBIT F.2

PTTEP's TROPICAL CYCLONE PLAN FOR GULF OF THAILAND



PTTEP

PTT Exploration and Production Public Company Limited

Tropical Cyclone Plan for Gulf of Thailand








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THIS DOCUMENT WILL BE REVIEWED EVERY 5 YEARS FROM DATE OF APPROVAL OR REVISED EARLIER IF NECESSARY.

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INTRODUCTION

1. PURPOSE

The word “Tropical Cyclone” (TC) is violent storm that originates over oceans in tropical areas and moves over to the coastal areas bringing about large-scale destruction due to violent winds (squalls), very heavy rainfall (torrential rainfall) and storm surge.

Tropical Cyclone (TC) is a significant threat to offshore operations in the Gulf of Thailand (GoT) and justify response procedures, resources and training of personnel to mitigate risks. Actions to be taken involve suspension of work activities, evacuation of non-essential offshore personnel (and total evacuation if needed) and sail away of marine vessels to a safe location. Risks to onshore sites – particularly Songkhla Petroleum Support Base should also be recognized.

This procedure intends to provide directions on coordination of Tropical Cyclone response and any situation requiring evacuation and remobilization of a large number of personnel from PTTEP operating assets in the Gulf of Thailand with the objectives to:

- Maximize safety of **P**ersonnel;
- Minimize impact to **E**nvironment;
- Minimize damage to **A**sset and continue production as long as safety is maintained; and
- Minimize impact to **R**eputation of the Company.

2. SCOPE

This procedure applies to all PTTEP operating assets and operations in the Gulf of Thailand and Songkhla Petroleum Support Base which comprise of:

- Arthit (ART), Greater Bongkot North (GBN), Greater Bongkot South (GBS), Floating Storage and Offloading Tanker (FSO2) and other PTTEP offshore assets in the Gulf of Thailand;
- Offloading tankers calling at Bongkot;
- Offshore drilling rigs;
- Marine support vessels e.g. Anchor Handling, Towing and Supply vessels (AHTS), Crew Boats (CB), Seismic Vessels etc.; and
- Working support barges / vessels e.g. accommodation, construction, derrick & pipe laying, diving, survey, hook up, well service etc.

Site specific Tropical Cyclone plans / procedures for operational assets, marine vessels, drilling rigs or working barges shall be prepared by the owner and approved by PTTEP’s Contract Holders (or delegated persons). Such plans / procedures shall be align with this plan.

REQUIREMENTS

3. TROPICAL CYCLONE MANAGEMENT PROCEDURE

3.1 RESPONSE TO TROPICAL CYCLONE

3.1.1 General

Tropical Cyclone Classification

Classification	Wind Speeds (knots) (based on 10-minute sustained winds)	Weather Characteristics
Tropical Disturbance	Persistent circulation for more than 24 hours	
Tropical Depression (TD)	<34	Squalls + thunderstorms
Tropical Storm (TS)	34 - 47	Squalls + thunderstorms over wide area
Severe Tropical Storm (STS)	48 - 63	Narrow bands of squalls + thunder storms spiral toward center
Typhoon (TY)	64 - 129	High winds, heavy rains
Super Typhoon (ST)	>130	Highest winds, severe rains

It is important to recognize that development may be considerably quicker (or slower) than above and some stages of development may be “skipped”.

PTTEP response to the Tropical Cyclone threat is based on reliable weather forecasts predicting potential strength and tracking (direction) of a Tropical Cyclone. This information, coupled with pre-determined alert levels (Pre-Alert (Grey), Green, Yellow, Orange and Red Zones) will allow phased actions to be taken by response teams.

It is important to stress that mobile offshore units (especially non-self-propelled vessels) such as drilling tenders/jack up, construction barges are much more vulnerable to Tropical Cyclone than fixed platforms thus priority of actions should be given to these units at early response stage.

3.1.2 General Actions Before and During Tropical Cyclone Period

General actions with responsibilities assigned must be taken before the start of and during Tropical Cyclone period (generally scheduled from 1st October until end of February depending on call-off announcement for each TC period).

Action	Timeline	Action Party
1. Official announcement of Tropical Cyclone Period for Gulf of Thailand (Form is in Appendix 1 Template for Declare/Call off Tropical Cyclone Period Notification).	Sep. (declare) Feb. (call off)	- PDT, Production Asset Group
2. Tropical Cyclone response briefing and exercise to be held to cover both offshore operations team and onshore support team. Assistance from PTTEP Weather Services Provider is required for briefing and exercises.	Sep.	- Marine Engineering & Operations Section - Safety, Security, Health & Envi. Division - Production Asset and Supply Chain Function Group SSHE
3. Tropical Cyclone Marine Representatives are ready to be mobilized for supporting all Accommodation/ Installation Barges and Tender Rigs in PTTEP Offshore Operating Assets when required by Greater Navamindra Marine Control (GMC) during the Tropical Cyclone season.	Generally during 1 st Oct. – end of Feb.	- Marine Engineering & Operations Section
4. Prepare and inspect Anchor Handling Tug and Supply (AHTS) Vessel and Crew Boats to ensure state of readiness such as: - All AHTS vessels to have 50% minimum fuel or enough for 15 days operation in full towing condition - Crew boats require at least 50% minimum fuel - Vessel water tanks to be filled as often as possible - Availability of AHTS(s) with clear deck for FSO2 offloading support and Drilling rig anchors handling	Prior to starting TC period	- Marine Engineering & Operations Section - Offshore Marine Control - SKL Marine Control - Construction Project Engineer – For AHTS hiring under Project
5. Additional support vessel for drilling operations during Tropical Cyclone season to have 2 AHTS(s) per Tender Rig.	Prior to starting TC period	- Marine Engineering & Operations Section
6. All marine vessels, Drilling Rig and Working support barges / vessels to have 2 weeks food provision at minimum.	During TC period	- Offshore Marine Control - Offshore Drilling Rig - Working support barge / vessel
7. Prioritize and manage marine resources (i.e. AHTS, Supply Boat, Crew Boat etc.) in alignment with EMT directions.	During TC period	- Offshore Marine Control in consultation with SKL Marine Control

3.1.3 Personnel On Board (POB) Categories and Reporting

GBN, GBS, ART Field and all drilling rigs/ marine vessels to categorize personnel according to the following scheme and reference on Personnel On Board (POB) lists to be distributed daily by email (primary mean) or fax to Greater Navamindra Marine Control (GMC), Emergency Management Room (EMR), and Songkhla Petroleum Support Base Radio Room. POB lists to be sent before 1600 hours every day or after the last personnel transfer by helicopter/crew boat:

Personnel categories are as follows:

- S** Visitors to site, normally evacuated in Green Alert.
- A** Non-essential personnel, normally evacuated in Yellow Alert.
- B** Further non-essential personnel, normally evacuated in Orange alert.
- C** Skeleton crew, normally remaining on Bongkot, Arthit although they may also be evacuated if weather forecast conditions are severe (e.g. Tropical Cyclone approaching or exceeding platform design limits).

Note:

POB reporting requirements apply throughout the year, not just during the Tropical Cyclone period.

3.1.4 Alert Zones

Tropical Cyclone Alert Zones have been established on the basis of the estimated length of time required to safely implement response actions (suspending well being drilled, retrieving anchors, connecting tow bridle for vessel sail-away, personnel evacuation etc). The Alert Zones are as defined in Table 1. Travel times and distances are based on the movement measured from the center of the Tropical Cyclone. The highest speed winds will occur approximately 35 – 50 nautical miles from the center.

Alert Zone	Nautical Miles from Offshore Asset	TC Travel Time to Offshore Asset (hours-days)		
		At 5 Knots	At 10 Knots	At 15 Knots
Grey (Pre-Alert)	960	192 (8 days)	96 (4 days)	64 (2.7 days)
Green	660	132 (5.5 days)	66 (2.8 days)	44 (1.8 days)
Yellow	560	112 (4.7 days)	56 (2.3 days)	37.3 (1.6 days)
Orange	460	92 (4 days)	46 (1.9 days)	30.6 (1.3 days)
Red	310	62 (2.6 days)	31 (1.3 days)	20.6 (0.9 days)

Table 1: Tropical Cyclone travel time and distance from/to Offshore Operating Asset of each Alert Zone

For PTTEP Operations in the Gulf of Thailand, the Alert Zones are centered on Arthit Field. The Alert Zones are shown graphically in Figure 1 below. Note that they have been extended into elliptical shapes in order to allow more time to respond - see also **Appendix 4**.

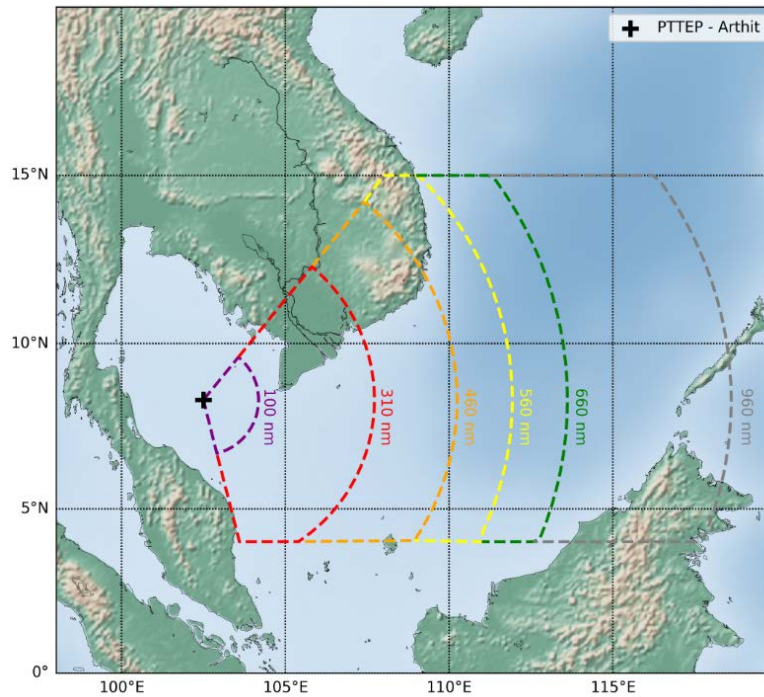


Figure 1 – Tropical Cyclone Alert Zones Chart

It is possible for a Tropical Cyclone to form within any of the Alert Zones above. In this case, an orderly progression through the various levels of alert is not possible. Such a case, TROPICAL CYCLONE FLASH ALERT will be issued immediately to the alert level required. Actions must be accelerated to achieve required objectives.

Weather conditions on site are very important as they determine what actions are possible without endangering personnel e.g. evacuation needing basket transfers and / or helicopter operations. You do not have to wait for a Tropical Cyclone to cross an Alert Zone limit before making a Tropical Cyclone declaration. If weather conditions are forecasted to worsen, early action is advisable. Upon the same principle, if the sea conditions on site are very good even if the Tropical Cyclone has already entered the various alert zones, it can be acceptable to hold the evacuation as long as sufficient lead time is available to safely transfer the personnel on crew vessels and sail to safe location. Using the “port open”/ “port close” criteria as the triggering point for evacuation as per the alert zones requirement is advised.

It is stressed that the Captain of any floating unit has the ultimate responsibility for the safety of the personnel on that unit and is authorized to take the appropriate actions.

3.1.5 Guidance for General Response Strategies

Response strategy for each alert zone shall be defined basing on risk assessment by considering critical information such as storm track (direction and intensity) and state of operations (mobile offshore units, fixed platform, state of operations etc.).

In general, response strategies for offshore assets/operations can be outlined (for lesser to more severe weather conditions) as a guidance as follows:

- 1) Keep monitor and continue only some operations as long as safety is maintained.
- 2) Suspend activities which can be affected by severe weather.
- 3) Move tender rigs/barges to stand off position.
- 4) Tow tender rigs/barges to shelter area (safe location) – with anchors retrieved/dropped.
- 5) Supply boats/DSVs/crew boats to enroute to shore or safe locations.
- 6) For fixed platforms: stay onboard, personnel evacuation with skeleton crews onboard and production continues, full personnel evacuation with process shutdown etc.
- 7) Evacuate personnel by helicopters and/or boats. Evacuation will be based on risk assessment, logistics resources, weather and Tropical Cyclone conditions, and evacuation lead time.

EMT decision/recommendation shall be in conjunction with sites teams which the first priority is to protect people.

Guideline Actions for **GREY** or **PRE-Alert Zone**

Theme: Assess risk, define strategies and response plan with focus on mobile offshore units.

Information

- Tropical Cyclone has its center located within **960 nautical miles** of Arthit Field.
- PTTEP Weather Services Provider notifies/calls PTTEP Tropical Cyclone Advisor and start providing weather forecast, forecast storm track and tropical advisory every **12 hours**.
- Further communication can be made to all offshore assets/operations and SKL for information and necessary preparation.

Onshore Team Guideline Actions

- Tropical Cyclone Advisor notifies (call) VP of Production, Drilling, Logistics and SSHE Manager of Production Asset Group for precautionary information.
- A meeting can be held among the above group of personnel to assess risk and state of operations and begin to prepare precautionary actions/response plans such as well securing plan, anchors retrieval plan, towing plan, condensate offloading plan, production plan etc.
- Bangkok EMT can be activated (if required).
- Consider to mobilize Tropical Cyclone Marine Representative(s) to Offshore.

Offshore Team Guideline Actions

- Remain normal operations and keep monitoring weather forecast update/advice from Tropical Cyclone Advisor.
- Assess weather forecast at site/operation locations and allowable window to perform normal operations safely.
- Plan operation activities ahead in case of impact from the possible tropical cyclone.
- Ensure POB list is up-to-date.
- Consider to manage POB e.g. limit offshore traveling for visitors.
- Notify all marine support vessels, drilling rigs, and barges to be prepared and ready upon further update/advice.
- Liaise with Sales and Commercial Section to arrange plan on tanker calling and maximize condensate offloading.
- Prepare response plan for each asset/facility/operations per site tropical cyclone plan.
- Well securing and anchors handling operations may begin at this stage if necessary.

Guideline Actions for **GREEN Alert Zone**

Theme: Assess risk, confirm strategies & response plans and decision for mobile offshore units.

Information

- Tropical Cyclone has its center located within **660 nautical miles** of Arthit Asset.
- PTTEP Weather Services Provider providing weather forecast, forecast storm track and tropical advisory **every 6 hours**.

Onshore Team Guideline Actions

- Activate the Bangkok EMT.
- Issue GREEN alert notification endorsed by Senior VP., Thai Offshore Asset (EMT Leader).
- Compile all POB lists from offshore.
- EMT to coordinate with offshore assets/operations to assess the situation, storm track/route/speed and state of operations & plans.
- EMT (in consultation with offshore assets/operations) to confirm and formulate response plans e.g. well securing plan, anchors retrieval plan, towing plan, condensate offloading plan, production plan, evacuation plan & accommodation (if required) etc.
- Make decision (in consultation with offshore teams) whether to remain tender rigs/barges in field, move to standoff position or sail away to shelter location.
- For FSO2, assess the risk if de-manning is necessary and prepare the plan.
- Notify concerned external parties for the approaching tropical storm e.g. DMF, PTT, Partners etc.

Offshore Team Guideline Actions

- Update POB lists and local weather status (refer to reporting sheet in **Appendix 3**).
- Suspend work activities at remote wellhead platforms and recover divers etc.
- Suspend inter-field personnel movements and crew changes.
- Stop mobilizing non-essential personnel (**S group**) to offshore.
- Evacuate non-essential personnel (**S group**) by helicopter or boat.
- Start securing work items and prepare contingency plans for breakdown of equipment.
- Suspend any sensitive activities e.g. long term drilling operations.
- Secure well and perform anchors handling operations.
- Ensure readiness of communication means e.g. Single Side Band, Satellite phone.
- Call all marine support vessels to support at field.
- Offshore Marine Control (GMC) to prepare tow route (if required).

The general actions taken at **YELLOW Alert Zone** are:

Theme: Assess risk and focus on towing mobile offshore units, de-manning FSO2 and evacuation plan for fixed platforms.

Information

- Tropical Cyclone has its center located within **560 nautical miles** of Arthit Asset.
- PTTEP Weather Services Provider providing weather forecast, forecast storm track and tropical advisory **every 6 hours**.

Onshore Team Guideline Action

- Activate EMT, if not done so.
- Issue YELLOW alert notification endorsed by EMT Leader.
- EMT to coordinate with offshore assets/operations to assess/update the situation, storm track/route/speed and state of operations & plans.
- Follow up and update response plans e.g. well(s) securing, AHTS preparation for de-anchoring and towing, shelter areas, marine/aviation resources, evacuation (if required), accommodation etc.
- Finalize evacuation schedule and preliminary shelter location / evacuation route.
- For fixed platforms, together with offshore teams, assess risk of adverse weather against design criteria and related factors for decision on evacuation and production shutdown. It is recommended to use weather condition for helicopter landing as a point of no return.
- Inform DMF, PTT and Partners of potential production disruption due to shutdown of facilities and response plans, if not done so.

Offshore Team Guideline Action

- Consider evacuating personnel **A group**.
- Update local weather status every 6 hours (refer to reporting sheet in **Appendix 3**).
- Stop any tanker offloading and release from the terminal.
- Consider stopping any sensitive activities e.g. drilling operations, well operations, construction, condensate offloading etc.
- Continue securing well, performing anchors handling operations and preparing for sail away to safe location.
- De-manning FSO2. (See note)
- Offshore Marine Control (GMC) to coordinate with barge master/captain of marine vessels for towing readiness and schedules (anchors retrieving, connecting tow bridle, tow route and shelter locations etc.) as required.
- Sail away tender rigs/barges to shelter location.

Note:

- The de-man on FSO2 may take place earlier than "YELLOW ALERT ZONE" if weather condition is a direct threat to Bongkot location with worsen wave & swell is developing significantly (unsafe for evacuation). Bongkot Field Manager will make a decision for de-manning.

Guideline Actions for **ORANGE Alert Zone**

Theme: Assess risk and decision on shutdown production and evacuation of skeleton crew.

Information

- Tropical Cyclone has its center located within **460 nautical miles** of Arthit Asset.
- PTTEP Weather Services Provider providing weather forecast, forecast storm track and tropical advisory **every 3 hours**.

Onshore Team Guideline Action

- Issue ORANGE alert notification endorsed by EMT Leader.
- EMT to coordinate with offshore assets/operations to assess/update the situation, storm track/route/speed and state of operations & plans.
- EMT (in consultation with offshore assets/operations) to follow up and update response plan e.g. shelter areas, marine/aviation resources, evacuation (if required), accommodation etc.
- Make decision, in consultation with offshore teams and Top Management, whether to shutdown operations and abandon production platforms OR having skeleton crews onboard by considering information from all dimensions (internal and external).
- Inform DMF, PTT and Partners of potential production disruption due to shutdown of facilities and response plans, if not done so.

Offshore Team Guideline Action

- Update revised POB and manifest of evacuated personnel to the Logistics Duty in the EMT.
- Update local weather status every 3 hours (refer to reporting sheet in **Appendix 3**). Consider evacuating personnel **B group**. Only **C group** personnel to remain offshore at this time.
- Crew boat to give Offshore Marine Control (GMC) and / or SKL Marine Control position reports every 1 hour.
- Barge master/captain of marine vessels under towing to keep regular update towing status to Offshore Marine Control (GMC).
- Prepare production for the following options:
 - Continue production with skeleton crew remain on ART, GBN, and GBS if safe to do so.
 - Leave the platform and shutdown production if Tropical Cyclone approaching or exceeding platform design limits to withstand severe weather condition.

Note:

- Fixed platforms are designed to be a safe location offshore. There is no requirement to evacuate skeleton crews unless the Tropical Cyclone poses a direct threat to a particular facility and beyond its design limits.

Guideline Actions for **RED Alert Zone**

Theme: *Assess risk, monitor situation and prepare plans for resuming operations.*

Information

- Tropical Cyclone has its center located within **310 nautical miles** of Arthit Asset.
- PTTEP Weather Services Provider providing weather forecast, forecast storm track and tropical advisory **every 3 hours**.

Onshore Team Guideline Actions

- Issue RED alert notification endorsed by Incident Commander.
- EMT to coordinate with offshore assets/operations to assess/update the situation, storm track/route/speed and state of operations & plans, status of skeleton crews onboard, any impact to facilities.
- Follow up and update response plan e.g. towing, shelter areas, marine/aviation resources, evacuation (if required), accommodation etc.
- Marine Logistics in EMT to coordinate with barge master/captain of marine vessels to monitor progress and status of sail away to shelter location.
- Inform DMF, PTT and Partners of potential production disruption due to shutdown of facilities and response plans, if not done so.

Offshore Team Guideline Actions

- Update local weather status every 3 hours (refer to reporting sheet in **Appendix 3**) until storm risk is over and stand-down announced.

3.1.6 Shelter Locations

Due to the storm moves into the Gulf of Thailand, most of the moves from east to west towards the northwest. So it should ship a storm shelter in a direction opposite to the direction of motion of the tropical cyclone, or to the south by trying to keep the wind hit the aft right all the time.

The direction and tow route of a tropical cyclone shelter will be issued by Offshore Marine Control (GMC) with consultation with EMT.

The recommended shelter locations for tender rigs/barges/support vessels etc. are as listed below:

- 1. Between Pulau Perhentian Besar and Pulau Redang at Latitude 05° 52' N Longitude 102° 53' E**
- 2. NORTH SHELTER : Koa Kut (Thailand) at Latitude 11° 38.0'N, Longitude 102° 32.0'E refer to B.A. chart 3542 subject to TC track.**

While sail away, regular reporting (3 hourly) of position and weather conditions should be made back to Marine Logistics Duty (in EMT) in accordance with the standard weather reporting sheet **Appendix 3** or by Single Site Band (SSB).

3.2 ORGANIZATION

The overall response to a Tropical Cyclone is organized as follows:

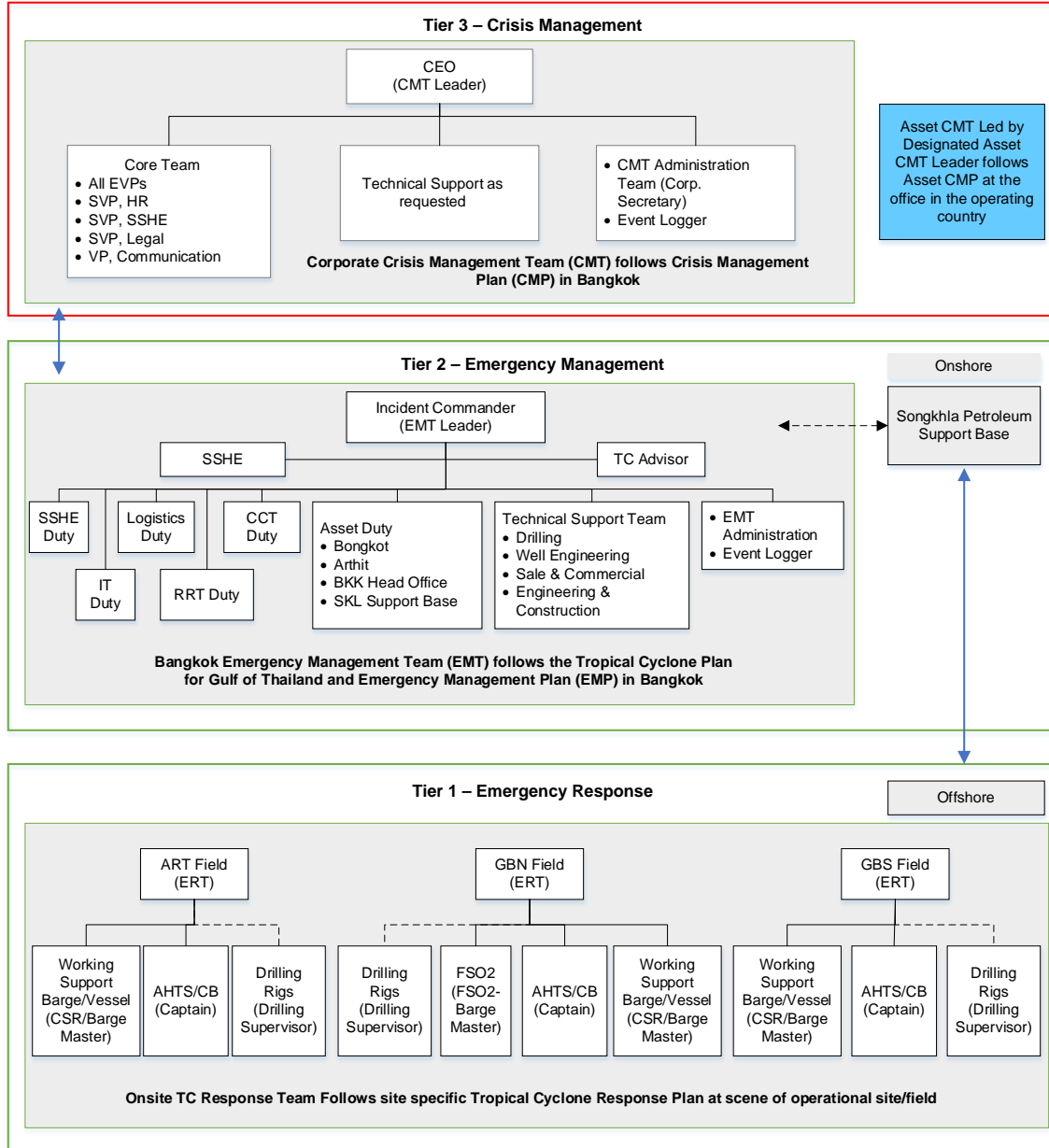


Figure 2 – Tropical Cyclone Response between Onshore and Offshore

3.3 TROPICAL CYCLONE NOTIFICATION

Tropical Cyclone notification within PTTEP organization can be shown by the following flow chart:

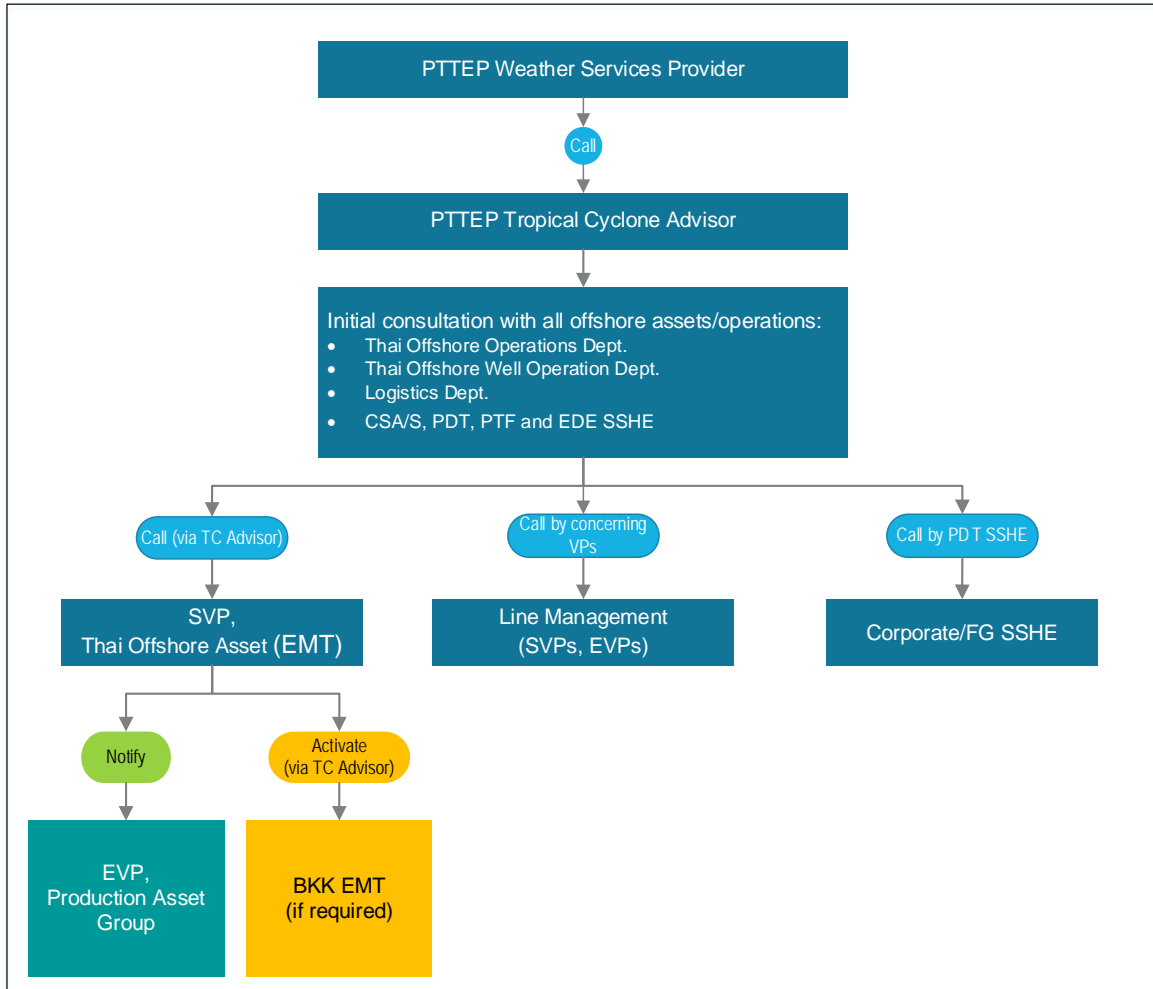


Figure 3 – Tropical Cyclone Notification Chart

Tropical Cyclone notification contact details shall be updated at least once a year by Production Asset Group SSHE before starting the tropical cyclone period. Examples of tropical cyclone notification contact details is referred in **Appendix 9**.

Key steps of Tropical Cyclone notification:

- Weather Service Provider will phone to PTTEP Tropical Cyclone Advisor to notify Tropical Cyclone.
- PTTEP Tropical Cyclone Advisor will phone VP-Thai Offshore Operations (first call), VP-Logistics, VP-Thai Offshore Well Operation, SSHE Manager of Production Asset and Supply Chain Management Group, etc. for further coordination according to the above diagram for appropriate actions.

SVP-Thai Offshore Asset, as EMT Leader, will decide whether Bangkok Emergency Management Team (Bangkok EMT) shall be activated and notify Alert Level to all PTTEP Operating Assets in the Gulf of Thailand. (Notification Template is in **Appendix 2** of this plan).

If communications problems between onshore and offshore are experienced and the Alert Level cannot be informed, Offshore Field Manager / Rig OIM / Barge Master are authorized to declare an Alert Level and take appropriate actions.

3.4 TROPICAL CYCLONE TEAMS

3.4.1 General

PTTEP has established Tropical Cyclone response centers where Tropical Cyclone teams are assembled and directing appropriate actions. Management and response teams are formed when a Tropical Cyclone Alert is declared as follows:

- Bangkok Emergency Management Team (BKK EMT)
- Greater Bongkot North & FSO2
- Greater Bongkot South
- Arthit
- PTTEP Petroleum Development Support Base (Songkhla)
- Drilling Rigs
- Supporting Vessels/Barges

The organization and general composition of these teams are as follows:

3.4.2 Bangkok Emergency Management Team

During Tropical Cyclone Period, Tropical Cyclone Advisor will be established. He will work closely with the Bangkok Emergency Management Team (EMT) to form Tropical Cyclone response team in Bangkok which consists of:

- Incident Commander (EMT Team Leader) – Senior VP., Thai Offshore Asset
- Tropical Cyclone Advisor – from Marine Engineering and Operations Section
- SSHE Manager - Production Asset Group
- SSHE Engineer - Thai Offshore Asset
- Asset Duty
- Logistics Duty – from Logistics Department
- SSHE Duty – from Safety, Security, Health, and Environmental Division
- Crisis Communication Leader Duty – from Communication and Social Responsibility Department
- Relative Response Leader Team Duty – from Human Resources Division
- Drilling Duty – from Drilling Operation Section
- Event Logger Duty – from Maintenance and Inspection Department

- EMT Administration Duty – from Safety, Security, Health, and Environmental Division
- Other personnel may be requested as required by EMT e.g. representative of Well Service, Drilling Projects, Sales commercial, Construction Project, Structural Engineering Team and etc.

This team is assembled at the Emergency Management Room in Emergency Command Center located at 19th floor, Energy Building A or any identified alternative Emergency Management Room. After accessing the Tropical Cyclone situation, the team may consider shift arrangement to cover 24 hours duty.

Overall responsibilities of the team are:

- Review and declare Tropical Cyclone Alert Levels and call-off
- Inform sites of Alert Level status – Tropical Cyclone Alert Notification (see Appendix 2)
- Assess overall risk and ensure coordinated response between sites.
- Ensure that support and guidance are provided to sites.
- Request mobilizing additional resources or third-party assistance if necessary.
- Liaison with PTTEP Weather Service Providers.
- Liaison with external parties – PTT and Department of Mineral Fuel (DMF) (refer to SSHE-106-STD-500 Emergency Crisis Management Standard).
- Technically support on drilling and production issues.
- Permit re-manning after surveillance helicopter flight for safety status check.

Specific responsibilities of team members follow:

1) Incident Commander (EMT Leader)

- Make decision to activate Bangkok EMT.
- Ensure operations sites know who team members are.
- Discuss actual and forecast weather with Tropical Cyclone Advisor.
- Ensure notification of Tropical Cyclone Alert Notification (Form in Appendix 2) has been sent to sites.
- Ensure major contractors are informed.
- Ensure that risk assessment is conducted to develop response actions.
- Mobilize Crisis Communication Teams if required.
- Provide regular update regarding Tropical Cyclone status to the Chief Operating Officer, Production Asset Group.
- Begin considering re-manning actions, after surveillance helicopter flight.

2) Tropical Cyclone Advisor

- Conduct a Tropical Cyclone brief prior to declaration of Tropical Cyclone Period.
- Act as a focal point to liaise with PTTEP Offshore Weather Services regarding the weather forecast.
- Ensure weather forecast and Tropical Cyclone track board are available.
- Advise EMT Leader on Tropical Cyclone situation i.e. declare/call off Tropical Cyclone alert level etc.
- Liaise with relevant concerns to convey the message of Tropical Cyclone forecast and its situation.
- Refer to Joint Typhoon Warning Center (JTWC) for alternative forecasts i.e.
 - Japan Meteorological Agency (www.jma.go.jp/jma/indexe.html)
 - Hong Kong Observatory (<http://www.hko.gov.hk/informtc/informtc.htm>)
 - Thai Meteorological Department (<http://www.tmd.go.th/index.php>)

3) SSHE Manager of Production Asset Group & SSHE Engineer of Thai Offshore Asset/Operation Support Group

- Provide advice to EMT based on Tropical Cyclone Plan for Gulf of Thailand.
- Provide support regarding SSHE issues.
- Advise EMT Leader on Tropical Cyclone situation i.e. declare/call off Monsoon season and Tropical Cyclone alert level etc.
- Prepare a notification of declare/call off Tropical Cyclone Period for approval by PDT, Production Asset Group.

4) Asset Duty (GBN/GBS/ART)

- Assess progress of work status offshore.
- Work with Logistics duty, Construction duty, Well Operation duty and Drilling duty to complete and maintain information on POB Board in Emergency Management Room.
- Ensure offshore comply with Asset Tropical Cyclone Plan.
- Obtain current production levels and forecasts.
- Obtain FSO₂ (GBN Asset Duty) stock level and space available / time to fill.
- Keep updating information to PTT, Department of Mineral Fuel (DMF), especially any shutdowns.

5) Logistics Duty

- Liaise with PTTEP Petroleum Development Support Base (Songkhla).
- Complete and maintain information on logistics board in Emergency Management Room.

- Work with Asset duty, Construction duty, and Drilling duty to complete and maintain information on POB Board in Emergency Management Room.
- Determine vessel/ helicopter resources available and needed.
- Obtain PAX lists for personnel in transit (helicopters and boats).
- Compile POB lists.
- Ensure PTTEP Petroleum Development Support Base (Songkhla) is adequate manned to response to the Tropical Cyclone evacuation.
- Ensure PTTEP Petroleum Development Support Base (Songkhla) books hotels in Songkhla for PTTEP staff, secondee and contractors.
- Ensure Personnel On Board (POB) lists are updated promptly.
- Ensure POB count done on boat/ helicopter arrival at Songkhla.
- Keep logistics contractors informed.
- Arrange surveillance helicopter flight before re-manning.

6) SSHE Duty

- Ensure EMT complies with the Tropical Cyclone Plan e.g. issuance of declare / call off Tropical Cyclone season and Tropical Cyclone alert level etc.
- Liaise with SSHE authority on site to ensure the readiness of evacuation equipment.
- Ensure that information boards in Emergency Management Room is maintain with the update information.
- Provide support regarding SSHE issues.
- Notify to PTT (Corporate SSHE) and Department of Mineral Fuel (Petroleum Safety & Environment Division) including update information when significant situation change.

7) EMT Admin duty

- Prepare a notification of declare/call off Tropical Cyclone Alert Level for approval by Incident Commander.
- Confirm alert levels – send pre-prepared notification to sites.
- Provide support regarding administration issues.

8) Crisis Communication Team (CCT) Duty

- Establish a pro-active media liaison and public affairs strategy
- Developing/ delivering a response to the media as directed by the EMT Leader
- Notify Department of Mineral Fuel (Head of Public Relation) and PTT Communication & Gas Business Group Public Relation Division on the formal emergency situation

- Develop the communication message including press release for internal & external communication
- Develop the Initial Media Holding Statement

9) Relative Response Team (RRT) Duty

- Advise the EMT Leader on personnel and welfare issues relating to staff
- Ensure appropriate legal advice is available for the EMT Leader when making critical decisions
- Establish numbers of personnel involved in Tropical Cyclone Evacuation by obtaining POB list
- Establish status of personnel involved in the Tropical Cyclone Evacuation including injuries and movements to other locations
- Work closely with EMT Leader and CCT to determine appropriate message to employees
- In the event of a serious injury or fatality, liaise closely with the EMT Leader in determining suitable and timely notification to the Next of Kin (NOK) / Nominated of Contact (NOC)

10) Event Logger Duty

- Liaise with the all EMT to ensure that all information is recorded
- Ensure that all events are precisely and accurately recorded as they occur
- Check the event logging board for up to date critical information

11) Drilling Duty

- Liaise with Company Man/ Drilling Supervisor.
- Liaise with drilling contractors and Rig OIM if not already done by Drilling Superintendents.
- Obtain current well status and plan.
- Work with Logistic Duty and Asset Duty to complete and maintain information on POB Board in Emergency Management Room.
- Define well securing plan with Company Man/ Drilling Supervisor/ Rig OIM.
- Monitor anchor pick up for tender assist rig. Two anchors should be retrieved for use as alternate tow lines if bridle breaks
- Work with Logistics Duty (in consultation with Company Man/ Drilling Supervisor and Rig OIM) to make decision whether to sail away the rig to shelter location or remain on site at standoff position.
- Monitor status during Rig sail away.

12) Construction Duty

- Liaise with Company Site Representative onboard Working support barges / vessels.
- Obtain current offshore construction status and plan.
- Work with Logistic Duty and Asset Duty to complete and maintain information on POB Board in Emergency Management Room.
- Monitor anchor pick up for Working support barges / vessels. Two anchors should be retrieved for use as alternate tow lines if bridle breaks
- Work with Logistics Duty (in consultation with Company Site Representative) to advise Captain/Master of Barge and its fleet whether to sail away the Working support barges / vessels to shelter location or remain on site at standoff position.
- Monitor status during working support barges / vessels sail away.

13) Sales and Commercial Duty

- Coordinate with asset duty on information updating for PTT and Department of Mineral Fuel (DMF), especially any shutdown.
- Notify DMF (Offshore Petroleum Production Operations Group) and PTT on the Tropical Cyclone situation and evacuation

14) PTTEP Person Assigned by EMT

- Be a PTTEP's focal point to liaise with other Operators e.g. Chevron, CPOC etc. to request for support or exchange information on responding action to the Tropical Cyclone

3.4.3 GBN / GBS / ART Teams

Arrangements will be made locally to ensure 24 hours coverage.

- Asset Field Manager
- Logistics section head/team leader
- Production section head/team leader
- SSHE Supervisor
- Maintenance section head/team leader
- Well Service section head/team leader
- Other nominated personnel – Doctor, Radio Operator, Safety Technicians may be involved.
- The team works from facilities on Quarter Platform (QP).

Team responsibilities are:

- Define response plan (evacuation, de-anchoring and sail away of fixed platforms and marine vessels).
- Ensure Offshore Crew Coordinator (OCC) appointed for their asset/operation.
- Keep onshore sites informed e.g. POB, movement of marine fleets etc.
- Liaise with contracted assets in GBN, GBS and Arthit Fields (drilling rigs, construction barges, support barges, all marine vessels etc).
- Coordinate all marine/helicopter movements.
- Send Offshore Crew Coordinator (OCC) to Songkhla at first opportunity.
- Monitor unmanned units.
- Maintain production consistent with safety.
- Remobilization actions.
- Give instructions to vessel Masters / Marine Captain as appropriate.
- Appoint a POB coordinator on each boat to help with reconciliation onboard and at Songkhla.
- Ensure weather observations report at site, as per **Appendix 3**, are sent to Bangkok and PTTEP Weather Services Provider.

3.4.4 PTTEP Petroleum Development Support Base (Songkhla)

Consider to have enough teams to cover 24 hours operation:

- Team Leader – Manager, Petroleum Development Support Base
- Support – SKL Duty Roster Duty Officer
- SSHE, SKL SSHE Duty
- Jetty, Jetty Officer Duty
- Marine, SKL Marine Control Duty
- Facilities, SKL Facilities Team Leader, Car pool service Duty, Purchasing Officer Duty
- Aviation, Heliport Officer Duty
- The Offshore Crew Coordinator (OCC) appointed by Asset/Site Manager to assists the Manager of Petroleum Development Support Base.
- The PSB Office and facilities are used.

Responsibilities are:

- Coordinate actions with Offshore Asset/Operation, Jetty, and Helibase.
- Liaison with Emergency Management Team (Bangkok).

- Ensure helicopter and vessel availability; schedule diesel and water deliveries; ensure site access and cargo handling facilities available.
- Ensure reception, transport and accommodation for evacuated personnel (hotels for PTTEP employees, contractors, secondees).
- Prepare handout to be given to personnel arriving onshore, explaining requirements. See Appendix 6 Evacuation Personnel Handout
- Send regular lists of personnel by hotel to Bangkok (OCC role)
- Assist smaller contract companies and vendor with no local representation
- Keep contact with PTTEP employees, organic contractors and secondees to facilitate re-manning (OCC role)
- Keep contact with contractors representatives to facilitate re-manning (Contractors are responsible for keeping contact with their own employees)
- Track marine spreads
- Remobilize actions
- Immigration formality

3.4.5 Drilling Rigs/ Work Barges or Support Vessels

The PTTEP Company Site Representative (CSR) / Drilling Supervisor and rigs personnel comprise the response team and arrange their duty according to personnel availability and in line with PTTEP and rig specific tropical cyclone plan.

4. OFFSHORE EVACUATION AND ONSHORE STAND-BY GUIDELINE

Offshore Asset Field Managers / Company Site Representative (CSR) and Rig OIM / Barge Master are responsible for coordinating with Logistics Duty and EMT for making decision on evacuation means (by boat or helicopter).

When evacuating the facilities or operations, the Offshore Asset Field Manager / Company Site Representative (CSR) shall e-mail (primary mean) or fax a completed POB or manifest lists of evacuated personnel to BKK EMT / Logistics Duty / PTTEP Petroleum Development Support Base (Songkhla).

All Evacuees shall have a copy of their ID Card or Passport and completed Immigration Card.

The owner of rig/barge/vessel should liaise with Coastguard / Authority of shelter area for the vessels and passengers entry permission and custom processes.

4.1 EVACUATION BY BOAT

When considering evacuation bear in mind:

- At an early stage weather conditions may be such that it is not safe to transfer people by personnel basket.

- In worsening sea conditions wave and swell heights may be difficult to estimate from an elevated deck.
- Weather and sea conditions may vary across the Field. The Masters of boats involved in personnel basket transfers are responsible for assessing conditions and only permitting transfers if safe.
- Particular care must be taken if personnel basket transfers are being made between two floating units, as their relative motions may make transfers unsafe.

Personnel evacuation priority in Offshore Asset/Operations is as follows:

- 1) Visitors
- 2) Wellhead Platforms/ Selected Production Operators
- 3) FSO2
- 4) Development drilling rigs
- 5) Exploration drilling rigs
- 6) Central Complex

4.2 EVACUATION BY HELICOPTER

PTTEP has a contract with Helicopter Services Provider based in Songkhla to provide helicopter services. Normal operating hours, helicopter should be available within 1 hour of scheduled take-off time. Outside normal operating hour, only 1 fully serviceable helicopter shall be available on night stand by within 2 hours from notification helicopter will be ready for takeoff.

Helicopters should not undergo extended maintenance restricting their availability during the Tropical Cyclone season. Additional helicopters may be available but this depends on other operators activities.

Helicopters can carry a maximum of 12 passengers, weather and weight limitations permitting. GBN, GBS and ART are approximately 1 hour to 1 hour 15 minutes flying time from Songkhla.

4.3 ONSHORE STAND-BY

- 1) Designated Shorebase personnel and Contractor Representative shall be available to meet evacuees and be prepared to provide instructions and information to the arriving evacuees.
- 2) Evacuees shall be provided a copy of the Evacuated Personnel Handout, see details in **Appendix 6**, during Evacuation and Standby.
- 3) Crew change personnel during a shift change should contact their Offshore Crew Coordinator (OCC) for further instruction. Visitors should contact their respective department sponsor.
- 4) Evacuees will in general be required to stay with their group and at the designated hotel unless released to go home or to be remobilized with a different group.
- 5) Throughout onshore stand-by phase, each evacuee is still considered on duty and at work and should be prepared at all times to assist with the evacuation or remobilization.

5. COMMUNICATIONS

5.1 RADIO

All offshore units and vessels in Arthit, GBN, and GBS keep a permanent watch on VHF International Marine Channel 8 (156.750 MHz), 6 (156.650 MHz), 9 (156.450 MHz) respectively.

Drilling rigs and boats use HF/ SSB when out of any Bongkot and Arthit VHF range (approximately 20 NM). PTTEP have 2 HF/ SSB stations:

- On Greater Bongkot North Central Complex
- At Petroleum Support Base

PTTEP HF/ SSB frequencies used are:

Hours	Frequency (KHz)	Remark
0000 – 2400	3785	24 Hrs – Stand by frequency
0000 – 2400	4,595	Back up frequency

Note: During Tropical Cyclone Alert HF/ SSB between Greater Bongkot North (GBN), Greater Bongkot South (GBS), Arthit (ART), and Songkhla should be checked hourly.

Aeronautical VHF/ AM radio frequency in GBN, GBS and ART Fields is 129.450 KHz.

Chevron has HF/ SSB stations at Bangkok, Songkhla, Erawan, Satun, Funan and Platong Chevron frequencies are:

Hours	Primary Frequency (KHz)	Secondary Frequency (KHz)
0700 – 1700	8319	4400 / 4945 / 8711 / 8804.5
1700 – 0700	4400	8319 / 4945 / 8711 / 8804.5

5.2 TELEPHONE

Private network, Inmarsat and TOT Public Company Limited of the operational assets, marine vessels, drilling rigs or working barges are used for telephone communications. Key numbers are provided in emergency telephone list.

6. TROPICAL CYCLONE CALL OFF AND RESUMING OPERATIONS

6.1 CALL OFF

A Tropical Cyclone Alert will be called off by Senior VP., Thai Offshore Asset, in conjunction with PTTEP Weather Service Provider advice. This will normally be because the Tropical Cyclone has dissipated or passed GBN, GBS, ART and no longer poses a threat to operations or personnel. Re-manning activities can start, and vessels can start sailing back to GBN, GBS, and ART. Tropical Cyclone call off notification is sent to operational sites and external parties (Department of Mineral Fuel (DMF), PTT) confirming Tropical Cyclone call off.

6.2 RESUMING OPERATIONS

Before re-manning actions start on GBN, GBS and ART, it is recommended to arrange a surveillance helicopter flight/ boat cruise to look for signs of obvious damage. This should include each Central Complex, FSO2 if they have been evacuated, and Wellhead Platform's. If the Central Complexes and FSO2 have not been evacuated, personnel may be sent on patrol to look for signs of damage. This should include: loose/ missing gratings, damaged handrails; damaged scaffolding; damage to lifesaving appliances/ firefighting equipment; structural damage (e.g. communications masts); loose equipment moved etc.

Helicopters, AHTS and crew boats are used to re-man offshore as available. Personnel going offshore by boat must collect an appropriately labeled lifejacket for the boat they are traveling on from the Jetty Office before departure and leave it on the boat on arrival offshore.

6.3 RE-MANNING TO OPERATION

As a general rule, the management will transfer all essential personnel back to their locations by helicopters when it is possible within two days maximum. In case it becomes difficult because of urgency, boat transfer will be considered when sea conditions permit.

Below are the guidelines for transferring the personnel back to locations:

1. Transfer of personnel to GBN, GBS and ART should be during the day only (both ATD and ETA).
2. Resumption of staff will be based on a prepared guideline from GBN, GBS and ART as stated in **Appendix 7** Personnel Recall Guideline.
3. Manifest of personnel will be dispatched to each hotel stating the ATD at least four (4) hours before the departure.
4. All personnel shall be transferred to the point of departure by:
 - Helicopter: at least one (1) hour before departure
 - Boat: at least two (2) hour before departure
5. All non-essential personnel and visitor shall be ceased till the re-mobilization have been completed and situation in the field back to normal.

The priority for re-manning is as follows:

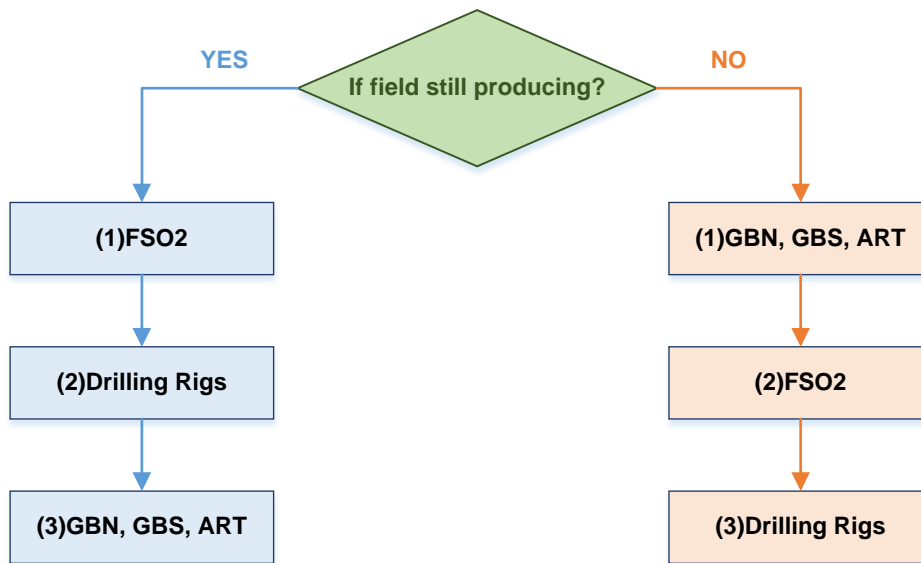


Figure 4 - Re-manning priority chart


POB lists prioritizing returning personnel are made up based on the above by the Field Managers/ VPs and drilling rig Company Man.

Please see Personnel Recall Guideline in **Appendix 7** of this plan.

APPENDICES

APPENDIX 1: TEMPLATE FOR DECLARE/ CALL OFF TROPICAL CYCLONE PERIOD


Example Template for Declare Tropical Cyclone Period

 PTTEP	<p>PTT Exploration and Production Public Company Limited A Company of PTT Group</p> <h2>Memorandum</h2>
FROM: PDS	REF:
TO: All Operating Sites in the Gulf of Thailand and	DATE:
CC:	
SUBJECT: Declaration of Tropical Cyclone Period for the Gulf of Thailand	


Please be advised that Tropical Cyclone Period for the Gulf of Thailand is officially declared from The period could last until – subject to official call-off notification.


All operational sites should now be in the state of readiness to deploy the tropical cyclone preparation and emergency response actions as per PTTEP Tropical Cyclone Plan for Gulf of Thailand and site specific procedures.

()
Chief Operating Officer
Production Asset and Supply Chain Management Group



Example Template for Call off Tropical Cyclone Period

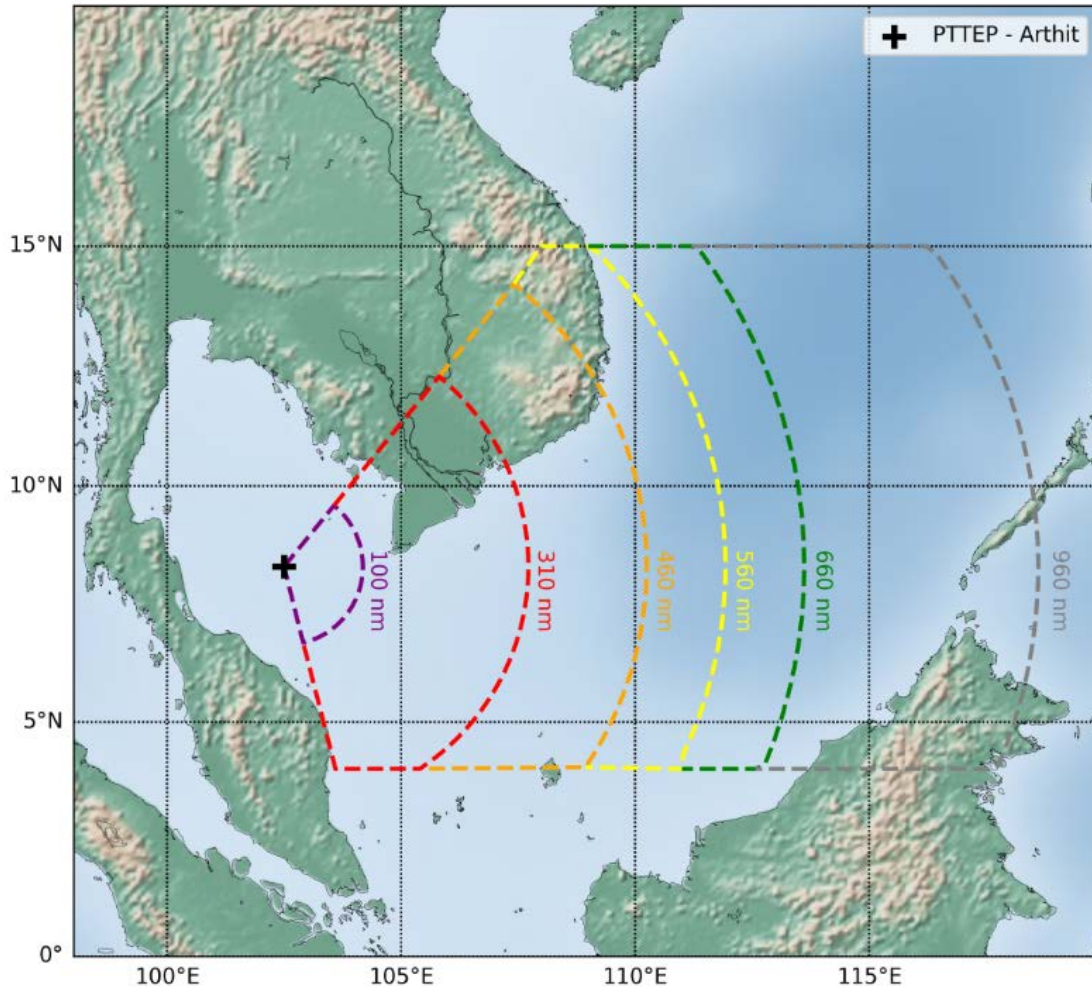
 PTTEP	<p>PTT Exploration and Production Public Company Limited A Company of PTT Group</p>	<h1>Memorandum</h1>
<p>FROM: PDS</p>	<p>REF:</p>	
<p>TO: All Operating Sites in the Gulf of Thailand and</p>	<p>DATE:</p>	
<p>CC:</p>		
<hr/> <p>SUBJECT: Call off Tropical Cyclone Period for the Gulf of Thailand</p>		
<p>Please be advised that Tropical Cyclone Period for the Gulf of Thailand is officially called off as from</p>		
<p>All operational sites in Gulf of Thailand will resume normal operations.</p>		
<p>() Chief Operating Officer Production Asset and Supply Chain Management Group</p>		



Example Template for Tropical Cyclone Declaration and Call Off (Page2)


Update Topic	Details	Action Required	Action Parties
Situation / Weather forecast	<ul style="list-style-type: none"> Current weather forecast declared as Tropical Depression / Tropical Storm / Severe Tropical Storm / Typhoon / Super Typhoon. Max. wind speed is knots. Max. wave high is m. 	<ul style="list-style-type: none"> Tropical Cyclone Advisor will keep monitoring and will update to concerned parties. Increase frequency of weather forecast report to every ... hrs. 	
Offshore floating units:	<ul style="list-style-type: none"> Start well securing. Perform anchor handling operations. Starting evacuating S / A / B / C personnel by helicopter / boat. Sail away tender rigs / barges to shore / shelter location. Shelter location is at Koh Kut / Pulau Redang. 	<ul style="list-style-type: none"> Expected to complete anchor retrieval process by at hrs. will be towing by at hrs. 	
FSO2	<ul style="list-style-type: none"> Starting evacuating S / A / B / C personnel by helicopter / boat. Arrange for tanker offloading. Stop any tanker offloading and release from mooring. De-man FSO2. 	<ul style="list-style-type: none"> Liaise with Sales and Commercial Section to 	
Fixed Platforms	<ul style="list-style-type: none"> Starting evacuating S / A / B / C personnel by helicopter / boat. With level of weather condition of the forecast, Max. wind speed around ... knots when passing offshore installation, there should not be much impact to fixed platform in terms of personnel evacuation. Assess on facility design criteria versus storm track prediction for proper response actions. 	<ul style="list-style-type: none"> Keep monitor and ensure appropriate preparation actions e.g. securing loose items, adjust work plan to suit weather condition. 	
BKK EMT	<ul style="list-style-type: none"> Assess situation, storm track/route/speed and state of operations & Plan. Notify concerned external parties e.g. DMF, PTT, Partners etc. Make decision whether to remain tender rigs/barges in field OR sail away to shelter locations. Make decision whether to shut down operations and abandon production platforms OR having skeleton crews onboard. 	<ul style="list-style-type: none"> TC Advisor will issue update situation and recommendation until the storm has no effect to our operation. 	

APPENDIX 4: TROPICAL CYCLONE PLOTTING CHART



Date	Time	Position Now	TC Strength Now/ Forecast	Speed/ Direction of Movement	Comment

APPENDIX 5: PTT GROUP EMERGENCY & CRISIS INCIDENT REPORT FORM



Emergency & Crisis Incident Report

เหตุการณ์จริง เหตุการณ์ซ้อม No.....

ถึง : ผู้จัดการฝ่ายความมั่นคง ความปลอดภัย อาชีวอนามัย และสิ่งแวดล้อม ปตท. (SSHE Corporate)
 โทรศัพท์ 0-2637-3498-9 โทร 02 6373111, 3222, 3333, 3444 หรือ 3555 หรือ 081 9363134 (ศูนย์สื่อสาร ปตท.) และ 089 969 6836 (SSHE Duty)

จากคุณ : ชื่อ..... พานสกุล..... ตำแหน่ง.....
 บริษัท : โทร : มือถือ : แฟกซ์ :

รายงานเหตุการณ์ฉุกเฉิน

1.รายละเอียดของเหตุการณ์ (วัน เวลา สถานที่ ระบุ ที่เกิดเหตุ)

.....

2.ลักษณะของเหตุการณ์ (ไฟไหม้ / ระเบิด / การชน / มลภาวะ ระบุ)

.....

3.การบาดเจ็บและเสียชีวิต

บุคคล	จำนวนเสียชีวิต	จำนวนบาดเจ็บ	จำนวนสูญหาย
Employee			
ลูกจ้างผู้รับเหมา			
อื่นๆ			

- ความเสียหายของอุปกรณ์ / ทรัพย์สินการผลิต

.....

4. กรณีผลิตก๊าซหนัก:

- ชนิดและลักษณะการหนัก:
-
- ปริมาณการหนักโดยประมาณ :
- ปริมาณแรงก๊างของหนักที่หนัก (ก๊าง x ยาว) และทิศทางของการเคลื่อนตัว
-
- สถานการณ์การกอบกู้ล่าสุด :
-

6. การแก้ไขสถานการณ์เบื้องต้น

.....

6. สิ่งที่ต้องดำเนินการต่อไป

.....

ลงนาม วันที่ เวลา

(.....)

ระดับเหตุการณ์กับ ปตท.

<input type="checkbox"/> 1	<input type="checkbox"/> 2
<input type="checkbox"/> 3	<input type="checkbox"/> 4

Note: Most updated revision is available SSHE-106-PDR-502 Emergency Management Plan. (Please follow this link to most updated revision)

APPENDIX 6: EVACUATED PERSONNEL HANDOUT

INSTRUCTIONS FOR GBN, GBS AND ART PERSONNEL
EVACUATED DURING TROPICAL CYCLONE

Example of Hotel Available in Songkha	Example of Hotel Available in Songkha
<ul style="list-style-type: none"> • Green World Palace • Songkhla Mermaid Hotel • BP Samila Beach Hotel & Resort • Haad Kaew Resort • Club Tree Hotel 	<ul style="list-style-type: none"> • Hansa JB Hotel • Lee Gardens Plaza Hotel • Centara Hotel Hat Yai

When you arrive at PTTEP Development Petroleum Support Base (Songkhla) or Helibase, please contact your Offshore Crew Coordinator (OCC).

You should be available for re-manning once the Tropical Cyclone is over. Stay at your hotel for instructions.

ACCOMODATION AND ALLOWANCE

One room is for two people.

Breakfast, Lunch, Dinner Coupons will be distributed by OCC.

Laundry is free.

Not include - ANY EXTRA FOOD OR DRINK

DEPARTURE FROM HOTEL

When you leave the hotel during your stay, inform and check in the logbook.

See the OCC and write your information as follows:

Name.....
 Room Number.....
 Departure Time.....
 Contact Phone Number.....
 Arrival Time.....

APPENDIX 7: PERSONNEL RECALL GUIDELINE

This guideline in general states the sequence in which personnel will be transported back to location in case of Tropical Cyclone Evacuation for Total Shutdown Evacuation and Partial Evacuation.

Please note that this guideline is an advice which can be changed by the Field Manager if necessary.

1) Greater Bongkot North (GBN)

Because the helicopter can carry safely 12 passengers at a time, the recall of personnel will be as listed below:

Total Shutdown and Evacuation (GBN)	
First Group (12pax)	Second Group (12pax)
<ol style="list-style-type: none"> 1. Manager, Bongkot North Field 2. Superintendent, Production 3. Supervisor, Production 4. Supervisor, Production 5. Superintendent, Maintenance 6. Supervisor, Mechanical 7. Supervisor, E&I 8. Technician, Automation 9. Supervisor, SSHE 10. Engineer, IT 11. Engineer, IT 12. Operator, Crane (HLO) 	<ol style="list-style-type: none"> 1. Team Leader, Production 2. Team Leader, Production 3. Senior Operator, Panel 4. Senior Operator, Panel 5. Senior Operator, Production 6. Senior Operator, Production 7. Skill Technician, E&I (Electrician) 8. Skill Technician, E&I (Electrician) 9. Skill Technician, E&I (Instrument) 10. Skill Technician, E&I (Instrument) 11. Catering (BQP) 12. Doctor
<p>Note: The number of crew to be verified and finalized depending on available of helicopter transportation. The transfer of the remaining personnel will be done with regards to the recall guideline for Partial Evacuation.</p>	
Partial Evacuation (GBN)	
First Group (12pax)	Second Group (12pax)
<ol style="list-style-type: none"> 1. Operator, Production 2. Operator, Production 3. Operator, Production 4. Operator, Production 5. Operator, Production 6. Operator, Production 7. Technician, SSHE 8. Logistics Team 9. Logistics Team 10. Maintenance Team 11. Maintenance Team 12. Maintenance Team 	<ol style="list-style-type: none"> 1. FSO Team 2. FSO Team 3. FSO Team 4. FSO Team 5. FSO Team 6. Maintenance Team 7. Maintenance Team 8. Catering Team (BQP) 9. Catering Team (BQP) 10. Catering Team (BQP) 11. Catering Team (FSO) 12. Catering Team (FSO)
<p>The remaining personnel will be transported back to location in the sequence agreed by the Superintendents, FSO2 Barge Master and the Field Manager.</p>	

2) Arthit (ART)

Because the helicopter can carry safely 12 passengers at a time, the recall of personnel will be as listed below:

Total Shutdown and Evacuation (ART)	
First Group (12pax)	Second Group (12pax)
<ol style="list-style-type: none"> 1. Manager, Arthit Field 2. Superintendent, Production 3. Lead Operator, Production (Panel) 4. Supervisor, Production 5. Skill Operator, Production 6. Supervisor, Mechanical 7. Supervisor, E&I 8. Skill Technician, Automation 9. Skill Technician, E&I (Electrician) 10. Supervisor, Logistics 11. Foreman, Deck 12. Engineer, IT 	<ol style="list-style-type: none"> 1. Supervisor, SSHE 2. Senior Operator, Production 3. Senior Operator, Production 4. Lead Operator, Production (Panel) 5. Superintendent, Maintenance 6. Technician, Mechanical (Turbine) 7. Technician, E&I (Turbine) 8. Operator, Radio 9. Operator, Crane 10. Doctor 11. Campboss 12. Catering Team
The transfer of the remaining personnel will be done with regards to the recall guideline for Partial Evacuation.	
Partial Evacuation (ART)	
First Group (12pax)	Second Group (12pax)
<ol style="list-style-type: none"> 1. Superintendent, Maintenance 2. Supervisor, Mechanical 3. Skill Technician, Mechanical 4. Supervisor, Production 5. Operator, Production 6. Operator, Production 7. Operator, Production 8. Engineer, IT 9. Operator, Crane 10. Foreman, Deck 11. Catering Team 12. Catering Team 	<ol style="list-style-type: none"> 1. PTT Representative 2. Operator, Production 3. Operator, Production 4. Operator, Production 5. Technician, Mechanical 6. Technician, E&I 7. Technician, E&I 8. Catering Team 9. Catering Team 10. Catering Team 11. Deck Crew 12. Deck Crew
The remaining personnel will be transported back to location in the sequence agreed by the Field Manager.	

3) Greater Bongkot South (GBS)

Because the helicopter can carry safely 12 passengers at a time, the recall of personnel will be as listed below:

Total Shutdown and Evacuation (GBS)	
First Group (12pax)	Second Group (12pax)
<ol style="list-style-type: none"> 1. Manager, Bongkot North Field 2. Supervisor, Production 3. Lead Operator, Production 4. Lead Operator, Panel 5. Supervisor, Mechanical 6. Supervisor, E&I 7. Technician, Automation 8. Skilled Technician, E&I (Electrician) 9. Skilled Technician, E&I (Electrician) 10. Supervisor, Logistic 11. Operator, Crane (HLO) 12. Engineer, IT 	<ol style="list-style-type: none"> 1. Superintendent, Production 2. Supervisor, Production 3. Lead Operator, Panel 4. Operator, Production 5. Operator, Production 6. Superintendent, Maintenance 7. Technician, Turbine (Instrument) 8. Technician, Turbine (Mechanical) 9. Supervisor, SSHE 10. Doctor 11. Catering Team 12. Catering Team
The transfer of the remaining personnel will be done with regards to the recall guideline for Partial Evacuation.	
Partial Evacuation (GBS)	
First Group (12pax)	Second Group (12pax)
<ol style="list-style-type: none"> 1. Operator, Production 2. Operator, Production 3. Operator, Production 4. Technician, Mechanical 5. Technician, Mechanical 6. Technician, Mechanical 7. Technician, Mechanical 8. Logistics Team 9. Logistics Team 10. Doctor 11. Catering Team 12. Catering Team 	<ol style="list-style-type: none"> 1. PTT Representative 2. Operator, Production 3. Operator, Production 4. Operator, Production 5. Operator, Production 6. Technician, Mechanical 7. Technician, Mechanical 8. Technician, Mechanical 9. Technician, Logistics 10. Catering Team 11. Catering Team 12. Catering Team

APPENDIX 8: DETAILS OF FIELD PARTICULARS

Details of Field/ Rig/ Barge/ Vessel/ Floating Storage and Offloading Tanker particulars should be covering but not limited to the following:

1. Field Details:

- Field designed to withstand:
 - year storm
 - maximum wave height
 - maximum wind speed
- Location: Latitude & Longitude
- Field water depth
- Field Distances from SKL
- Helicopter flying time from Songkhla
- Sailing Times (in hours) from Songkhla

2. Fixed structure details i.e. for:

- Living Quarters Platform
- Production Platform
- Riser Platform
- Flare Platform
- Wellhead Platforms

3. Rig/Barge/Vessel/Floating Storage and Offloading Tanker details:

- Number of mooring anchor
- Length, breadth, and Depth of rig/barge/vessel/tanker
- Number of maximum POB
- Number of operating crew
- Capacity of diesel oil storage
- Capacity of emergency generator diesel oil storage
- Capacity of water storage
- Number of crane and its capacity
- Number of life boat, life raft and its capacity
- Maximum vessel speed
- Type of engine

APPENDIX 9: EXAMPLES OF TROPICAL CYCLONE CONTACT DIRECTORY

Position	Display Name	Contact		
		email	☎ Direct	📱 Mobile
EVP-PDT	Nirandorn R.	nirandornr@pttep.com	+662-537-4413	+6689-202-5894
SVP-PTF	Pichet S.	Pichet.Sangjan@pttep.com	+662-537-5702	+6685-485-1594
SVP-OSM	Chula M.	chulam@pttep.com	+662-537-6523	+6681-818-0721
SVP-OWO	Sahawit V.	sahawitv@pttep.com	+662-537-4923	+6681-819-2620
PTTEP Weather Services Provider - OWS	Duty Forecaster (24 hours)	ows@offshoreweather.com.au	+61398878613	-
	Peter Wellby	peter@offshoreweather.com.au	+61398878613	+61428829355
Tropical Cyclone Advisor - PTTEP	Ngamkeat V.	ngamkeatv@pttep.com	+662-537-5505	+6681-811-9153
	Montra W.	montraw@pttep.com	+662-537-2501	+6690-197-8339
	Wiriya M.	wiriyam@pttep.com	+662-537-5961	+6692-254-5705
VP-PFO	Supot L.	supotl@pttep.com	+662-537-4459	+6698-829-3514
VP-OLG	Thiti P.	thitip@pttep.com	+662-537-4213	+6681-170-1539
VP-OTF	Sunchai P.	sunchaip@pttep.com	+662-537-7077	+6681-816-4608
VP-CSA	Khomsan L.	khomsanl@pttep.com	+662-537-5541	+6698-826-5452
Manager, SSHE-PDT	Teerapong N.	teerapongn@pttep.com	+662-537-4839	+6684-460-6446
Engineer, SSHE-PTF	Thriraphan S.	thriraphans@pttep.com	+662-537-2665	+6681-821-1857
Engineer, SSHE-EDE	Teradej V.	teradejv@pttep.com	+662-537-4090	+6681-818-1955
EMT	PTTEP Telephone Operator	Bangkok_telephone_operators@pttep.com	+662-537-4000	-
	EMT Room	Emergency_roombkk@pttep.com	+662-537-4001-4008	-
CPOC Duty Manager			+60 017 389 2455	
Chevron Duty Manager				

Note: Most updated revision is available at EMT Room (hard copy) and PDT SSHE Documentation Intranet. ([Please follow this link to most updated revision](#))

APPENDIX 10: REQUIRED TIME FOR SAFE PLANT RUN DOWN

Site / Asset	Required Time for Safe Plant Run Down (Hour)
ART	1.5
GBN	6.30
FSO2	3
GBS	1.5
Drilling Rig	12

APPENDIX 11: FIELD DESIGN CRITERIA

Field design criteria of PTTEP Gulf of Thailand Operations are:

Description	ART	GBN	FSO2	GBS
Field Location (Complex)				
Latitude	8° 15' 35" N	8° 01' 35.458" N	8° 03' 56.502" N	7° 29' 21.592" N
Longitude	102° 31' 37" E	102° 19' 06.488" E	102° 20' 18.807" E	102° 37' 04.011" E
Designed criteria for <u>normal operations</u>⁴⁾ at central complex				
Max Wind speed based on 10-minute mean (knots) ¹⁾	80.4	71.9	57.7	70.6 ⁵⁾
Max wave height (m) ²⁾	14.6	12.04	13.8	18.84 ⁵⁾
Environment return period (Year) ³⁾	100	100	100	100
Helicopter flying time				
From SKL (hr)	1.15	1	1	55 minute
Sailing time from SKL				
With speed 18 knots (hr)	8	8	8	6.8
With speed 12 knots (hr)	11.5	11	11	10.3
With speed 10 knots (hr)	14	13	13	12.3
Criteria for helicopter operations				
Max wind speed (knots)	60	60	60	60
Max wave height (m)	N/A	N/A	As below table	N/A

Note:

- 1) 10 minute mean wind speed is converted by method present in 'Analysis of Metocean Design Criteria - Winds and Waves during Tropical Cyclones and Monsoons' Optimer 1997
- 2) Maximum wave height under typhoon condition is converted by method present in 'Analysis of Metocean Design Criteria - Winds and Waves during Tropical Cyclones and Monsoons' Optimer 1997
- 3) The abovementioned design criteria of central complex is the indicative information for the operational purpose as it based on Environment return period of 100 years. With the appropriate Structural integrity management, such max wind speed or max wave height do not lead to primary structural failure of central complex. The environment condition which may lead to structural collapse will base on Environment return period of 1,000 up to 10,000 years e.g. max wave height over 20m, or the like in the Gulf of Thailand
- 4) Design criteria for normal operations which personnel can work and live on the fixed platforms. However, the design limits which platform can withstand severe weather conditions are different figures (currently under re-study).
- 5) Criteria Updated as per EFE study report Fixed Platforms Condition and Field Design Criteria for Tropical Cyclone Response (GBS-STU-19012, 26 June 2020)

Ship/Rig motion limitations for landing on all helidecks, Reference from 10009-OLG-GDL-4201: Aviation Management Guideline, are:

Description	Day		Night	
	Limits for Landing	Limits for Planning	Limits for Landing	Limits for Planning
Heave Rate \leq 1.5 m/s	1.0 m/sec	1.3 m/sec	0.5 m/sec	0.5 m/sec
Pitch	+3°	+3°	+2°	+2°
Roll	+3°	+3°	+2°	+2°
Total Heave	1.0 m/sec	1.3 m/sec	0.5 m/sec	0.5 m/sec
	Max. heave rate 1.5 m/sec		Max. heave rate 1.5 m/sec	

Field/Site/Rig/Barge/Vessel particulars shall be integrated into each Site specific Tropical Cyclone plans/procedures which shall be covered the items as specified in **Appendix 8** Field Particulars, as minimum.

APPENDIX 12: WEATHER CONDITION DURING STS PABUK

Wind speed and wave height (Actual vs Forecast) captured during the Severe Tropical Storm PABUK.

Date	Description	PTTEP		CPOC	
		Forecast	Actual	Forecast	Actual
2 nd January 2019	Wind speed	21 knots	20 knots	29 knots	N/A
	Wind gust	27 knots	N/A	38 knots	N/A
	Wave height	3.8 m	N/A	4.3 m	N/A
3 rd January 2019	Wind speed	48 knots	40 knots	52 knots	N/A
	Wind gust	62 knots	N/A	68 knots	N/A
	Wave height	11.1 m	8 m	10.3 m	N/A
4 th January 2019	Wind speed	52 knots	50 knots	32 knots	N/A
	Wind gust	68 knots	N/A	42 knots	N/A
	Wave height	11.8 m	12.6 m	7.5 m	N/A
5 th January 2019	Wind speed	21 knots	N/A	15 knots	N/A
	Wind gust	27 knots	N/A	20 knots	N/A
	Wave height	4.3 m	N/A	2.9 m	N/A
6 th January 2019	Wind speed	18 knots	N/A	16 knots	N/A
	Wind gust	24 knots	N/A	21 knots	N/A
	Wave height	3.6 m	N/A	2.5 m	N/A

Note:

- 1) PTTEP weather forecast provided by OWS
- 2) CPOC weather forecast provided by Fugro
- 3) *Winds are 10-min average speed.*
- 4) *With the above weather condition, there were some damages to the fixed platforms such as boat landings.*

ROLES AND RESPONSIBILITIES

Roles	Responsibilities
Document Owner	<p>The owner of the Tropical Cyclone Plan for Gulf of Thailand is SSHE Manager of Production Asset and Supply Chain Management Group, with responsibilities for:</p> <ul style="list-style-type: none"> ■ Issuing this document and its revisions ■ Supporting and ensuring effective implementation of the document
Document Custodian	<p>The custodian of the Tropical Cyclone Plan for Gulf of Thailand is SSHE Manager of Production Asset and Supply Chain Management Group, with responsibilities for:</p> <ul style="list-style-type: none"> ■ Identifying deficiencies or potential improvements ■ Initiating periodic revision ■ Maintaining revision history and document status register <p>Roles and Responsibilities of concerning parties for the Tropical Cyclone Plan for Gulf of Thailand are outlined in Section 3.4 Tropical Cyclone Teams of this document.</p>

DEFINITION AND ACRONYMS

Set out below are common specific terms presented in alphabetical order:

Term	Definition
Asset	Refers to an operating Asset, site, or location within a respective Function Group.
Corporate	Refers to the PTTEP business groups hierarchically above Asset level, and located in the PTTEP headquarters, Bangkok.
Division	A business group may have one or more distinct groups within its hierarchy. These are referred to as Divisions.
Department	A subgroup within a Function Group, Division or Asset.
Function Group	Refers to a corporate level business group. These may have associated Divisions, Departments, or operational Assets within their hierarchy.
Subsidiaries	Juristic organizations which PTTEP is a shareholder of more than 50%.

Acronyms	Description
AHTS	Anchor Handling Towing Supply
ART	Arthit Field
ATD	Approximated Time Departure
CCT	Crisis Communication Team
CSR	Company Site Representative
DMF	Department of Mineral Fuels, Ministry of Energy
DSV	Diving Support Vessel
EMT	Emergency Management Team
ERT	Emergency Response Team
ETA	Estimated Time Arrival
EVP	Executive Vice President
FSO2	Floating Storage and Offloading Tanker
GBN	Greater Bongkot North
GBS	Greater Bongkot South
GMC	Great Navamindra Marine Control
HF	High Frequency
IC	Incident Commander

Acronyms	Description
JTWC	US Military Joint Typhoon Warning Center
OCC	Offshore Crew Coordinator
PDT	Production Asset Group
POB	Personnel On Board
PTF	Thai Offshore Asset
PTT	PTT Public Company Limited
RRT	Relative Response Team
SKL	Songkhla
SSB	Single-Side Band
SSHE	Safety, Security, Health, and Environment
SVP	Senior Vice President
TC	Tropical Cyclone
VP	Vice President

REFERENCES

Document Code	Document Title
PTTEP SSHE Controlling Documents	
11003-STD-SSHE-300-002-R01	Corporate Oversight of SSHE MS Standard
11038-STD-SSHE-401-R06	SSHE Risk Management Standard
SSHE-106-STD-500	Emergency & Crisis Management Standard
12148-PDR-SSHE-501/01-R03	Crisis Management Plan
SSHE-106-PDR-502	Emergency Management Plan
Other Reference Documents	
Noble Denton metocean data Report No. L24889 Rev 0, Dated 07/05/2010	PTTEP, Recommendations for Metocean Data Phase2 – Generic Data Development Gulf of Thailand. (please follow this link)
November 10, 2005	Update and Refinement of South Bongkot, Gulf of Thailand Metocean Design Data. (please follow this link)

REVISION HISTORY

Rev.	Description of Revision
0-4	No information
5	<p>Authorized by: No information, Date: September 2006</p> <ul style="list-style-type: none"> ■ Add more field (NangNuan, Arthit) ■ Updated contact number
6	<p>Authorized by: No information, Date: September 2007</p> <ul style="list-style-type: none"> ■ Add Re-manning to operation guideline in section 7 ■ Add more hotel lists in Appendix 4 ■ Add Personnel Recall Guideline in Appendix 7
7	<p>Authorized by: No information, Date: September 2009</p> <p>This Typhoon Evacuation Plan (SSHE MS.P.10-03) replaces Typhoon Emergency Plan (P.PSH.003). Changes from the last version are:</p> <ul style="list-style-type: none"> ■ Rename the document title ■ Add Northern Arthit Development Field (NAD) and removed Nang Nuan Field ■ Transfer details of Typhoon Evacuation procedure for Tender Assisting Platform Rig to their site specific procedures / plans
8	<p>Authorized by: No information, Date: September 2010</p> <ul style="list-style-type: none"> ■ Change the position title to reflect the company organizational change in April 2010 ■ Rename the EMT Leader from Emergency Director to Incident Commander according to the Emergency and Crisis Management Standard (SSHE MS.S.10) issued in November 2009 ■ Change the duty of EMT Leader to EVP Domestic Asset Group ■ Change the duty of PTTEP Typhoon Coordinator from TSH/O (Manager, Safety Operation) to the Logistics Transportation section ■ Update the Bongkot Field Particulars in Appendix 5
9	<p>Authorized by: No information, Date: August 2011</p> <ul style="list-style-type: none"> ■ Main changing is to add BONGKOT South Field related details into this plan ■ Minor changing is to regroup of some details into the same topic and rearrange the appendices by keeping all the forms in the same group
9.1	<p>Authorized by: No information, Date: October 2011</p> <ul style="list-style-type: none"> ■ Revised Appendix 2 ■ Revised action in 6.1.4 regarding Typhoon exercise and feedback
10	<p>Authorized by: No information, Date: July 2012</p> <ul style="list-style-type: none"> ■ Revise duration of the TRS season ■ Delete North Arthit ■ Rename Typhoon Coordinator to Typhoon Advisor ■ Revise Name list of Typhoon Advisor ■ Revise appendix 7 ■ Revise number of wellhead platform

Rev.	Description of Revision
	<ul style="list-style-type: none"> ■ Revise SSB frequency
11	<p>Authorized by: No information, Date: April 2013</p> <ul style="list-style-type: none"> ■ Change Title from Typhoon Evacuation plan to be Tropical Revolving Storms Evacuation Plan ■ Define evacuation criteria ■ Add one more shelter ■ Revised Skeleton crew and re-manning ■ Revised action before and after Monsoon season ■ Update TRS History
12	<p>Authorized by: No information, Date: August 2014</p> <ul style="list-style-type: none"> ■ Revised TRS ending period to be 15th February ■ Updated TRS advisor ■ Updated SSB Frequency ■ Added Weather Extreme Table ■ Revised wellhead platform helideck which have landing permit ■ Updated manning and re-manning
13	<p>Authorized by: No information, Date: August 2015</p> <ul style="list-style-type: none"> ■ Changed title from Tropical Revolving Storms Evacuation Plan to be Tropical Cyclone Evacuation Plan ■ Rename Typhoon Advisor to Tropical Cyclone Advisor ■ Revised common acronyms ■ Updated TC Alert Zone Chart ■ Revised TC Notification Flow Chart ■ Revised Template of Declare and Call off Monsoon Season Notification ■ Revised Tropical Cyclone Notification Form ■ Revised Evacuation handout ■ Revised recall of personnel list ■ Revised asset's information
14	<p>Authorized by: - , Date: February 2016</p> <ul style="list-style-type: none"> ■ Revised Tropical Cyclone Advisor name list ■ Rename Bongkot SSHE Superintendent to SSHE Supervisor ■ Update SSHE Controlling document ■ Changed Marine and Logistics superintendent to be Greater Navamindra Marine Control (GMC) ■ Marine radio channel 9 from 156.800 to 156.450 MHz
15	<p>Authorized by: POS , Date: August 2017</p> <ul style="list-style-type: none"> ■ Reformed document coding to be aligned with the SSHE Documentation Management Standard. ■ Replaced "Offshore Weather Services" by "PTTEP Weather Service Provider"

Rev. Description of Revision

- Renamed Arthit Support Service Supervisor to Logistics Supervisor
- Updated SSHE controlling document
- Renamed GBS Medic to GBS Doctor
- Added Appendix 12 Tropical Cyclone Contact Directory

16 Authorized by: PDT , Date: October 2018

- Reformed document coding to be aligned with the Company Organization
- Renamed to PTTEP Tropical Cyclone Plan for Gulf of Thailand
- Added Pre-Alert Zone and actions taken into Tropical Cyclone Alert Zones Chart.
- Revised Tropical Cyclone notification chart.
- Updated field designed criteria to max wind speed based on 10-minute mean (knots)

17 Authorized by: PDT , Date: September 2020

- Revised contents following "PABUK" Lookback Review Meeting in February 2019
- Added roles of CCT duty, RRT duty, Event Logger duty and Sales & Commercial duty into BKK EMT roles and responsibility
- Added 'PTTEP Person Assigned by EMT' as member of BKK EMT
- Updated Site's Personnel Recall Guideline
- Revised wind speed of each tropical cyclone classification
- Added Appendix for Safety Factor and structural design limit for each production / living quarter platform.
- Added Appendix for Required time for plant run down of each site
- Added Appendix for Weather conditions during STS PABUK.

EXHIBIT F.3

PTTEP'S INCIDENT MANAGEMENT STANDARD



PTTEP

PTT Exploration and Production Public Company Limited

Incident Management Standard

Document Code: 11038-STD-SSHE-601-R07

January 2021

Approval Register

Document Subject	Incident Management Standard
Document Code	11038-STD-SSHE-601-R07
Document Owner	Safety Management Department (CSA)
Prepared by	Sarawut Uparawanna, Senior Operational Safety Engineer
Effective Date	January 2021

Review and Approve

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	CEO		

THIS DOCUMENT WILL BE REVIEWED EVERY 5 YEARS FROM DATE OF APPROVAL OR REVISED EARLIER IF NECESSARY.

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INTRODUCTION

1. PURPOSE

This standard is to provide incident reporting and analysis process to ensure that all incidents are reported, investigated, and logged properly as a lesson learned.

Background

PTTEP Policy requires:

- A generative SSHE culture will help to achieve our vision of being incident free with the key objective of sustainable development.
- Improve SSHE performance by investigating and learning from incidents and implementing audits and reviews.

Analysis of all SSHE incidents is one of the critical success factors for ensuring that Policy objectives are met.

Standardisation

All incidents are to be reported through the PTTEP provided online system, with aims to improve the efficiency of communication channels and limitation of reporting time scales. Moreover, the reporting database will help in term of analysis summary and follow-up corrective actions for further improvement. In addition to the online incident reporting system, any reporting through either hard copy or electronic format is acceptable for the Asset/Site where has internet access might be limited.

2. SCOPE

This Procedure sets the minimum requirements in PTTEP Asset for reporting, investigating and following-up all incidents, including High Potential Incident (HPI), near miss, external complaints, non-compliance and others.

Note: This SSHE document may set requirements supplemental to applicable laws. However, nothing herein is intended to replace, amend, supersede or otherwise depart from any applicable laws relating to the subject matter of this SSHE document. In the event of any conflict or contradiction between the provisions of this SSHE document and applicable laws as to the implementation and governance of this SSHE document, the provisions of applicable laws shall prevail.

REQUIREMENTS

3. INCIDENT MANAGEMENT

Key requirements of Incident Management are:

- Incident shall be immediately notified and reported as per severity criteria
- All incident shall be investigated and provided recommendations for corrective and preventive and followed up to close out of those recommendations
- Incident shall be reported via PTTEP provided online system or optionally via hard copy in case of limited internet access sites
- All incident records and statistics shall be analyzed for reoccurrence prevention, and
- Incident lesson learn shall be prepared and communicated to all concern parties.

The Incident Management Process shall comprise of the following steps shown in Figure 1, it develops as a mechanism for preventing the repeated incident which may become a major incident. The PTTEP provided online system shall be used to report and record the management of incident throughout the process until completion and close out. Incident Management overview and Incident Management System (IMS) flow chart of incident severity cases are described in Appendix A and B respectively.

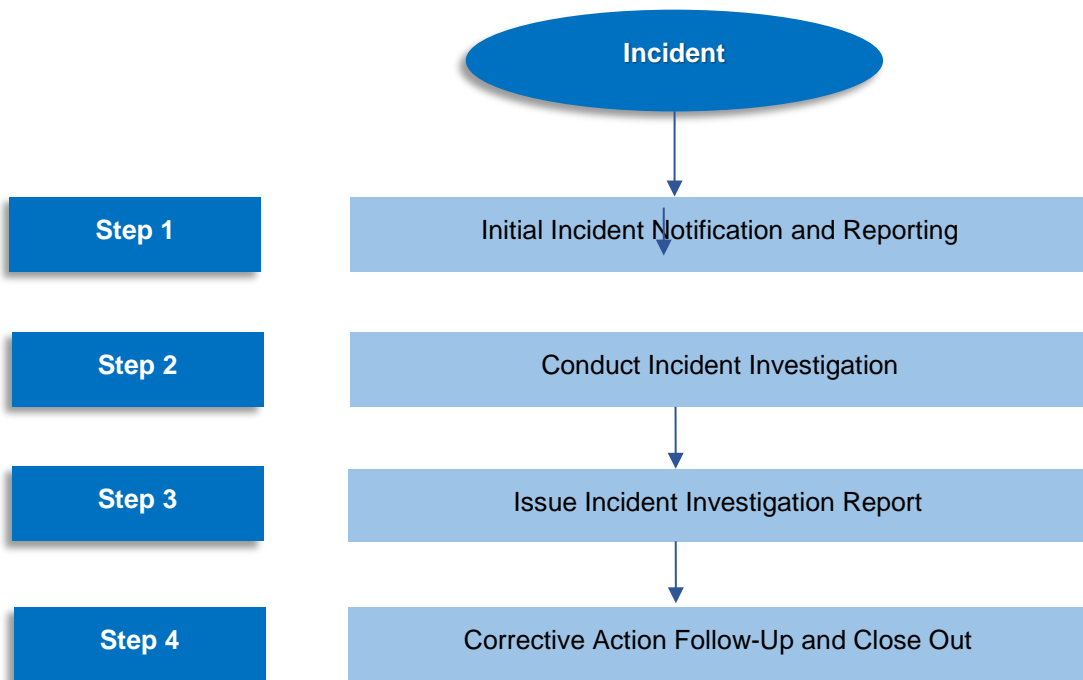


Figure 1: Incident Management Process

3.1 INITIAL INCIDENT NOTIFICATION AND REPORT

3.1.1 Initial Internal Notification

All Assets/Projects are required to notify all incidents following the criteria shown in Table 1, as per incident severity level which referred to PTTEP Risk Assessment Matrix in SSHE Risk Management Standard (11038-STD-SSHE-401).

Table 1: Criteria of Incidents Notification within PTTEP

Incident Severity Level		Notify	Required Timescales	Reported by
Real	Potential			
5. Critical	5. Critical	<ul style="list-style-type: none"> ■ CEO, by VP, Safety Management Department/ SVP, Corporate SSHE Division ■ EVP ■ Asset SVP and VP ■ SVP, Corporate SSHE Division ■ VP, Safety Management Department and VP, Insurance Department (For incident related to Asset, Production, Property) ■ FG SSHE/Asset SSHE 	Immediately by phone, follow by reporting via PTTEP provided online system or Email within 24 hrs.	PTTEP Site representative/ Field or Site Manager
4. Serious	4. Serious			
3. Significant*				
2. Moderate		<ul style="list-style-type: none"> ■ Asset SVP and VP ■ SVP, Corporate SSHE Division ■ VP, Safety Management Department and VP, Insurance Department (For incident related to Asset, Production, Property) ■ FG SSHE/Asset SSHE 	By phone within 24 hrs., follow by reporting via PTTEP provided online system or Email within 48 hrs.	
1. Minor				

Note: (*) Including;

1. Loss of Primary Containment (LOPC) -Tier 1,2 and Spill to environmental > 1 bbl. (and potential).
2. Incident related to PTTEP Asset, production, property which falls into severity level 2 or higher with the consequence of damaged/loss more than \$10k then shall notify to the VP, Insurance Department.

3.1.2 Initial External Notification

Initial external notification for Thailand Domestic Asset and International Asset shall be relied on government and local authority in each country e.g. DMF, PTT Group and other local government agencies for Thailand Domestic Asset, PETRONAS and other government agencies for Malaysia Asset, MOGE and other government agencies for Myanmar Asset and etc. Initial notification requirement shall be followed each country requirements.

Thailand Domestic Assets

SVP SSHE has been delegated to initially and officially report the incident to government agencies such as Department of Mineral Fuels (DMF), Marine Department and PTT Group by supporting from VP, Safety Management Department. In local operation site, operation support base and any other local PTTEP business unit, site SSHE is responsible for Initial Incident Notification with relevant government agencies in area such as Provincial Department of Labor Protection and Welfare and Local Police Station, etc. Criteria of External Incidents Notification for Thailand Domestic Assets and Flow of Incident Notification to DMF are shown in Table C1 and Figure C1 in Appendix C respectively.

International Assets

Asset SVP or delegated person such as Asset VP/Site Manager or Asset SSHE of each International Asset/Project shall be responsible for official reporting incidents to local authorities in the countries where PTTEP operates in accordance with their legislation requirements within the required timescale.

3.1.3 Incident Reporting

Reports of any incidents related to PTTEP activities shall be initiated and issued in accordance with the characteristics of each Operation and Asset, e.g. who owned it, managed and operated by whom, with/without PTTEP representative. Details of SSHE incident reporting perimeter could be found in Appendix D

3.1.3.1 Incident Classification

Initial step of reporting the incident is to properly classify the incident classifications and the incident severity (Near misses to be assessed for the potential of the possible consequence).

Classification of the incident can be done by utilizing PTTEP Risk Assessment Matrix illustrated in SSHE Risk Management Standard or the Severity matrix in the Incident reporting form (PTTEP provided online system or hard copy).

Definitions of incidents classification are described in DEFINITION AND ACRONYMS in this procedure. For occupational illness suspected cases, criteria of occupational illness cases are described for reference in Appendix E.

3.1.3.2 Incident Report Form

The PTTEP provided online system shall be used to report the incident. The description of Incident Report Form is shown in Appendix F.

In case of any Road Traffic Incident happened, the Supplementary Report Form as shown in Appendix G shall be used in conjunction with Incident Management Process.

For any locations where PTTEP provided online system has not yet implemented, the incident report form, either hardcopy or electronic format shall be used. This form is also available at site SSHE personnel and SSHE intranet.

Any external complaint related to SSHE, External Complaint/Issue Form can be found in Grievance Handling Guideline Document (12140-GDL-009-R00) and shall be used in conjunction with Incident Management Process. Response actions follow up and close out with external person, public or community shall also be attached and recorded in the system.

3.2 CONDUCT INCIDENT INVESTIGATION

Incident investigation shall be conducted as soon as possible after initial notification, reporting and complete of any essential response at site by site authorities. Then, incident investigation shall be performed as per below requirement, but not limited to:

- All incidents shall be investigated by an appropriate investigation team, the team composition depends on the severity and classification of the incident. To gain initial information of the incident, initial investigation shall be done on the same day or immediately as soon as possible
- Investigation by site authority/asset team of LTI or HPI, shall start within 3 days.
- Details MAE or HPI, lessons learned, and alerts from incidents shall be reviewed as a matter of urgency and effective action taken where applicable.
- The Corporate SSHE Division is responsible for re-assessment of the severity to reflect actual/potential severity of incident.
- All reports shall be in English

3.2.1 Level of Investigation

The level of investigation depends on the real or potential severity of the incident. When assessing potential severity, consider what is realistic and foreseeable.

Based on the incident classification establish the required level of investigation using Table 2.

Table 2: Level of investigation required in accordance with the severity of incident

Incident Severity	Investigation Level		Investigation Team	
	Initial Investigation onsite	Final Investigation	Nominated by	Approved by
Real or Potential severity level 1 Minor to level 3 Significant (except LTI)	✓	Upon requested by site top authority of specific interested cases	Site SSHE	Company Asset/site/field top authority
LTI, Significant Spill, LOPC Tire 1,2 and Potential severity level 4 Serious to level 5 Critical (HPI)	✓	✓	Function Group/Asset SSHE or VP Safety Management Department	SVP Division/Asset
Real severity level 4 Serious to level 5 Critical	✓	✓	SVP SSHE Division	EVP Function Group (with cc. CEO)

Note:

1. In case of real severity level 4-5, the investigation team leader shall be independent and not relevant to the incident. Third party investigator may be invited to participate in investigation.
2. Incident with significant consequence to the Company, including FAT or LTI, HPI and MAE or Significant Spill, incident investigation report shall be reviewed by corporate SSHE and FG/Asset VP.
3. Corporate or Subsidiary Legal Departments will advise if an incident is to be subject to Legal Professional Privilege (LPP). In this case circulation of documents and reports related to the investigation is strictly limited to identify individuals. All documents, reports, etc., shall be clearly marked that they are subjected to LPP.

3.2.2 Investigation Team

The investigation team shall comprise:

- Investigation Team leader;
- Investigation Team Facilitator (SSHE personnel depends on incident severity); and

- Investigation Team members (Asset supervisory staff, specialist personnel within PTTEP and/or relevant external parties, e.g. Joint Venture/Partners, Contractors, vendors or manufacturers if involved).

Team leader and members should have the necessary experiences and skills of investigation techniques, refer to Incident Investigation Guideline (12148-GDL-SSHE-602-024). This should be identified in the development plan of the persons by Line Management.

3.3 ISSUE INCIDENT INVESTIGATION REPORT

Every report shall be reviewed to ensure that details given are completed, corrective/preventive actions are assigned. Initial incident investigation report and full incident investigation report shall be issued as per incident severity as shown in Table 3.

Table 3: Time frame of incident investigation report submission in accordance with the severity of incident.

Incident Severity	Time frame of incident investigation report submission	
	Initial Investigation Report	Full Investigation Report
Real severity level 1 Minor to level 3 Significant Spill, LOPC Tier 1,2 and Potential severity level 4,5 (HPI)	14 days	28 days
Real severity level 4 Serious to level 5 Critical	1 month	6 months*

Note: * Full investigation report for LOPC Tier 1,2 shall be issued within time frame which not over 28 days. And, full investigation report for real severity level 4-5 shall be issued within time frame which not over 6 months. However, time frame of both cases is subject to complexity/complication of an incident.

3.3.1 Report Format

All LTI, Significant Spill (although < 1,000 bbl), LOPC Tier 1& 2, HPI and real Severity level 4 and 5 incidents shall be written in full incident investigation report format and content in accordance with the Incident Investigation Guideline. The full investigation report shall be reviewed and signed by concerned parties as well as electronic approval in PTTEP provided online system. This approved report with its actions shall be uploaded into the PTTEP provided online system

In some countries, the reports may have to be issued earlier than this standard criterion. Each International Asset shall follow local regulation requirements of such countries.

3.4 CORRECTIVE/PREVENTIVE ACTIONS FOLLOW UP AND CLOSE OUT

Corrective/Preventive action shall be recorded and followed up for close out via PTTEP provided online system. Outstanding actions shall be reviewed by Site SSHE, Asset/Site/Field top authority and Asset/Project SSHE and FG SSHE every month. If there are any concerns, these shall be highlighted to the Asset manager/VP and Division/Asset SVP in Site/Asset SSHE monthly meeting.

- All corrective actions shall be logged and assigned to a responsible party with target completion date. Tracking of the progress shall be done until completion and close out.
- LTI, Significant Spill, LOPC Tier 1,2, HPI and incident of real severity level 4 to 5 shall be:
 - presented by the concerned Asset/Project Manager or FG EVP for management review of the corrective actions and SSHE improvement plans in the SSHE Council Committee Meeting, which is held every 3 months or MCM meeting (either one which comes first). Further recommendations from management review shall be recorded and implemented.
- Each Asset/Project/Activity shall set up at least 3 monthly Incident Review Meeting to ensure the outstanding incidents recommendations are properly completed and closed out.

4. ANALYSIS AND STATISTICS

Consequences of the incident to people, environment, reputation, assets and consequential business loss shall be analyzed and included in the Company's SSHE statistic according to the criteria in Corporate SSHE Plan, SSHE KPI's, and Performance Monitoring Standard (11038-STD-SSHE-202).

For SSHE Performance calculation, refers to Appendix H.

Corporate SSHE and individual Asset/Project shall utilize information from the incident analysis to develop SSHE performance improvement plans in order to prevent similar incidents from happening again.

5. LESSONS LEARNED FROM INCIDENT

Lessons learned from incidents severity level 2 and above shall be developed and communicated to staff and contractors in order that the root causes of incidents and the preventive measures are shared and applied by all to prevent further incidents. Once incident investigation is completed, site SSHE is responsible for preparation of incident lesson for internally communicate with site staff and contractor. All incident lesson learn shall be reviewed and approved by Function Group SSHE/Asset SSHE and corporate Safety Management department. For the incidents which have potential to occur in all Assets/Projects, corporate team is responsible to communicate to all PTTEP sites. Process of incident lesson learn approval is described in Appendix I.

APPENDICES

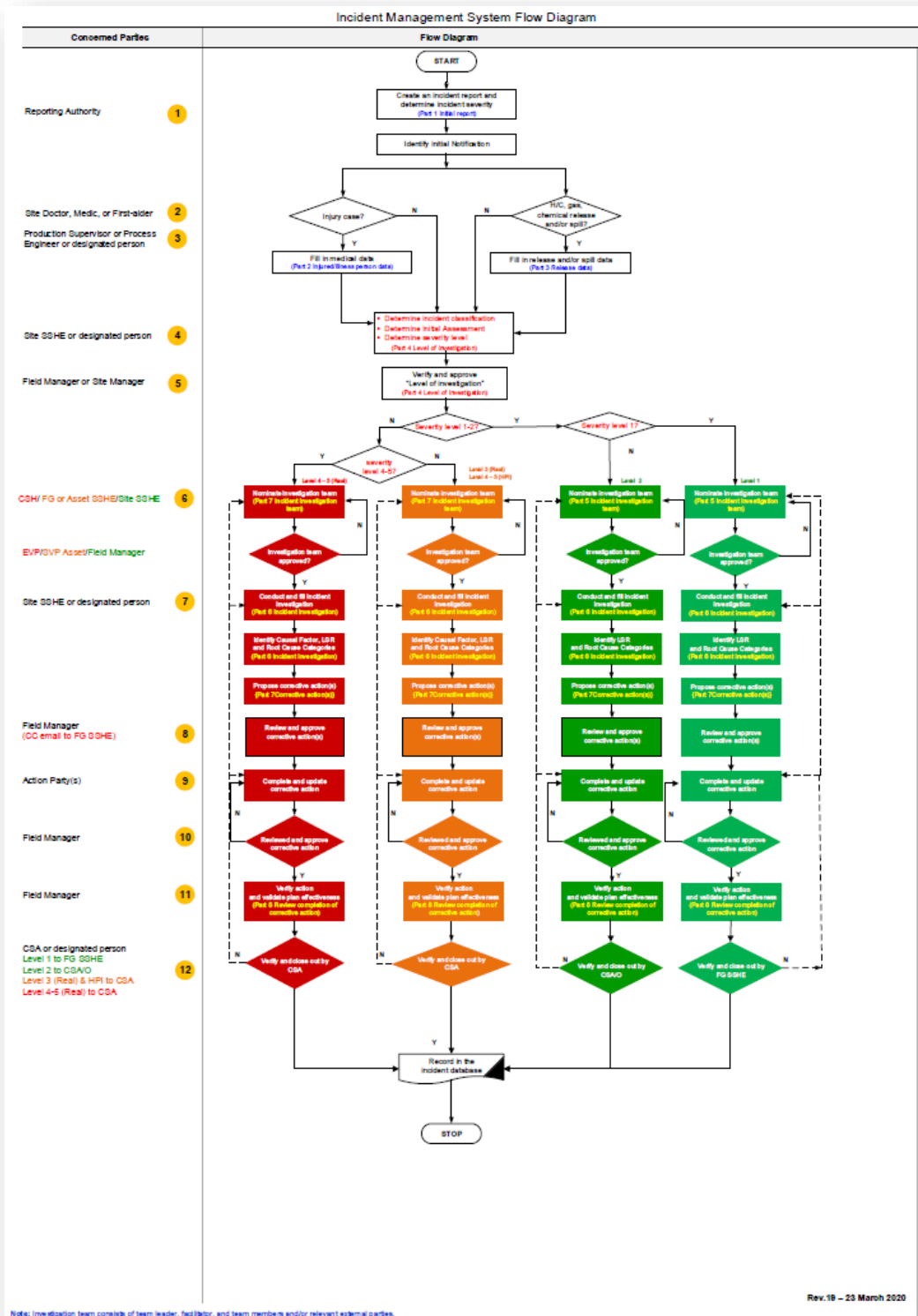
APPENDIX A: INCIDENT MANAGEMENT OVERVIEW

The full size of Incident Management Overview is available on [SSHE Intranet > SSHE MS > SSHE MS Documents > Corporate Tools > Appendix - Incident Management Standard.](#)

APPENDIX A: INCIDENT MANAGEMENT OVERVIEW							
Incident							
Step 1 – Initial Incident Classification (Refer to PTTEP Risk Assessment Matrix)							
	Level 1 Minor	Level 2 Moderate	Level 3 Significant	Level 4 Serious (Potential/Real)		Level 5 Critical (Potential/Real)	
Injury	- Minor injury with first aid	- MTC - Single RWDC	- Single LWDC - Multiple RWDC	- Multiple LWDC - One permanent disability - One fatality		- Multiple fatalities	
Environment	- Spill < 3 Lbs - Slight effect within fence, negligible financial consequences	- Spill > 3 Lbs - No lasting effect, single breach of statutory.	- Spill > 3,000 Lbs - Tier 2 - Localized effect, limited effect, repeat breach of statutory.	- Spill > 50K Lbs - Tier 2 - Regional assistance, severe env Damage, take extensive measures to restore.		- Spill > 500K Lbs - Tier 3 - International assistance, major financial consequences, persistent severe environmental damage	
Property	- Loss < \$10K	- Loss between \$10K-200K	- Loss between \$100K-5M	- Loss between \$5-50M		- Loss > \$50M	
Legal/ Compliance	- No penalty - Breach that can be resolved without any actual punishment	- Fines /compensation: - That law < 200K THB - Foreign laws < 5K USD	- Fines/compensation: - That law < 100K-5M THB - Foreign laws 5K-200K USD	- Suspension of stock trading - Suspension of licenses or permits - Imprisonment 6-12 months - Fines/compensation: - That law > 5 M THB - Foreign laws > 1M USD		- Cancellation of Board + Management Revocation of any licenses or permits - Imprisonment > 12 months - Fines/compensation: - That law > 5 M THB - Foreign laws > 1M USD	
Financial	- < 0.03% of NI/NPV/EMV	- 0.01-0.1% of NI/NPV/EMV	- 0.1-1% of NI/NPV/EMV	- 1-10% of NI/NPV/EMV		- > 10% of NI/NPV/EMV	
Project Cost + Schedule	- Impact on cost or schedule <1.25%	- Impact on cost or schedule 1.25-2.5%	- Impact on cost or schedule 2.5-5%	- Impact on cost or schedule 5-10%		- Impact on cost or schedule > 10%	
Image/Reputation	- No news coverage - Non-violent on-line media post - Local community complaint	- Local media interest - Influenced on-line media post - Local community aggregation	- Regional media coverage - On-line media spread - Local community protest with provincial/state influencer	- National media coverage - Local community protest with national influencer		- International media coverage - Formal complaint from international authority	
Step 2 – Initial Internal Notification							
	Level 1 Minor	Level 2 Moderate	Level 3 Significant	Level 4 Serious (Potential/Real)		Level 5 Critical (Potential/Real)	
Notify	- VP Safety Management Department	- SVF and VP Asset - SVF SSHE Division - VP Safety Management Department - FG SSHE/Asset SSHE - VP Insurance Department (For incident related to Asset, Production, Property)	- CEO by VP Safety Management Department/SVF Corporate SSHE Division - FICA EVP - Asset SVF and VP - SVF Corporate SSHE Division - VP Insurance Department (For incident related to Asset, Production, Property) - FG SSHE/Asset SSHE	- CEO by VP Safety Management Department/SVF Corporate SSHE Division - FICA EVP - Asset SVF and VP - SVF Corporate SSHE Division - VP Insurance Department (For incident related to Asset, Production, Property) - FG SSHE/Asset SSHE		- CEO by VP Safety Management Department/SVF Corporate SSHE Division - FICA EVP - Asset SVF and VP - SVF Corporate SSHE Division - VP Insurance Department (For incident related to Asset, Production, Property) - FG SSHE/Asset SSHE	
Required Timeline Report by	By phone in 24 hrs., follow by reporting via PTTEP provided online system or Email within 48 hrs.		In readability by phone, follow by reporting via PTTEP provided online system or Email within 24 hrs.				
Remark: See the requirement of external notification from Incident Management Procedure							
Step 3 – Review and Approve Incident Classification (Incident Classification and Severity refer to Risk Assessment Matrix)							
	Level 1 Minor	Level 2 Moderate	Level 3 Significant	Level 4 Serious (Potential/Real)		Level 5 Critical (Potential/Real)	
Injury	Verify classification and severity with Asset, Medical or Corporate Doctor						
LQPC	Verify classification and severity with Corporate Technical Safety						
Spill	Verify classification and severity with Corporate Environment Management						
HSE and others	Verify classification and severity with Corporate Safety Management						
Step 4 – Investigation							
	Level 1 Minor	Level 2 Moderate	Level 3 Significant	Level 4 Serious		Level 5 Critical	
Initial Investigation Create	Required			Potential	Real	Potential	Real
Detailed Investigation	Upon requested by site top authority of specific intended cases			Required	Required	Required	Required
Team Nominated by	Site SSHE			- FG SSHE for Domestic asset, or - Asset SSHE for International asset, or - VP Safety Management Department	- SVF SSHE Division	- FG SSHE for Domestic asset, or - Asset SSHE for International asset, or - VP Safety Management Department	- SVF SSHE Division
Team Approved by	Company asset/site top authority			- SVF Division/Asset (Subsidiary CEO)	- EVP	- SVF Division/Asset (Subsidiary CEO)	- EVP
Step 5 – Incident Investigation Review							
	Level 1 Minor	Level 2 Moderate	Level 3 Significant	Level 4 Serious		Level 5 Critical	
Review Team	N/A	- VP Asset - FG SSHE/Asset SSHE - Manager Operational Safety Section	- VP Asset - FG SSHE/Asset SSHE - VP Safety Management Department	- VP Asset - FG SSHE/Asset SSHE - VP Safety Management Department	- SVF Division/Asset - FG SSHE/Asset SSHE - SVF SSHE Division	- VP Asset - FG SSHE/Asset SSHE - VP Safety Management Department	- SVF Division/Asset - FG SSHE/Asset SSHE - SVF SSHE Division
Step 6 – Investigation Report Completion							
	Level 1 Minor	Level 2 Moderate	Level 3 Significant (&LOPC Tier 1,2)	Level 4 Serious		Level 5 Critical	
Timing of Final Report Completion	Initial report 14 days Full report 28 days			Potential	Real	Potential	Real
				Initial report 14 d. Full report 28 d	Initial report 3 m. Full report 6 m.	Initial report 14 d. Full report 28 d	Initial report 3 m. Full report 6 m.
Step 7 – Lesson Learned Communication							
	Level 1 Minor	Level 2 Moderate	Level 3 Significant	Level 4 Serious (Potential/Real)		Level 5 Critical (Potential/Real)	
Communication Package	Upon requested by site top authority of specific intended cases			Required (See Incident Lesson Learn Process Workflow)			
Step 8 – Corrective Action Completion and Follow Up							
	Level 1 Minor	Level 2 Moderate	Level 3 Significant	Level 4 Serious (Potential/Real)		Level 5 Critical (Potential/Real)	
Effectiveness Validation	FG SSHE/Asset SSHE/Corporate SSHE			FG SSHE/Asset SSHE/Corporate SSHE			
Approve Corrective Action Completion	Field Manager/ Site Top Authority						
Step 9 – Report Closeout Approval							
	Level 1 Minor	Level 2 Moderate	Level 3 Significant	Level 4 Serious		Level 5 Critical	
Report Closeout Approved by	FG SSHE/Asset SSHE	Manager Corporate Operational Safety Section	VP Corporate Safety Management Department	VP Corporate Safety Management Department	SVF SSHE Division	VP Corporate Safety Management Department	SVF SSHE Division

APPENDIX B: IMS INCEDENT REPORT FLOW CHART

The full size of IMS Incident Report Flow Chart is available on [SSHE Intranet > SSHE MS > SSHE MS Documents > Corporate Tools > Appendix - Incident Management Standard.](#)



APPENDIX C: CRITERIA OF EXTERNAL INCIDENTS NOTIFICATION AND DMF INCIDENT NOTIFICATION FLOW CHART FOR THAILAND DOMESTIC ASSET

Table C1: Criteria of External Incidents Notification for Thailand Domestic Asset

Incident	Notification to Whom (after Notification of incident received)					
	DMF within 4 hrs.: Initial report by phone or e-mail within 72 hrs.: Written report	PTT Group within 24 hrs.: initial report by phone or e-mail	Police immediately: initial report	Safety inspector of Department of Labor Protection and Welfare immediately: initial report within 7 days written report	Marine Department within 24 hrs. initial report by phone or e-mail	Department of Disaster Prevention and Mitigation (DDPM) for the spill on land
Major Accident. Production loss 100 MMscf. or shutdown > 3 hrs.	X	X				
Emergency & Crisis Tier 2 & 3 *	X	X				
Fatality	X	X	X	X		
Lost Work Day Case	X	X				
Spill to Environment (> 1 bbl or potential)	X	X				
Spill to Environment (> 20 bbl)					X	X
Major Land Transport and Vessel Incident **	X	X				
Report by	Corporate Safety Management Department	Corporate Safety Management Department, *EMT/CMT	Site SSHE	Site SSHE	Corporate Safety Management Department, *EMT/CMT	Corporate Safety Management Department, *EMT/CMT

Remark: * Incident notification in case of emergency or crisis situation shall refer to emergency duty roaster contacts which will be notified as weekly basis per PTTEP Emergency and Management Plan (SSHE-106-PDR-502).

** As per PTT Group Major incident definition: Injury >LTI, Property Damage >1 MMUSD and spill to environment > 1 bbl

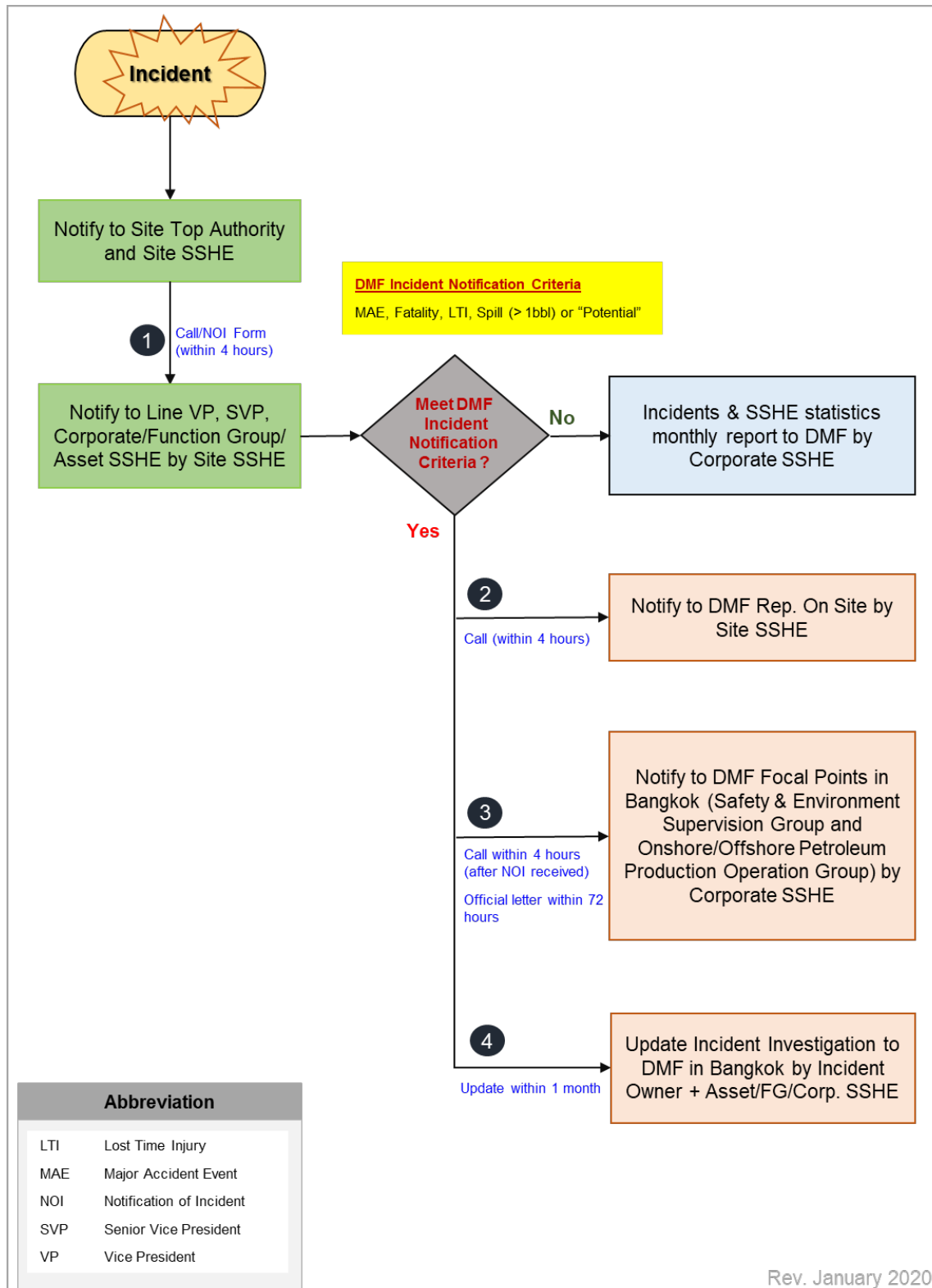


Figure C1 : Incident Notification and Reporting to Department of Mineral Fuels (DMF) for Thailand Domestic Assets

APPENDIX D: SSHE INCIDENT REPORT PERIMETER


The SSHE Incident Report Perimeter is available on [SSHE Intranet > SSHE MS > SSHE MS Documents > Corporate Tools > Appendix - Incident Management Standard.](#)

APPENDIX E: OCCUPATIONAL ILLNESS CASE IDENTIFICATION GUIDANCE

The Occupational Illness Case Identification Guidance is available on [SSHE Intranet > SSHE MS > SSHE MS Documents > Corporate Tools > Appendix - Incident Management Standard.](#)

APPENDIX F: EXAMPLE OF INCIDENT REPORT FORM

The Incident Reporting Form is available on [SSHE Intranet > SSHE MS > SSHE MS Documents > Corporate Tools > Appendix - Incident Management Standard.](#)



Appendix F: Example of Incident Report Form

Incident Management Standard
11038-STD-SSHE-601-R07

INCIDENT REPORT FORM

SSHE Form (Rev.08, Sep 2020)


PART 1: INITIAL REPORT (To be completed by Reporting Authority)			
Date of incident: []	Time of incident: []	Date of report: []	FOR SITE SSHE USE ONLY (Please tick as many as apply) Work Related: <input type="checkbox"/> Work Related <input type="checkbox"/> Non-work Related Incident Classification: <input type="checkbox"/> High Potential Incident (HPI) <input type="checkbox"/> Near miss <input type="checkbox"/> External complaint <input type="checkbox"/> Non-compliance <input type="checkbox"/> Injury <input type="checkbox"/> Occupational illness Severity: <input type="checkbox"/> Fatality (FAT) <input type="checkbox"/> Lost Work Day Case (LWDC) [] days <input type="checkbox"/> Restricted Work Day Case (RWDC) [] days <input type="checkbox"/> Medical Treatment Case (MTC) <input type="checkbox"/> First Aid Case (FAC) <input type="checkbox"/> Property damage or loss <input type="checkbox"/> Production loss <input type="checkbox"/> Spill <input type="checkbox"/> Other Environmental pollution <input type="checkbox"/> Process Safety Event (PSE) <input type="checkbox"/> Loss of Primary Containment (LOPC) <input type="checkbox"/> Other [] <input type="checkbox"/> Other []
Asset: []	Location/Equipment: []		
IOGP function: <input type="checkbox"/> Exploration <input type="checkbox"/> Production <input type="checkbox"/> Drilling <input type="checkbox"/> Construction <input type="checkbox"/> Unspecified			
Responsible department: []			
Job classification: <input type="checkbox"/> Company <input type="checkbox"/> Contractor <input type="checkbox"/> Third party (please specify name of contractor or <u>third party</u> company: [])			
Type of activity: <input type="checkbox"/> Construction, commissioning, decommissioning <input type="checkbox"/> Production operations <input type="checkbox"/> Diving, subsea, ROV <input type="checkbox"/> Maintenance, inspection, testing <input type="checkbox"/> Drilling/Workover/Well services <input type="checkbox"/> Seismic/Survey operations <input type="checkbox"/> Lifting, rigging, crane operations <input type="checkbox"/> Office, warehouse <input type="checkbox"/> Off-duty, recreation <input type="checkbox"/> Transport – Water/Marine activity <input type="checkbox"/> Transport – Air <input type="checkbox"/> Transport – Land* <input type="checkbox"/> Other []			
Event category: <input type="checkbox"/> Assault and violent act <input type="checkbox"/> Caught in, under or between <input type="checkbox"/> Confined space <input type="checkbox"/> Cut, puncture, scrape <input type="checkbox"/> Fire/Explosion/Burn <input type="checkbox"/> Exposure electrical <input type="checkbox"/> Exposure noise, chemical, biological, vibration <input type="checkbox"/> Exposure radiation <input type="checkbox"/> Fall from height <input type="checkbox"/> Slips and trips (at same height) <input type="checkbox"/> Overstress/Overload <input type="checkbox"/> Pressure release <input type="checkbox"/> Vehicle/Aircraft related* <input type="checkbox"/> Struck by <input type="checkbox"/> Water related, drowning <input type="checkbox"/> Other [] <input type="checkbox"/> Equipment failure <input type="checkbox"/> Security incident			
Cost estimate in USD:	Equipment and Material []	Production []	Admin/Labour []
Summary of incident: []			
Description: What happened? [] Why did it happen? [] What are the consequences? []			
Immediate actions: []			
Reported by: []	Position: []	Signature: []	Date: DD/MM/YYYY

*In case of road traffic incident, supplementary form "Road Traffic Incident Report" shall be completed and attached to this report.

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APPENDIX G: SUPPLEMENTARY REPORT FORM (ROAD TRAFFIC INCIDENT REPORT)

The Supplementary Report Form (Road Traffic Incident Report) is available on [SSHE Intranet > SSHE MS > SSHE MS Documents > Corporate Tools > Appendix - Incident Management Standard.](#)



Incident Management Standard
11038-STD-SSHE-601-R07

Appendix G: Supplementary Report Form (Road Traffic Incident Report)

SUPPLEMENTARY REPORT FORM (ROAD TRAFFIC INCIDENT REPORT)

Note: In case of road traffic incident, supplementary form (Road Traffic Incident Report) shall be completed and attached to this report.

SUPPL SUPPLEMENTARY FORM (To be completed by Site SSHE)

Road type of incident:

Single car incident

Rollover
 Collision with

Pedestrian
 Animal
 Object on the road
 Object beside the road
 Other:

Two car incident

One vehicle stationary
 Both vehicles moving

At junction Not at a junction
 Roundabout
 Moving along in same direction
 X junction
 Moving in opposite direction
 Y junction
 Reversing
 T junction
 Overtaking

Multiple car incident (please specify)

General:	Conditions:				
Weather	Light	Road	Quality	Condition	Shoulder
<input type="checkbox"/> Clear	<input type="checkbox"/> Dawn	<input type="checkbox"/> Straight	<input type="checkbox"/> Smooth	<input type="checkbox"/> Wet	<input type="checkbox"/> Shoulder
<input type="checkbox"/> Rain	<input type="checkbox"/> Daylight	<input type="checkbox"/> Bend	<input type="checkbox"/> Stony	<input type="checkbox"/> Dry	<input type="checkbox"/> Windrow
<input type="checkbox"/> Fog	<input type="checkbox"/> Low sun	<input type="checkbox"/> Incline	<input type="checkbox"/> Corrugated	<input type="checkbox"/> Washouts	<input type="checkbox"/> Profile flat
<input type="checkbox"/> Dust	<input type="checkbox"/> Dusk	<input type="checkbox"/> Incline and bend	<input type="checkbox"/> Loose	<input type="checkbox"/> Heavy sands	<input type="checkbox"/> Profile up
<input type="checkbox"/> Overcast	<input type="checkbox"/> Dark				<input type="checkbox"/> Profile down

Sketch To show 1) Direction of travel of all involved vehicles, pedestrians, etc. 2) Point of impact 3) Final resting places 4) Road measurements 5) Any signposts 6) Wind direction 7) Sun position 8) Skid marks and wheel tracks 9) Windows 10) Road markings 11) Distances to nearest town/camp 12) Road gradients 13) Each vehicle to be numbered for references in this form

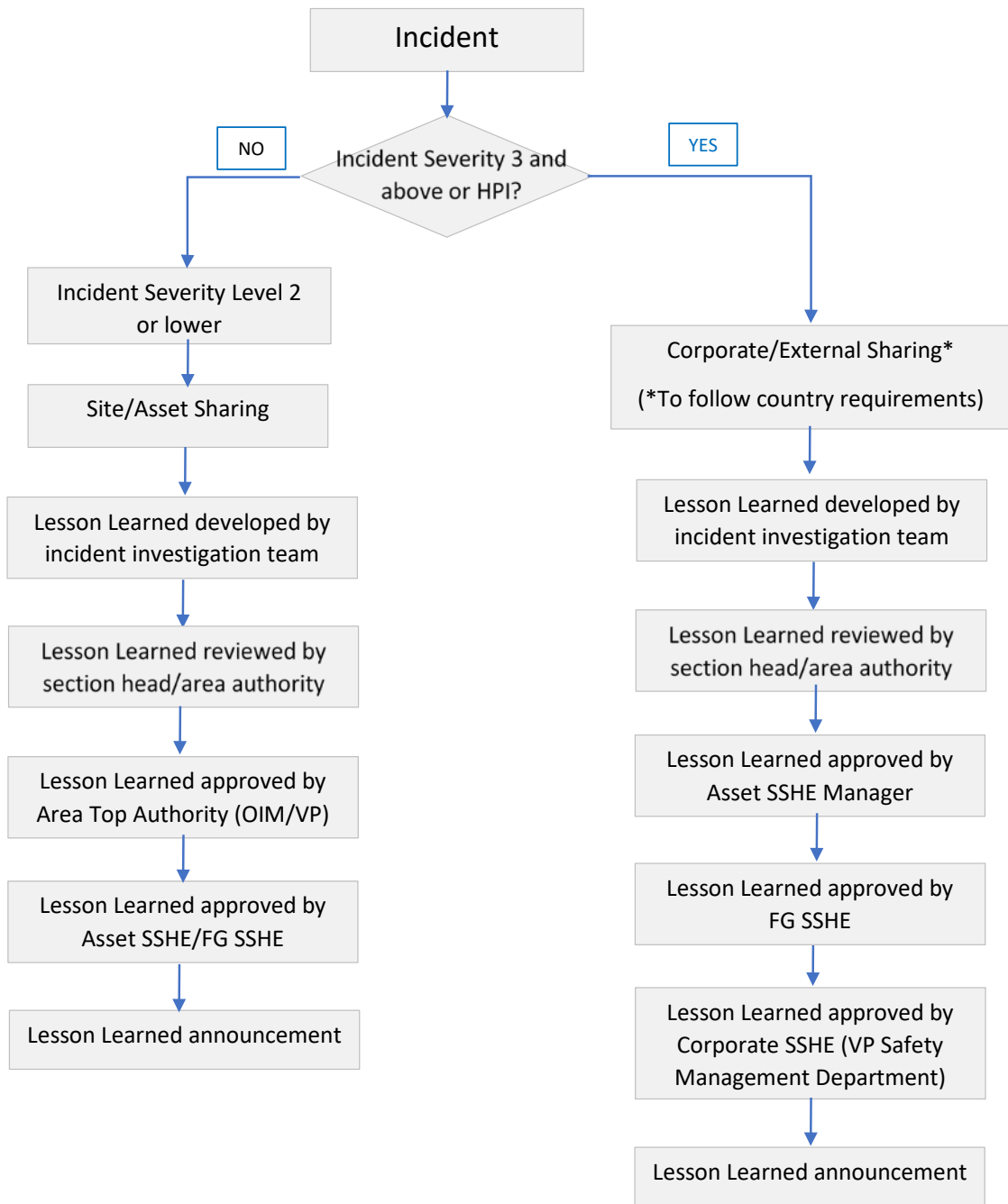
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APPENDIX H: SSHE PERFORMANCE CALCULATION

SSHE Performance Measures		
HPI Frequency Rate (HPIR)	=	$\frac{\text{Number of HPI} \times 10^6}{\text{Man hour worked}}$
TRI Frequency Rate (TRIR)	=	$\frac{(\text{FAT} + \text{LTI} + \text{RWDC} + \text{MTC}) \times 10^6}{\text{Man hour worked}}$
FAT Frequency Rate (FAR)	=	$\frac{\text{Number of FAT} \times 10^8}{\text{Man hour worked}}$
LTI Frequency Rate (LTIF)	=	$\frac{\text{Number of (FAT + LTI)} \times 10^6}{\text{Man hour worked}}$
Total Recordable Occupational Illness Rate (TROIR)	=	$\frac{\text{TROIC} \times 1000000}{\text{Total Man hours}}$
Spill Rate	=	$\frac{\text{Volume of spill report (tonnes)} \times 10^6}{\text{Tonnes Production}}$
Loss of Primary Containment Frequency Rate (LOPC Rate)	=	$\frac{\text{Numer of LOPC Tier 1 \& Tier 2} \times 10^6}{\text{Production} + \text{Drilling work hours}}$

APPENDIX I: INCIDENT LESSON LEARNED APPROVAL PROCESS

Incident Lesson Learned Review and Approval



ROLES AND RESPONSIBILITIES

Roles	Responsibilities
Document Owner	<p>The owner of the Incident Management Procedure is the SVP, Corporate SSHE Division, with responsibilities for:</p> <ul style="list-style-type: none"> ■ Issuing the Incident Management Procedure and its revisions. ■ Ensuring effective implementation of the Incident Management Procedure. ■ Giving clear directives on how standardized incident reporting process is to be implemented and maintained.
Document Custodian	<p>The custodian of the Incident Management Procedure is the VP, Safety Management Department, with responsibilities for:</p> <ul style="list-style-type: none"> ■ Identifying deficiencies or potential improvements. ■ Initiating periodic revision. ■ Maintaining revision history and document status register. ■ Ensuring all incident reports are complied with Incident Management Procedure. ■ Ensuring all incidents are properly investigated and analyzed to prevent reoccurrence. ■ Ensuring all incidents are closed according to Incident Management Procedure. ■ Gathering data to develop PTTEP's statistic report.
Asset/Department VP	<ul style="list-style-type: none"> ■ Ensure his/her Asset/Department has an Incident Management to meet requirement of this Procedure. ■ Provide necessary training to staff and Contractor to understand the Incident Management Procedure and the Asset's Incident Management Procedure. ■ Ensure staff and Contractor report all incidents including near misses, suspected, non-compliances, and violations of the SSHE rules. ■ Ensure all incidents are proper investigated. ■ Ensure recommendations are followed up and implemented to prevent reoccurrence. ■ Participate in the Incident Review meeting if required.

Roles	Responsibilities
VP, Safety Management Department	<ul style="list-style-type: none"> ■ External reporting to Department of Mineral Fuels (DMF) the criteria refer to Section 3.1.2 ■ Reassess of the severity to reflex actual/potential severity of incident under consultation with FG SSHE/Asset SSHE. ■ Consult with FG SSHE/Asset SSHE to nominate investigation team for HPI. ■ Final verify and validate if the effectiveness and correctness of the corrective/ preventive actions prior to close-out. ■ Review to close out incident report real severity 3-5 and HPI cases. ■ Seek for consultations with relevant functions for completeness of the investigation. ■ Call a meeting among the concerned function/personnel to review investigation of the incident with significant consequence to the Company, including Fatality (FAT) or Lost Workday Case (LWDC), High Potential Incident (HPI) and Major Accident Event (MAE) or Significant Spill.
Manager, Operational Safety Section	<ul style="list-style-type: none"> ■ Ensure effectiveness of incident investigation by advising techniques the Incident Investigation Guideline (12148-GDL-SSHE-602-024) ■ Advise Function Group SSHE or Asset SSHE or Site SSHE to correct or improve the incident investigation results and its recommendations for corrective/preventive actions. ■ Review quality of incident reports and return to Function Group SSHE/Asset SSHE/site SSHE for amendment if needed. ■ Review to close out incident report real severity 2. ■ Act as a focal point of the meeting with Function Group SSHE/ Asset SSHE/Site SSHE and operations team to review investigation of the incident and its recommendations for corrective/preventive actions.
Manager, Technical Safety Section	<ul style="list-style-type: none"> ■ Advise Function Group SSHE or Asset SSHE or Site SSHE for any Process Safety Event incident including LOPC case and LOPC Tier case classification and verification ■ Participate or facilitate with Process Safety Event incident including LOPC cases as necessary ■ Review to ensure the corrective and preventive actions are effective to prevent reoccurrence.

Roles	Responsibilities
Manager, Technical Safety Section (continued)	<ul style="list-style-type: none"> ■ Review quality of incident investigation reports and return to site for amendment if needed.
Manager, Operational Environment	<ul style="list-style-type: none"> ■ Advise Function Group SSHE or Asset SSHE or Site SSHE for any spill or environmental issue related incident classification and verification. ■ Advise Function Group SSHE or Asset SSHE or Site SSHE for spill volume calculation and conformation. Advise site for any spill response preparedness and site cleanup if requested by site. ■ Participate or facilitate with environmental concern incident including spill cases as necessary ■ Review to ensure the corrective and preventive actions are effective to prevent reoccurrence.
Function Group SSHE/ Asset SSHE	<ul style="list-style-type: none"> ■ Consult with FG SSHE/Asset SSHE to nominate investigation team for HPI. ■ Review and approve initial assessment and severity level of incident. ■ Participate and/or facilitate incident investigation as necessary. ■ Ensure all incident investigation is complied with technique the Incident Investigation Guideline (12148-GDL-SSHE-602-024) ■ Review to ensure the corrective and preventive actions are effective to prevent reoccurrence. ■ Advise Asset SSHE/Field/Site Manager and/or Site SSHE to correct or improve the recommended corrective/preventive actions. ■ Review quality of incident investigation reports and return to site for amendment if needed. ■ Review to close out incident report real severity 1.
Field/Site Manager	<ul style="list-style-type: none"> ■ Initial review and approve initial assessment and severity level of incident. ■ Approve incident investigation team for incident severity level 1-3. ■ Review and approve corrective and preventive actions. ■ Review the implementation of corrective/preventive actions for proper close out. ■ Monitor effectiveness of corrective/preventive actions. Introduce necessary additional action if required.

Roles	Responsibilities
Site Supervisor/ Superintendent	<ul style="list-style-type: none"> ■ Provide comment, review and necessary information to incident report as required. ■ Participate in incident investigation as necessary. ■ Ensure all corrective and preventive actions are properly implemented. ■ Present the incident for the Incident Review Meeting if required. ■ Provide technical information support with site SSHE, FG/Asset SSHE or Corporate SSHE during incident reporting and incident investigation.
Site SSHE	<ul style="list-style-type: none"> ■ Initial notify incident to relevant personnel according to incident notification criteria (internal & external part as per Section 3.1). ■ Notify external parties as per Section 3.1.2 ■ Determine initial classification of each incident. ■ Determine initial level of severity of incident according to Risk Assessment Matrix and level of investigation either Corporate level or site level. ■ Consult with Field/Site Manager to nominate and assign incident investigation team for incident severity level 1-3. ■ Make initial assessment for finding root cause of incident to prevent reoccurrence. ■ Assign corrective and preventive actions to concern parties and follow up all actions that need to be closed out. ■ Monitor and follow up any incidents that not close out according to Incident Management Procedure. ■ Be or nominate an incident investigation facilitator in the investigation team to facilitate the investigation of incident.
Reporting Authority (i.e. Employee, Line Supervisor, Contractor, Third Parties, Witness)	<ul style="list-style-type: none"> ■ Report any incidents to line supervisor and/or Site SSHE immediately by providing all necessary information as much as possible. ■ Participate interview session and support all data/information during incident investigation.

DEFINITION AND ACRONYMS

Set out below are common specific terms presented in alphabetical order:

Term	Definition
Asset	Refers to an operating Asset, site, or location within a respective Function Group.
Corporate	Refers to the PTTEP business groups hierarchically above Asset level, and located in the PTTEP headquarters, Bangkok.
Department	A subgroup within a Function Group, Division or Asset.
Division	A business group may have one or more distinct groups within its hierarchy. These are referred to as Divisions.
Function Group	Refers to a corporate level business group. These may have associated Divisions, Departments, or operational Assets within their hierarchy.
Company Employee	A person employed by and on the payroll of the reporting Company, including Corporate and management personnel specifically involved in E&P industry. Persons employed under short-service contracts are included as Company employees provided, they are paid directly by the Company.
Contractor	A 'Contractor' is defined as an individual or organization performing work for the reporting Company, following verbal or written agreement. 'Sub-contractor' is synonymous with 'Contractor'.
Contractor Employee	Any person employed by a Contractor or Contractor's Sub-Contractor(s) who is directly involved in execution of prescribed work under a Mode 1 or Mode 2 contract with the reporting Company.
External Complaint	A Third party or local community complaint to Company about Company activities relating to injury/illness or harm to people, damage to property and/or environmental impact on third parties or local community.
Fatality (FAT)	Death of a person resulting from occupational injury or illness either immediately or after a period of time. "Delayed" deaths that occur after the incidents are to be included if the death were a direct result of the incident. For example, if a fire killed one person outright, and a second died three weeks later from lung damage caused by the fire, both shall be reported.

Term	Definition
FAT (continued)	<p>In some cases, a delayed fatality occurs in the next calendar year after the incident. For example, if the above fire occurred on December 21, 2007, the second death from it might occur in January 2008. All fatalities from an incident are included in the report for the year of that incident. In the above case, the fatality in 2008 is reported with the 2007 data.</p>
First Aid Case (FAC)	<p>Cases that are not sufficiently serious to be reported as Medical Treatment Case (MTC) or more serious cases but nevertheless require minor first aid treatment, first aid cases are not recordable incidents (OSHA).</p> <p>If the treatment of the resultant injury or illness is limited to one or more of the 14 specific treatments. These are:</p> <ul style="list-style-type: none"> ■ Using a non-prescription medication at non-prescription strength. ■ Administering tetanus immunizations. ■ Cleaning, flushing or soaking wounds on the surface of the skin. ■ Using wound covering such as bandages, Band-Aids, Gauze pads, etc.; or using butterfly bandages or Steri-strips. ■ Using hot or cold therapy. ■ Using any non-rigid means of support, such as elastic bandages, wraps non-rigid back belts, etc. ■ Using temporary immobilization devices while transporting an accident victim (e.g. splints, slings, neck collars, back boards, etc. ■ Drilling of a fingernail or toenail to relieve pressure or draining fluid from a blister. ■ Using eye patches. ■ Removing foreign bodies from the eye using only irrigation or a cotton swab. ■ Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs or other simple means. ■ Using finger guards. ■ Using massage. ■ Drinking fluids for relief of heat stress.

Term	Definition
FAC (continued)	<ul style="list-style-type: none"> ■ Using adrenaline auto-injectors (e.g. EpiPen™) if pre-prescribed for the patient. <p>First Aid Case does include sending injured or illness person to hospital for any diagnostic and result there is no further medical treatment by medical doctor.</p>
Full Incident Investigation Report	<p>Report of incident investigation which is complied with full contents and format as per PTTEP Incident Investigation Guideline (12148-GDL-SSHE-602-024).</p>
High Potential Incident (HPI)	<p>Any near miss or incident having a potential severity level 4 Serious or level 5 Critical on the PTTEP Risk Assessment Matrix. In every case potential severity will be higher or equal to actual severity.</p> <p>Example of HPI:</p> <ul style="list-style-type: none"> ■ Explosion. ■ Fire (whether controlled quickly or not) in the process area and platform installations/marine vessels. ■ Action or Emergency Shutdown (ESD) caused by a confirmed gas release or fire detection. ■ Incident where a falling object could have caused fatality. ■ Vehicle incident below or above legal speed limit (e.g. burst tyres at speed; any person struck by a moving vehicle; any vehicle overturning, etc.). ■ Likely collision between a vessel and a platform or the risk of someone being caught between a vessel and a dock or similar. ■ Significant helicopter or air craft incident. ■ Crane overturning. ■ Person falling overboard.
Hours Worked	<p>The actual hours worked, including overtime hours, are recorded in the case of onshore operations. The hours worked by an individual will generally be about 2,000 per year. For offshore workers, the hours worked are calculated on a 12-hour work day. Consequently, average hours worked per year will vary from 1,600 to 2,300 hours per person depending upon the on/off shift ratio. Vacations and leave are excluded.</p>
Incident	<p>An unplanned event or uncontrolled event or chain of events that has resulted in injury or illness, damage to property, environmental impact or negative impact on Company reputation.</p>

Term	Definition
Initial Notification	Notification of the basic information of an incident before the start of the Incident management system.
Initial Incident Investigation Report	Report of incident investigation team which summary the overview of incident details such as incident event summary and timeline, initial causes and intermediate causes, and quick actions and recommendations summary after incident notification is performed.
Legal Professional Privilege (LPP)	A privilege that applies to communications, oral or in writing, made or brought into existence for the dominant purpose of obtaining or giving legal advice or assistance, or for use in existing or anticipated legal proceedings.
Loss of Primary Containment (LOPC)	<p>An unplanned or uncontrollable release of any material from containment, including non-toxic and non-flammable materials (e.g. steam, hot condensate, nitrogen, compressed CO₂ or compressed air).</p> <p>Primary containment refers to pipes, vessels, tanks, etc. (Refer to Loss of Primary Containment (LOPC) Reporting and Reduction Guideline, 12147-GDL-SSHE-403/00/01) for details of Tier 1, Tier 2, Tier 3 and Tier 4.</p>
Lost Time Injury (LTI)	A fatality or lost work day case injury. The number of LTIs is the sum of fatalities and lost work day cases.
Lost Work Day Case (LWDC)	Any work-related injury or illness other than a fatal injury or illness, which results in a person being unfit to any work on any day after the day of occurrence of the occupational injury or illness. "Any day" includes rest days, weekend days, leave days, public holidays or day after ceasing employment. The number of LWDC is the sum of fatalities and lost work day cases. LWDC shall be followed up not over than 365 days.
Major Accident Event (MAE)	Any incident that results in multiple fatalities or equivalent damage, production loss, environmental impact as per the PTTEP Risk Assessment Matrix.
Medical Treatment Case (MTC)	Cases that occupational injured or illness person requires treatment from a professional physician or qualified paramedic and more severe than requiring simple first aid treatment but not severe enough to be reported as RWDC/LWDC for example, treatment of infection, treatment of 2 nd or 3 rd degree burns, application of sutures, application of butterfly adhesive bandage, removal of foreign body from wounds, fracture/ broken bones or teeth, dermatitis.

Term	Definition
MTC (continued)	<p>Medical Treatment does not include:</p> <ul style="list-style-type: none"> ■ The conduct of diagnostic Procedure, such as x-rays and blood tests including the administration of prescription medications used solely for diagnosis purposes (e.g. eye drops to dilate pupils). ■ Visits to a physician or other licensed Health care professional solely for observation or counselling. <p>The following may not involve any treatment but for purposes of severity classification, will reported as Medical Treatment.</p> <ul style="list-style-type: none"> ■ Any loss of consciousness. ■ Significant injury or illness diagnosed by a physician or other licensed Health care professional for which no treatment is given or recommended at the time of diagnosis. Examples include: punctured ear drums, fractured ribs or toes, byssinosis and some types of occupational cancer. ■ Needles stick injuries and cuts from sharp objects that are contaminated with another person’s blood or other potentially infectious material. ■ Occupational hearing loss.
Near Miss	<p>Near Miss is an Incident which potentially could have resulted in actual injury or illness, damage to property, environmental impact or negative impact to Company reputation.</p> <p>Note: As a professional judgment and general rule of thumb when determining if an incident is a Near Miss or Property Damage, the criteria that Near Miss is an incident where no loss has occurred, should be used.</p>
Non-Compliance	<p>A failure to comply with a requirement of Company SSHE Management System (SSHE MS) and/or national and International laws and regulations.</p> <p>Note: Discharge/Leak of Produced water, other wastewater and etc. which their characteristics exceeded the country regulation shall be reported as Non-Compliance.</p>
No. of Lost Work Days	<p>If the number of days unfit for work (LWDC Days) is collected and reported, enter the sum total of calendar days (consecutive or otherwise) after the days on which the occupational injuries or illness occurred, where persons reported under LWDC (above) were unfit for work and did not work.</p>

Term	Definition
<p>No. of Lost Work Days (continued)</p>	<ul style="list-style-type: none"> ■ If LWDC is reported, at least one day must be reported for each lost workday case (LWDC). ■ Where absence from work extends beyond the year end, the actual or estimated days unfit for work in the following year should be added to those for the reporting year in computing the number of lost work days, i.e. days unfit for work. ■ Days unfit for work between a fatal incident and the date of death are not included. ■ The maximum lost working days reportable for each lost work day case is 180. <p>Example – Three employees were severely injured and unfit for work after their respective incidents. Employee A was unfit for 2 working days, a weekend and 2 further days. Employee B was unfit for 3 weeks, and Employee C was fit for work the day after the injury but thereafter not fit for the three following days.</p> <p>A was unfit for work for 2+2+2 days = 6 days B was unfit for work for 3 x 7 days = 21 days C was unfit for work for = 3 days Number of days unfit for work = 30 days</p> <p>This example should be reported as 3 Lost Work Day Cases and 30 Lost Work Days.</p> <p>Anyhow the No. of Lost Work Days should be consulted with Corporate Doctors for confirmation.</p>
<p>Occupational Illness</p>	<p>Any abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to environmental factors associated with employment. It includes acute and chronic illness or diseases which may be caused by inhalation, absorption, ingestion of, or direct contact with the hazard, as well as exposure to physical and psychological hazards. It will generally result from prolonged or repeated exposure (IOGP).</p> <p>Examples: back problems/lower limb disorders, cancer and malignant blood disease, infectious disease (food poisoning, malaria, etc.), mental ill health; noise induced hearing loss, silicosis, asbestosis, allergic bronchitis, asthma, synovitis, tenosynovitis, heat exhaustion, radiation exposure.</p>

Term	Definition
Occupational Injury	Any injury such as a cut, fracture, sprain, amputation, etc. which results from a work related activity or from an exposure involving a single incident in the work Environment, such as deafness from explosion, one-time chemical exposure, back disorder from a slip/trip, insect or snake bite.
Permanent Disabilities	Persons having incapacity to work due to work related health problems. The incapacity may be partial, so that permanent disability may be used both for people who have taken early retirement for health reasons and for working people with a chronic disease or injury.
Premises	Any PTTEP owned or rented office, yard, platform, pipeline, offshore field area, land, etc.
Process Safety	A blend of engineering and management skills focused on preventing Major accidents and near misses, particularly structural collapse, explosions, fires and damaging releases associated with a loss of containment of energy or dangerous substances such as chemicals and petroleum products.
Process Safety Event (PSE)	An unplanned or uncontrolled release of any material including non-toxic and non-flammable materials (e.g. steam, hot water, nitrogen, compressed CO2 or compressed air) from a process, or an undesired event or condition, that under slightly different circumstances, could have resulted in a release of material.
Restricted Work Day Case (RWDC)	<p>Any work-related injury or illness other than a fatality or lost work day case which results in a person being unfit for full performance of the regular job on any day after the occupational injury or illness, e.g.</p> <ul style="list-style-type: none"> ■ an assignment to a temporary job, ■ part time work at regular job, ■ working full-time in the regular job but not performing all the usual duties of the job. <p>RWDC when IP can do minimum 50% of their Job Description.</p> <p>Where alternative restricted work cannot be assigned or performed, the incident shall be recorded as a LWDC.</p> <p>RWDC when IP can do minimum 50% of their Job Description.</p>

Term	Definition
Spill	<p>Spill is defined as any loss of containment that reached the Environment. The spill volume reported should reflect the volume of material that reached the Environment only (i.e. not inclusive of any released volume retained within secondary or other confinement). Reported volume reaching the Environment is irrespective of the quantity recovered (i.e. represents the gross volume reaching the Environment, not a net volume remaining in the Environment).</p> <p>Spills of produced water or process wastewater are excluded. Loss of containment resulting from acts of sabotage (such as theft of oil from pipelines and storage) shall be reported. Loss as a result of “acts of terrorism”/attacks on infrastructure should not be reported.</p> <p>Intentional discharges of drill cutting (only offshore operations exceed 12 nautical miles) during drilling activities are excluded.</p>
Third Party	<p>Third party is a person or group of person or organization which are not employed by or contracted to the Company or Contractor. Including visitors.</p>
Total Recordable Injury (TRI)	<p>The number of recordable incidents which are summary of Fatalities (FAT) + Lost Workday Cases (LWDC) + Restricted Workday Cases (RWDC) + Medical Treatment Cases (MTC).</p>
Work Environment	<p>The establishment and other locations where one or more employees are working or are present as a condition of their employment. The work Environment includes not only physical locations, but also the equipment or materials used by the employee during the course of his or her work.</p>
Work from Home	<p>Works which performed by employee at home, including work in a home office. Injury and illness occurs will be considered work-related if the injury or illness occurs while the employee is performing work for pay or compensation in the home, and the injury or illness is directly related to the performance of work rather than to the general home environment or setting.</p>
Work Related activity	<p>A work-related activity is an activity in a work environment, which is or ought to be subject to management control.</p>

Term	Definition
Work Related Incident	<p>Personnel Injury or Illness arising during work or travel to work for or on behalf of the Company, or its employing Subcontracting Company.</p> <p>To classification of incidents with respect to inclusion within PTTEP's reporting perimeter (or not) shall refer to Appendix F: SSHE Incident Reporting Perimeter.</p>

Acronyms	Description
CEN	Environment Management Department
CEO	President and Chief Executive Officer
CPA	Process Safety and Assurance Department
CPA/P	Planning and Assurance Section
CSA	Safety Management Department
CSA/O	Operational Safety Section
CSA/S	Security Section
CSH	Safety, Security, Health & Environment Division
DMF	Department of Mineral Fuels
EVP	Executive Vice President
FAC	First Aid Case
FAR	Fatality Frequency Rate
FAT	Fatality
FG	Function Group
HPI	High Potential Incident
IMS	Incident Management System
IOGP	The International Association of Oil and Gas Producers
KPIs	Key Performance Indicators
LOPC	Loss of Primary Containment
LPP	Legal Professional Privilege
LTI	Lost Time Injury
LTIF	Lost Time Injury Frequency
LWDC	Lost Work Day Case
MAE	Major Accident Event
MOC	Management of Change
MOGE	Myanmar Oil and Gas Enterprise

Acronyms	Description
MTC	Medical Treatment Case
NOI	Notification of Incident
OSHA	Occupational Safety and Health Administration
PETRONAS	Petroleum Nasional Berhad (National Petroleum Limited)
PSE	Process Safety Event
PTT	Petroleum Authority of Thailand
RWDC	Restricted Work Day Case
SSHE MS	Safety, Security, Health and Environment Management System
SVP	Senior Vice President
TRI	Total Recordable Injury
TRIR	Total Recordable Injury Rate
VP	Vice President

REFERENCES

Document Code	Document Title
PTTEP SSHE Controlling Documents	
11038-STD-SSHE-202	Corporate SSHE Plan, SSHE KPI's and Performance Monitoring Standard
11038-STD-SSHE-401	SSHE Risk Management Standard
11038-STD-SSHE-503	Environment Management Standard
11038-STD-SSHE-504	Security Management Standard
11038-STD-SSHE-507	Occupational Health Management Standard
SSHE-106-STD-500	Emergency & Crisis Management Standard
12146-PDR-SSHE-501/03	Spill Management Plan
12148-PDR-SSHE-302/01	SSHE Contractor Management Procedure
12148-GDL-SSHE-602-024	Incident Investigation Guideline
Other Reference Documents	
12140-GDL-009-R00	Grievance Handling Guideline
-	Criteria and Method for Exploration, Production, and Conservation of Petroleum; Ministerial Regulation of the Ministry of Energy, B.E. 2555 (2012)
-	Petroleum Act, B.E. 2514 (1971); Ministry of Energy; 2007
-	Occupational Safety, Health and Environment Act, B.E.2554; Ministry of Labour; 2011
GRI 403	GRI Sustainability Reporting Standards GRI 403: Occupational Health and Safety; Global Reporting Initiative; 2018
IOGP Report 2018su	Safety Data Reporting User's Guide - Scope and Definitions (2018 data); International Association of Oil & Gas Producers; 2018
IOGP Report No. 444	OGP Health and safety incident reporting system users' guide, (2010 data); International Association of Oil & Gas Producers; 2011
IOGP/IPIECA Report no. 393	Health Performance Indicators; International Association of Oil & Gas Producers; 2007
OSHA - 29CFR Part 1904	Recording and Reporting Occupational Injuries and Illness Occupational Safety and Health Administration (USA); 1904
OSHA - 29CFR Part 1904.5	Determination of work-relatedness; Occupational Safety and Health Administration (USA); 1904

Document Code	Document Title
OSHA- 29CFR Part 1904;1952	A Brief Guide to Recordkeeping Requirements for Occupational Injuries And Illnesses, 2001; Occupational Safety and Health Administration (USA); 2001

REVISION HISTORY

Rev.	Description of Revision
0	Authorized by: PEP New Document
1	Authorized by: PEP, Date: April 2003 Modified from original version
2	Authorized by: CEO, Date: October 2009 This SSHE Incident Management Standard (SSHE MS.S.14) replaces the HSE Policies and Procedures Manual Part B3 "Accident/Incident, Unsafe Act/Condition and Pollution/Spill Reporting, Investigation and Analysis (SP.PHS.003/03-R1)". <ul style="list-style-type: none">■ Changes from the previous version are:■ Defined and classified the incident types as follows: accident, near miss, hydrocarbon release, spill, external complaint and non-conformance.■ Specified clear definition of High Severity Incident (HSI) and High Potential Incident (HPI)■ Revised incident report form and reporting requirements to include the followings:■ Involvement of PEP, VPs and SSHE advisor in reviewing and giving comments regarding the incident and corrective actions taken.■ Categories of basic causes and immediate causes.■ Combination of Hydrocarbon release and spill report form and modification of its contents.■ Renamed Unsafe Act/Condition (UAUC) report form to "Hazard Report Card (HRC)" and transferred its detailed reporting procedure as a supporting document of Incident Management Standard.■ Updated definitions of Medical Treatment Case (MTC) and First Aid Case (FAC) in accordance with OGP.■ Included the course of legal profession privilege in the incident investigation process.
3	Authorized by: CEO, Date: March 2011 <ul style="list-style-type: none">■ Changed of position titles according to organization change in February 2011.■ Revised of Near Miss and Accident definition.■ Changed all contractors working within PTTEP concession must report in PTTEP incident report form.■ Added a fatality notification in external notification table 3.
4	Authorized by: CEO, Date: October 2011 <ul style="list-style-type: none">■ Changed of position titles according to organization change in May 2011.■ Revised of Incident and spill definition to be in line with OGP.■ Included Loss of Primary Containment as per OGP definition.■ Revised of incident severity table.

Rev. Description of Revision

- Investigation of real severity of HPI, third party investigators may be invited to participate in investigation.
- Added in case of significant incident (LTI, HPI or major Spill) occurred, the involved management shall present the incident in upcoming SSHE council meeting or MC, CMC meeting (whichever comes first).
- Revised Timing requirement to complete investigation report.

5 Authorized by: CEO, Date: May 2013

- Changed of PTTEP web-based program from WIMS to IMS.
- Changed of Non-Conformance to Non-Compliance as per OGP terminology.
- Changed of Work-Related Activity to Work Related Injury and definition.
- Revised initial internal notification and initial external notification criteria
- Included all corrective actions and reports from incident severity level 4 Major to level 5 Catastrophic, refer to PTTEP SSHE-106-STD-400, including LTI and HPI incidents shall be reviewed and followed up until closed-out at SSHE council meeting.
- Revised incident report workflow.
- Revised incident report form and reporting requirements. A supplementary report form is added for Road Traffic Incident.
- Included Major Accident Rate definition as per SSHE-SD.
- Included Process Safety Event (PSE) definition and add PSE in the Incident Report Form.

6 Authorized by: CEO, Date: December 2017

- Added Role and Responsibility of IRC refer to the latest PTTEP Company order: Appoint of Incident Review Committee (IRC).
- Added Process Safety meaning in terminology and change Process Safety Event (PSE) definition.
- Removed SSHE advisor and replaced by Function Group SSHE/Asset SSHE
- Added Notification of Incident to Insurance Department for any damages/losses of Asset/ production or property more than 10,000 USD.
- Revised the authorized person who nominate investigation team for HPI, i.e. Function Group SSHE for Domestic Asset and Asset SSHE for International Asset
- Revised Incident Report Form by adding MOC in part 5.
- Removed Appendix 4 Complaint Form. The form in the Grievance Handling Guideline Document (12140-GDL-009-R00) can be used in place.
- Final report of Lost Time Injury case shall be submitted.

7 Authorized by: CSH, Date: January 2021

- Incorporated SSHE Incident Reporting Perimeter Guideline and Occupational Illness Cases Identification Guideline into this Incident Management Standard.
- Updated last PTTEP SSHE Policy clauses.
- Removed role and responsibility of IRC refer to the latest PTTEP Company order: Cancellation of Incident Review Committee (IRC).

Rev. Description of Revision

- Added roles and responsibilities of Technical Safety Manager and Environment Operation Manager.
 - Revised Incident Management Process, Incident Report Form, Incident Reporting Timeline and Incident Investigation Report Timeline.
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EXHIBIT G

CONTRACTOR'S ORGANIZATION, PERSONNEL, AND COMMUNICATION

EXHIBIT H

**CONTRACTOR'S OPERATIONS MANUALS (OM-A, OM-B, OM-C AND OM-D)
AND GENERAL MAINTENANCE MANUAL**

EXHIBIT I

**CONTRACTOR'S SSHE POLICY AND
SAFETY AND QUALITY MANAGEMENT SYSTEM MANUAL**

EXHIBIT J

INTEGRITY PACT

- End of Contract THC21-5493 -