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

CALL FOR TENDER NO.: THC21-5493

FOR

PROVISION OF 5-YEAR HELICOPTER SERVICES FOR OFFSHORE OPERATING ASSETS

CONTENTS OF THIS CALL FOR TENDER

PART I

INSTRUCTIONS TO TENDERERS

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1. PURPOSE

1.1 Through this CFT, PTT Exploration and Production Public Company Limited, PTTEP Energy Development Limited and PTTEP International Limited (all together hereinafter referred to as "**COMPANY**") are seeking to nominate a contractor for the performance of works/services under the Contract No. THC21-5493. The details of the works/services are specified in Exhibit A of Form of Contract (PART II of the CFT).

1.2 The tentative and estimated Contract duration is five (5) years and five (5) months with the details below:

- The EFFECTIVE DATE of the CONTRACT is tentatively on 16th May 2022,
- The COMMENCEMENT DATE of the SERVICES is tentatively on 16th October 2022, and
- The OPERATIONAL PERIOD of the SERVICES is five (5) years.

2. CLOSING DATE AND TIME

The closing date and time for the submission of the TENDER is **Thursday, 28th April 2022 at 14.00 hrs., Bangkok time**.

3. DEFINITIONS

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

3.1 **CFT** shall mean the Call for TENDER No. THC21-5493.

3.2 **SERVICES** (or **WORK**) shall mean the works or services and other obligations to be performed by a successful TENDERER as described in the TENDER DOCUMENTS, in particular Exhibit A of the Form of Contract.

3.3 **TENDER** shall mean the TENDERER's offer to perform the SERVICES, and any subsequent revised offer in response to COMPANY's request.

3.4 **TENDER DOCUMENTS** shall mean this CFT and any document related thereto remitted by COMPANY together with any addenda that may be issued by COMPANY to TENDERER prior to the closing date and time set out in Section 2.

3.5 **TENDERER** shall mean the company, partnership or other person who receives this CFT (either via email or any other ways) from COMPANY.

3.6 **ITT** shall mean this Instructions to TENDERER.

3.7 **FOC** (or "Form of Contract") shall mean Form of Contract No. THC21-5493, which is a part of the TENDER DOCUMENTS.

3.6 "days" means "consecutive calendar days, it being understood that all dates and time periods referred to in this ITT relate to Gregorian calendar.

3.7 The definitions of **APPLICABLE LAWS, AVAIABILITY, COMPANY, COMMENCEMENT DATE**, **CONTRACT**, **CONTRACTOR, EFFECTIVE DATE**, **HELICOPTER**, **OPERATING BASE**, **OPERATION READINESS AUDIT**, **OPERATIONAL PERIOD, PARTY, PARTIES, PERMANENT HELICOPTERS**, **PRE-AWARD AUDIT, SERVICES** and **SPARE PARTS** shall refer to article 1.2 of the main agreement of the Form of Contract.

4. ACKNOWLEDGMENT OF RECEIPT OF CALL FOR TENDER DOCUMENTS

4.1 TENDERER shall sign and return a Letter of Acknowledgement in the form given in Annex I to COMPANY by **Tuesday, 12th April 2022**. TENDERER shall specify the name, position, phone number, fax number and email address of the person in charge of its TENDER.

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

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

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

Telephone: + 66(0) 2537 4000
Fax: + 66(0) 2537 4444

Attention: **PTTEP Procurement**
PTTEPProcurement@pttep.com

5. PRE-BID CLARIFICATIONS

5.1 COMPANY's representative will be available at COMPANY's office stated in Section 4 during the pre-bid period for pre-bid clarifications. Any query shall be addressed in writing to the address and names mentioned in Section 4.

5.2 Such query must reach COMPANY's representative not later than seven (7) days before the closing date stated in Section 2.

6. TENDER SUBMISSION

6.1 TENDERER shall submit to COMPANY a Letter of Submission in the form set out in Annex II together with its TENDER.

6.2 **COMPANY will only consider the TENDER from TENDERER who receives the CFT (either via email or any other ways) from COMPANY. The TENDER from other persons or companies will not be considered.**

6.3 The TENDER shall be submitted in **two (2) original documents** which are **one (1) original Technical Proposal** and **one (1) original Commercial Proposal**, clearly identified "**ORIGINAL**" on each document, and one (1) copy of both documents, clearly identified "**COPY**" on each document. **Each Proposal shall be sealed in a separate envelope**. TENDERER shall refer to further instructs in Appendix I and illustration in Appendix II.

6.4 In addition to the hard copy submission, TENDERER shall submit two (2) CDs. The first CD, clearly marked "**Technical Proposal CD**", shall contain completed Technical Proposal in editable native files. The second CD, clearly marked "**Commercial Proposal CD**", shall contain completed Commercial Proposal in editable native files. **Each CD shall be packed in a separate and sealed envelope**. TENDERER shall refer to further instructions in Appendix I and illustration in Appendix II.

For the native files, **such native file shall be complete and in-line with the original (hardcopy proposals), and TENDERER shall not lock/protect/encrypt the files.**

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

> **NAME OF TENDERER**
>
> BID FOR **PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED**
> **PTTEP ENERGY DEVELOPMENT COMPANY LIMITED**
> **PTTEP INTERNATIONAL LIMITED**
>
> CALL FOR TENDER NO: THC21-5493
>
> COMMERCIAL PROPOSAL or TECHNICAL PROPOSAL *(Please specify)*
>
> ORIGINAL or COPY *(Please specify)*
>
> "**NOT TO BE OPENED**"

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

> **NAME OF TENDERER**
> ADDRESS OF TENDERER
>
> BID FOR **PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED**
> **PTTEP ENERGY DEVELOPMENT COMPANY LIMITED**
> **PTTEP INTERNATIONAL LIMITED**
>
> CALL FOR TENDER NO: THC21-5493
>
> "**NOT TO BE OPENED**"
>
> TO: **MR. ANUSORN WUTHIJAROEN**
> **VICE PRESIDENT, GLOBAL SUPPLY CHAIN PROCUREMENT AND CONTRACTS DEPARTMENT**
> **(For PTTEP PROCUREMENT)**
>
> **PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED**
> ENERGY COMPLEX BUILDING A, FLOORS 6, 19-36
> 555/1 VIBHAVADI RANGSIT ROAD
> CHATUCHAK, BANGKOK 10900
> THAILAND
>
> (PTTEP'S MAILROOM, PARKING 2)

6.6 The TENDER shall be addressed to COMPANY in such a manner that it reaches COMPANY's mailroom, Bangkok office before the closing date and time mentioned in Section 2. The TENDER that arrives after such closing date and time may not be considered.

6.7 It is TENDERER's responsibility to send along a document transmittal/delivery form and obtain from COMPANY's addressee a receipt for the delivery of the TENDER before the closing date and time. Without such receipt, no claim will be examined.

6.8 TENDERER is advised that by mailing its TENDER, it runs the risk of envelopes being accidentally opened which would make the TENDER invalid. COMPANY would strongly recommend avoiding normal mailing and giving preference to the use of a reputable courier service.

6.9 The TENDER which is incomplete or vague may not be considered.

6.10 Any financial or commercial matters that in any way related to TENDERER's Commercial Proposal must only specify in the Commercial Proposal. Also, these matters shall not be transmitted by e-mail or fax unless specifically instructed otherwise by COMPANY.

6.11 COMPANY will not consider the TENDER from TENDERER who fails to meet the technical requirements below:

- **TENDERER shall comply with this ITT and agree with CONTRACT's terms and conditions including CONTRACT's Exhibits. In case of exception(s)/deviation(s) by TENDERER, such exception(s)/deviation(s) shall be acceptable by COMPANY after clarification(s);**

- **TENDERER or its partner shall have a minimum of five (5) years of experience in operating offshore helicopters in support oil and gas operations in any location in the last seven (7) years by the CFT issuing date;**

- **TENDERER shall have valid Air Operator Certificate (AOC) authorized by the Civil Aviation Authority of Thailand (CAAT) to perform commercial air operations for the proposed type of PERMANENT HELICOPTERS by the closing date;**

- **TENDERER shall have valid Repair Station Certificate - Class 1 authorized by the Civil Aviation Authority of Thailand (CAAT) to perform line and base maintenance for the proposed type of PERMENENT HELICOPTERS in Thailand by the closing date. If TENDERER intends to use third party to perform line and base maintenance for the proposed type of PERMANENT HELICOPTERS, TENDERER shall provide COMPANY the copy of its third party's Repair Station Certificate - Class 1 authorized by the Civil Aviation Authority of Thailand (CAAT) to perform line and base maintenance for the proposed type of PERMANENT HELICOPTERS in Thailand by the closing date. Foreign repair station certificate from third party authorized by the Civil Aviation Authority of Thailand (CAAT) shall not be accepted;**

- **TENDERER shall comply with COMPANY's SSHE requirements indicated in Exhibit D of the Form of CONTRACT and is able to provide its SSHE documents as requested in Section 11 of Appendix I of this ITT;**

- **TENDERER shall comply and sign the Integrity Pact;**

- **TENDERER shall confirm to provide PERMANENT HEICOPTERS (two (2) units) on COMMENCEMENT DATE scheduled in the Exhibit A of the Form of CONTRACT;**

- **TENDERER shall propose PERMANENT HELICOPTERS (two (2) units), which shall have minimum specifications as written in the Exhibit C of the Form of CONTRACT, which shall include, but not limited to, the following;**
  - **The age of proposed PERMANENT HELICOPTERS (two (2) units) shall not exceed ten (10) years counting from manufacturing date to COMMENCEMENT DATE;**
  - **The proposed of PERMANENT HELICOPTERS (two (2) units) shall have;**
    - **at least twelve (12) seats,**
    - **IFR certified, and**
    - **Offshore oil & gas configuration.**
  - **The proposed type of PERMANENT HELICOPTERS shall have 'D' Value not more than 20 meters and shall have 'T' Value not more than 7.1 tonnes;**
  - **The flotation system of the proposed type of PERMANENT HELICOPTERS shall be certified at least Sea State 6;**
  - **The proposed PERMANENT HELICOPTERS (two (2) units) 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);**

- **The proposed type of PERMANENT HELICOPTERS shall be in service, after receiving Type Certificate (TC) by Federal Aviation Administration (FAA) or European Union Aviation Safety Agency (EASA) for at least two (2) years and one thousand (1,000) commercial flying hours by CFT issuing date.**

- **TENDERER shall confirm to commence the services on COMMENCEMENT DATE including, but not limited to, the followings;**
  - **PERMANENT HELICOPTERS (two (2) units) be ready to operate at COMPANY's OPERATING BASE;**
  - **associated equipment and SPARE PARTS including all stock items in Category A of TENDERER's Minimum Equipment List (MEL);**
  - **valid certificates as required by APPLICABLE LAWS such as valid Air Operating Licence (AOL), Air Operator Certificate (AOC) for the proposed type of PERMANENT HELICOPTERS, Repair Station Certificate Class 1 to perform line and base maintenance for the proposed type of PERMANENT HELICOPTERS, Block permit for Arthit Field, G1/61 and G2/61;**
  - **manuals & procedures; and**
  - **supporting staffs, pilots and engineers including required certificates to carry out the tasks.**

- **TENDERER shall confirm to provide the number of staff for PERMANENT HELICOPTERS (two (2) units) as listed below on the COMMENCEMENT DATE:**
  - **Minimum number of pilots/co-pilots = 12 (pilots = 6, co-pilots = 6)**
  - **Minimum number of B1 engineers = 4**
  - **Minimum number of B2 engineers = 2**

- **TENDERER or its partner shall have established functioning Safety and Quality Management System which covers the full range of flight, ground and maintenance operations, and used for at least two (2) years prior to the submission of the TENDER. Such Safety and Quality Management System shall fully comply with International Association of Oil and Gas Producers ("IOGP") Report 410 (dated June 2008), Sections 1.5-1.12 and 6.23-6.31 and IOGP Report 590 version 2 (dated May 2017) section 590-B except sub-sections 9 and 10, which are related to search and rescue. In case of any gap(s) to fully comply with IOGP requirements found by COMPANY, TENDERER shall provide practical plan to close those gap(s) to fully comply with IOGP requirements by COMMENCEMENT DATE;**

- **TENDERER or its partner shall have established functioning Helicopter Flight Data Monitoring (HFDM) system, and used for at least two (2) years prior to the submission of the TENDER and its analysed data shall feedback to training/procedures. In case of no feedback to training/procedure, TENDERER shall provide practical plan to feedback analysed HFDM data to training/procedures by COMMENCEMENT DATE;**

- **TENDERER or its partner shall have established procedures for the download, analysis and management of Health Usage Monitoring System (HUMS) data, as well as follow up activity, and used for at least two (2) years prior to the submission of the TENDER and its analysed data shall feedback to training/procedures. In case of no feedback to training/procedure, TENDERER shall provide practical plan to feedback analysed HUMS data to training/procedures by COMMENCEMENT DATE;**

- **TENDERER shall have the operational readiness to perform the SERVICES as per the contract requirements, which include, but not limited to, the following;**

  - **<u>People:</u>**
    - **Manpower including mobilization**
      - **minimum number of pilots/co-pilots = 12 (pilots = 6, co-pilots = 6),**
      - **minimum number of engineers = 6 (B1 engineers = 4, B2 engineers = 2)**
    - **Manpower qualification and certification with supporting CVs**

  - **<u>Plant</u>**
    - **PERMANENT HELICOPTERS (two (2) units) including mobilization**

- **OPERATING BASE set up**
- **Equipment and spare part set up**

- **Process**
  - **AOL and AOC amendment (if required)**
  - **Manuals & procedures including operation manuals, aircraft flight manual, general maintenance manual, aircraft maintenance program manual, minimum equipment list, training manual, security manual, safety management manual, emergency manual, flight operations officer or dispatcher manual and quality assurance manual.**

If TENDERER does not have all required items to perform the SERVICES as per the contract requirements, TENDERER shall be able to provide practical plan to be ready to commence the SERVICES by COMMENCEMENT DATE.

- **TENDERER or its partner's standard practice for pilot qualification shall currently meet the requirements in IOGP report 590, version 2 (dated May 2017), section 590-C, table 1 and table 3 listed below:**

  - **Table 1: Aircraft commander and co-pilot qualifications**
  - **Table 3: Helicopter pilot experience and qualification levels**

In case TENDERER or its partner's standard practice for pilot qualification currently does not meet the requirements in IOGP report 590 version 2 (dated May 2017) section 590-C, table 1 and table 3, TENDERER shall provide practical plan to meet the requirements in IOGP report 590 version 2 (dated May 2017) section 590-C, table 1 and table 3 by COMMENCEMENT DATE.

6.12 COMPANY shall only consider the TENDER from TENDERER who agrees and signs on Integrity Pact, by TENDERER's authorized person with TENDERER's company stamp set out in Attachment VIII of Appendix I.

6.13 Commercial Proposal shall be submitted in US Dollar (USD) and in the form provided in this TENDER DOCUMENTS, otherwise such Proposal will not be considered by COMPANY.

TENDERER shall not change, amend, or revise any format, price structures or any contents, including shall not add pricing terms/conditions or including any other optional rates and/or fees, to/of/from the COMPANY's Exhibit B, and/or commercial proposal form(s) provided in this TENDER DOCUMENTS without written consent from COMPANY.

Unless otherwise clearly stated by COMPANY through written communication or TENDERER receive written consent from COMPANY, TENDERER shall be able to quote/provide commercial proposal for all items in Exhibit B of the TENDER DOCUMENTS/FOC.

As such, for all items which TENDERER completed with "QUOTED" in Section 13 of the Volume I – Technical Proposal, TENDERER shall provide numerical value proposal for such items in Section 1 of Volume II – Commercial Proposal. Subject to this instruction, for item(s) where TENDERER's intention for the commercial rate for the item is "ZERO US Dollar (ie. no charge of fees to COMPANY)", TENDERER shall complete with "QUOTED" in Section 13 of the Volume I – Technical Proposal and TENDERER shall then indicate "Zero (0.00)" for such items in Section 1 of Volume II – Commercial Proposal.

Furthermore, unless otherwise clearly stated by COMPANY, TENDERER's commercial proposals submitted in Section 1 of Volume II – Commercial Proposal shall be proposed in numerical value (up to 2 decimal places) for each and every field(s) and rate(s). COMPANY shall not accept a 'mark-up' or 'at cost' or 'cost plus' (eg. "actual cost + x%") or such similar format proposal which COMPANY cannot use for its commercial evaluation.

7. BASIS OF TENDER

7.1 TENDERER shall separately submit Technical and Commercial Proposals in the manners set out in Appendix I and Appendix II.

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

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

(a) **Unpriced Supplementary Proposal** which includes:

(i) agreed clarification documents (Technical, Commercial and Contractual) with TENDERER's initial on each page, and
(ii) a Letter of Confirmation stating that TENDERER has no further requests for clarifications and qualifications; and

(b) **Priced Supplementary Proposal**, which is the same as the agreed clarification documents without modifications other than the inclusion of the individual Delta Cost Impact for all the items previously indicated by TENDERER in its Unpriced Supplementary Proposal as having cost impact. Priced Supplementary Proposal must be initialed on each page by TENDERER.

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

The Supplementary Proposal shall be submitted in two (2) original documents which are one (1) Unpriced Supplementary Proposal and one (1) Priced Supplementary Proposal, clearly identified "Unpriced" or "Priced" on each document. **Each Proposal shall be sealed in a separate envelope**.

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

8. COMMERCIAL PROPOSAL

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

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

9. MODIFIED TENDER

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

- all such modifications shall be presented in a precise alternative wording; generalizations or other imprecise languages will not be considered;

- each modification shall be presented in a "Exception/Deviation Sheet (Unpriced)" (in the form set out in Annex III), showing clearly the impact, if any, on price and schedule;

- For clarity, any exception(s) and/or deviation(s) from TENDER DOCUMENTS which are not specified by TENDERER in the "Exception/Deviation Sheet (Unpriced)" and submitted in Volume I – Technical Proposal, Section 12 shall be considered invalid and shall be disregarded; and

- Should the TENDERER be successful for this CFT; the final contracts shall be developed based on (i) the TENDER DOCUMENTS issued by COMPANY and (ii) (if any) COMPANY issued Tender Bulletin(s), incorporating item(s) which have been indicated by COMPANY to result in amendment to the TENDER DOCUMENTS and (iii) (if any) COMPANY issued clarification(s), incorporating item(s) which have been indicated by COMPANY to result in amendment to the TENDER DOCUMENTS and (iv) (if any) incorporating the mutually agreed exception(s) and/or deviation(s) from TENDER DOCUMENTS as concluded by both parties in "Exception/Deviation Sheet (Unpriced)".

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

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

10. PERIOD OF TENDER VALIDITY

The TENDER shall remain valid for a period of **ten (10) months** from the closing date and time set out in Section 2 above. However, COMPANY reserves the right to request the extension of the validity period.

11. COST OF TENDERING

11.1 The TENDER shall be proposed and submitted at TENDERER's sole cost and expense. In no case will any cost or expense incurred by TENDERER in the preparation or submission of its TENDER be borne by COMPANY.

11.2 TENDERER shall, at its own cost, be prepared to discuss at COMPANY's office mentioned in Section 4, at COMPANY's option, any aspect of the TENDER, especially, but not only, the modifications TENDERER may have brought to any TENDER DOCUMENTS, at any reasonable time between the closing date and time and the award of a contract.

12. COMPLIANCE WITH INSTRUCTIONS

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

13. WITHDRAWAL OF TENDER

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

14. CONFIDENTIALITY

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

14.2 The TENDER DOCUMENTS shall remain the property of COMPANY. COMPANY may require an unsuccessful TENDERER to return the TENDER DOCUMENTS to COMPANY.

15. OWNERSHIP OF TENDER

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

16. MISCELLANEOUS INSTRUCTIONS

16.1 TENDERER shall be responsible to comply with and be fully aware of all applicable governmental and local laws, regulations, practices, codes and requirements in relation with, but not limited to, safety, taxation and customs, which might affect TENDERER when bidding, executing the Contract for the SERVICES and provision of the SERVICES.

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

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

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

16.5 TENDERER's information as requested in Sections 16.2 – 16.4 shall be an essential part of the TENDER and, in the case of a successful TENDER, may be incorporated as appropriate in the Contract between COMPANY and TENDERER.

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

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

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

16.9 Before the CONTRACT is awarded, COMPANY reserves the right to conduct PRE-AWARD AUDIT with the potential successful TENDERER tentatively in the 4th week of May 2022 in order to:

- **verify that all submitted technical documents by TENDERER are correct and properly implemented in accordance with COMPANY's requirements, and**
- **seek the gaps between TENDERER's as-is operation and contract requirements to come up with findings for TENDERER to propose corrective action plan to rectify and complete by the COMMENCEMENT DATE.**

The audit schedule is, however, subject to change due to COMPANY's operational requirement. COMPANY shall give notification to TENDERER at least two (2) days in advance prior to conducting PRE-AWARD AUDIT at TENDERER's operating site.

The scope of PRE-AWARD AUDIT shall include but not limited to:

- **TENDERER Experience;**
- **TENDERER Qualification;**
- **SSHE Capability;**
- **Integrity Pact;**
- **Helicopter Availability;**
- **Helicopter Specification;**

- **Manpower Resource;**
- **Spare Part and Equipment;**
- **Safety & Quality Management System;**
- **Helicopter Flight Data Monitoring (HFDM);**
- **Health Usage Monitoring System (HUMS); and**
- **Operational Readiness of the above items including OPERATING BASE and SPARE PARTS set up, manual & procedures and so on.**

COMPANY will not consider the TENDER from the potential successful TENDERER who fails the PRE-AWARD AUDIT in the following condition(s);

- **The demonstrated operations / evidences found during the audit are not in line with the submitted manuals/documents by TENDERER during the CFT period, as a result, TENDERER fails to meet the technical requirements, or**
- **The audited TENDERER is unable to provide corrective action plans to close all findings found during PRE-AWARD AUDIT by COMMENCEMENT DATE within three (3) days after the completion of PRE-AWARD AUDIT.**

16.10 After the CONTRACT is awarded to CONTRACTOR, COMPANY reserves the right to conduct and complete OPERATION READINESS AUDIT tentatively two (2) weeks prior to COMMENCEMENT DATE at COMPANY's OPERATING BASE as specified in Exhibit A of the Form of CONTRACT by giving notification two (2) days in advance in order to verify that the findings raised and agreed by the PARTIES in the PRE-AWARD AUDIT are closed and to verify the readiness of operation on the COMMENCEMENT DATE specified in sub-article 2.2.1 of the Form of Contract including helicopter technical inspection, OPERATING BASE set-up, manpower and others.

The audit schedule is, however, subject to change due to COMPANY's operational requirement.

16.11 On COMMENCEMENT DATE specified in sub-article 2.2.1 in the Form of Contract, CONTRACT shall be automatically terminated in full without requiring COMPANY to notify the termination to CONTRACTOR if:

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

16.12 If CONTRACT is automatically terminated in accordance with sub-Section 16.11 while the bid validity of the remaining TENDERERs is still valid, COMPANY will directly negotiate for new contract with the remaining technically qualified TENDERERs to maintain COMPANY's operation and business with following actions;

- **Notify and negotiate with the next lowest price TENDERER to commence the SERVICES within seven (7) days by using the submitted proposals of this CFT,**
- **If the next lowest price TENDERER declines or fails to commence the SERVICES within seven (7) days after receiving COMPANY's notification, COMPANY will then notify and negotiate with the next lowest price TENDERER until the SERVICES is commenced.**

17. ACCEPTANCE OF TENDER AND FINAL AWARD

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

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

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

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

18. GOOD CORPORATE GOVERNANCE AND BUSINESS ETHICS

PTTEP Group operates in a lawful, transparent, fair and accountable manner, as well as in compliance with its Good Corporate Governance Principles and Code of Business Ethics (CG&BE). For the details of CG&BE, please visit http://www.pttep.com/en/Aboutpttep/Corporategovernance/CgandbusinessEthics.aspx#topic-179

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

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

APPENDIX

APPENDIX I

DOCUMENT TO BE INCLUDED IN TENDER

The documents to be included in the TENDER are as follows. These documents shall be submitted in the sequence as listed below. In addition, **each section shall be clearly labelled and separated in an easily identifiable manner**.:

Volume I - Technical Proposal

Section 1: Letter of Submission (in the form set out in Annex II of this ITT)

Section 2: TENDERER's experience in operating offshore helicopters to support oil and gas operations in any location in the past seven (7) years (in the form set out in Attachment I of this Appendix I). If TENDERER intends to use its partner's experience in operating offshore helicopters to support oil and gas operations in any location to submit instead, TENDERER shall submit a copy of cooperation agreement between TENDERER and its partner to perform the SERVICES under this contract if such TENDERER is awarded.

Section 3: TENDERER's license and certificates for this TENDER comprising:

- A copy of valid Air Operating License (AOL),
- A copy of valid Air Operator Certificate (AOC) authorized by the Civil Aviation Authority of Thailand (CAAT) to perform commercial air operations for the proposed type of PERMANENT HELICOPTERS including operations specifications and its attachment(s),
- A copy of valid Repair Station Certificate – Class I authorized by the Civil Aviation Authority of Thailand (CAAT) to perform line and base maintenance in Thailand for the proposed type of PERMANENT HELICOPTERS.
  Note: If TENDERER intends to use third party to perform line and base maintenance for the proposed type of PERMANENT HELICOPTERS, TENDERER shall provide COMPANY the copy of its third party's Repair Station Certificate - Class 1 authorized by the Civil Aviation Authority of Thailand (CAAT) to perform line and base maintenance in Thailand for the proposed type of PERMANENT HELICOPTERS. Foreign repair station certificate from third party authorized by the Civil Aviation Authority of Thailand (CAAT) shall not be accepted,
- Block Permit

Section 4: Integrity pact signed by TENDERER's authorized person and with TENDERER's company stamp as set out in Attachment VIII of this Appendix I.

Section 5: Letter of Confirmation to provide the following items by the COMMENCEMENT DATE scheduled in the EXHIBIT A of the Form of Contract:

- PERMANENT HELICOPTERS (two (2) units), which shall comply with requirements specified in Annex 2 of EXHIBIT C of the Form of Contract. TENDERER shall complete the form set out in Attachment V of this Appendix I, and which shall be ready to operate at COMPANY's OPERATING BASE;
- Associated equipment and SPARE PARTS including all stock items in Category A of TENDERER's Minimum Equipment List (MEL);
- Valid certificates as required by APPLICABLE LAWS such as valid AOL, AOC, Repair Station Certificate Class I for the proposed type of PERMANENT HELICOPTER and Block Permit for G1/61, G2/61, and Arthit field;
- Manuals and procedures; and
- Supporting staffs, pilots and engineers including required certificates to carry out the tasks

Section 6: TENDERER's organization chart to perform the SERVICES under this CONTRACT and TENDERER's organization information as set out in Attachment II of this Appendix I. The organization shall also include key personnel and the number of pilots/co-pilots, B1 engineers, B2 engineers, professional nurse, safety manager and safety officer. Crew qualification and experience and engineer qualification and experience shall be provided in the form set out in Attachment III of this Appendix I.

TENDERER shall demonstrate how such provided number of pilots/co-pilots and B1 and B2 engineers shall fulfil the requirements in the CONTRACT for NORMAL OPERATING HOURS and NIGHT.

Section 7: TENDERER to provide the latest updated and authorized manuals/documentation as listed below:

- Safety and Quality Management System Manual, which covers the full range of flight, ground and maintenance operations, and which shall be established and implemented for at least two (2) years and shall comply with IOGP Report 410 (dated June 2008), Sections 1.5-1.12 and 6.23-6.31 and IOGP Report 590 version 2 (dated May 2017) section 590-B except sub-sections 9 and 10, which are related to search and rescue. TENDERER should ensure that they include the following as a pre-requisite, the latest Safety Review Board Report and TENDERER's Hazard Register;

- Flight Operations Manuals including OM-A, OM-B, OM-C, OM-D – TENDERER should ensure that they include the following as a pre-requisite;
  - Route Manual
  - Aircraft Type Specific SOP's
  - Training Manual (Including information on the type of FSTD device currently being utilized)
  - Ground Operations Manual
  - Security Manual
  - ERP Manual and Plan
  - HFDM Manual, which shall be established and implemented for at least 2 years and HFDM analysed data should feedback to training/procedure. TENDERER shall identify which part of its HFDM manual states the feedback of HFDM analysed data to training/procedure. TENDERER shall provide three (3) proofs of use for a two (2) year period as listed and described below:
    - One (1) proof of use for 2 years previous,
    - One (1) proof of use for 1 year previous, and
    - One (1) proof of use for the present operation.
  - Quality Manual

    TENDERER shall show an exceedance in the data with a corresponding correction entered in the aircraft logbook or other documents by Engineer meeting. Also TENDERER shall show how much such information is formally feedback to training/procedure. If TENDERER does not have formal feedback process of such information to training/procedure, TENDERER shall provide a plan to develop such process by COMMENCEMENT DATE.

- MOE Manual – TENDERER should ensure that they include the following as a pre-requisite;
  - Maintenance Manual
  - Training Manual
  - MME/MEL
  - Quality Manual
  - HUMS Manual, which shall be established and implemented for at least 2 years and HUMS analysed data should feedback to training/procedure. TENDERER shall identify which part of its HUMS manual states the feedback of HUMS analysed data to training/procedure. TENDERER shall provide three (3) proofs of use for a two (2) year period as listed and described below:
    - One (1) proof of use for 2 years previous,
    - One (1) proof of use for 1 year previous, and
    - One (1) proof of use for the present operation.
  - Fuel Control Manual
  - Stores Manual (including processes for the management of stock provision)

    TENDERER shall show an exceedance in the data with a corresponding correction by Pilot meeting or individual counseling record. No crew names should be used. Also TENDERER shall show how much such information is formally feedback to training/procedure. If TENDERER does not have formal feedback process of such

information to training/procedure, TENDERER shall provide a plan to develop such process by COMMENCEMENT DATE.

- Internal Audit Programs Processes;
- Management of Change (MOC) process; and
- Environmental Management Control Procedure.

With regards to Safety and Quality Management system, in case any gap(s) to fully comply with IOGP requirements found by COMPANY, TENDERER shall provide practical plan to close those gap(s) to fully comply with IOGP requirements by COMMENCEMENT DATE.

With regards to Helicopter Flight Data Monitoring (HFDM) system and Health Usage Monitoring System (HUMS), in case of no feedback to training/procedure, TENDERER shall provide practical plan to feedback analysed HFDM and HUMS data to training/procedures by COMMENCEMENT DATE.

Section 8: TENDERER shall confirm the TENDERER's current operational readiness to perform the SERVICES as per the contract requirements, which include, but not limited to, the following;

- People
  - Manpower including mobilization
    - minimum number of pilots/co-pilots = 12 (pilots = 6, co-pilots = 6),
    - minimum number of engineers = 6 (B1 engineers = 4, B2 engineers = 2)
  - Manpower qualification and certification with supporting CVs
- Plant
  - PERMANENT HELICOPTERS (two (2) units) including mobilization
  - OPERATING BASE set up
  - Equipment and spare part set up
- Process
  - AOL and AOC amendment (if required)
  - Manuals & procedures
    - Operations Manual
    - Aircraft Flight Manual
    - GMM - General Maintenance Manual
    - Aircraft Maintenance Program Manual
    - Minimum Equipment List
    - Training Manual
    - Security Manual
    - Safety Management Manual
    - Emergency Manual
    - Flight Operations Officer or Dispatcher Manual
    - Quality Assurance Manual

If TENDERER currently does not have all required items to perform the SERVICES as per the contract requirements, TENDERER shall be able to provide practical plan to be ready to commence the SERVICES by COMMENCEMENT DATE.

Section 9: TENDERER or its partner to demonstrate standard practice for pilot qualification to the compliance with the following requirements in IOGP report 590, version 2 (dated May 2017), section 590-C:

- Table 1: Aircraft commander and co-pilot qualifications
- Table 3: Helicopter pilot experience and qualification levels

In case TENDERER or its partner's standard practice for pilot qualification currently does not meet the requirements in IOGP report 590 version 2 (dated May 2017) section 590-C, table 1 and table 3, TENDERER shall provide practical plan to meet the requirements in IOGP report 590 version 2 (dated May 2017) section 590-C, table 1 and table 3 by COMMENCEMENT DATE.

Section 10: TENDERER to demonstrate how to manage TENDERER's PERMANENT HELICOPTERS to support the requirement for AVAILABILITY specified in article 6: AVAILABILITY AND DELAY in the Terms and Conditions of the Form of Contract attached to the Call for Tender. In particular, TENDERER shall explain how TENDERER will cover extended periods of unavailability due to planned MAJOR MAINTNENACE and/or unforeseen breakdown of TENDERER's HELICOPTER throughout the CONTRACT period.

TENDERER shall provide the scheduled program of scheduled major and other maintenance as set out below:

Type of Inspection	Hours/Calendar Interval	Time for Maintenance (Days)	Manpower Required

TENDERER shall provide forecasted scheduled major and other maintenance for PERMANENT HELICOPTERS during the first operational year of the CONTRACT.

Section 11: Project organization chart, SSHE role and responsibilities for this CONTRACT

- SSHE training procedure and SSHE training matrix;
- SSHE training record of the staffs referenced to TABLE 1 MANDATORY SSHE TRAININGS MATRIX in Exhibit D: SSHE contract requirement of the Form of Contract; for at least the following positions:
  - Base manager or equivalent
  - Pilots at least 3 Pilots
  - Chief Engineer / Engineering Manager or equivalent
  - Safety manager
  - Flight safety officer
- SSHE Risk Assessment;
  - TENDERER's risk assessment procedure or method that uses to evaluation risk.
  - Full risk assessment for this project with mitigation measures.
  - Safety case, HAZID, HAZOP and Bow-Tie of aviation operation (if any).
- Emergency Readiness;
  - TENDERER's emergency response plan related to offshore helicopter operation including a list of emergency facilities and response team
  - Example of emergency response drill in case of helicopter loss signal, Medical evacuation and etc of previous project.
  - Training records for emergency response team related to emergency response plan
- SSHE personnel, which includes
  - Qualified SSHE personnel including Safety Manager as per the required qualification in Exhibit C of the Form of Contract
  - CVs with evidence of training records & certificates of SSHE personnel
- Draft of SSHE bridging document
- Draft CONTRACT SSHE management plan to manage the CONTRACT and also SSHE monitoring plan (Tracking action plan)
- Sub-contractor management
  - Sub-contractor management procedure
  - Sub-contractor list that will support in this CONTRACT
  - Evidence of evaluation and control the sub-contractors in previous contract.
  - Plan to comply with the sub-contractor management for this CONTRACT
- SSHE audit and review

- SSHE audit and review procedure
- Audit report of year 2019-2021 and result of follow up findings
- SSHE management system certification i.e. ISO45001, OHSAS18001 and ISO14001

- SSHE performance and monitoring
  - SSHE performance and monitoring procedure and sample of SSHE rewards
  - Evidence of implementation in accordance with SSHE performance and monitoring procedure.
  - Evidence to prove that SSHE statistics have been analyzed and the result leads to prepare further prevention or reoccurrence measures.
  - Evidence of management SSHE review during 2019-2021
- Incident management system
  - Incident management procedure
  - Incident reports of all incidents and closing result of all incidents in form set out in below SSHE Record Table During 2019 – 2021 and Attachment IV – SSHE Statistics
  - Incident lesson learnt for all provided incidents
  - Incident communication to staff for all provided incidents
- SSHE record and SSHE award during 2019-2021;
  - SSHE records over the past 3 years for PTTEP or other oil and gas operators (e.g. Chevron, Shell, Total, BP, Mubadala, Kris Energy, Petronas and etc.) by providing the data in below tables.
  - SSHE award that bidders received from PTTEP or other oil and gas operators (e.g. Chevron, Shell, Total, BP, Mubadala, Kris Energy, Petronas and etc.)

SSHE Record Table During 2019 – 2021

	2019(Cases)	**2020(Cases)**	**2021(Cases)**
Major Accident Event (MAE)			
Aircraft Accident			
Fatality (FAT)			
Lost Time Injury (LTI)			
Total Recordable Injury (TRI)			
Official Non-Compliance Report			
Property Damage			
High Potential Incident (HPI)			
Man-hours			

Remark: Please see general definition of SSHE record in Attachment VI: PTTEP's Incident Management Standard and Attachment VII: PTTEP's Risk Management Standard of this Appendix I.

Section 12: Exception/Deviation Sheet (Unpriced) (if any, in the form set out in Annex III of this ITT)

Section 13 UNPRICED Commercial Terms and Schedule of Rates in the form as given in Exhibit B of the Form of Contract duly completed with "QUOTED" for quoted items or "NOT QUOTED" for items that are not quoted. **Prices shall NOT be indicated anywhere in the UNPRICED Commercial Terms and Schedule of Rates**.

Section 14: Legal documents: Memorandum of Associate, Affidavit, Power of Attorney, or other documents showing the name of authorized person who can sign on behalf of and bind TENDERER regarding the TENDER and a relevant contract/agreement between COMPANY and TENDERER, copy of tax certificate etc.

Note: Should the document(s) (TENDERER's company affidavit) indicate that multiple authorized person can sign on behalf of and bind TENDERER regarding the TENDER and a relevant contract/agreement between COMPANY and TENDERER, TENDERER shall clearly indicate the name of the selected authorized person.

Volume II - Commercial Proposal

Section 1: PRICED Commercial Terms and Schedule of Rates in the form as given in Exhibit B of the Form of Contract duly completed with price proposal

Section 2: Cost breakdown (in the form set out in Attachment IX of this Appendix 1)

Section 3: Exception/Deviation Sheet (Priced) (if any, in the form set out in Annex IV of this ITT)

Attachment I – TENDERER's Organization

TENDERER organization

(to be submitted in the Technical package)

Completed by		**Date**:	
Appointment			
TENDERER Name			
Address			
Year of founding			
Ownership/shareholding details			
Telephone Number		Fax Number:	
Web Site		Email:	
Location of TENDERER Base			
Out stations			
Years of experience in operating offshore helicopters to support oil and gas operations in the last 7 years with supporting documents. **Note: TENDERER shall provide its track records in offshore in the last 7 years. Track records shall include customers, contract period, contract value, operation area, helicopter type(s) used for customers and so on.**			
Number of flying hours in operating offshore helicopters to support oil and gas operations in last 7 years with supporting documents			
Years of experience in operating offshore helicopters to support oil and gas operations on the proposed type of helicopters in the last 7 years with supporting documents			
Number of flying hours in operating offshore helicopters to support oil and gas operations on the proposed type of helicopter in the last 7 years with supporting documents			

TENDERER Worldwide organization (Corporate & Business Units/BU)			
Place	**AOC or fly permit**	**Main**	**BU**
		☐	☐
		☐	☐
		☐	☐
		☐	☐

Attachment II – CV of Key Personnel

SENIOR MANAGEMENT ***Provide Resume of Nominated Managers/Postholders***			
Title	**Name**	**Years of Experience**	**Time in Position**
Accountable Manager			
Head of Flight Operations			
Head of Engineering			
Chief Pilot			
Head of Safety			
Head of Quality for Operation and Maintenance			
Head of Training			
Head of Ground Handling			

Position	**Number of Personnel to Perform the SERVICES under this CONTRACT**	**Remarks**
Pilot		CV including qualification & experience (in the form set out in Attachment III) and name for all pilots shall be provided
Co-Pilot		CV including qualification & experience (in the form set out in Attachment III) and name for all co-pilots shall be provided
B1 Engineer		CV including qualification & experience (in the form set out in Attachment III) and name for all B1 engineers shall be provided
B2 Engineer		CV including qualification & experience (in the form set out in Attachment III) and name for all B2 engineers shall be provided
Professional Nurse		CV including qualification & experience shall be provided
Safety Manager		CV including qualification & experience shall be provided
Safety Officer		CV including qualification & experience shall be provided

Attachment III – Crew qualifications and experience – Pilot in command (PIC) and First Officer (FO)

(To be submitted in the Technical Package)

CREW QUALIFICATIONS & EXPERIENCE - Pilot In Command (PIC)					
TENDERER		**PIC label 1**	**PIC label 2**	**PIC label 3**	**PIC label 4**
License & qualifications (FCL) (Total) – Refer to Annex 3 of Exhibit C		*Validity (period & date)*			
Seniority with TENDERER					
Age					
Medical					
Airline Transport Pilot License (ATPL)					
(12) Twelve-month instrument rating					
Contractual aircraft type rating					
IFR					
Experience (Total) – Refer to Annex 3 of Exhibit C					
Total Hours Helicopter	(*Mini 3000 h)*				
Total Hours in Command	(*Mini 1500 h)*				
Total Hours in Command -Multi engine	(*Mini 1200 h)*				
Total Hours in Similar Aircraft Complexity	(*Mini 500 h)*				
Total Hours in Command on Contract Type	(*Mini 100 h)*				

Mandatory recurrent Training & Checking (Ops & Total)	*Validity (period & date)*			
(12) Twelve-month Line check/Route check				
(12) Twelve-month simulator FFS level "C" or "D" (LOFT training & PPC included)) ***(Provide copies last Simulator training & Simulator Training Syllabi & LOFT scenario)***				
(12) Twelve-month Emergency drills and survival training				
CRM initial and (12) twelve months recurrent training				
Dangerous good (24) twenty-four months recurrent training				
Night recency practice 90 days night Deck Landing Practice (NDLP)				
HUET (4 year validity) (Rotary Wings)				

Date	***Contractor representative name***	***Contractor representative signature***

CREW QUALIFICATIONS & EXPERIENCE - Pilot In Command (PIC)					
TENDERER		**PIC label 5**	**PIC label 6**	**PIC label 7**	**PIC label 8**
License & qualifications (FCL) (Total) – Refer to Annex 3 of Exhibit C		*Validity (period & date)*			
Seniority with TENDERER					
Age					
Medical					
Airline Transport Pilot License (ATPL)					
(12) Twelve-month instrument rating					
Contractual aircraft type rating					
IFR					
Experience (Total) – Refer to Annex 3 of Exhibit C					
Total Hours Helicopter	(*Mini 3000 h)*				
Total Hours in Command	(*Mini 1500 h)*				
Total Hours in Command -Multi engine	(*Mini 1200 h)*				
Total Hours in Similar Aircraft Complexity	(*Mini 500 h)*				
Total Hours in Command on Contract Type	(*Mini 100 h)*				

Mandatory recurrent Training & Checking (Ops & Total)	*Validity (period & date)*			
(12) Twelve-month Line check/Route check				
(12) Twelve-month simulator FFS level "C" or "D" (LOFT training & PPC included)) ***(Provide copies last Simulator training & Simulator Training Syllabi & LOFT scenario)***				
(12) Twelve-month Emergency drills and survival training				
CRM initial and (12) twelve months recurrent training				
Dangerous good (24) twenty-four months recurrent training				
Night recency practice 90 days night Deck Landing Practice (NDLP)				
HUET (4 year validity) (Rotary Wings)				

Date	***Contractor representative name***	***Contractor representative signature***

CREW QUALIFICATIONS & EXPERIENCE - First Officer/Co-pilot (FO)

TENDERER		**FO label 1**	**FO label 2**	**FO label 3**	**FO label 4**
License & qualifications (FCL) (Total) - Refer to Annex 3 of Exhibit C		*Validity (period & date)*			
Seniority with TENDERER					
Age					
Medical					
Airline Transport Pilot License (ATPL) or Commercial Pilot License (CPL)					
Instrument rating					
Contractual aircraft type rating					
IFR					
Experience (Total) - Refer to Annex 3 of Exhibit C					
Total Hours	(*Mini 500 h)*				
Total Hours on Multi-Engine Aircraft	(*Mini 500 h)*				
Total Hours in Command of Multi Engine Aircraft					
Total Hours in Command	(*Mini 100 h)*				
Total Hours on Contract Type	(*Mini 50 h)*				

Mandatory recurrent Training & Checking (Ops & Total) - Refer to Annex 3 of Exhibit C	*Validity (period & date)*			
(12) Twelve-month line check/route check				
(12) Twelve-month simulator FFS level "C" or "D" (LOFT training & PPC included)) ***(Provide copies last Simulator training & Simulator Training Syllabi & LOFT scenario)***				
(12) Twelve-month Emergency drills and survival training				
CRM initial and (12) twelve-month recurrent training				
Dangerous good (24) twenty-four-month recurrent training				
Night recency practice 90 days night Deck Landing Practice (NDLP)				
HUET (4 years validity) (Rotary Wings)				

Date	***Contractor representative name***	***Contractor representative signature***

CREW QUALIFICATIONS & EXPERIENCE - First Officer/Co-pilot (FO)

		FO label 5	FO label 6	FO label 7	FO label 8
TENDERER					
License & qualifications (FCL) (Total) - Refer to Annex 3 of Exhibit C		*Validity (period & date)*			
Seniority with TENDERER					
Age					
Medical					
Airline Transport Pilot License (ATPL) or Commercial Pilot License (CPL)					
Instrument rating					
Contractual aircraft type rating					
IFR					
Experience (Total) - Refer to Annex 3 of Exhibit C					
Total Hours	(*Mini 500 h)*				
Total Hours on Multi-Engine Aircraft	(*Mini 500 h)*				
Total Hours in Command of Multi Engine Aircraft					
Total Hours in Command	(*Mini 100 h)*				
Total Hours on Contract Type	(*Mini 50 h)*				

Mandatory recurrent Training & Checking (Ops & Total) - Refer to Annex 3 of Exhibit C	*Validity (period & date)*			
(12) Twelve-month line check/route check				
(12) Twelve-month simulator FFS level "C" or "D" (LOFT training & PPC included)) ***(Provide copies last Simulator training & Simulator Training Syllabi & LOFT scenario)***				
(12) Twelve-month Emergency drills and survival training				
CRM initial and (12) twelve-month recurrent training				
Dangerous good (24) twenty-four-month recurrent training				
Night recency practice 90 days night Deck Landing Practice (NDLP)				
HUET (4 years validity) (Rotary Wings)				

Date	***Contractor representative name***	***Contractor representative signature***

ENGINEERS QUALIFICATIONS & EXPERIENCE								
NAME OF COMPANY:			**LOCATION**:				**DATE**:	
POSITION	**Reference of CV**	**LICENCE**			**AIRCRAFT / ENGINE / EQUIPMENT**			
		Issuing Authority	**Date**	**Trade Groups**	**Types Approved**	**Date of Courses**	**Years on Type**	**Total Experience**

Attachment IV – SSHE Statistics

STATISTICAL INJURY AND ILLNESS DATA TENDERER shall explain the latest work-related injuries details (last 3 years). If available, TENDERER shall complete last 3 years SSHE statistics table (refer to OGP and ICAO for definitions). TENDERER shall also detail last 3 years Fatalities, LTI, RWDC and MTCs.

SSHE STATISTICS			
Last three years statistics	**2019**	**2020**	**2021**
Occupational Safety Records (OGP definitions)			
Man hours			
MAE (Major Accident Event)			
FAT (Fatalities)			
LTI (Lost Time Injury)			
RWDC (Restricted Work Day Case)			
MTC (Medical Treatment Cases)			
FAC (First aid cases)			
HPI (High Potential Incident)			
LTIF (Lost Time Injury Frequency) = (FAT+LTI)/million manhours			
TRIR (Total Recordable Injury Rate)			
Accidents & Serious Incidents Records (in accordance with ICAO definition)			
No of Accident			
No of serious incident			
No of fatalities			
No of injured			
Type of aircraft			
Registration			
Indicate the primary cause for each accident			

Remark: Please see general definition of SSHE record in Attachment VII: PTTEP's Incident Management Standard and Attachment VIII: PTTEP's Risk Management Standard

Provide analysis of all recordable injuries (FAT, LTI, RWDC, MTC) by type of activities and corrective actions taken (improvement plan) during 2019, 2020, 2021

No	Date of Event (DD/MM/YY)	Geographical area/Country	Location	Recordable Injury Category (FAT, LTI, RWDC, MTC)	Type of Activity (e.g. Maintenance)	Type of Injury (e.g. Cut/Puncture)	Cause of Injury (e.g. Dropped object)	Lost Workdays (LTI only)	Corrective Action(s) and Improvement plan (with current status)

Attachment V – Helicopter Technical Specification

TENDERER shall provide the information of all proposed PERMANENT HELICOPTERS as follows:

No.	Description	PERMANNET HELICOPTER No.1	PERMANNET HELICOPTER No.2
1	Type of PERMANENT HELICOPTER		
2	Manufacturer Date in Date / Month / Year format together with evidence including photo of manufacturing plate (1)		
3	Serial Number		
4	Years in Service after Type Certificate (TC) of the proposed type of PERMANENT HELICOPTER (2)		
5	Commercial flying hours after Type Certificate (TC) of the proposed type of PERMANENT HELICOPTER (3)		
6	Compliance with FAR/JAR 29 Amendment 45 (4)		
7	Normal Cruise Speed (Knots)		
8	D-Value (Meter) (5)		
9	Maximum All Up Weight (Kg) (6)		
10	Payload (Kg) (7) **Note:** TENDERER shall provide **payload calculation** for PERMANENT HELICOPTER in according with the given condition		
11	Sea State Limitation (8)		
12	Offshore Oil and Gas Configuration with IFR Certified (9)		
13	Maximum Seat Capacity (10)		

(1) The age of PERMANENT HELICOPTER shall not exceed 10 years counting from manufacturing date to the COMMENCEMENT DATE.
(2) Years in Service after Type Certificate (TC) by Federal Aviation Administration (FAA) or European Union Aviation Safety Agency (EASA) of the proposed type of PERMANENT HELICOPTER shall be at least 2 years by Call-for-Tender issuing date
(3) Commercial flying hours after Type Certificate (TC) by Federal Aviation Administration (FAA) or European Union Aviation Safety Agency (EASA) of the proposed type of PERMANENT HELICOPTER shall be at least 1,000 commercial flying hours by Call-for-Tender issuing date
(4) The proposed type of PERMANENT HELICOPTER shall comply with FAR/JAR 29 Amendment 45
(5) D-Value of the proposed type of PERMANENT HELICOPTER shall not be more than 20 meters.
(6) Maximum All Up Weight of the proposed type of PERMANENT HELICOPTER shall not be more than 7.1 tonnes.
(7) On the 131 Nm sector between Main Operating Base (Songkhla Airport) and AQP (please see its coordinate in Exhibit A), the proposed PERMANENT 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.
(8) The floatation system of the proposed type of PERMANENT HELICOPTER shall be certified to at least Sea State 6.
(9) The proposed PERMANENT HELICOPTER shall be offshore oil and gas configuration with IFR certified.
(10) The maximum seat capacity of the proposed type of PERMANENT HELICOPTER shall be at least 12.

The proposed PERMANENT HELICOPTER No.1 shall be equipped with the following equipment:

No.	Required Equipment	Compliance		Remarks
		Yes	No	
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)	☐	☐	

No.	Required Equipment	Compliance		Remarks
		Yes	No	
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	☐	☐	

No.	Required Equipment	Compliance		Remarks
		Yes	No	
30	Air conditioning system	☐	☐	
31	Screen between cockpit and cabin to reduce the risk of infection between pilots and passengers	☐	☐	

The proposed PERMANENT HELICOPTER No.2 shall be equipped with the following equipment:

No.	Required Equipment	Compliance		Remarks
		Yes	No	
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)	☐	☐	

No.	Required Equipment	Compliance		Remarks
		Yes	No	
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	☐	☐	

No.	Required Equipment	Compliance		Remarks
		Yes	No	
30	Air conditioning system	☐	☐	
31	Screen between cockpit and cabin to reduce the risk of infection between pilots and passengers	☐	☐	

Attachment VI – PTTEP's Incident Management System

PTTEP

PTT Exploration and Production Public Company Limited

Incident Management Standard

Document Code: 11038-STD-SSHE-601-R07

January 2021

Approval Register	
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Prepared by	Sarawut Uparawanna, Senior Operational Safety Engineer
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Review and Approve			
	Name	**Signature**	**Date**
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THIS DOCUMENT WILL BE REVIEWED EVERY **5 YEARS** FROM DATE OF APPROVAL OR REVISED EARLIER IF NECESSARY.

TABLE OF CONTENTS

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.

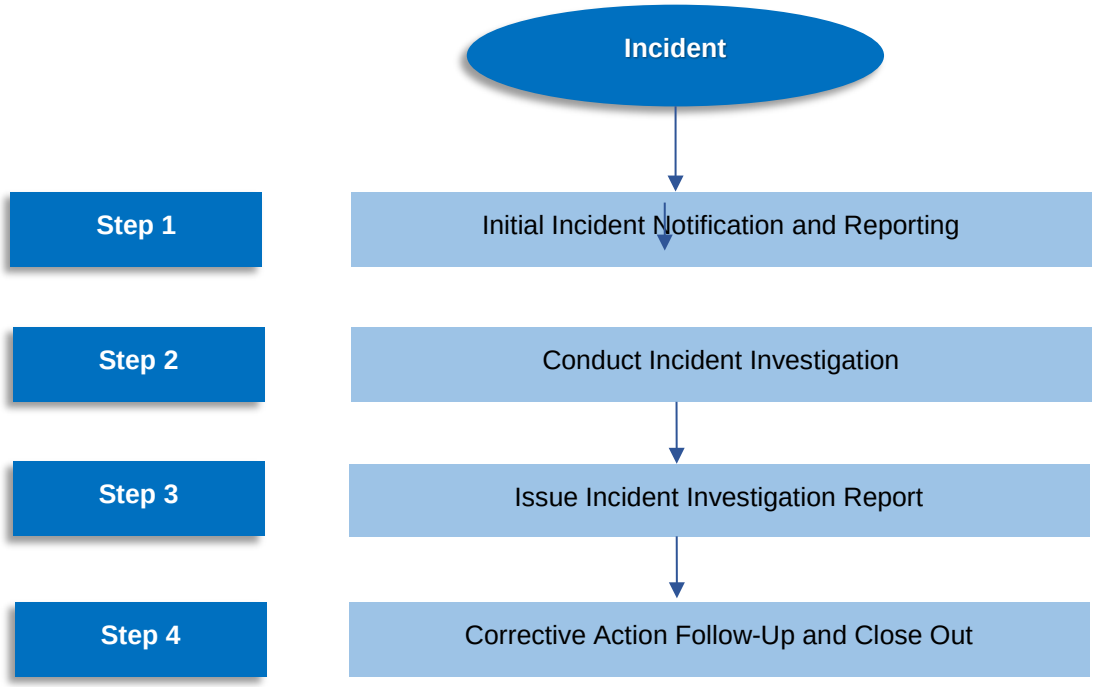


Figure 1: Incident Management Process

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

<table>
<tr><th colspan="2">Incident Severity Level</th><th rowspan="2">Notify</th><th rowspan="2">Required Timescales</th><th rowspan="2">Reported by</th></tr>
<tr><th>Real</th><th>Potential</th></tr>
<tr><td>5. Critical</td><td>5. Critical</td><td rowspan="4">■ 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</td><td rowspan="3">Immediately by phone, follow by reporting via PTTEP provided online system or Email within 24 hrs.</td><td rowspan="5">PTTEP Site representative/ Field or Site Manager</td></tr>
<tr><td>4. Serious</td><td>4. Serious</td></tr>
<tr><td>3.Significant*</td><td rowspan="2"></td></tr>
<tr><td>2. Moderate</td><td rowspan="2">■ 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</td><td rowspan="2">By phone within 24 hrs., follow by reporting via PTTEP provided online system or Email within 48 hrs.</td></tr>
<tr><td>1. Minor</td><td></td><td>■ VP, Safety Management Department
■ FG SSHE/Asset SSHE</td></tr>
</table>

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.

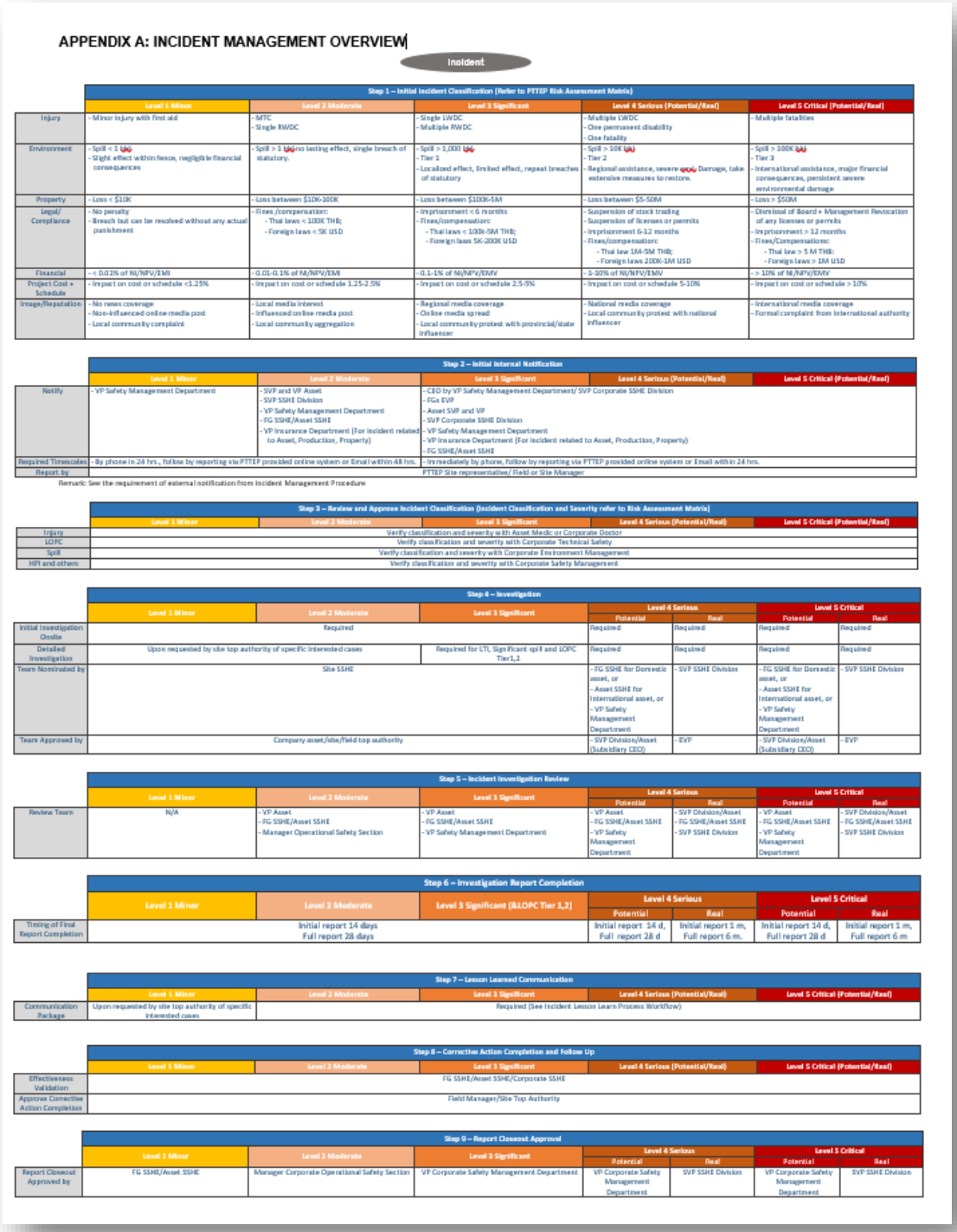
5. LESSONS LEARNED FROM INCIDENT

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 < 1 bbl - Slight effect within fence, negligible financial consequences	- Spill > 1 bbl no lasting effect, single breach of statutory.	- Spill > 1,000 bbl - Tier 1 - Localized effect, limited effect, repeat breaches of statutory	- Spill > 10K bbl - Tier 2 - Regional assistance, severe env. Damage, take extensive measures to restore.	- Spill > 100K bbl - Tier 3 - International assistance, major financial consequences, persistent severe environmental damage
Property	- Loss < $10K	- Loss between $10K-100K	- Loss between $100K-5M	- Loss between $5-50M	- Loss > $50M
Legal/ Compliance	- No penalty - Breach but can be resolved without any actual punishment	- Fines /compensation: - Thai laws < 100K THB; - Foreign laws < 5K USD	- Imprisonment < 6 months - Fines/compensation: - Thai laws < 100K-5M THB; - Foreign laws 5K-200K USD	- Suspension of stock trading - Suspension of licenses or permits - Imprisonment 6-12 months - Fines/compensation: - Thai law 1M-5M THB; - Foreign laws 200K-1M USD	- Dismissal of Board + Management Revocation of any licenses or permits - Imprisonment > 12 months - Fines/Compensations: - Thai law > 5 M THB; - Foreign laws > 1M USD
Financial	- < 0.01% 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-influenced online media post - Local community complaint	- Local media interest - Influenced online media post - Local community aggregation	- Regional media coverage - Online 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	- SVP and VP Asset - SVP 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/ SVP Corporate SSHE Division - FGs EVP - Asset SVP and VP - SVP Corporate SSHE Division - VP Safety Management Department - VP Insurance Department (For incident related to Asset, Production, Property) - FG SSHE/Asset SSHE		
Required Timescales	- By phone in 24 hrs., follow by reporting via PTTEP provided online system or Email within 48 hrs.	- Immediately by phone, follow by reporting via PTTEP provided online system or Email within 24 hrs.			
Report by	PTTEP Site representative/ Field or Site Manager				

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 Medic or Corporate Doctor				
LOPC	Verify classification and severity with Corporate Technical Safety				
Spill	Verify classification and severity with Corporate Environment Management				
HPI 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	
				Potential	Real	Potential	Real
Initial Investigation Onsite	Required			Required	Required	Required	Required
Detailed Investigation	Upon requested by site top authority of specific interested cases		Required for LTI, Significant spill and LOPC Tier1,2	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	- SVP SSHE Division	- FG SSHE for Domestic asset, or - Asset SSHE for International asset, or - VP Safety Management Department	- SVP SSHE Division
Team Approved by	Company asset/site/field top authority			- SVP Division/Asset (Subsidiary CEO)	- EVP	- SVP 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	
				Potential	Real	Potential	Real
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	- SVP Division/Asset - FG SSHE/Asset SSHE - SVP SSHE Division	- VP Asset - FG SSHE/Asset SSHE - VP Safety Management Department	- SVP Division/Asset - FG SSHE/Asset SSHE - SVP 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	
				Potential	Real	Potential	Real
Timing of Final Report Completion	Initial report 14 days Full report 28 days			Initial report 14 d, Full report 28 d	Initial report 1 m, Full report 6 m.	Initial report 14 d, Full report 28 d	Initial report 1 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 interested cases	Required (See Incident Lesson Learn Process Workflow)			

Step 8 – Corrective Action Completion and Follow Up

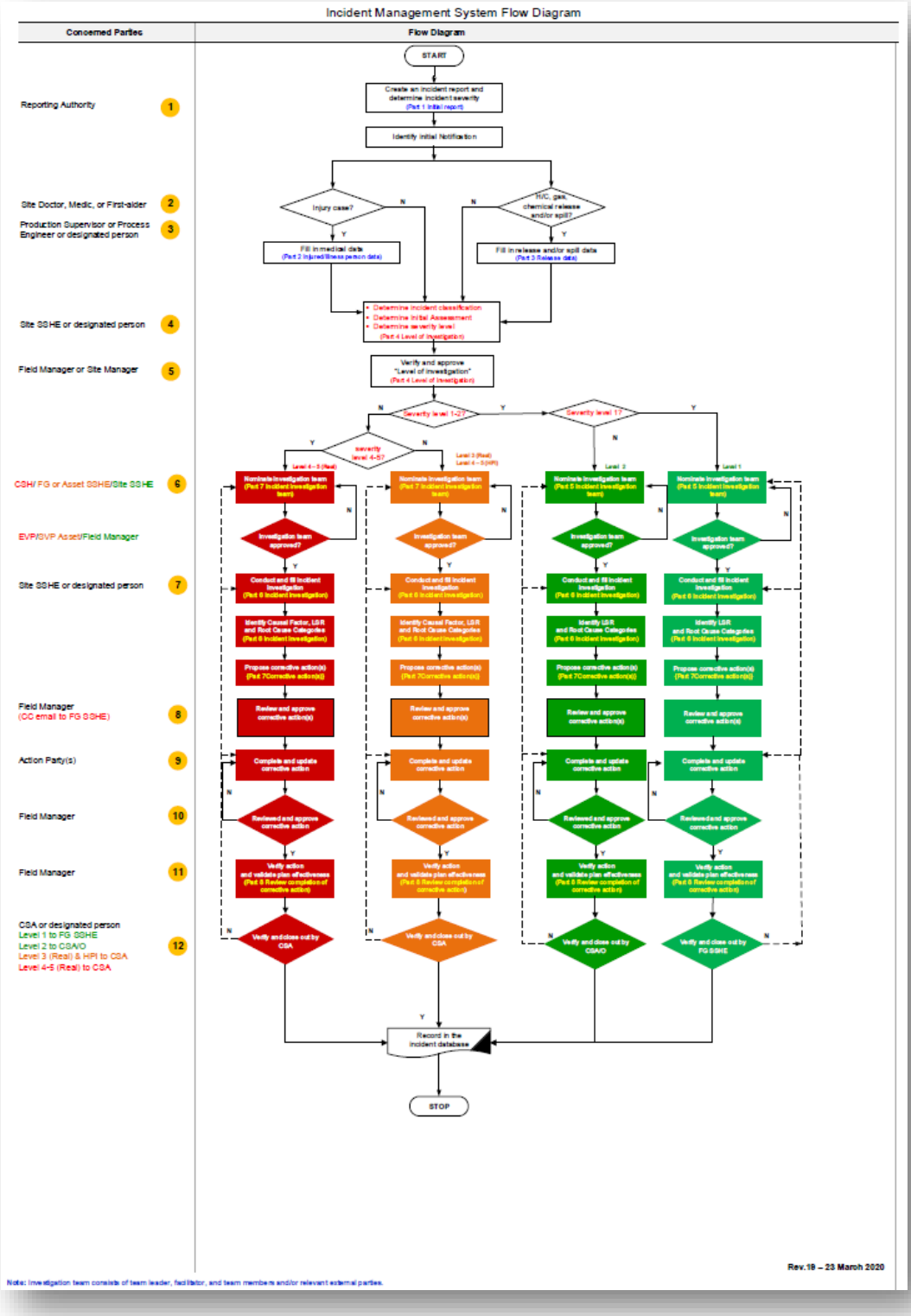
	Level 1 Minor	Level 2 Moderate	Level 3 Significant	Level 4 Serious (Potential/Real)	Level 5 Critical (Potential/Real)
Effectiveness Validation	FG SSHE/Asset SSHE/Corporate SSHE				
Approve Corrective Action Completion	Field Manager/Site Top Authority				

Step 9 – Report Closeout Approval

	Level 1 Minor	Level 2 Moderate	Level 3 Significant	Level 4 Serious		Level 5 Critical	
				Potential	Real	Potential	Real
Report Closeout Approved by	FG SSHE/Asset SSHE	Manager Corporate Operational Safety Section	VP Corporate Safety Management Department	VP Corporate Safety Management Department	SVP SSHE Division	VP Corporate Safety Management Department	SVP 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

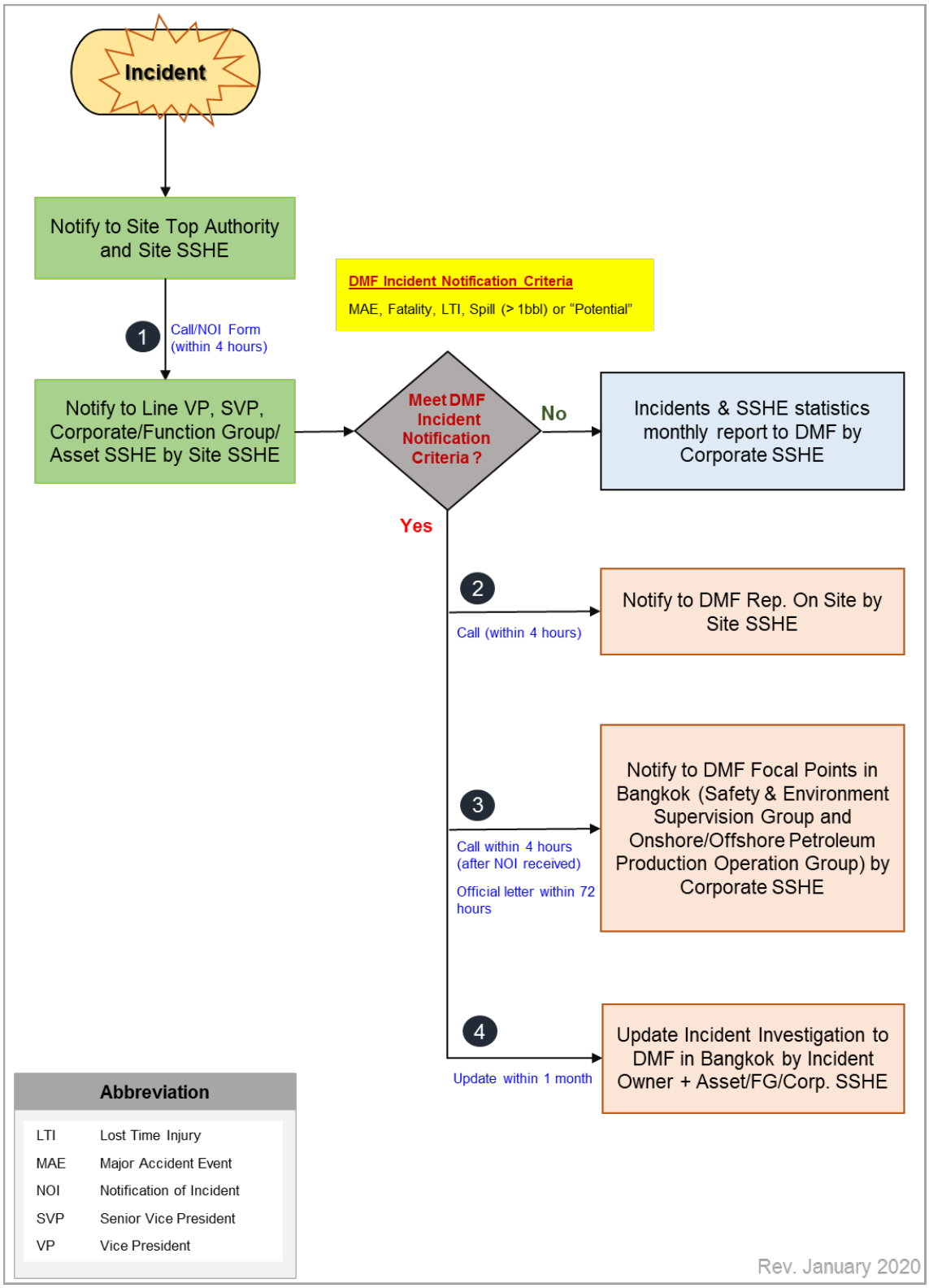


Figure C1 : Incident Notification and Reporting to Department of Mineral Fuels (DMF) for Thailand Domestic Assets

APPENDIX D: SSHE INCIDENT REPORT PERIMETER

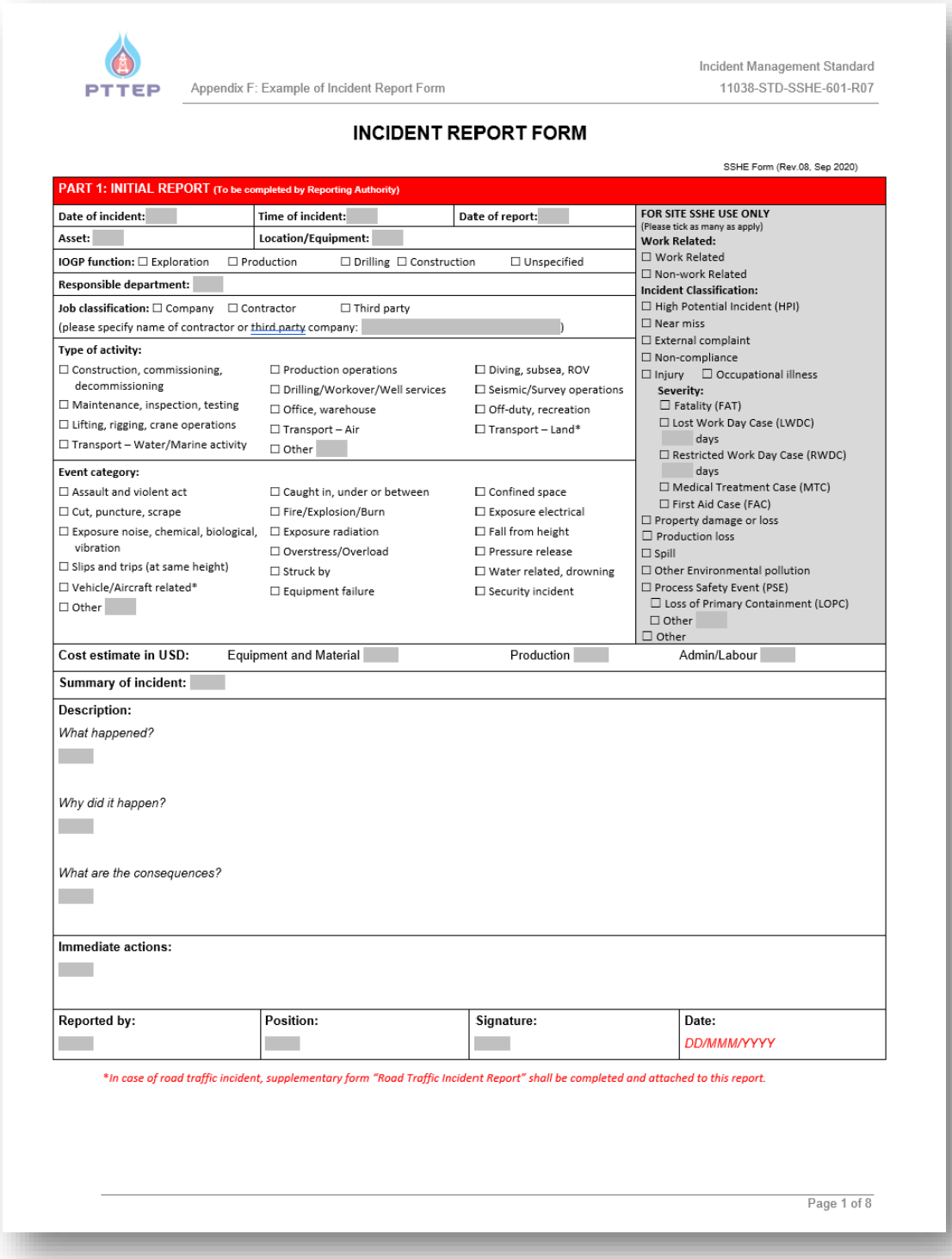
The SSHE Incident Report Perimeter is available on SSHE Intranet > SSHE MS > SSHE MS Documents > Corporate Tools > Appendix - Incident Management Standard.

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.



PTTEP 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:**
Asset:	**Location/Equipment:**	

IOGP function: ☐ Exploration ☐ Production ☐ Drilling ☐ Construction ☐ Unspecified

Responsible department:

Job classification: ☐ Company ☐ Contractor ☐ Third party
(please specify name of contractor or third party company:)

Type of activity:

☐ Construction, commissioning, decommissioning	☐ Production operations	☐ Diving, subsea, ROV
☐ Maintenance, inspection, testing	☐ Drilling/Workover/Well services	☐ Seismic/Survey operations
☐ Lifting, rigging, crane operations	☐ Office, warehouse	☐ Off-duty, recreation
☐ Transport – Water/Marine activity	☐ Transport – Air	☐ Transport – Land*
	☐ Other	

Event category:

☐ Assault and violent act	☐ Caught in, under or between	☐ Confined space
☐ Cut, puncture, scrape	☐ Fire/Explosion/Burn	☐ Exposure electrical
☐ Exposure noise, chemical, biological, vibration	☐ Exposure radiation	☐ Fall from height
☐ Slips and trips (at same height)	☐ Overstress/Overload	☐ Pressure release
☐ Vehicle/Aircraft related*	☐ Struck by	☐ Water related, drowning
☐ Other	☐ Equipment failure	☐ Security incident

FOR SITE SSHE USE ONLY
(Please tick as many as apply)
Work Related:
☐ Work Related
☐ Non-work Related
Incident Classification:
☐ High Potential Incident (HPI)
☐ Near miss
☐ External complaint
☐ Non-compliance
☐ Injury ☐ Occupational illness
Severity:
☐ Fatality (FAT)
☐ Lost Work Day Case (LWDC) days
☐ Restricted Work Day Case (RWDC) days
☐ Medical Treatment Case (MTC)
☐ First Aid Case (FAC)
☐ Property damage or loss
☐ Production loss
☐ Spill
☐ Other Environmental pollution
☐ Process Safety Event (PSE)
☐ Loss of Primary Containment (LOPC)
☐ Other
☐ Other

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:

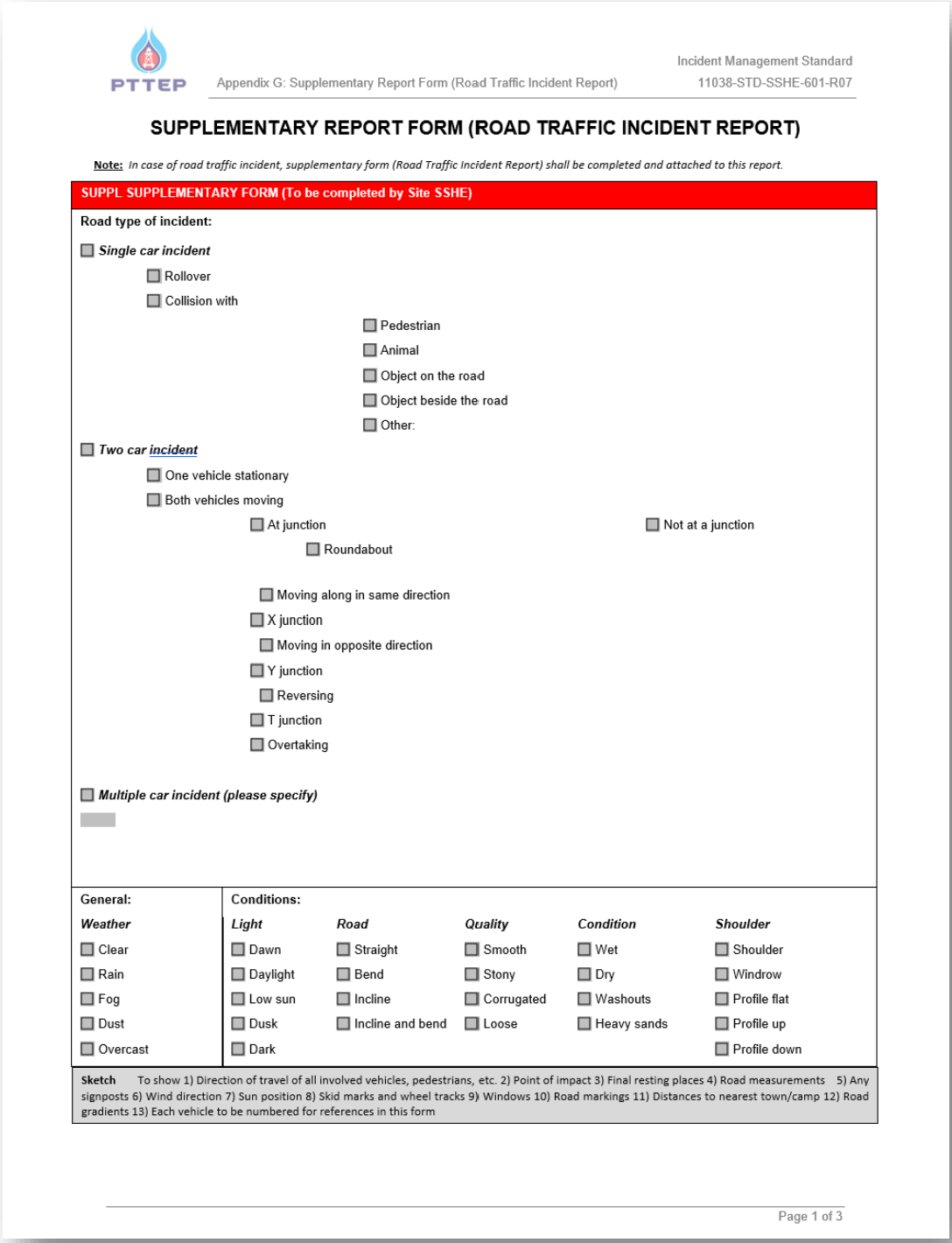
Reported by:	**Position:**	**Signature:**	**Date:**
			DD/MMM/YYYY

**In case of road traffic incident, supplementary form "Road Traffic Incident Report" shall be completed and attached to this report.*

Page 1 of 8

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.



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
    - ☐ Roundabout
    - ☐ Moving along in same direction
    - ☐ X junction
    - ☐ Moving in opposite direction
    - ☐ Y junction
    - ☐ Reversing
    - ☐ T junction
    - ☐ Overtaking
  - ☐ Not at a junction

☐ ***Multiple car incident (please specify)***

General:

Weather
☐ Clear
☐ Rain
☐ Fog
☐ Dust
☐ Overcast

Conditions:

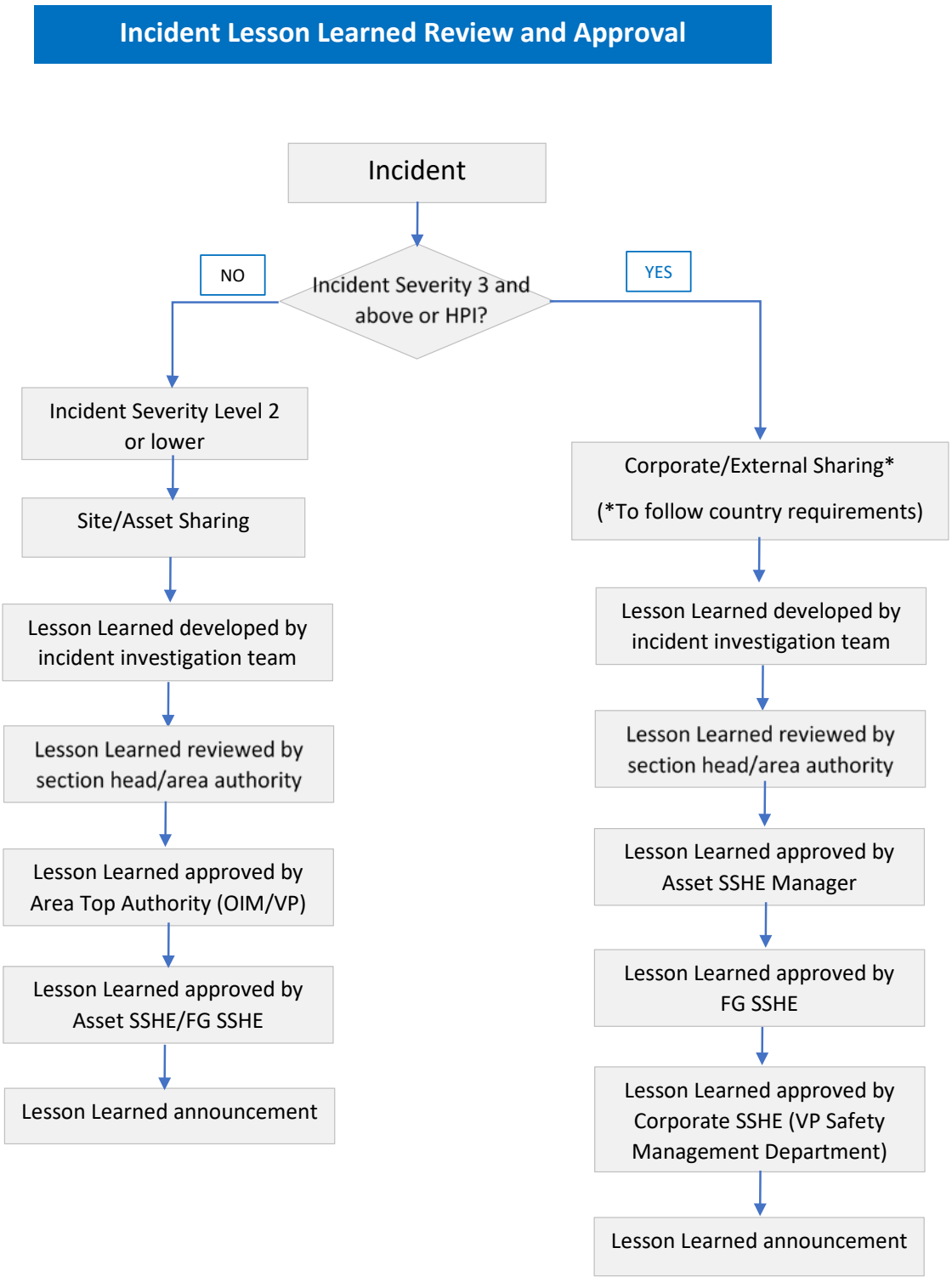
Light	***Road***	***Quality***	***Condition***	***Shoulder***
☐ Dawn	☐ Straight	☐ Smooth	☐ Wet	☐ Shoulder
☐ Daylight	☐ Bend	☐ Stony	☐ Dry	☐ Windrow
☐ Low sun	☐ Incline	☐ Corrugated	☐ Washouts	☐ Profile flat
☐ Dusk	☐ Incline and bend	☐ Loose	☐ Heavy sands	☐ Profile up
☐ Dark				☐ Profile down

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

APPENDIX H: SSHE PERFORMANCE CALCULATION

SSHE Performance Measures		
HPI Frequency Rate (HPIR)	=	$\frac{\textbf{Number of HPI x } 10^6}{\textbf{Man hour worked}}$
TRI Frequency Rate (TRIR)	=	$\frac{(\textbf{FAT} + \textbf{LTI} + \textbf{RWDC} + \textbf{MTC})\ \textbf{x } 10^6}{\textbf{Man hour worked}}$
FAT Frequency Rate (FAR)	=	$\frac{\textbf{Number of FAT x } 10^8}{\textbf{Man hour worked}}$
LTI Frequency Rate (LTIF)	=	$\frac{\textbf{Number of } (\textbf{FAT} + \textbf{LTI})\ \textbf{x } 10^6}{\textbf{Man hour worked}}$
Total Recordable Occupational Illness Rate (TROIR)	=	$\frac{\textbf{TROIC x } 1000000}{\textbf{Total Man hours}}$
Spill Rate	=	$\frac{\textbf{Volume of spill report (tonnes)x } 10^6}{\textbf{Tonnes Production}}$
Loss of Primary Containment Frequency Rate (LOPC Rate)	=	$\frac{\textbf{Numer of LOPC Tier 1 \& Tier 2 } x\ 10^6}{\textbf{Production} + \textbf{Drilling work hours}}$

APPENDIX I: INCIDENT LESSON LEARNED APPROVAL PROCESS



ROLES AND RESPONSIBILITIES

Roles	Responsibilities
Document Owner	The owner of the Incident Management Procedure is the SVP, Corporate SSHE Division, with responsibilities for: ■ 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	The custodian of the Incident Management Procedure is the VP, Safety Management Department, with responsibilities for: ■ 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	■ 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	■ 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	■ 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	■ 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)	■ Review quality of incident investigation reports and return to site for amendment if needed.
Manager, Operational Environment	■ 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	■ 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	■ 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	■ 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	■ 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)	■ 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)	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.
First Aid Case (FAC)	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). If the treatment of the resultant injury or illness is limited to one or more of the 14 specific treatments. These are: ■ 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)	■ Using adrenaline auto-injectors (e.g. EpiPenTM) if pre-prescribed for the patient. 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.
Full Incident Investigation Report	Report of incident investigation which is complied with full contents and format as per PTTEP Incident Investigation Guideline (12148-GDL-SSHE-602-024).
High Potential Incident (HPI)	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. Example of HPI: ■ 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	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.
Incident	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.

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)	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). 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.
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 2nd or 3rd 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)	Medical Treatment does not include: ■ 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. The following may not involve any treatment but for purposes of severity classification, will reported as Medical Treatment. ■ 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	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. 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.
Non-Compliance	A failure to comply with a requirement of Company SSHE Management System (SSHE MS) and/or national and International laws and regulations. Note: Discharge/Leak of Produced water, other wastewater and etc. which their characteristics exceeded the country regulation shall be reported as Non-Compliance.
No. of Lost Work Days	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.

Term	Definition
No. of Lost Work Days (continued)	■ 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. 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. 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 This example should be reported as 3 Lost Work Day Cases and 30 Lost Work Days. Anyhow the No. of Lost Work Days should be consulted with Corporate Doctors for confirmation.
Occupational Illness	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). 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.

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)	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. ■ 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. RWDC when IP can do minimum 50% of their Job Description. Where alternative restricted work cannot be assigned or performed, the incident shall be recorded as a LWDC. RWDC when IP can do minimum 50% of their Job Description.

Term	Definition
Spill	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). 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. Intentional discharges of drill cutting (only offshore operations exceed 12 nautical miles) during drilling activities are excluded.
Third Party	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.
Total Recordable Injury (TRI)	The number of recordable incidents which are summary of Fatalities (FAT) + Lost Workday Cases (LWDC) + Restricted Workday Cases (RWDC) + Medical Treatment Cases (MTC).
Work Environment	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.
Work from Home	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.
Work Related activity	A work-related activity is an activity in a work environment, which is or ought to be subject to management control.

Term	Definition
Work Related Incident	Personnel Injury or Illness arising during work or travel to work for or on behalf of the Company, or its employing Subcontracting Company. To classification of incidents with respect to inclusion within PTTEP's reporting perimeter (or not) shall refer to Appendix F: SSHE Incident Reporting Perimeter.

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	Petroliam 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)". ■ 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** ■ 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** ■ 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.

Attachment VII – PTTEP's SSHE Risk Management Standard

PTTEP

PTT Exploration and Production Public Company Limited

SSHE Risk Management Standard

Document Code: 11038-STD-SSHE-401-R06

April 2019

Approval Register	
Document Subject	SSHE Risk Management Standard
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Review and Approve	Name	Signature	Date
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THIS DOCUMENT WILL BE REVIEWED EVERY **5 YEARS** FROM DATE OF APPROVAL OR REVISED EARLIER IF NECESSARY.

TABLE OF CONTENTS

INTRODUCTION

1. PURPOSE

The primary objective of SSHE Risk Management is to ensure that all SSHE risks including Major Accident Events (MAE), to which people, environment, asset, reputation are exposed, are systematically identified, risks are evaluated and measures for reducing them to levels that are As Low As is Reasonably Practicable (ALARP) are put in place, documented and maintained. This allows the management of uncertainty on PTTEP's SSHE objectives. The Standard follows the principles of ISO 31000, 31010 and 17776.

The purpose of this Standard is:

- To define methods and tools applied for determining the level of SSHE risk and the demonstration of ALARP.
- To provide an overview for the SSHE risk management process, with emphasis on:
  - Hazards and Effects Management Process (HEMP)
  - Integration of SSHE Risk Management into governance, compliance and work processes.
- To define PTTEP's SSHE Risk Acceptance criteria;
- To provide guidance on use of the SSHE Risk Assessment Matrix;
- To set the requirement for establishing and maintaining a Hazard (or Risk) Register.

2. SCOPE

Asset Lifecycle Phases					
Identify/Assess	Select	Define	Execute	Operate	Abandon
X	X	X	X	X	X

The Standard applies to all PTTEP Assets, throughout the lifecycle of every development Project, which includes acquisition, seismic survey, exploration, drilling, engineering design, construction, installation, operation, modification, logistics support and abandonment.

Reference should also be made to the Corporate Risk Management Department requirements for the Risk Management Committee, Key Risk Indicators etc.

Legal requirements for SSHE Risk Assessment in countries where PTTEP operates take precedence over this Standard.

Contractors are expected to have an equivalent SSHE Risk management processes.

REQUIREMENTS

3. SSHE RISK MANAGEMENT

3.1 GENERAL

Effective SSHE Risk Management must be:

- Integrated – as an integral part of all activities.
- Structured and comprehensive – providing consistent and comparable results.
- Customized – risk management is customized and proportionate to external and internal objectives.
- Inclusive – appropriate and timely involvement of stakeholders.
- Dynamic – recognizing risks can emerge, change or disappear.
- Use best available information – based on historical and current information and future expectations.
- Account for human and cultural factors – behavior and culture can significantly influence risk management.
- Promote continual improvement – through learning and experience.

3.2 ORGANISATION OF SSHE RISK MANAGEMENT

SSHE Risk Assessments may be performed by asset/project/activity or Corporate SSHE personnel. Service Level Agreements can be used to define/agree responsibilities.

SSHE Risk management processes and techniques must be performed by competent personnel. Technical Authorities levels 1 and 2 must undertake or review SSHE Risk Assessments.

Competent personnel must select the most appropriate SSHE Risk Assessment technique to be applied.

To get most benefit (risk reduction, cost savings) from SSHE Risk Assessment it is recommended that studies be performed as early as possible in the work process e.g. to allow for inherently safer design.

Key information and decisions relating to SSHE Risk Assessment must be recorded for future reference. Recommendations to reduce SSHE risks to ALARP must be entered into the Action Tracking System and closed out the work activity or next Project phase is performed.

Further details are in Appendix A.

3.3 SSHE RISK ACCEPTANCE CRITERIA

One of the key aspects of SSHE Risk Management is comparison of study results against pre-defined SSHE risk acceptance criteria. For qualitative risks (e.g. JSA, HAZID) the three zones in the SSHE Risk Assessment Matrix are used. For quantitative risks (Quantitative Risk Assessment) Location Specific Individual Risk (LSIR) and Individual Risk Per Annum (IRPA) are used. Whatever the technique and targets the objective is to reduce SSHE risks to "as low as reasonably practical" (ALARP).

In theory, the notion of risk reduction to ALARP applies to the whole spectrum of risk ranging from the very low (negligible) to very high. The standard approach of three risk regions is shown below in Figure 1 - Triangle of Risk Regions.

However, the philosophy of risk assessment recognizes that resources and available time are finite, and therefore seeks to focus attention on high risks and the medium risks to achieve ALARP.

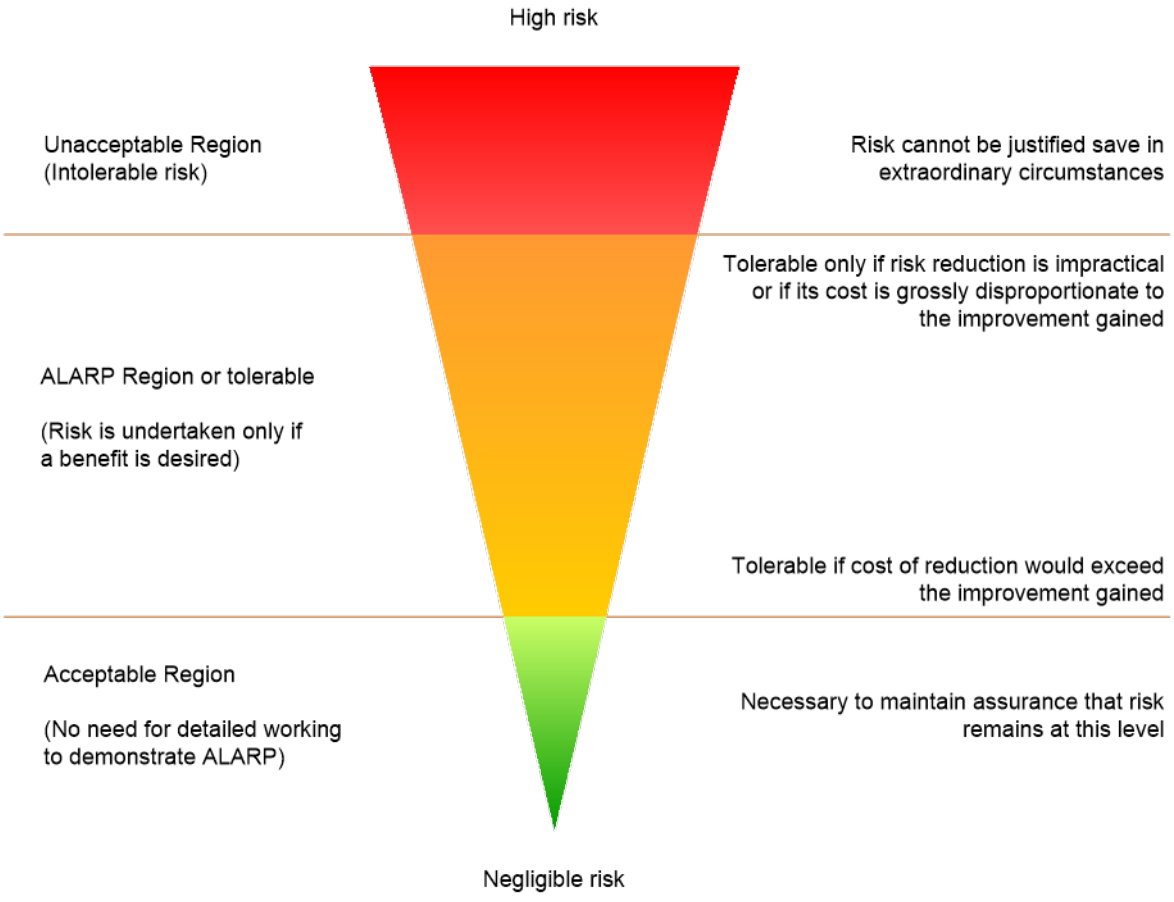


Figure 1: Triangle of Risk Regions

Further details on SSHE risk acceptance criteria are given in Appendix B.

3.4 SSHE RISK MANAGEMENT PROCESS

The SSHE Risk Management process follows the principles of the Hazards and Effects Management Process (HEMP) of identify – assess – control – recover.

Risk management process as applied across PTTEP is shown in Figure 2.

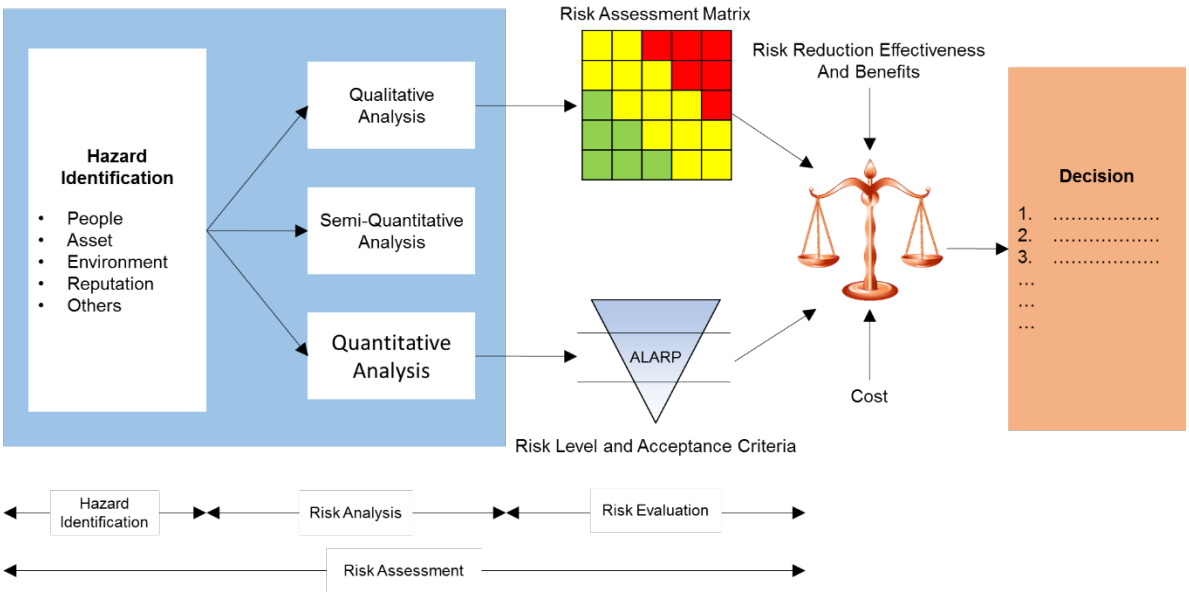


Figure 2: Risk Management Process

The steps above are:

Hazard Identification: the process to identify potential source of harm to people, Environment or Asset.

Risk Analysis: the systematic process, either qualitative or quantitative, to analyze the consequences and frequency of occurrences of any potential harmful events.

Risk Evaluation: the process by which acceptability of the estimated risk is judged in comparison with accepted criteria and Standards.

Risk Assessment: the process covers hazard identification, risk analysis and risk evaluation.

Risk Management: the process of **managing the risk.** The key elements of risk management are management systems, design and operating measures, and Audit and review.

Unless SSHE Risk Assessments are for a “one off” activity they shall be periodically reviewed and updated as necessary This may be prompted by changing circumstance or context and in any case should be every 5 years as a minimum to link with the Safety Case review period.

Appendix C contains more information on SSHE Risk Management process.

Appendix D shows the SSHE Risk Assessment Matrix, gives guidance on its use and assessment of residual risks.

3.5 DEMONSTRATION OF ALARP

ALARP balances the quantum of SSHE risk on the one hand with the time, difficulty and cost of implementing risk reduction measures on the other.

It is PTTEP SSHE Policy that SSHE risks are reduced to ALARP. As this can be a subjective assessment guidance is given in Appendix E, including holding an ALARP Workshop in Projects.

3.6 HAZARD MANAGEMENT HIERARCHY

In principle, the following hierarchy shall be used for the selection of risk reduction measures and underpins a responsible and robust approach to SSHE risk management:

- Elimination and minimization of SSHE hazard by using options with a lower impact on SSHE; inherently safe design;
- Substitution by using products and/or processes with a lower impact on SSHE;
- Isolation/separation of hazards and targets;
- Engineering controls – prevention;
- Engineering controls – mitigation;
- Organizational control, i.e. competency and communication;
- Procedural controls; and
- Personal Protective Equipment (PPE).

3.7 MANAGING THE LIFECYCLE OF RISK

The SSHE Risk Management lifecycle starts from early days of a Project and will continue until decommissioning of the facilities.

Appendix F gives more details.

3.8 MONITORING, AUDIT AND REVIEW

Monitoring SSHE Risk management implementation and effectiveness shall be made to ensure and demonstrate compliance with the regulations, the installation Safety Case and any mandatory standard requirements, and to review the effectiveness of the existing risk control measures.

3.9 FEEDBACK EXPERIENCE

Single severe consequence incidents including near misses or repeated lesser consequence incidents may indicate problems with SSHE risk controls/barriers (preventive and mitigation).

For all High Potential Incidents there shall be a review of the related Bow Tie to address and improve any barrier issues. Periodic analysis of incident root causes can also help identify barrier issues requiring attention.

Feedback on barrier SSHE Risk Management issues can be given by issuing Learning from Experience documents.

4. HAZARD REGISTER

A hazard register shall be maintained for facilities operating under a Safety Case and typically includes the following:

- Hazard, threat or exposure;
- Event Cause and impact;
- Risk classification and level;
- Priority (determines the focus);
- Safeguard, mitigation, controls and preparedness; and
- Required evidence of compliance.

A hazard register should be established for Projects/activities to manage the identified risks throughout the whole lifecycle of a Project/activity.

The Hazard Register shall be reviewed and updated by the Asset/project/activity Manager at least annually.

APPENDICES

APPENDIX A: ORGANIZATION FOR SSHE RISK MANAGEMENT

The following are requirements for organization of SSHE risk management process:

- SSHE risk management process shall be performed by personnel, or groups of personnel who are both competent in the SSHE risk management techniques involved and knowledgeable about the design, operation and maintenance of the facilities under consideration. TA1 is responsible for reviewing the risk assessment performed within Asset/Project's activity. Should the residual risk is classified as "High risk", TA2 is responsible to review and verify the risk assessment.
- For high risk MAE's the guidance provided in the Bow-Tie Analysis Guideline (12147-GDL-SSHE-413-010) shall be applied.
- Hazard identification and risk assessment shall be planned and implemented as early as possible, subject to the availability of the necessary information in order to allow more inherently safer risk reduction measure to be implemented with less or no impact. During the course of Project, the risk assessment shall be planned timely to enable the results to be incorporated without incurring avoidable rework and costs.
- SSHE risk management process shall be documented such that the key information and the decisions made are transparent and available for future reference. Recommended actions arising from the risk assessment studies shall be recorded, tracked until closed out and time-bound, i.e. have a date when closure is due. Close out of recommendations before work commences must be ensured.
- The risk assessment techniques to be used shall be selected by competent person on a case-by-case basis, and on the basis of the nature of the SSHE risk, the perception of the stakeholders, the magnitude of the risks and costs involved to mitigate the risk.

APPENDIX B: SSHE RISK ACCEPTANCE CRITERIA

For qualitative risk evaluation, the PTTEP RAM shown in Appendix E shall be used.

The following risk management outcomes are used to support the decision making process:

High Risk: Risk reductions are mandatory. Short term and interim risk reduction shall be put in place. Long term risk reduction plan shall be developed and implemented. The number, independence and reliability of the risk reduction measures shall be commensurate with the magnitude of the risk. Bow-tie diagram or quantitative method shall be used to demonstrate tolerability and ALARP.

Medium Risk: Risk is tolerable if reasonable risk reduction measures are confirmed to be in place in order to reduce the risk to ALARP.

Further risk reduction should be considered against cost benefit and the advantages that can be achieved.

Low Risk: Broadly Acceptable level of risk where further reductions are to be achieved by continuous improvement of the SSHE Management System (SSHE MS) rather than specific design. Further risk reduction may be considered at management/team discretion commensurate with the Asset/site perception of acceptable production loss.

For quantitative risk evaluation, area risk, Individual Risk (of fatality) Per Annum (IRPA) and Location Specific Individual Risk (LSIR) are calculated and are compared against the criteria in Table B1:

Table B1: Quantitative Risk Acceptance Criteria – Individual Risk, per year

	Existing Facilities		**New Facilities and Brownfield Modifications/Projects**	
	Public	**Workers**	**Public**	**Workers**
High Risk (above the values given below)				
Tolerability Criteria	1×10^{-4} Total risk based on LSIR contour	1×10^{-3} Total risk	1×10^{-4} Total risk based on LSIR contour	1×10^{-3} Total risk
Targets	As above	As above	1×10^{-5} Total risk based on LSIR contour	1×10^{-4} Process related risks only
Medium Risk (between the values given above and below)				
Tolerability Criteria	1×10^{-6} Total risk based on LSIR contour	1×10^{-6} Total risk	1×10^{-6} Total risk based on LSIR contour	1×10^{-6} Total risk
Targets	As above	As above	1×10^{-7} Total risk based on LSIR contour	As above
Low Risk (below the values given above)				

Tolerability Criteria are limits that should not be exceeded.

Targets are desirable to achieve and should be aimed for.

When QRA method is applied, IRPA associated with various categories of workers including the most exposed workers are obligatory. In case of involvement with Public, the QRA approach may be used in lieu of compliance with prescriptive consequence-based requirement provided that all relevant local legislations are fulfilled.

For High Risk, the risk reduction is obligatory. Possible risk reduction measures shall be evaluated using detailed analysis (Database/Consequence analysis/QRA) until it is demonstrated that residual risk is acceptable or ALARP.

For Medium Risk, additional design and/or operational risk reduction measures may be required to further reduce the risk to ALARP. For quantitative risk analysis, ALARP demonstration is required where IRPA level are between 1×10^{-6} and 1×10^{-3} per year.

For new Projects, it is recommended that risk targets are defined at an early stage of the Project in order to drive the risk towards broadly acceptable region. The objective of the risk targets is to narrow the range to which explicit ALARP considerations should be applied.

APPENDIX C: SSHE RISK MANAGEMENT PROCESS

C.1 GENERAL

Risk management is a process to ensure that all significant risks are identified, prioritized and managed effectively. It is necessary to perform the initial screening of risk related to any activities, identify the hazards, analyze and evaluate the risks based on risk acceptability criteria, prioritize remedial actions, determine the effectiveness of the mitigation measures and implement risk reduction measures.

To gain most effectiveness and efficiency SSHE Risk Management shall be integrated into work processes as follows:

Work Process	SSHE Risk Management Integration
Project Realisation and Execution Process	■ Safety studies, e.g. QRA, FERA. ■ Project Technical Reviews. ■ Peer Review and Challenge.
Management of Change	■ e-MOC Modifications – SSHE risk assessment built into process. ■ e-MOC Deviations – SSHE risk assessment built into process. ■ Modification and Project Management Process. ■ Administrative, organisational, legislative changes – DAS
Production Operations	■ Asset Reference Plan. ■ Integrated Activity Plan. ■ Job Safety Analysis. ■ Safety Cases – safety studies, hazard registers. ■ 5 yearly re-HAZOP. ■ Operations Technical Review. ■ SSHE Risk Management Review.
Activities	■ Job Safety Analysis. ■ Safety Cases – safety studies, hazard registers. ■ Bridging Documents including SSHE risk assessment
General	■ Annual Work Plan and Budget – including risk assessment. ■ Key Risk Indicators including risk assessment. ■ Legally required SSHE risk assessments e.g. EIA.
Contractor Management	■ Contract SSHE Risk Assessment.
Mergers and Acquisitions	■ SSHE Due Diligence.

To ensure effective implementation of the risk management system, each of the following essential steps requires monitoring and audit and review.

C.2 HAZARD IDENTIFICATION

Hazard identification is a key element in SSHE risk management which can be performed through a number of techniques and activities including Hazard Identification (HAZID) and Hazard and Operability (HAZOP) studies, Bow-tie studies, inspections, management reviews, technical review and audits, incident investigations, etc. The most common SSHE risk assessment techniques are:

Name	Technique	Used For	Applies To
Job Safety Analysis (JSA)	Guidewords. Risk Assessment Matrix.	Work site task assessment.	All activities/Projects/ assets.
Hazard Identification (HAZID)	Guidewords. Risk Assessment Matrix.	Assessment of more complex or higher risk work.	All activities/Projects/ Assets.
Quantified Risk Assessment (QRA)	Numerical analysis of consequences and likelihood.	Verify design reduces risks to individuals and groups.	Projects, some activities and production operations.
Layer of Protection Analysis (LOPA	Semi-quantitative method.	Evaluate barrier/ control sufficiency and effectiveness.	Projects and production operations.
Hazard and Operability Study (HAZOP)	Guidewords.	Process and utility system design verification.	Projects and production operations.
Bow Ties	Structured brainstorming.	Display risks using causes, consequences and barriers.	All activities/Projects/ Assets, in particular for Major Accident Events.

Every installation shall have a Safety Case including a Hazard Register which should identify all the MAE for the installation and means of avoidance, prevention, control, mitigation and recovery. This shall start first by the examination of the possibilities for eliminating or reducing hazard potential. If deemed not possible, then measures have to be taken to control or mitigate consequences of materialization of the hazard. This is achieved using proven hazard identification techniques (for example, HAZID, HAZOP, “What-If”, etc.).

C.3 RISK ANALYSIS AND EVALUATION

Risk is the product of the consequence and probability associated with a hazardous event, i.e.

Risk = Consequence x Probability (How Bad x How often)

Risk analysis can be performed through various techniques, qualitative, se-mi quantitative or quantitative processes, to estimate the Probability or Frequency of Occurrence and Consequences of each identified hazard in order to assess the risks posed by an installation based on its current status but without any additional control or mitigation measures in place (Initial Risk). If the risk is found to be unacceptable or high, additional control and mitigation measures together with their effectiveness will need to be identified to reduce the level of risk to ALARP (Residual Risk).

The RAM shown in Appendix D is used as a tool for a preliminary or a qualitative assessment of frequency of occurrence and consequences.

The QRA technique is used for quantitative processes, normally used as part of a formal Safety assessment for a Safety Case. QRA is usually performed at Project stage and updated for major modifications/expansion of facilities during lifetime of Assets.

APPENDIX D: RISK ASSESSMENT MATRIX

D.1 RISK ASSESSMENT MATRIX

								Likelihood				
								Rare (A)	Unlikely (B)	Possible (C)	Likely (D)	Almost Certain (E)
Impact Rating	**Project Cost + Schedule**	**Legal / Compliance**	**Property Damage ******	**Financial**	**People***	**Environment*****	**Image/Reputation**	**Event occurrence is remote and/or never heard of in the EP industry**	**Event has occurred a few times in the EP industry or is unlikely to occur in PTTEP**	**Event has occurred several times in the EP industry or occurred once in PTTEP or may occur in PTTEP**	**Event has occurred several times per year in the EP industry or more than once per year in PTTEP or occurred in the same location or is likely to occur in PTTEP**	**Event has occurred frequently in the EP industry or occurred more than once per year at the same location or is expected to occur in PTTEP**
Critical (5)	Impact on cost or schedule > 10%	Dismissal of Board + Management Revocation of any licenses or permits Imprisonment > 12 months Fines/Compensations: Thai law > 5 M THB: Foreign laws > 1M USD	Loss > $50M	> 10% of NI/NPV/EMV	Multiple fatalities	Spill > 100K bbl Tier 3 International assistance, major financial consequences, persistent severe environmental damage.	International media coverage Formal complaint from international authority	**Note 1**	**Note 1**			
Serious (4)	Impact on cost or schedule 5-10%	Suspension of stock trading Suspension of licenses or permits Imprisonment 6-12 months Fines/compensation: Thai law 1M-5M THB; Foreign laws 200K-1M USD	Loss between $5-50M	1-10% of NI/NPV/EMV	Multiple LWDC One permanent disability One fatality	Spill > 10K bbl Tier 2 Regional assistance, severe envi. damage, take extensive measures to restore.	National media coverage Local community protest with national influencer					
Significant (3)	Impact on cost or schedule 2.5-5%	Imprisonment ≤ 6 months Fines/compensation: Thai laws < 100k-5M THB; Foreign laws 5K-200K USD	Loss between $100K-5M	0.1-1% of NI/NPV/EMV	Single LWDC Multiple RWDC	Spill > 1,000 bbl Tier 1 Localised effect, limited effect, repeat breaches of statutory.	Regional media coverage Online media spread Local community protest with provincial/state influencer					
Moderate (2)	Impact on cost or schedule 1.25-2.5%	Fines /compensation: Thai laws < 100K THB; Foreign laws < 5K USD	Loss between $10K-100K	0.01-0.1% of NI/NPV/EMI	MTC Single RWDC	Spill > 1 bbl no lasting effect, single breach of statutory.	Local media interest Influenced online media post Local community aggregation					
Minor (1)	Impact on cost or schedule <1.25%	No penalty Breach but can be resolved without any actual punishment	Loss < $10K	< 0.01% of NI/NPV/EMI	Minor injury with First Aid	Spill < 1 bbl Slight effect within fence, negligible financial consequences.	No news coverage Non-influenced online media post Local community complaint				**Note 2**	**Note 2**

*, **, ***, Refer to qualitative explanation on page 14-15.

(1) If residual risk is in 5,A or 5,B have to focus on reducing consequences.

(2) If residual risks in 1,E or 1,D focus on reducing frequency of occurrence

Consequences Line 5, are Major Accident Events (MAE's).

Consequences Lines 4 and 5 are High Potential Incidents (HPI's) for purposes of incident reporting and investigation.

The original file of Risk Assessment Matrix can be found in SSHE Intranet > SSHE MS > SSHE MS Documents > Corporate Tools > Appendix: SSHE Risk Management Standard

(*) Effect to people (Workforce and Public[1])

No.	Description
1	**Minor Effect** – Slight injury/illness (First Aid Case-FAC) OR No or slight damage to health, e.g. non-toxic dusts (as an acute hazard).
2	**Moderate Effect** – Cases of Medical Treatment Case (MTC) OR a single Restricted Work Day Case (RWDC). Minor health effects, which are reversible, e.g. skin irritation, food poisoning.
3	**Significant Effect** – Multiple cases of RWDC OR a single Lost Work Day Case (LWDC) Affecting work performance in either short or long term, absence from work. Irreversible health damage without loss of life, e.g. noise, poor manual handling tasks, hand/arm vibration syndrome, chemicals causing systemic system effects, repetitive strain injury.
4	**Serious Effect** – Multiple LWDC OR one or more permanent disability OR one Fatality from an accident/illness. Irreversible health damage with serious disability or death, e.g. corrosive burns, known human carcinogens.
5	**Critical Effect** – Multiple Fatalities from an accident, e.g. chemical with acute toxic effects (Hydrogen sulphide, carbon monoxide), known human carcinogens (large exposed population).

Note: 1. Effect to public shall be considered with the severity at least equal to the workforce. Depending on societal risk perception in the region, public risk may have to be considered one order of magnitude more severe than that of the workforce.

(**) Property damage and repair/replacement

No.	Description
1	**Minor Effect** – Minimal damage. Negligible down time or asset loss. Losses less than $10K.
2	**Moderate Effect** – Some asset loss, damage and/or downtime. Losses between $10K - $100K.
3	**Significant Effect** – Serious asset loss, damage to facility and/or down time. Losses between $100K - $5 M.
4	**Serious Effect** – Major asset loss, damage to facility and/or down time. Losses between $5M - $50 M.
5	**Critical Effect** – Massive asset loss, significant damage to facility and/or down time. Losses more than $50 M.

Note: 2. Only monetary term is specified and has been calibrated in the same order of magnitude with PTTEP Corporate's risk perception and made more stringent to be able to apply at Asset level. However, at Asset/site management discretion, the decision for implementation of safeguard and mitigation may be more stringent commensurate with the Asset/site perception of acceptable property damage. In no case it can be less stringent.

(***) Effect to Environment

No.	Description
1	**Minor Effect** – Minor environmental damage, within the fence and within systems or vicinity of the installation. No or negligible financial consequences.
2	**Moderate Effect** – Sufficiently large contamination or discharge to damage the environment, but no lasting effect. Single breach of statutory or prescribed limit, or single complaint.
3	**Significant Effect** – Limited discharges affecting the neighborhood and damaging the environment. Repeated breaches of statutory or prescribed limit, or many complaints.
4	**Serious Effect** – Severe environmental damage. The Company is required to take extensive measures to restore the damaged environment. Extended breaches of statutory or prescribed limits, or widespread nuisance.
5	**Critical Effect** – Persistent severe environmental damage or severe nuisance extending over a large area. Loss of commercial, recreational use or nature conservancy, resulting in major financial consequences for the Company. Ongoing breaches well above statutory or prescribed limits.

D.2 USING THE RISK ASSESSMENT MATRIX

The PTTEP Risk Matrix, five-cell by five-cell is divided into three main regions with the assigned color code for High risk (Red color), Medium risk (Yellow color) and Low risk (Green color) as shown in Appendix D.

The left side of the matrix covers the potential consequences of the events/incidents to financial people, production/property, Project cost and schedule, legal/compliance, Environment and image/ reputation; the criteria are based on incident real/potential severity assessment.

The top part of the matrix shows frequency estimation which is based upon knowledge/historical data of similar events/incidents occurring within PTTEP or in the Exploration and Production (E&P) industry as a whole.

Note:

1. The quantity of spill is measured in bbl however the impact is dependent on the actual site location and this must be considered, e.g. if it is on-shore close to a river course or populated water front spills of less volume may have significant impact on the Environment.
2. For certain application of the RAM, i.e. for Alarm Management prioritisation, the severity row can be expanded to include “No effect”, which has no adverse impact to any of people, production/ property loss, Environment and reputation. For this severity category, the risk is considered broadly acceptable regardless of the frequency of occurrence.

3. When utilising the RAM as reference for other application, i.e. for Alarm Management, SIL assessment, the consequence severity given in the matrix is the minimum requirement in line with risk perception at PTTEP Corporate level and calibrated with risk perception at Asset level. Depending on context of a risk assessment or risk perception at the Asset level, the severity consequence may be modified to be more stringent subjected to approval from CPA. In no case the severity consequence can be modified to be less stringent.

D.3 RISK CLASSIFICATION

The risk classification is determined using the risk matrix following a systematic approach, normally conducted by a group workshop type review, for example a HAZID study.

The level of risk management required will be determined by the risk classification selected from the Risk Matrix (See Appendix D). The Consequences are estimated first, followed by Likelihood, e.g. one fatality with Likely is noted as (4,D)

During SSHE Risk Assessments it is compulsory for the following Consequences categories to be used:

- People
- Property Damage/Production Loss
- Environment
- Image/Reputation

A decision must be made by the Risk Assessment team whether to include the following Consequences based on the context of the Risk Assessment being done:

- Financial
- Project Cost and Schedule
- Legal/Compliance

For example, a credible major incident causing a fatality, moderate production/property loss, no environmental impact and serious reputation issues is risk ranked.

Due to single fatality, this provides an initial risk ranking of High Risk (4,D), which is intolerable, so control measures need to be identified and put in place to reduce the frequency of the incident to say unlikely Medium Risk (4,B). Any further risk reduction measures would need to be investigated and implemented if justified (using cost benefit analysis) in order to achieve ALARP.

It is mandatory to reduce any identified risks having a **High Risk** (red region) of the matrix, such risks are unacceptable and measures must be taken to eliminate or reduce the identified risk to a Medium or Low Risk with ALARP demonstrated. Risk reduction should follow a Hazard Management Hierarchy (Section 3.6), e.g. can be a combination of design or operating measures, but nevertheless the primary measures must be risk reduction by design rather than operating Procedures which are subject to human error or non-compliance with Procedures.

Risks within the **Medium Risk** (yellow region) of the matrix should be subjected to further risk reduction measures in accordance with ALARP principles; i.e. risk reduction measures must be identified and cost benefit analysis may need to be carried out to assess and demonstrate ALARP.

Any risks which are shown to be in the **Low Risk** (green region) of the matrix are considered to be broadly acceptable where further reductions are to be achieved by continuous improvement of the SSHE MS rather than specific design. Further risk reduction may be considered at management/team discretion commensurate with the Asset/site perception of acceptable production loss.

D.4 GUIDELINE ON RESIDUAL RISK ASSESSMENT

The residual risk shall be assessed by determining the reduced consequence and likelihood, taking into account the effectiveness of the safeguards that are in place. Where it is possible to determine the extent of the reduction, the description provided in the Risk Matrix shall be applied for selecting the consequence or likelihood class. Otherwise, the reduced consequence or likelihood class can be determined using an approach of "**relative to the original risk**". This approach is typically applicable for likelihood, of which the descriptions provided in risk matrix refer to the occurrence of past incidents within PTTEP and E&P industry.

The safeguards that are available shall be assessed to determine whether they can be taken into account to reduce consequence or likelihood. It is not commonly found that one safeguard can be used to reduce both consequence and likelihood, although some exception may apply, which in that case proper justification shall be recorded for clarity.

Generally, safeguards can be categorized into two types, namely preventive and mitigative safeguards, based on the timing upon which their roles are required to function (i.e. before or after the top event occurs). The difference between preventive and mitigative safeguards are illustrated in the figure below.

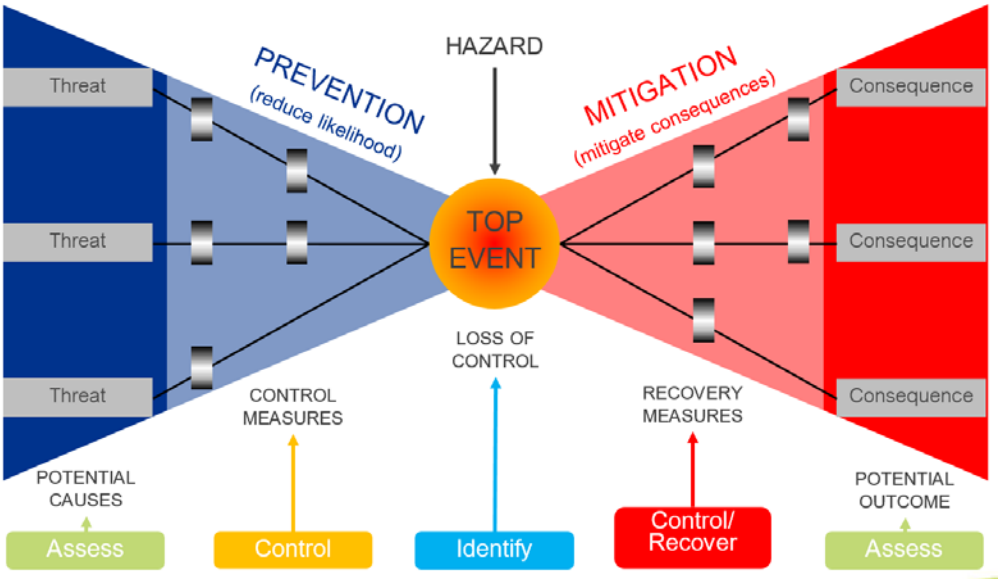


Figure D1: Preventive and Mitigative Barriers Illustration

In principle, the preventive safeguards, if they are deemed effective, can reduce the likelihood class, as when they work as expected, no significant consequence will occur and when they fail the consequence stays the same. The likelihood reduction shall depend on the effectiveness of the safeguards, some examples are provided below:

- Independent alarm(s) with operator intervention(s) (Maximum credit of one likelihood class reduction);
- Process controls and shutdown systems (Maximum credit of one likelihood class reduction);
- Mechanical equipment protection such as vibration trip, overheat trip, etc. (Maximum credit of one likelihood class reduction);
- Mechanical relief devices such as Process Safety Valve (PSV) (Maximum credit of two likelihood class reduction); and
- Effective Procedural Controls (Maximum credit of one likelihood class reduction).

Notes:

1. Maximum credit given in the examples above assume that the safeguards can fully prevent all corresponding causes under the assessment. In case various causes are grouped together and the safeguards only applicable to some of the causes, adjustment to the credit shall be made based on qualitative judgement.
2. The overall cumulative credit of all the safeguards can be assessed with layer of protection basis, i.e. overall credit is the summation of the individual credits, provided that they are independent with each other and can fully prevent all corresponding causes under assessment.
3. For other type of preventive safeguards, credit suggested in Layer of Protection Analysis (LOPA) Guideline (12004-GDL-SSHE-415-004) may be referred.

The mitigative safeguards, if they are deemed effective, can reduce the consequence class, provided that their reliability are higher than 90%. Typically for loss of containment scenario, the mitigative safeguards will prevent the escalation and thus avoiding further casualties. Thus, the reduced consequence may be assessed to be just the initial or immediate casualties from the initial fire/explosion/release. These immediate casualties shall be compared to the consequence description in the risk matrix to determine the most suitable reduced consequence class.

For non-loss of containment scenario, reduced consequence shall be assessed by estimating the effect assuming the safeguards works on demand (e.g. for worker falling from height, harness is expected to reduce consequence from fatality to be minor injury).

Some examples of mitigative safeguards are provided below:

- Fire and Gas Detection system;
- Isolation and blowdown system;
- Fire protection system such as foam/water deluge, etc.;

- Escape, Evacuation and Rescue (EER) and Lifesaving Equipment;
- Physical barriers, e.g. bund/dike, fire/blast wall, barricades or safety distance separation (limit the casualties only to area before/within the barriers - no casualties beyond the barriers); and
- PPE, only if the PPE is specifically intended to prevent certain consequences, for examples: chemical exposure, falls protection, etc.

Safeguards related to ignition control, although it is normally considered as mitigative safeguards (since top event, in this case loss of containment, would have already occurred), can be treated as preventive safeguards, as long as the fluid being released is non-toxic.

Care shall be given to avoid double-counting of the safeguards when assessing the residual risk. In many circumstances, some typical safeguards that are regarded as normal industry practice, have been inherently taken into account when determining the original risk. This normally is the case since the likelihood description in the risk matrix makes reference to the occurrence of past incidents within PTTEP and E&P industry, where the same typical safeguards may already be in place. In such cases, those safeguards should not be used to reduce the risk again to prevent double-counting, unless proper justifications are provided. Some examples include:

- Basic design features based on PEGS or applicable International Codes and Standards;
- Following General Marine Instructions;
- Provision of material compatible with the fluids;
- Typical Quality Assurance (QA)/Quality Check (QC) requirement including Factory Acceptance Test (FAT)/Site Acceptance Test (SAT);
- Basic maintenance requirement; and
- Basic emergency response Procedure.

APPENDIX E: DEMONSTARTION OF ALARP

E.1 DEMONSTRATION OF ALARP

Risk reduction to ALARP represents the point, objectively assessed, at which the time, trouble, difficulty and cost of further risk reduction measures become **grossly disproportionate** to the additional risk reduction obtained. Demonstration of ALARP is necessary whether quantitative, qualitative or semi-quantitative methods are used for risk evaluation.

A robust ALARP demonstration must account for all of these factors to an appropriate degree. The ALARP decision process is based on the decision context type. A variable degree of emphasis is attached to the factors (codes, Standards, industry best practice, QRA, Cost Benefit Analysis (CBA), stakeholder perceptions, etc.) that need to be taken into account in order to reach a decision. This is shown in the diagrams below.

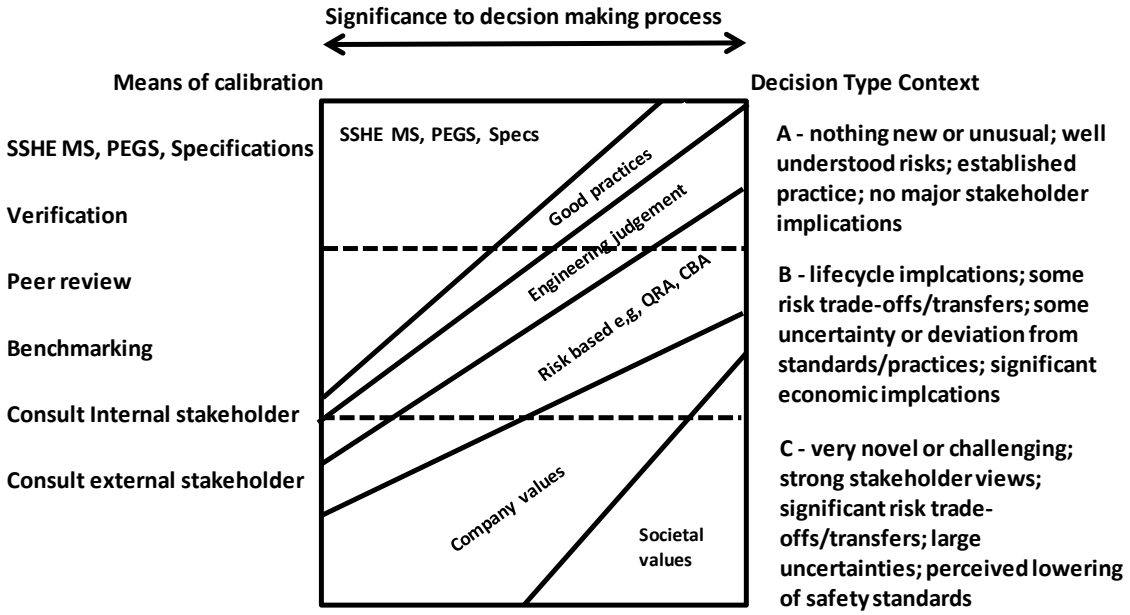


Figure E1: Decision Making Framework

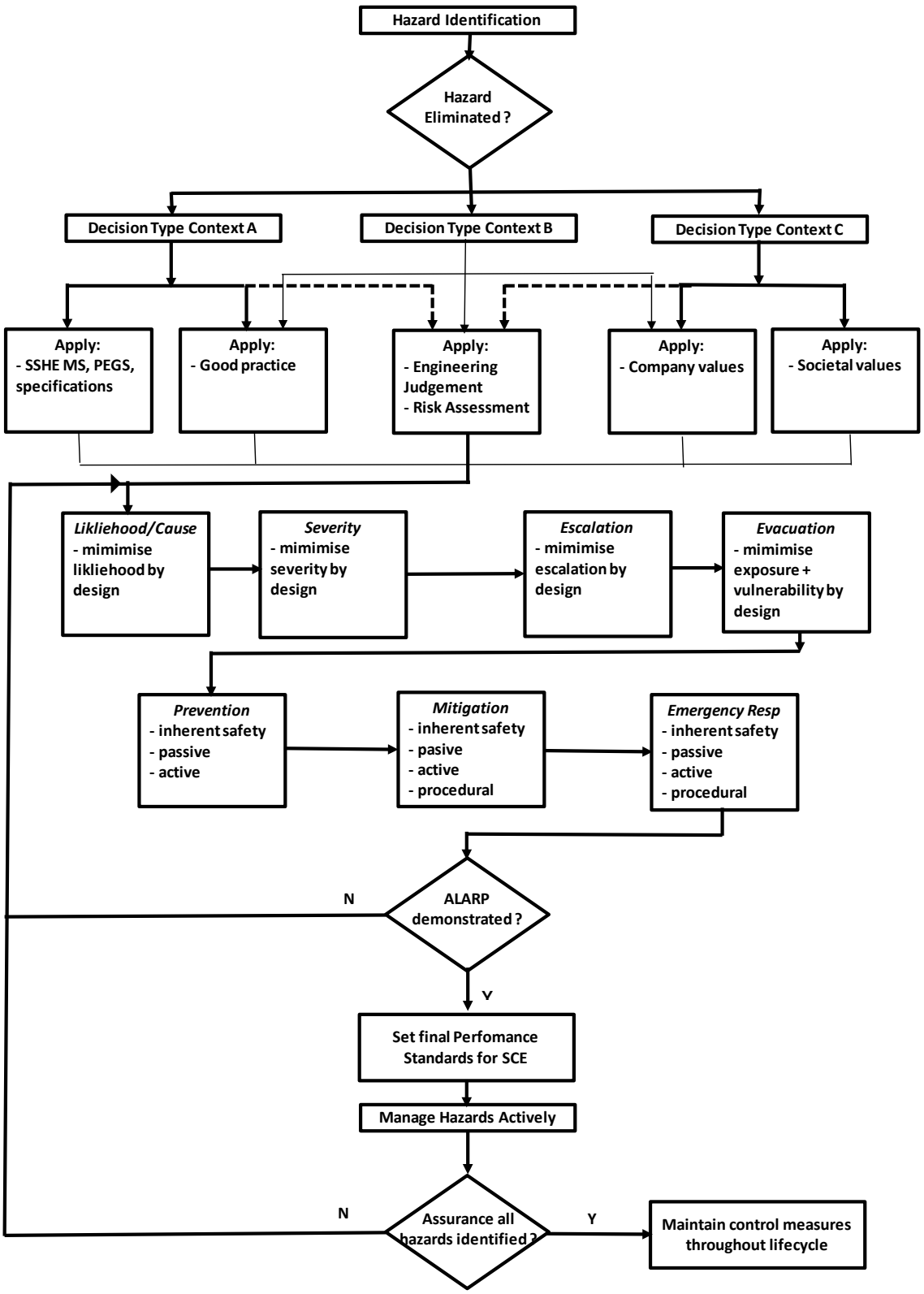


Figure E2: Risk Assessment Decision Making Flowchart

Decision context Type A relates to design which is characterized by:

- nothing new or unusual;
- well understood risks;
- established practice; and
- no major stakeholder implications.

Decision context Type B relates to design which is characterized by:

- lifecycle implications;
- some risk trade-offs/transfers;
- some uncertainty or deviation from PTTEP Engineering General Specifications (PEGS) or SSHE MS or industry Standard practices; and
- significant economic implications.

Decision Type C relates to design which is characterized by:

- being very novel or challenging;
- strong stakeholder views and perceptions;
- significant risk trade-offs or risk transfer;
- large uncertainties; and
- perceived lowering of Safety Standards.

ALARP demonstration considers fundamentally different options for risk reduction over the lifetime of a facility or operation, and considers all of the issues in relation to these options to allow a decision to be taken at the right level in PTTEP with the full knowledge of all the options, the associated risks and the costs for their reduction.

Risk reduction to ALARP requires minimizing the potential for all incidents, including those that have not occurred previously and those hazards that are unique to a particular site or facility or which arise as a result of a first time application of a technology, or a combination of technologies. In such circumstances, compliance with PEGS and SSHE MS, and industry Standard practices will not be sufficient to manage the risks.

When qualitative risk assessment is used based on the PTTEP RAM in Appendix A, the risk levels in the yellow region (Medium Risk) require additional assessment to determine the requirement for any further risk reduction measures in order to achieve ALARP. Reduction of risk to ALARP is an essential process of risk management.

When quantitative methods (QRA) are used individual risks between $1x10^{-6}$ and $1x10^{-3}$ per annum shall be subject to ALARP assessment.

Facility specific risk assessment is required to assist in the selection of new and additional risk reduction measures which will be selected on the basis of CBA. Where the applied technologies are very novel or where there are large uncertainties in relation to the hazards, stakeholders may have strong opinions which will need to be taken into account.

CBA is done where uncertainty or risk trade-offs exist, where the balance of costs and benefits is unclear, or where a more thorough approach is required. CBA is a numerical assessment enabling comparison of costs of implementing a design or modification with the likely improvement in Safety that would be expected to be achieved. ALARP principles acknowledge that an investment aimed at reducing injury or harm will not be made without regard to the size of that investment.

CBA cannot form the sole basis of the ALARP decision and shall not be used to undermine existing Standards and practices (reverse ALARP). CBA includes all life cycle costs and benefits, meaning the entire range of costs (financial and resources) and benefits (reduction of risks to persons, reduced risk of asset damage with associated lost/deferred production and repair costs) that accrue throughout the design, construction, installation and operation of the facility.

The effectiveness of risk reduction measures can be expressed in terms of a numerical value. The options decision tool (ODT) presented below allows this value to be calculated:

$$\text{ODT} = \frac{\text{net cost of measure}}{\text{reduction in asset impact}}$$

Where risk based decision making and use of CBA is required the UK HSE benchmark value and guidance is recommended (Reducing Risks, Protection People, UK HSE). Estimation of net cost requires all future costs or savings to be translated into present values using a suitable discount factor. Further guidance is in the previous reference.

When qualitative risk assessment is used based on the PTTEP RAM in Appendix A, the risk levels in the yellow region (Medium Risk) require additional assessment to determine the requirement for any further risk reduction measures in order to achieve ALARP. Reduction of risk to ALARP is an essential process of risk management.

When quantitative methods (QRA) are used individual risks between $1x10^{-6}$ and $1x10^{-3}$ per annum shall be subject to ALARP assessment.

It should be noted that for most major Projects, a Safety Philosophy or Safety Concept is established to deliver good Safety engineering practices by establishing minimum mandatory Safety requirements to assure and underpin the Safety of an installations from a very early stage of a Project. The concept of ALARP should not be used in reverse to remove such minimum mandatory and sound Safety engineering requirements which are established in the Safety Philosophy or the Safety Concept. Such aspects should also be covered in the Concept Selection Report and summarised in the Design Safety Case.

E.2 ALARP WORKSHOP

An extremely effective means of assessing and demonstrating that ALARP is achieved for major Projects is to undertake an ALARP workshop, once all Safety studies including QRA have been undertaken. Such an ALARP workshop, would normally be attended by a multidisciplinary team of engineers and include operations personnel. The Safety consultant or entity responsible for producing the QRA report would produce a ranked list of the top MAE's in descending order of risk contribution in terms of Potential Loss of Life (PLL). The "cut-off" point for MAE's to be considered at the workshop would be approved by the Project Technical Safety Engineer.

Each MAE should be reviewed by the team and the measures currently in the design, for the prevention, control, mitigation and recovery of the MAE, should be documented. With the list of existing safeguards, the team would identify what additional measures providing a reasonable potential to reduce risks, should be considered further or incorporated in the design or operation.

Following the workshop, the recommendations for risk reduction measures should be subject to a critical review focusing on measures having the greatest potential, considering both cost of implementation and risk benefits.

The results of all ALARP assessment shall be presented in the Design and Operations Safety Case.

APPENDIX F: MANAGING THE LIFECYCLE OF RISK

The development cycle of an installation includes, but is not necessarily limited to the minimum requirement for SSHE Risk Management as summarized in Table F1. Integration with Project Realization Process (PREP) is demonstrated. For more detail, refer to PREP Manual (CMS-0790-MNL-300) and PREP Project Roadmap (CMS-0790-STD-305).

In addition, risk assessment is required;

- At the start of each lifecycle phase for an Asset;
- Prior to any major change (structural, operational, or maintenance) to an Asset;
- Prior to the execution of an activity; and
- Prior to the introduction of a new hazard to the operation.

Finally, the installation risk lifecycle can be managed by creation of a set of sound and comprehensive Safety Cases for different phases and a Management System which is included in the Safety Cases.

Table F1: Typical SSHE Requirements of Risk Management in the Project Life Cycle

SSHE Deliverables	PREP								
	Phase 1 - Identify/Assess		**Phase 2 - Select**	**Phase 3 - Define/Develop**	**Phase 4 - Execute**			**Phase 5 - Operate/Evaluate**	**Decommissioning**
	Prospect/ Preliminary Studies/Acquire	Feasibility Studies	Conceptual/Pre-Project/Pre-FEED	Basic Engineering/FEED	Detailed Engineering	Construction/ Installation/Hook Up	Commissioning/Start Up	Operations	
Concepts/ Philosophies			■ Safety Philosophy ■ Safety Concept	■ Safety Philosophy ■ Safety Concept	■ Safety Philosophy ■ Safety Concept				
Safety Studies (non-exhaustive)	■ Concept HAZID	■ Feasibility HAZID	■ Coarse HAZID ■ Coarse HAZOP ■ Layout Review ■ Safety Distances	■ HAZID 1 ■ HAZOP 1 ■ Bow Ties (SCE's) ■ Fire & Explosion Risk Assessment ■ Fire & Gas Detection Mapping ■ Evacuation, Escape & Rescue Analysis ■ Emergency Systems Survivability Analysis ■ Human Factors Engineering ■ Safety Integrity Level (SIL) Assessment ■ Coarse QRA ■ ALARP Review	■ HAZID 2 ■ HAZOP 2 ■ Bow Ties (SCE's) ■ Performance Standards ■ Fire & Explosion Risk Assessment ■ Fire & Gas Detection Mapping ■ Evacuation, Escape and Rescue Analysis ■ Emergency Systems Survivability Analysis ■ Human Factors Engineering ■ SIL Verification ■ Dropped Objects ■ Ship Collision ■ QRA & ALARP Workshop ■ Safeguarding Narratives ■ ALARP Review	■ Installation HAZID ■ SimOps HAZID & Plan	■ Commissioning & Start Up HAZID ■ SimOps HAZID & Plan	■ Operations HAZIDs, Job Safety Analysis ■ Management of Change ■ Renew HEMP 5 Yearly ■ Safety Case 5 yearly ■ SCE and Performance Standards Verification	■ HAZID
Safety Cases			■ Concept Selection Report		■ Design Safety Case	■ Installation Safety Case (if legal requirement)	■ Operations Safety Case	■ Operations Safety Case ■ Activity Safety Cases ■ HAZID & Bridging Document	■ Decommissioning Safety Case (if legal requirement)
Audits/ Reviews	■ SSHE Due Diligence Audit (can be any phase)		■ PTR 1	■ PTR 2	■ PTR 3		■ PTR 4 ■ Pre Start Up Safety Audit	■ Operations Technical Review ■ Safety Case Barrier Audit ■ SSHE MS Audits ■ Specialist Audits	■ Specialist Audits
Other SSHE Deliverables		■ ALARP Register ■ Legislation Database	■ ALARP Register ■ Legislation Database ■ Project SSHE Plan	■ ALARP Register ■ Legislation Database ■ Project SSHE Plan	■ ALARP Register ■ Legislation Database ■ Project SSHE Plan	■ ALARP Register ■ Legislation Database ■ MAE Prevention Tool (installation) ■ Health Risk Assessment ■ Security Risk Assessment ■ Incident Management System ■ Action Tracking System ■ Project SSHE Plan	■ ALARP Register ■ Legislation Database ■ MAE Prevention Tool (operation) ■ Incident Management System ■ Action Tracking System ■ Project SSHE Plan ■ Project SSHE Lessons Learned	■ ALARP Register ■ Legislation Database ■ Environmental Impact Assessment ■ MAE Prevention Tool (operation) ■ Drilling Major Accident Event Prevention Tool ■ Process Safety Event Indicators ■ Health Risk Assessment ■ Security Risk Assessment ■ Incident Management System ■ Action Tracking System	■ ALARP Register ■ Legislation Database ■ Environmental Impact Assessment ■ MAE Prevention Tool (decommissioning) ■ Incident Management System ■ Action Tracking System

APPENDIX G: MONITORING AND REVIEW

Monitoring methods shall vary depending on the type of risk being monitored, for example:

- Implementation of the PTTEP MAE prevention tool guideline (Line of Sight);
- Workplace hazard monitoring (i.e. noise, air, dust hazard);
- Integrity of SCEs and Performance Standards;
- Temporary downgraded of Safety system;
- Compliances with the installation Safety Case;
- Medical surveillance check;
- Behavioural observation; and
- Environmental monitoring (i.e. discharges to water or air), and others.

Results of each monitoring shall be recorded as the evidence for internal and external audit and review, proposed action shall be implemented, closed-out and reported to the management respectively.

Audit and review of the risk management system shall be carried out at a regular interval to systematically verify and review the effectiveness of the control put in place in terms of reducing risk to an acceptable level, and of the monitoring process itself.

Conformity with the technical content of the risk assessment process (for example assumptions, calculations, input parameters of the models, methods, presentation of results, etc.) defined in this Standard (effective implementation, frequency of update through life cycle, adequacy of documentation, adaptation of SSHE MS, etc.) shall be verified during the formal audit and reviews.

Competent auditors for these conformity audits and reviews may be the representatives of SSHE Division and/or the external auditors and/or consultants relevant to each specific subject.

Note: Key personnel involved in the risk management program must have the appropriate qualifications and competency to understand and apply this Standard and any other relevant specific procedures. The Asset/Division or Project in charge of risk management must have adequate resources necessary for the application.

In the absence of resources, assistance should be sought from the SSHE Division who can either allocate resources to manage the work directly or via specialized Contractors/consultants, in particular to develop or update or upgrade the Safety Case, EIA, HRA, Security Risk Assessment, etc.

ROLES AND RESPONSIBILITIES

Roles	Responsibilities
Document Owner	The owner of the Standard is SVP, Corporate SSHE Division, with responsibilities for: ■ Issuing the SSHE Risk Management Standard and its revisions. ■ Ensuring effective implementation of the Standard.
Document Custodian	The custodian of the Standard is VP, Process Safety and Assurance Department, with responsibilities for: ■ Identifying deficiencies or potential improvements. ■ Initiating periodic revision. ■ Maintaining revision history and document status register.
All EVPs, SVPs, VPs	■ Ensure that hazards generated by the activities within his/her Function Group/Division/Asset are managed as per the requirements of this Standard. ■ Allocate the necessary budget and resources to implement the SSHE risk management process (such as organizing Hazard Identification (HAZID), developing Safety Case, and other relevant studies and documentation). ■ Ensure the competency of SSHE specialist (e.g. Function Group/site SSHE, SSHE engineer) within his/her Division/Asset to conduct risk assessment, if not sufficient, assistance from Corporate SSHE should be requested. ■ Ensure that SSHE responsibilities and management within his/her Function Group/ Division/Asset are delegated and managed to prevent any undesirable consequences. ■ Ensure the SSHE risk management processes are planned and implemented effectively.
Project/Asset/Activity Manager	■ Ensure that the Corporate SSHE is kept aware of the start of any new development Project at the inception stage. ■ Ensure that the SSHE risk management process is initiated as early as possible to ensure SSHE risk management. ■ Ensure that sufficient and qualified competent resources are in place for the implementation of SSHE risk management. Competent specialists are SSHE discipline within the Project team, specifically safety engineering specialist. Assistance from the Corporate SSHE may be requested for obtaining specialist resources.

Roles	Responsibilities
Project/Asset/Activity Manager (continued)	■ Ensure the SSHE risk management processes are planned and implemented timely. ■ Asset Managers shall ensure that Major Accident Events (MAE's)/Safety Critical Elements (SCE's) and Performance Standards are reviewed annually at Site SSHE Committee and confirmed in a Statement of Fitness. ■ Ensure that recommendations from risk assessments are closed before work commences.
SVP, Corporate SSHE Division	■ Ensure that relevant personnel are familiar with the SSHE risk management approach. ■ Provide expertise, support and resources (as necessary) to the Project/Asset/Divisions regarding implementation of SSHE risk management. ■ Ensure the implementation of SSHE risk management throughout the Project/Asset lifecycle.
Technical Authority (TA)	■ Initiate, review and approve deviation requests supported by SSHE risk assessments.

DEFINITION AND ACRONYMS

Set out below are common specific terms presented in alphabetical order:

Term	Definition
As Low As Reasonably Practicable (ALARP)	A term used to define tolerable risk acceptance only where risk reduction is impractical or cost benefit analysis is carried out and a judgment is made that the cost of further risk reduction is grossly disproportionate when compared to the actual risk reduction that would be achieved.
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.
Hazard	A hazard is an intrinsic property of anything with the potential to cause harm. Harm includes ill-health, and injury, damage to property, plant, products or the environment, production losses, or increased liabilities.
Hazard Identification	The process to identify potential sources of harm to people, the environment, asset, reputation, business or schedule.
Major Accident Event (MAE)	Any accident or incident that results in multiple fatalities or equivalent damage, production loss, environmental impact as per the risk matrix
Risk	A combination of the probability of an event and its consequences.
Risk Analysis	A systematic process, either qualitative or quantitative, to analyze the consequences and frequency of occurrences of any potential harmful events.
Risk Assessment	The process covering hazard identification, risk analysis and risk evaluation.
Risk Evaluation	The process by which acceptability of the estimated risk is judged in comparison with accepted criteria and standards.

Term	Definition
Risk Management	A process of managing risk. The key elements of risk management are Management System, Design and Operating measures, and Review and Audit.
Risk owner	Person or entity with the accountability and authority to manage a risk.

Acronyms	Description
ALARP	As Low As Reasonably Practicable
CBA	Cost Benefit Analysis
CEN	Environment Management Department
CPA	Process Safety and Assurance Department
CPA/T	Technical Safety Section
CSA	Safety Management Department
CSH	Safety, Security, Health and Environment Division
E&P	Exploration and Production
EER	Escape, Evacuation and Rescue
EIA	Environmental Impact Assessment
FAC	First Aid Case
FAT	Factory Acceptance Test
FMEA	Failure Modes and Effects Analysis
HAZID	Hazard Identification
HAZOP	Hazard and Operability
HEMP	Hazards and Effects Management Process
HRA	Health Risk Assessment
IRPA	Individual Risk Per Annum
JSA	Job Safety Analysis
LOPA	Layer of Protection Analysis
LOS	Line Of Sight
LSIR	Location Specific Individual Risk
LWDC	Lost Work Day Case
MAE	Major Accident Event
MTC	Medical Treatment Case
ODT	Options Decision Tool
ORA	Online Risk Assessment

Acronyms	Description
OTR	Operational Technical Review
PLL	Potential Loss of Life
PEGS	PTTEP Engineering General Specifications
PPE	Personal Protective Equipment
PREP	Project Realization Process
PSV	Process Safety Valve
PTR	Project Technical Review
QA	Quality Assurance
QC	Quality Check
QRA	Quantitative Risk Assessment
RAM	Risk Assessment Matrix
RWDC	Restricted Work Day Case
SAT	Site Acceptance Test
SCE	Safety Critical Element
SIL	Safety Integrity Level
SIMOPS	Simultaneous Operations
TA	Technical Authority

REFERENCES

Document Code	Document Title
PTTEP SSHE Controlling Documents	
11038-STD-SSHE-000	SSHE Management System
11038-STD-SSHE-101	SSHE Roles and Responsibilities Standard
11038-STD-SSHE-420-008	Safety Case Standard
11038-STD-SSHE-440-007	Process Safety Management Standard
11003-PDR-SSHE-403-001	Health Risk Assessment Procedure
12004-GDL-SSHE-415-004	Layer of Protection Analysis (LOPA) Guideline
12147-GDL-SSHE-403/00/02	Major Accident Event Prevention Tool Guideline
12147-GDL-SSHE-404-016	Quantitative Risk Assessment (QRA) Guideline
12147-GDL-SSHE-411-013	Hazard Identification (HAZID) Study Guideline
12147-GDL-SSHE-412-012	Hazard and Operability (HAZOP) Study Guideline
12147-GDL-SSHE-413-010	Bow-Tie Analysis Guideline
12148-GDL-SSHE-401/00/08	Job Safety Analysis (JSA) Guideline
12148-GDL-SSHE-402-011	Security Risk and Threat analysis and Assessment Guideline
SSHE-106-GDL-703	Project Technical Review Guideline
Other Reference Documents	
10008-STD-3-PRP-001	PREP Framework for Project Management
10008-STD-3-PRP-003	Evaluation of the Development Options
10008-STD-3-PRP-006	Governance, Compliance and Assurance
10008-STD-3-PRP-011	Project Risk Management
10008-STD-3-PRP-012	Engineering Management
10008-PDR-3-PRP-002	Project Peer Review and Challenge
Institute of Chemical Engineers	Hazard and Identification Risk Assessment by Geoff Wells, Printed by the Institute of Chemical Engineers – IchemE.
ISO 17776: 2016	Petroleum and Natural Gas Industries – Offshore Production Installations -Major Accident Hazard Management During the Design of New Installations.
ISO 31000: 2018	Risk Management - Guidelines
ISO 31010: 2010	Risk Assessment Techniques
ISO/IEC 73	Risk Management - Vocabulary
OGP 210	Guidelines for the Development and Application of Health, Safety and Environmental Management Systems

Document Code	Document Title
Oil and Gas UK	Framework for Risk Related Decision Support
UK HSE	Reducing Risks, Protecting People

REVISION HISTORY

Rev.	Description of Revision
0	**Authorized by: PEP, Date: December 2004** This Loss Prevention and Risk Assessment Standard (S.PSH.004) replaced HSE Policies and Procedures Manual part "B15 – Loss Prevention" and part "C4 – Guidance Notes on Risk Assessment and Management". The main issues highlighted were: ■ Commitment to "As Low As Reasonably Practicable (ALARP)" principle for risk assessment and management. ■ Need for various studies and reviews at various stages of Project development. ■ Need for Technical Audits (Operational Technical Review – OTR's and Project Technical Review – PTR's) during project phases and operations. ■ Development of site specific SSHE cases to demonstrate a link between the identified hazards/risks for a site and the management system in place to control those risks. ■ New PTTEP Risk Matrix (Appendix 4) to be used for evaluating risk.
1	**Authorized by: PEP, Date: July 2009** This SSHE Risk Management Standard (SSHE MS.S.07) replaced the Loss Prevention and Risk Assessment Standard (S.PSH.004). Changes from the last version were: ■ Focus on the principle of SSHE Risk assessment and management process. ■ Revise the criteria of consequences and frequency of occurrence as illustrated in Table 2 PTTEP Risk Assessment Matrix. ■ Include the involvement of "Cost Benefit Analysis – CBA" as part of risk management process. ■ Include the monitoring, audit and review to verify the effectiveness of the risk management system.
2	**Authorized by: CEO, Date: February 2011** Updated to include a revised Risk Matrix to be used as a standard Matrix within PTTEP and provide simplification and more clarity on the contents of the document.
3	**Authorized by: CEO, Date: October 2011** Revised from SSHE.MS.S.07. The revision includes: ■ Updated SSHE Risk Matrix on frequency, effect to people and asset. ■ Integration with PREP. ■ Detailed application of the Risk Assessment Matrix.

Rev.	Description of Revision
4	**Authorized by: CEO, Date: August 2014** The revision includes: ■ Three yearly reviews. ■ RAM amended to integrate Major Accident Events into Consequences and define requirements if residual severity is Major (level 5). ■ Incorporation of Hazards and Effects Management Process. ■ Elaboration on ALARP Workshop.
5	**Authorized by: CEO, Date: November 2015** ■ Revision of Risk Assessment Matrix in line with SEM corporate requirements. ■ Individual Risk per Annum criteria and targets amended based on practical experience and reference to international practices. ■ Section 6.6 Demonstration of ALARP expanded to provide more guidance on hierarchy to be followed.
6	**Authorized by: President & CEO, Date: April 2019** ■ Reorganized document format and structure. ■ Amended references to ISO 17776, 31000 and 31010. ■ Amended Risk Assessment Matrix. ☐ Revised notes 1 and 2. ☐ Added alphabet identifiers to Likelihood. ☐ Added more details on Environment criteria of each impact rating. ☐ Revised impact rating title in qualitative explanation table to align with Risk Assessment Matrix. ■ Added requirement to verify risk assessment recommendations are closed before starting work. ■ Added more explanation of demonstration of residual risk assessment. ■ Updated Figure Typical SSHE Requirements of Risk Management in the Project Life Cycle.

Attachment VIII - Integrity Pact

ข้อตกลงคุณธรรม (Integrity Pact)
ความร่วมมือป้องกันการทุจริตในการจัดซื้อจัดจ้างภาครัฐ
(ระหว่างหน่วยงานของรัฐเจ้าของโครงการ ผู้ประกอบการและผู้สังเกตการณ์)

ข้อตกลงคุณธรรมฉบับนี้ทำขึ้นระหว่าง ปตท. สำรวจและผลิตปิโตรเลียม จำกัด (มหาชน) และ ปตท.สผ.อินเตอร์เนชั่นแนล จำกัด และ ปตท.สผ. เอนเนอร์ยี่ ดีเวลลอปเมนท์ จำกัด ซึ่งเป็นหน่วยงานของรัฐ ซึ่งต่อไปในข้อตกลงคุณธรรมนี้เรียกว่า "หน่วยงานของรัฐเจ้าของโครงการ" ฝ่ายหนึ่ง กับ .....ซึ่งเป็นผู้ประกอบการ จดทะเบียนเป็นนิติบุคคล ณ ..... มีสำนักงานใหญ่อยู่เลขที่.....ถนน.....ตำบล/แขวง.....อำเภอ/เขต.....จังหวัด.....โดย .....ผู้มีอำนาจลงนามผูกพันนิติบุคคลปรากฏตามสำเนาหนังสือรับรองของสำนักงานทะเบียนหุ้นส่วนบริษัท.....ลงวันที่ .....(และสำเนาหนังสือมอบอำนาจลงวันที่ .....) แนบท้ายข้อตกลงคุณธรรมนี้ ซึ่งต่อไปในข้อตกลงคุณธรรมนี้เรียกว่า "ผู้ประกอบการ" ฝ่ายหนึ่ง และ พล.อ.อ. วีรวิท คงศักดิ์ อยู่บ้านเลขที่ 21/21 ถนน ลำลูกกา 21 ตำบล/แขวง คูคต อำเภอ/เขต ลำลูกกา จังหวัด ปทุมธานี ผู้ถือบัตรประจำตัวประชาชนเลขที่ 3100902099063 และ นายวิชา เมฆตระการ อยู่บ้านเลขที่ 39 ถนน สุภาพงษ์ 1 แยก 3-3 สุภาพงษ์ ตำบล/แขวงหนองบอน อำเภอ/เขต ประเวศ จังหวัด กรุงเทพฯ ผู้ถือบัตรประจำตัวประชาชนเลขที่ 3100100699107 และ นายอมรพงษ์ เกตุปมา อยู่บ้านเลขที่ 188/2 ซอย สุขุมวิท 65 (ชัยพฤกษ์) ตำบล/แขวง พระโขนงเหนือ อำเภอ/เขต วัฒนา จังหวัด กรุงเทพฯ ผู้ถือบัตรประจำตัวประชาชนเลขที่ 3120600626991 และ ดร.ศศิชา สืบแสง อยู่บ้านเลขที่ 159/29 ถนน วิภาวดีรังสิต ตำบล/แขวง จอมพล อำเภอ/เขต จตุจักร จังหวัด กรุงเทพฯ ผู้ถือบัตรประจำตัวประชาชนเลขที่ 3101701508587 และ นายสมศักดิ์ สิทธิชาญคุณะ อยู่บ้านเลขที่ 240/55 ถนน จรัญฯ ตำบล/แขวง บ้านช่างหล่อ อำเภอ/เขต บางกอกน้อย จังหวัด กรุงเทพฯ ผู้ถือบัตรประจำตัวประชาชนเลขที่3102002979620 ดังปรากฏตามสำเนาบัตรประจำตัวประชาชนแนบท้ายข้อตกลงคุณธรรมนี้ ซึ่งต่อไปในข้อตกลงคุณธรรมนี้เรียกว่า "ผู้สังเกตการณ์" อีกฝ่ายหนึ่ง

เนื่องด้วย หน่วยงานของรัฐเจ้าของโครงการจะดำเนินการจัดทำสัญญาจัดซื้อจัดจ้าง "โครงการการจัดหาบริการเฮลิคอปเตอร์ 5 ปีสำหรับโครงการนอกชายฝั่ง" ซึ่งต่อไปในข้อตกลงคุณธรรมนี้เรียกว่า "โครงการ" ภายใต้กระบวนการที่กำหนดตามกฎหมายและกฎระเบียบต่าง ๆ ที่เกี่ยวข้องกับการจัดซื้อจัดจ้างภาครัฐ จึงมีความประสงค์ที่จะสร้างความร่วมมือป้องกันการทุจริตในการจัดซื้อจัดจ้างในโครงการ เพื่อให้การใช้เงินงบประมาณเป็นไปอย่างคุ้มค่าและมีประสิทธิผล และปฏิบัติการจัดซื้อจัดจ้างด้วยความสุจริต โปร่งใส และเป็นธรรมยิ่งขึ้น จึงกำหนดให้ผู้ประกอบการเฉพาะที่ได้ร่วมลงนามในข้อตกลงคุณธรรมนี้เท่านั้น เป็นผู้มีสิทธิเข้าร่วมกระบวนการจัดซื้อจัดจ้างในโครงการ

และโดยที่หน่วยงานของรัฐเจ้าของโครงการและผู้ประกอบการเห็นพ้องต้องกันว่าผู้สังเกตการณ์มีส่วนสำคัญในความร่วมมือป้องกันการทุจริตในกระบวนการจัดซื้อจัดจ้างภาครัฐในโครงการ

หน่วยงานของรัฐเจ้าของโครงการ ผู้ประกอบการ และผู้สังเกตการณ์ จึงร่วมกันทำข้อตกลงคุณธรรมนี้ โดยรับรองว่า จักร่วมมือกันปฏิบัติตามประกาศคณะกรรมการความร่วมมือป้องกันการทุจริต เรื่อง แนวทางและวิธีการในการดำเนินงานโครงการความร่วมมือป้องกันการทุจริตในการจัดซื้อจัดจ้างภาครัฐ แบบของข้อตกลงคุณธรรม การคัดเลือกผู้สังเกตการณ์ และการจัดทำรายงานตามมาตรา ๑๗ และมาตรา ๑๘ แห่งพระราชบัญญัติการจัดซื้อจัดจ้างและการบริหารพัสดุภาครัฐ พ.ศ. ๒๕๖๐ ประกาศ ณ วันที่ ๕ กรกฎาคม พ.ศ. ๒๕๖๑ และที่มีการแก้ไขเพิ่มเติม หรือที่ประกาศขึ้นใหม่ ซึ่งต่อไปในข้อตกลงคุณธรรมนี้เรียกว่า "ประกาศ" รวมทั้งจักดำเนินการตามเงื่อนไขที่กำหนด ดังต่อไปนี้

๑. หน่วยงานของรัฐเจ้าของโครงการ

โดยที่หน่วยงานของรัฐเจ้าของโครงการมีเจตจำนงอันแรงกล้าที่จะใช้หลักการทางคุณธรรมเป็นเครื่องช่วยให้เกิดความร่วมมือและร่วมใจระหว่างทุกฝ่ายอันจะเกิดผลให้กระบวนการจัดซื้อจัดจ้างในโครงการปลอดจากการทุจริต หรือการกระทำโดยมิชอบทั้งปวง เพื่อให้การใช้เงินงบประมาณสำหรับการดำเนินงานตามโครงการเป็นไปอย่างคุ้มค่า มีประสิทธิผล และเกิดประโยชน์แก่ประเทศชาติและประชาชนอย่างแท้จริง จึงขอให้คำมั่นสัญญาในการปฏิบัติตามข้อตกลงคุณธรรมไว้ดังนี้

๑.๑ จักเปิดเผยข้อมูลที่เกี่ยวข้องกับการจัดซื้อจัดจ้างภาครัฐ ตามขั้นตอนที่กำหนด เช่น (๑) แผนการจัดซื้อจัดจ้างของโครงการ (๒) ขอบเขตของงาน (Terms of Reference : TOR) (๓) ประกาศการจัดซื้อจัดจ้าง/ประกาศเชิญชวน ร่างเอกสารประกวดราคา (๔) ประกาศราคากลาง (ราคาอ้างอิง) (๕) รายชื่อผู้รับ/ซื้อเอกสาร (๖) รายชื่อผู้ยื่นเอกสารการเสนอราคา (๗) สรุปข้อมูลการเสนอราคาเบื้องต้น (๘) รายชื่อผู้ผ่านการพิจารณาคุณสมบัติและข้อเสนอด้านเทคนิค (๙) รายชื่อผู้ชนะการเสนอราคาและราคาที่ตกลงซื้อหรือจ้าง (๑๐) สัญญา (๑๑) การแก้ไขสัญญา (๑๒) การส่งมอบงาน (๑๓) การตรวจรับงาน (๑๔) การจ่ายเงิน (๑๕) ข้อร้องเรียนและผลการพิจารณาข้อร้องเรียน โดยเผยแพร่ไว้ในระบบเครือข่ายสารสนเทศของหน่วยงาน และกรมบัญชีกลางผ่านระบบจัดซื้อจัดจ้างภาครัฐด้วยอิเล็กทรอนิกส์ (Electronic Government Procurement : e-GP) เพื่อเปิดโอกาสให้ประชาชนทั่วไปสามารถมีส่วนร่วมในการตรวจสอบกระบวนการจัดซื้อจัดจ้างภาครัฐได้

๑.๒ จักปฏิบัติต่อผู้ประกอบการซึ่งเป็นผู้เข้าร่วมเสนอราคาทุกรายอย่างเท่าเทียมกัน เช่น ให้ข้อมูลเดียวกันกับผู้เข้าร่วมเสนอราคาทุกราย กรณีที่มีความจำเป็นต้องกำหนดรายละเอียดเพิ่มเติม หรือมีการแก้ไขคุณลักษณะเฉพาะที่เป็นสาระสำคัญ ซึ่งมิได้กำหนดไว้ในเอกสารตั้งแต่ต้น หน่วยงานของรัฐเจ้าของโครงการจะต้องจัดทำเป็นเอกสารประกวดราคาเพิ่มเติม รวมทั้ง แจ้งเป็นหนังสือให้ผู้ที่ได้รับหรือได้ซื้อเอกสารประกวดราคาไปแล้วทุกรายทราบ และไม่ให้ข้อมูลที่เป็นความลับ หรือที่ให้ประโยชน์กับผู้เข้าร่วมเสนอราคารายหนึ่งรายใด ที่จะทำให้เกิดข้อได้เปรียบเสียเปรียบกับผู้เข้าร่วมเสนอราคาในขั้นตอนการเสนอราคา หรือการดำเนินการตามสัญญา ทั้งนี้ เพื่อสนับสนุนให้เกิดการแข่งขันอย่างเป็นธรรม เป็นต้น

๑.๓ จักกำหนดมาตรการป้องกันมิให้เกิดพฤติการณ์ หรือการกระทำใด ๆ ระหว่างหน่วยงานของรัฐเจ้าของโครงการ หรือกรรมการ หรือผู้บริหาร หรือเจ้าหน้าที่ของหน่วยงานของรัฐเจ้าของโครงการ กับผู้ประกอบการที่จะเข้ายื่นข้อเสนอในโครงการ หรือซึ่งเป็นผู้เข้าร่วมเสนอราคา หรือผู้ทำสัญญาในโครงการ ในลักษณะที่อาจทำให้บุคคลอื่น หรือสาธารณชนเกิดข้อสงสัยว่าส่อไปในทางทุจริต หรืออาจนำไปสู่การทุจริตในการปฏิบัติหน้าที่ หรือในกระบวนการจัดซื้อจัดจ้างภาครัฐในโครงการ พร้อมทั้ง มาตรการป้องกันมิให้มีการเรียก - รับ หรือยอมจะรับทรัพย์สิน หรือประโยชน์อื่นใดไม่ว่าเพื่อตนเองหรือผู้อื่นในการกำหนดเงื่อนไข หรือผลประโยชน์ตอบแทน เพื่อช่วยเหลือให้ผู้ที่จะเข้ายื่นข้อเสนอ หรือผู้เข้าร่วมเสนอราคาในโครงการรายใดได้มีสิทธิเข้าทำสัญญากับหน่วยงานของรัฐเจ้าของโครงการโดยไม่เป็นธรรมหรือกีดกันผู้ที่จะเข้ายื่นข้อเสนอ หรือผู้เข้าร่วมเสนอราคาในโครงการรายใดมิให้มีโอกาสเข้าแข่งขันในการยื่นข้อเสนอ หรือเสนอราคาอย่างเป็นธรรม

๑.๔ จักอนุญาตและอำนวยความสะดวกให้ผู้สังเกตการณ์เข้าร่วมสังเกตการณ์การทำงาน หรือการประชุมที่เกี่ยวข้องกับการจัดซื้อจัดจ้างภาครัฐ และเปิดเผยข้อมูลและเอกสารที่เกี่ยวข้องในกระบวนการจัดซื้อจัดจ้างภาครัฐให้ผู้สังเกตการณ์ทราบ ตลอดระยะเวลาของโครงการในทุกขั้นตอนของการจัดซื้อจัดจ้าง ซึ่งรวมถึงขั้นตอนดังต่อไปนี้ (๑) แผนการจัดซื้อจัดจ้างของโครงการ (๒) การจัดทำร่างขอบเขตของงาน (TOR) (๓) การจัดทำร่างเอกสารประกวดราคา ประกาศการจัดซื้อจัดจ้าง ประกาศเชิญชวน (4) การกำหนดราคากลาง (ราคาอ้างอิง) (5) การตรวจสอบคุณสมบัติผู้เสนอราคา การตรวจสอบเอกสารข้อเสนอทางเทคนิคและราคา การต่อรองราคา การพิจารณาอุทธรณ์ หรือทุกขั้นตอนของการดำเนินการจัดซื้อจัดจ้าง (6) การจัดทำสัญญา (7) การแก้ไขสัญญา (8) การตรวจรับงานตามสัญญาจัดซื้อจัดจ้าง ทั้งนี้ หน่วยงานของรัฐเจ้าของโครงการต้องกำหนดการประชุมและให้ข้อมูลที่เพียงพอเกี่ยวกับการประชุมใด ๆ ที่มีขึ้นของหน่วยงานของรัฐเจ้าของโครงการ หรือระหว่างหน่วยงานของรัฐเจ้าของโครงการกับผู้ที่จะเข้ายื่นข้อเสนอ หรือผู้เข้าร่วมเสนอราคา หรือผู้ทำสัญญา ให้ผู้สังเกตการณ์ได้ทราบล่วงหน้า เพื่อให้ผู้สังเกตการณ์ได้ทำหน้าที่และร่วมสังเกตการณ์ได้อย่างมีประสิทธิภาพ

๑.๕ จักกำหนดมาตรการและช่องทางที่สะดวกต่อการปฏิบัติสำหรับผู้ที่พบเห็นว่ากรรมการ หรือผู้บริหาร หรือเจ้าหน้าที่ หรือผู้มีส่วนเกี่ยวข้องกับการจัดซื้อจัดจ้างผู้ใดมิได้ปฏิบัติตามข้อตกลงคุณธรรมนี้ หรือได้กระทำการใด ๆ ที่ไม่เป็นไปตามที่ข้อตกลงคุณธรรมนี้กำหนด หรือพบเห็นพฤติกรรมที่ส่อไปในทางทุจริต หรืออาจนำไปสู่การทุจริตได้ ให้สามารถแจ้งหน่วยงานของรัฐเจ้าของโครงการ นอกจากนี้อาจแจ้งไปยังหน่วยงานที่เกี่ยวข้อง เช่น สำนักงานคณะกรรมการป้องกันและปราบปรามการทุจริตแห่งชาติ สำนักงานคณะกรรมการป้องกันและปราบปรามการทุจริตในภาครัฐ กรมสอบสวนคดีพิเศษ สำนักงานการตรวจเงินแผ่นดิน เป็นต้น ให้พิจารณาดำเนินการตามอำนาจหน้าที่ โดยหน่วยงานของรัฐเจ้าของโครงการอาจพิจารณาดำเนินการทางวินัยควบคู่ไปด้วยก็ได้หากผู้ที่เกี่ยวข้องนั้นเป็นเจ้าหน้าที่ของรัฐในสังกัด

๒. **ผู้ประกอบการ**

โดยที่ผู้ประกอบการตระหนักดีว่า ผู้ประกอบการที่มีคุณธรรมเป็นผู้มีบทบาทสำคัญยิ่งในความร่วมมือป้องกันการทุจริตในการจัดซื้อจัดจ้างภาครัฐ เพื่อให้การดำเนินโครงการในทุกขั้นตอนปลอดจากการทุจริต หรือการกระทำโดยมิชอบทั้งปวง สมดังเจตจำนงของหน่วยงานของรัฐเจ้าของโครงการ จึงขอให้คำมั่นสัญญาในการปฏิบัติตามข้อตกลงคุณธรรมไว้ ดังนี้

๒.๑ จักปฏิบัติตามมาตรการและวิธีการดำเนินงานที่จำเป็น เพื่อป้องกันการทุจริตในการจัดซื้อจัดจ้างภาครัฐและสนับสนุนให้กระบวนการจัดซื้อจัดจ้างภาครัฐเป็นไปด้วยความสุจริต โปร่งใส และเป็นธรรม โดยกำหนดให้มีนโยบายต่อต้านการทุจริต พร้อมทั้ง สื่อสารนโยบายต่อต้านการทุจริตให้ทั่วถึงทั้งองค์กรของผู้ประกอบการ

๒.๒ จักไม่กระทำการใด ๆ ที่เป็นการให้ เสนอให้ หรือรับว่าจะให้ทรัพย์สิน หรือประโยชน์อื่นใดแก่กรรมการ หรือผู้บริหาร หรือเจ้าหน้าที่ของหน่วยงานของรัฐเจ้าของโครงการ หรือผู้มีส่วนเกี่ยวข้องกับการจัดซื้อจัดจ้างในโครงการ หรือผู้ที่จะเข้ายื่นข้อเสนอ หรือผู้เข้าร่วมเสนอราคารายอื่น เพื่อจูงใจให้กระทำการ ไม่กระทำการ หรือประวิงการกระทำใด ๆ อันมิชอบ ไม่ว่าในทางตรงหรือทางอ้อม หรือสมยอมกัน ในการเสนอราคาต่อหน่วยงานของรัฐเจ้าของโครงการ หรือในกระบวนการจัดซื้อจัดจ้าง หรือในการปฏิบัติตามสัญญา ทั้งก่อน ระหว่างการเสนอราคา และหลังการทำสัญญาจัดซื้อจัดจ้าง

๒.๓ จักยินยอมและอำนวยความสะดวกให้ผู้สังเกตการณ์เข้าร่วมสังเกตการณ์ เข้าถึงข้อมูลและเอกสาร และตรวจสอบโครงการได้ในขั้นตอนต่าง ๆ เช่นเดียวกับหน่วยงานของรัฐเจ้าของโครงการ รวมถึงการตรวจรับงาน

๒.๔ กรณีหากผู้ประกอบการได้ทำสัญญาในโครงการ จักต้องรับผิดชอบการกระทำของผู้รับเหมาช่วงใด ๆ ของผู้ประกอบการ (ถ้ามี) เสมือนเป็นการกระทำของผู้ประกอบการเอง และจักต้องจัดการให้ผู้รับเหมาช่วงเหล่านั้นต้องมีหน้าที่ปฏิบัติเสมือนเป็นผู้ร่วมลงนามในข้อตกลงคุณธรรมนี้ด้วย

๒.๕ ในกรณีที่ผู้ประกอบการพบว่า ผู้ที่จะเข้ายื่นข้อเสนอ หรือผู้เข้าร่วมเสนอราคา หรือผู้ทำสัญญา หรือตัวแทนในโครงการนี้รายใดมิได้ปฏิบัติตามข้อตกลงคุณธรรม หรือได้กระทำการใด ๆ ที่ไม่เป็นไปตามที่ข้อตกลงคุณธรรมกำหนด หรือพบเห็นพฤติกรรมที่ส่อไปในทางทุจริต หรืออาจนำไปสู่การทุจริตได้ จักแจ้งให้หน่วยงานของรัฐเจ้าของโครงการทราบ นอกจากนี้อาจแจ้งไปยังหน่วยงานอื่น ๆ ที่เกี่ยวข้อง เช่น สำนักงานคณะกรรมการป้องกันและปราบปรามการทุจริตแห่งชาติ สำนักงานคณะกรรมการป้องกันและปราบปรามการทุจริตในภาครัฐ กรมสอบสวนคดีพิเศษ สำนักงานการตรวจเงินแผ่นดิน เป็นต้น ให้พิจารณาดำเนินการตามอำนาจหน้าที่

๓. **ผู้สังเกตการณ์** (Observer)

โดยที่ผู้สังเกตการณ์รับรู้ว่า ผู้สังเกตการณ์ที่มีความเป็นอิสระ มีความเป็นกลาง มีคุณธรรม และมีความรู้ความสามารถในวิชาชีพเฉพาะในทุกด้านที่เกี่ยวข้องกับโครงการ เป็นเสมือนกลไกสำคัญ ในการป้องกันการทุจริตในการจัดซื้อจัดจ้าง เพื่อให้การดำเนินโครงการในขั้นตอนต่าง ๆ ปลอดจาก

การทุจริต หรือการกระทำโดยมิชอบทั้งปวง จึงขอให้คำมั่นสัญญาในการปฏิบัติตามข้อตกลงคุณธรรมไว้ดังนี้

๓.๑ จักเข้าร่วมสังเกตการณ์ในกระบวนการจัดซื้อจัดจ้างตลอดระยะเวลาของโครงการและทุกขั้นตอนของการดำเนินการจัดซื้อจัดจ้าง ซึ่งรวมถึงขั้นตอนดังต่อไปนี้ (1) แผนการจัดซื้อจัดจ้างโครงการ (๒) การจัดทำร่างขอบเขตของงาน (TOR) (๓) การจัดทำร่างเอกสารประกวดราคา ประกาศการจัดซื้อจัดจ้างประกาศเชิญชวน (4) การกำหนดราคากลาง (ราคาอ้างอิง) (5) การตรวจสอบคุณสมบัติผู้เสนอราคา การตรวจสอบเอกสารข้อเสนอทางเทคนิคและราคา การต่อรองราคา การพิจารณาข้ออุทธรณ์หรือทุกขั้นตอนของการดำเนินการจัดซื้อจัดจ้าง (6) การจัดทำสัญญา (7) การแก้ไขสัญญา (8) การตรวจรับงานตามสัญญาจัดซื้อจัดจ้าง

ผู้สังเกตการณ์มีสิทธิเข้าถึงข้อมูลและเอกสารที่เกี่ยวข้องกับโครงการโดยทั้งหน่วยงานของรัฐเจ้าของโครงการและผู้ที่จะยื่นข้อเสนอ หรือผู้เข้าร่วมเสนอราคา หรือผู้ทำสัญญาจะต้องให้ความร่วมมืออำนวยความสะดวกในการให้ข้อมูล

๓.๒ จักปฏิบัติหน้าที่โดยอิสระ ซื่อสัตย์สุจริตและเที่ยงธรรม โดยให้การสนับสนุนด้านความรู้ที่ถูกต้องและเป็นประโยชน์ แสดงความคิดเห็นตามหลักวิชาความรู้ โดยไม่มีสิทธิออกเสียงหรือร่วมลงมติ และจักไม่กระทำการใด ๆ อันมิชอบที่จะเป็นเหตุในการขัดขวางกระบวนการจัดซื้อจัดจ้าง

๓.๓ ผู้สังเกตการณ์และสมาชิกในครอบครัวของผู้สังเกตการณ์โดยตรง จักไม่มีส่วนได้เสียหรือมีความสัมพันธ์กับหน่วยงานของรัฐเจ้าของโครงการ บุคคลหรือนิติบุคคล บริษัทและกรรมการบริษัท ที่เข้าร่วมเสนอราคา

๓.๔ การรักษาข้อมูลความลับ ดังนี้

๓.๔.๑ จักไม่นำเอกสารและข้อมูลต่าง ๆ ที่ได้รับจากการเป็นผู้สังเกตการณ์ของโครงการไปเปิดเผย เว้นแต่ที่เป็นไปตามแนวทางปฏิบัติที่กล่าวไว้ในข้อตกลงคุณธรรม และการเปิดเผยตามขั้นตอนของการจัดซื้อจัดจ้างที่กฎหมายกำหนด

๓.๔.๒ จักไม่นำเอกสารที่เกี่ยวข้องกับโครงการไปใช้ในการแสวงหาผลประโยชน์ส่วนตัว หรือนำไปใช้ในทางที่มิชอบ หรือให้เป็นประโยชน์แก่บุคคล

๓.๔.๓ หากเปิดเผยข้อมูลที่เป็นความลับทางการค้าโดยมิได้รับอนุญาตเป็นลายลักษณ์อักษรจากคณะกรรมการความร่วมมือป้องกันการทุจริต จะต้องรับผิดต่อความเสียหายที่เกิดขึ้น อันเนื่องมาจากการเปิดเผยข้อมูล หรือการใช้ข้อมูลความลับนั้น

๓.๕ จักลงนามในหนังสือการรักษาข้อมูลเป็นความลับและไม่มีส่วนได้เสียตามฟอร์มที่กำหนดแนบท้ายประกาศ เพื่อให้หน่วยงานของรัฐเจ้าของโครงการเก็บไว้เป็นเอกสารประกอบการลงนามข้อตกลงคุณธรรม

๓.๖ จักดำเนินการตามแนวทางการปฏิบัติงานของผู้สังเกตการณ์ รวมทั้งรายงานผลการสังเกตการณ์ และจัดทำรายงานการประเมินผลโครงการ เพื่อเสนอต่อคณะกรรมการความร่วมมือป้องกันการทุจริต ตามหลักเกณฑ์ วิธีการและรายละเอียดที่กำหนดในประกาศ

๓.๗ ในกรณีที่พบว่า หน่วยงานของรัฐเจ้าของโครงการ ผู้เข้าร่วมเสนอราคาหรือผู้ทำสัญญา หรือตัวแทนรายใดมิได้ปฏิบัติตามข้อตกลงคุณธรรมนี้ หรือได้กระทำการใด ๆ ที่ไม่เป็นไปตามที่ข้อตกลงคุณธรรมนี้กำหนด หรือพบเห็นพฤติกรรมที่ส่อไปในทางทุจริต หรืออาจนำไปสู่การทุจริตได้ จะต้องรีบแจ้งหน่วยงานของรัฐเจ้าของโครงการทราบ เพื่อให้มีการชี้แจง หรือแก้ไขในระยะเวลาที่กำหนด หากหน่วยงานของรัฐเจ้าของโครงการไม่ชี้แจง หรือแก้ไข ให้ผู้สังเกตการณ์รายงานคณะกรรมการความร่วมมือป้องกันการทุจริตทันที เพื่อดำเนินการรายงานข้อมูลสู่สาธารณะ และผู้สังเกตการณ์อาจแจ้งหน่วยงานอื่น ๆ ที่เกี่ยวข้อง เช่น สำนักงานคณะกรรมการป้องกันและปราบปรามการทุจริตแห่งชาติ สำนักงานคณะกรรมการป้องกันและปราบปรามการทุจริตในภาครัฐ กรมสอบสวนคดีพิเศษ สำนักงานการตรวจเงินแผ่นดิน เป็นต้น ให้พิจารณาดำเนินการตามอำนาจหน้าที่

ข้อตกลงคุณธรรมนี้ทำขึ้นเป็นสามฉบับ มีข้อความถูกต้องตรงกัน หน่วยงานของรัฐเจ้าของโครงการ ผู้ประกอบการ และผู้สังเกตการณ์ ได้อ่านและเข้าใจข้อความโดยละเอียดตลอดแล้ว จึงได้ลงลายมือชื่อพร้อมทั้งประทับตรา (ถ้ามี) ไว้เป็นสำคัญต่อหน้าพยาน และต่างยึดถือไว้ฝ่ายละหนึ่งฉบับ

ลงนาม.....	ลงนาม.....
(นายมนตรี ลาวัลย์ชัยกุล)	(.....)
ตำแหน่ง ประธานเจ้าหน้าที่บริหาร	ตำแหน่ง.....
หน่วยงาน หน่วยงานของรัฐเจ้าของโครงการ	หน่วยงาน ผู้ประกอบการ
วันที่.....เดือน.....ปี.....	วันที่.....เดือน.....ปี.....
บ้านเลขที่..... ตำบล/แขวง.....	บ้านเลขที่..... ตำบล/แขวง.....
อำเภอ/เขต.....จังหวัด.....	อำเภอ/เขต.....จังหวัด.....
ประเทศ.....	ประเทศ.....

ลงนาม.....

(พล.อ.อ. วีรวิท คงศักดิ์)

ตำแหน่ง ผู้สังเกตการณ์ข้อตกลงคุณธรรม

หน่วยงาน องค์กรต่อต้านคอร์รัปชัน (ประเทศไทย)

วันที่ ๒๕ เดือน ธ.ค. ปี ๖๔

บ้านเลขที่..... ตำบล/แขวง.....

อำเภอ/เขต.....จังหวัด.....

ประเทศ.....

ลงนาม.....

(นายวิชา เมฆตระการ)

ตำแหน่ง ผู้สังเกตการณ์ข้อตกลงคุณธรรม

หน่วยงาน องค์กรต่อต้านคอร์รัปชัน (ประเทศไทย)

วันที่.....เดือน.....ปี.....

บ้านเลขที่..... ตำบล/แขวง.....

อำเภอ/เขต.....จังหวัด.....

ประเทศ.....

ลงนาม.....

(นายอมรพงษ์ เกตุปมา)

ตำแหน่ง ผู้สังเกตการณ์ข้อตกลงคุณธรรม

หน่วยงาน องค์กรต่อต้านคอร์รัปชัน (ประเทศไทย)

วันที่ 28 เดือน ธ.ค. ปี 64

บ้านเลขที่..... ตำบล/แขวง.....

อำเภอ/เขต.....จังหวัด.....

ประเทศ.....

ลงนาม.....

(ดร.ศศิชา สืบแสง)

ตำแหน่ง ผู้สังเกตการณ์ข้อตกลงคุณธรรม

หน่วยงาน องค์กรต่อต้านคอร์รัปชัน (ประเทศไทย)

วันที่.....เดือน.....ปี.....

บ้านเลขที่..... ตำบล/แขวง.....

อำเภอ/เขต.....จังหวัด.....

ประเทศ.....

ลงนาม.....

(นายสมศักดิ์ สิทธิชาญคุณะ)

ตำแหน่ง ผู้สังเกตการณ์ข้อตกลงคุณธรรม

หน่วยงาน องค์กรต่อต้านคอร์รัปชัน (ประเทศไทย)

วันที่ 28 เดือน ธ.ค. ปี 64

บ้านเลขที่..... ตำบล/แขวง.....

อำเภอ/เขต.....จังหวัด.....

ประเทศ.....

Attachment IX - Cost Breakdown

Please refer to Attachment IX in Excel format in Tender Documents

Attachment IX - Cost Breakdown

Aircraft Cost Breakdown			
PERMANENT HELICOPTER TYPE:			
Cost breakdown per HELICOPTER		PERMANENT HELICOPTER No. 1	PERMANENT HELICOPTER No. 2
		USD	USD
A. Flying Hourly Charge - per hour per helicopter			
1. Power By the Hour (PBH) Rates	Helicopter	0.00	0.00
	Engine	0.00	0.00
2. Any Mature Maintenance/Engine Restoration not included in PBH		0.00	0.00
- Dynamic Components Repair & Overhaul		0.00	0.00
- Life Limited Parts		0.00	0.00
- Engine restoration costs		0.00	0.00
3. Consumables		0.00	0.00
4. Landing and Parking Fees and Other Levys		0.00	0.00
- Luggage Tag		0.00	0.00
- Navigation Charges		0.00	0.00
- Landing Fees		0.00	0.00
- Parking Fees		0.00	0.00
5. Others		0.00	0.00
TOTAL FLYING HOUR CHARGE PER FLIGHT HOUR		0.00	0.00
B. Monthly Standing Charge - Annual per helicopter			
1 a. Pilot salaries	No. of Pilots: _____	0.00	0.00
b. Co-pilot salaries	No. of Co-Pilots: _____	0.00	0.00
c. B1 Engineer salaries	No. of B1 Engineers: _____	0.00	0.00
d. B2 Engineer salaries	No. of B2 Engineers: _____	0.00	0.00
e. Operational and Admin Staff salaries	Please specify position and no.	0.00	0.00
f. Other employees	Please specify position and no.	0.00	0.00
2. Base Costs (details shown in attached link)		0.00	0.00
3. Training			
	Pilots Recurrent	0.00	0.00
	Pilots Initial	0.00	0.00
	Co-Pilots Recurrent	0.00	0.00
	Co-Pilots Initial	0.00	0.00
	B1 Engineers Recurrent	0.00	0.00
	B1 Engineers Initial	0.00	0.00
	B2 Engineers Recurrent	0.00	0.00
	B2 Engineers Initial	0.00	0.00
	Others	0.00	0.00
4. Computerized maintenance/operational system		0.00	0.00
5. Others		0.00	0.00
SUB TOTAL - per helicopter per year (no finance or insurance)		0.00	0.00
4. Helicopter Cost and Insurance			
Helicopter Lease/Depreciation Costs		0.00	0.00
Third Party Legal Liability		0.00	0.00
Other Insurance		0.00	0.00
SUB TOTAL - Aircraft and Insurance		0.00	0.00
C. Other Operational Costs			
5.Corporate Overhead		0.00	0.00
SUB TOTAL - Annual other operational costs		0.00	0.00
TOTAL MONTHLY STANDING CHARGE PER YEAR PER HELICOPTER		0.00	0.00
D. Mark - Up			
Profit Element		0.00	0.00
TOTAL MONTHLY STANDING CHARGE PER YEAR PER HELICOPTER + PROFIT		0.00	0.00
MONTHLY STANDING CHARGE PER HELICOPTER		0.00	0.00

E. Mobilisation / Demobilisation		PERMANENT HELICOPTER No. 1	PERMANENT HELICOPTER No. 1
1. Mobilisation fee per helicopter			
- Shipping Costs		0.00	0.00
- Customs Clearance		0.00	0.00
- Insurance		0.00	0.00
-Taxes Levied directly on Price		0.00	0.00
-Profit		0.00	0.00
TOTAL MOBILIZATION PER YEAR PER HELICOPTER		0.00	0.00
2. De-Mobilisation fee per aircraft			
- Shipping Costs		0.00	0.00
- Customs Clearance		0.00	0.00
- Insurance		0.00	0.00
-Taxes Levied directly on Price		0.00	0.00
-Profit		0.00	0.00
TOTAL DEMOBILIZATION PER YEAR PER HELICOPTER		0.00	0.00
TOTAL MOB/ DEMOB PER YEAR (incl. Profit, Taxes)		0.00	0.00

NOTE:

1. It is mandatory to complete all sections of the table either with a figure or an N/A
2. This cost breakdown shall include in Volume II - Commercial Proposal only

Base Cost Breakdown

	Per Year	Per Year
Base	**Songkhla**	**Total**
A. Hangar		
Utilities (Annual)	0	0
Insurance (Annual)	0	0
Total Hangar Costs	**0**	**0**
B. All Workshop and Engineering Office Support Facilities		
Utilities (Annual)	0	0
Insurance (Annual)	0	0
Total Workshop and Engineering Office Support Costs	**0**	**0**
C. Airport Facilites and Operations Management		
Check - In Cost (Annual)	0	0
Aviation Documents	0	0
Passenger Handling Fees (Annual)	0	0
Utilities (Annual)	0	0
IT Hardware (Annual)	0	0
IT Software (Annual)	0	0
Office Consumables (Annual)	0	0
Other (Annual)	0	0
Total Airport Facilites and Operations Management Cost	**0**	**0**
D. Tooling and GSE and Consignment Stock		
Helicopter Special Tooling for operation	0	0
Ground Support Equipment	0	0
Consignment Stock	0	0
Spares	0	0
Total Tooling, GSE and Consignment Stock Costs	**0**	**0**
TOTAL BASE COSTS PER YEAR	**0**	**0**

NOTE:

1. It is mandatory to complete all sections of the table either with a figure or an N/A, except any cells that have been blacked out.
2. This cost breakdown shall include in Volume II - Commercial Proposal only

ASSUMPTIONS/DEFINITIONS

Instructions for Completion of Aircraft Cost Pricing

1) **Please complete the commercial schedules contained herein to generate a price for provision of the SERVICES**
2) **Definitions and guidance text is detailed below**
3) **For each of the options, the Tab titled 'Base Cost' should be completed first, this will autopopulate the base cost element in the 'Aircraft Cost' Tab**
4) **For each of the options, the Tab titled 'Aircraft Cost' should be completed second**
6) **Where detail is indicated or requested, please complete the details in Column E along with any response comments or provide attachments**

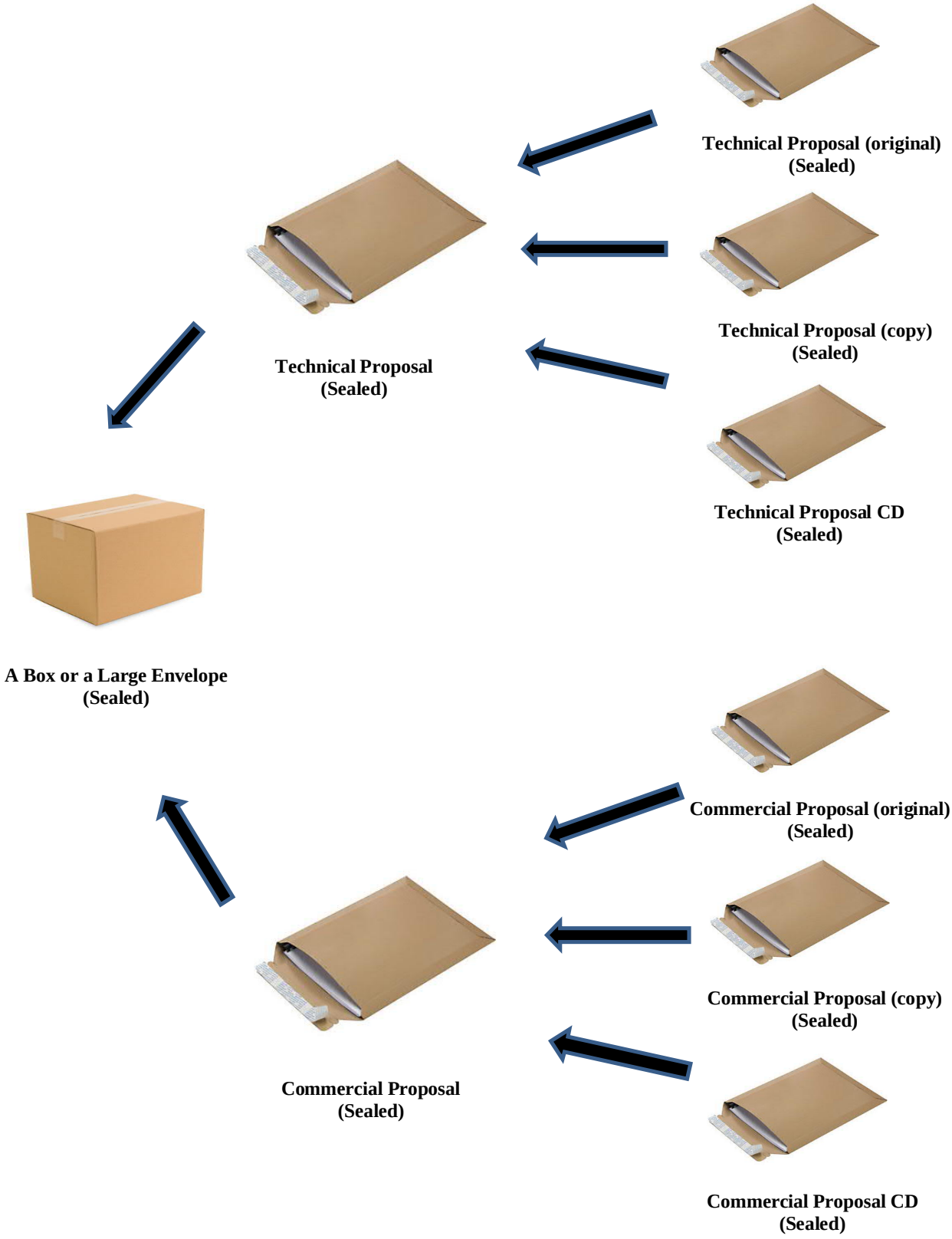
Guidance Notes for "Base Costs"		
Term / Cost Element		**Operators Response/Comments/Detail**
A. Hangar		
- Rent (Annual)	Provide details of Hangar rental or a contributon to Hangar costs if you own the hangar	
- Municipal Taxes (annual)	Enter details of any Municipal Taxes that have to be paid on the hangar	
- Utilities (Annual)	Enter the cost of Hangar Utilities (Water, Gas or electricity)	
- Insurance (Annual)	Enter details of the insurance costs for the hangar	
B. All Workshop and Engineering Office Support Facilities		
- Rent (Annual)	Enter the cost of rent for any Hangar workshops and engineering offices utilised at the base for the operation if not already included in Hangar costs	
- Municipal Taxes (Annual)	Enter details of any Municipal Taxes that have to be paid on the Hangar Workshops and Engineering offices if not already included in Hangar costs	
- Utilities (Annual)	Enter the cost of Hangar Workshop and engineering offices Utilities (Water, Gas or electricity) if not already included in hangar costs	
- Insurance (Annual)	Enter the annual cost of any Hangar Workshop and engineering officeinsurance if not already included in Hangar costs	
C. Airport Facilities and Operations Management		
- Check-in costs (Annual)	Enter any costs that you have for providing Check-in facilities. Do not include Check-in Staff salaries	
- Aviation Documents and manuals (Annual)	Enter the estimated annual cost of the provision of Publications either regulatory publications (AIC, AIP, etc) or company Publications (Ops / Maintenance Manuals etc.)	
- Passenger Handling fees (Annual)	Enter The estimated cost of Passenger handling charges at the base	
- Rent (Annual)	Enter the cost of rent for any offices utilised at the base for the operation	
- Municipal Taxes	Enter details of any Municipal Taxes that have to be paid on the Operational offices	
- Utilities (Annual)	Enter the cost of Office Utilities (Water, Gas or electricity)	
- IT hardware (Annual)	Enter and detail the annual contribution towards the cost of any IT hardware utilised on the contract at the base	
- IT Software (Annual)	Enter and detail the annual contribution towards the cost of any IT software used at the base (FDM, Operations Management Programmes, Safety Management Systems, Maintenance programmes etc.)	
- Office consumables (Annual)	Enter the annual cost of office consumables (Pens, Paper, Printer Cartridges etc.)	
- Other (Annual)	Enter and detail any other annual costs that you incur on the base in the operations offices	
D. Tooling and GSE and Consignment Stock		
- Cost of Aircraft Special Tooling	Enter and detail the annual contribution towards the cost of Aircraft Special Tools and general tooling held at the base	
- Ground Support Equipment Costs	Enter the annual contribution towards the cost of GSE held at the base	
- Consignment Stock	Enter the annual contribution towards the cost of any Consignment stock that you hold on behalf of the Manufacturer if any.	
- Spares	Enter the annual contribution towards the value of the aircraft spares held at the base	

Guidance Notes for "Aircraft Cost" Tab		
VARIABLE (Hourly) COST		
POWER BY THE HOUR (PBH) Rates		
AirFrame	If the Aircraft is being supported either partially or fully by the OEM for the purposes of maintenance and spares, insert the PBH rate being applied and basis of the calculation. Note. This should include any other costs that you may have that are part of the hourly rate i.e. Avionics PBH, Duties and VAT on spares imports, Contribution to sheduled major inspections etc.	
Engine	If the Engines are being supported partially or fully by the OEM for the purposes of maintenance and spares, insert the PBH rate being applied and basis of the calculation	
Consumables	Detail the cost of consumables not included in PBH and basis of the calculation	
Maintenance not included in PBH		
Dynamic Components Repair & Overhaul	If there is only partial or no PBH on the Airframe then this line should contain the hourly cost of Dynamic Componenents repair and overhaul (Excluding Engine components)	
Life Limited Parts	If there is only partial or no PBH on the Airframe then this line should contain the hourly cost of life limited parts	
Engine restoration costs	if there is only partial or no PBH on the Engine then this line should contain the hourly cost of Engine Repair and Overhaul	
Landing and Parking Fees and Other Levys		
Landing Fees	Detail the hourly contribution to Landing fees at the base	
Navigation Charges	Detail the hourly contribution to Navigation fees at the base	
FIXED (Annual) COST		
SALARIES		
Crew salaries	Identify the annual cost of Salary and any Benefits along with the number of Captains and Co-Pilots being used per airframe and the value of the wages of each professional without taxes (base salary + Benefits and Company costs)	
Engineering salaries	Identify the annual cost of Salary and any Benefits along with the number of Engineers being used per airframe and the value of the wages of each professional without taxes (base salary)	
Operational and Admin Staff salaries	Identify the annual cost of Salary and any Benefits along with the number of Operational and Admin Staff being used per airframe, and the value of the wages of each employee without taxes (base salary)	
Other employees	Identify the annual cost of Salary and any Benefits along with the number of other employees being used per airframe and the value of the wages of each employee without taxes (base salary)	
Training		
Pilots Recurrent	Detail all training costs along with number of pilots and the Operators policy for recurrent training (This must include Simulator costs, Accommodation and Travel costs for all pilots and the accompanying training Captain)	
Pilots Initial (if applicable)	Detail any initial training anticipated for this project, why and the number of pilots to be processed through the initial training phase	
Engineers Recurrent	Detail any training costs along with number of Engineers and the Operators policy for recurrent training	
Engineers Initial (if applicable)	Detail any initial training anticipated for this project, why and the number of engineers to be processed through the initial training phase	
Other Training	Detail any other training costs by type of training, the discipline to be trained and the number of personnel (HUET, DG etc.)	

Base Costs		
Base Costs	Provide the total base costs from the Base Cost sheet here	
Aircraft Cost and Insurance		
Insurance	Detail actual cost of annual premium in each of categories below:	
Aircraft	Aircraft Hull costs (Annual)	
Third Party Legal Liablity	Detail all third party and other legal liablity costs (Annual)	
Other Insurance	Detail any other insurance the Operator will be charging (Annual)	
Aircraft Leasing/Rental	Provide the details of the calculation of this annual amount. Lease or Capital Value/Residual Value and Depreciation Policy	
Other Operational Costs		
Overheads	Insert the annual overhead costs. Provide a breakdown of the elements included in this figure (Annual)	
Profit Element	Provide details of the profit calculation or the fixed amount being applied	
Mobilisation/Demobilisation		
Mobilisation fee per aircraft		
Shipping Costs	If mobilisation is being indicated, provide the cost and details on whether the Aircraft is being transported by air, marine vessel or other means	
Customs Clearance	Provide details on the breakdown of costs related to the clearance of the aircraft throigh customs into Myanmar	
Insurance	Provide details on the insurance costs during the transit of the aircraft into country	
Profit and Taxes		
Profit	Provide details of the profit calculation or the fixed amount being applied	
Taxes Levied on Price	Provide details of the type of taxes being levied and the % being applied	
De-Mobilisation fee per aircraft		
Shipping Costs	Provide the cost and details on whether the Aircraft is being transported by air, marine vessel or other means	
Customs Clearance	Provide details on the breakdown of costs related to the clearance of the aircraft through customs out of Myanmar to its final destination	
Insurance	Provide details on the insurance costs during the transit of the aircraft to its destination	
Profit	Provide details of the profit calculation or the fixed amount being applied	
Taxes Levied on Price	Provide details of the type of taxes being levied and the % being applied	

APPENDIX II

HOW TO SUBMIT TENDER



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

NAME OF TENDERER

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

CALL FOR TENDER NO: THC21-5493

COMMERCIAL PROPOSAL or TECHNICAL PROPOSAL *(Please specify)*

"**NOT TO BE OPENED**"

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

NAME OF TENDERER
ADDRESS OF TENDERER

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

CALL FOR TENDER NO: THC21-5493

"**NOT TO BE OPENED**"

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

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

(PTTEP'S MAILROOM, PARKING 2)

ANNEXES

ANNEX I

FORM OF LETTER OF ACKNOWLEDGMENT

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

QUOTE

Date:

Subject: Call for TENDER No: **THC21-5493**
Provision of 5-Year Helicopter Services for Offshore Operating Assets

Dear Sirs,

We acknowledge receipt of your invitation for TENDER and the TENDER DOCUMENTS for the above mentioned Call for TENDER and are in possession of all documents listed therein which were received on ……..…

We hereby agree to keep all information contained in the TENDER DOCUMENTS strictly confidential, and will not disclose or communicate such information to any third parties without prior approval from you.

We acknowledge that any breach of this undertaking will not only result in disqualification, but may also affect any possible future works or services with you.

*<Remark: **Delete (*) which is not applicable**>*

(*) We hereby accept to respond to your invitation and to submit our TENDER not later than the Closing Date and Time and we agree to comply with your INSTRUCTIONS TO TENDERERS.

The person responsible for this job in our organization is:

Mr. / Ms. : .....
Position : .....
Company Name : .....
Address : .....
.....
Telephone : .....
Fax : .....
Email : .....

(*) We hereby decline your invitation and return all your TENDER DOCUMENTS herewith, in accordance with your instructions. Reason for declining: ……

UNQUOTE

ANNEX II

FORM OF LETTER OF SUBMISSION

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

QUOTE

Date:

Subject: Call for TENDER No: **THC21-5493**
Provision of 5-Year Helicopter Services for Offshore Operating Assets

Dear Sirs,

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

◉ Our TENDER is in full compliance with the terms and conditions set forth in the TENDER DOCUMENTS.

○ Our TENDER contains modifications/exceptions to the following terms and conditions, all of which are provided in the separate exception documents:

- ☐ Technical requirements/specifications
- ☐ Commercial terms and conditions
- ☐ Contractual terms and conditions
- ☐ Pricing structure

We agree to keep our TENDER valid for a period of **ten (10) months** from the closing date and time stipulated in Section 2 of the INSTRUCTIONS TO TENDERERS and it shall remain binding upon us and may be accepted by you at any time before the expiration of such period.

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

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

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

UNQUOTE

ANNEX III

EXCEPTION/DEVIATION SHEET (UNPRICED)

As per Section 9 of the INSTRUCTIONS TO TENDERERS, TENDERER shall clearly specify the items which do not comply with COMPANY's technical, contractual or commercial requirements and shall indicate in this Exception/Deviation Sheet (Unpriced) the incidence, if any, on time and prices to be in full conformity with the TENDER DOCUMENTS.

The Exception/Deviation Sheet (Unpriced), to be prepared as per the template below, shall be submitted as Section 12 of Volume I - Technical Proposal.

#	Reference Document /Section No.	Proposed Exception/Deviation	Reason for Exception/Deviation	(A) Impact to Schedule (Y/N)	(B) Impact to Contract Cost (Y/N)	(C) Cost Impact is quantifiable (Y/N)	(D) Increase or Decrese in Contract Cost if to withdraw this exception & comply with COMPANY's requirements
TECHNICAL EXCEPTIONS							
1							
2							
…							
CONTRACTUAL EXCEPTIONS							
1							
2							
…							
COMMERCIAL EXCEPTIONS (NO PRICE QUOTED)							
1							
2							
…							

ANNEX IV

EXCEPTION/DEVIATION SHEET (PRICED)

Reference is made to the Exception/Deviation Sheet (Unpriced) (Annex III). In case TENDERER submits the Exception/Deviation Sheet (Unpriced) as part of its Technical Proposal, TENDERER is required to prepare the Exception/Deviation Sheet (Priced) specifying the Cost Impact Amount incurred if to withdraw the exceptions and fully comply with COMPANY's requirements. The Cost Impact Amount shall be specified in relation to **each** exception item identified as having Impact to Contract Cost and Cost Impact is quantifiable.

The Exception/Deviation Sheet (Priced), to be prepared as per the template below, shall be submitted as Section 3 of Volume II - Commercial Proposal.

Important Note: *For the purpose of commercial bid evaluation, COMPANY reserves the right to add in costs for the items which TENDERER **does not** specify the Cost Impact Amount or identify as unquantifiable cost impact items, as seen appropriate.*

#	Reference Document /Section No.	Proposed Exception/Deviation	Reason	Impact to Contract Cost? (Y/N)	Cost Impact is quantifiable? (Y/N)	Increase or Decrese in Contract Cost if to withdraw this exception & comply with COMPANY's requirement	Cost Impact Amount (USD)
TECHNICAL EXCEPTIONS							
1							
2							
…							
CONTRACTUAL EXCEPTIONS							
1							
2							
…							
COMMERCIAL EXCEPTIONS							
1							
2							
…							

PART II

FORM OF CONTRACT

(This part contains 280 pages in total)