




PURUSA PROJECT DEVELOPMENT

PROJECT EXECUTION PLAN

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PROVISION OF EPCI SERVICE FOR WELLPAD C&D INTRA-FIELD FLOWLINE PROJECT		CONTRACT NO. : ABC-XX-XX					
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COMMENT REVIEW SHEET

No	Section/Page Ref.	MEL Comments	Contractor Response	Remarks

REVISION DETAIL TABULATION

DATE	PAGE	REVISION	REVISION DETAILS

TABLE OF CONTENTS

1	GENERAL	5
1.1	PROJECT DESCRIPTION	5
1.2	PURPOSE	6
1.3	REFERENCE	6
1.4	DOCUMENT ORDER OF PRECEDENCE	6
1.5	DEFINITION	7
1.6	ABBREVIATION	7
2	PROJECT SCOPE	9
3	GENERAL PROJECT ARRANGEMENT	10
3.1	PROJECT OFFICE AND WORK SITE	10
3.2	INTERFACE MANAGEMENT	10
4	PROJECT SCHEDULE	11
5.	PROJECT EXECUTION	11
5.1	CONTRACTOR PROJECT Organization	11
5.1.1	ROLES & RESPONSIBILITIES	12
•	PROJECT MANAGER	12
•	PROJECT ENGINEER	12
•	ENGINEERING MANAGER	12
•	CONSTRUCTION MANAGER	12
•	HSSE COORDINATOR	12
•	PROCUREMENT LEAD	13
•	PROJECT CONTROL	13
•	QA/QC LEAD	13
•	PRE-COMMISSIONING LEAD	13
6.	GENERAL ADMINISTRATION AND COORDINATION	13
6.1	ADMINISTRATION	13
6.2	COMMUNICATION	14
6.3	MEETINGS	15
6.4	REPORTS	15
6.5	DOCUMENT TRANSMITTAL AND CONTROL	16
7	PROJECT QUALITY MANAGEMENT	16
8.	HEALTH, SAFETY, SECURITY AND ENVIROMENTAL MANAGEMENT (HSSE)	16
8.1	CONTRACTOR'S COMMITMENT	16
8.2	HSSE MANAGEMENT TEAM	17
8.3	RISK IDENTIFICATION AND ASSESSMENT	17
9	ENGINEERING	17

10 PROCUREMENT	18
10.1 PROJECT MATERIALS	18
10.2 SOURCING	18
10.3 EVALUATION & PO PROCESS	19
10.4 EXPEDITING	19
10.5 LOGISTIC	20
10.6 TOP-UP ORDERS	20
11 MATERIAL MANAGEMENT	20
11.1 MATERIAL CONTROL	20
11.2 STORAGE	21
11.3 MATERIAL REQUESTS FOR CONSTRUCTION	21
12 SUBCONTRACT PLAN	21
13 RESOURCES PLAN	22
MANPOWER	22
CONSTRUCTION EQUIPMENTS	22
14 CONSTRUCTION WORK STRATEGY – SUMMARY	23
15 ATTACHMENTS	25
ATTACHMENT 1: PROJECT & ENGINEERING OFFICE LAYOUT	25
ATTACHMENT 2: SITE OFFICE LAYOUT	25
ATTACHMENT 3: FABRICATION SHOP LAYOUT AT BALARAJA, TANGERANG	25
ATTACHMENT 4: CONTRACTOR PROJECT ORGANIZATION CHART	27

1.1 PROJECT DESCRIPTION

The general scope of work for each Company and Contractor can be described including map of location, main process to be done.

For example :

Sample Energy Pte. Ltd. (Company) is operator of the Purusa Fiels Field near Riau, Sumatra. The field comprises two wellpads (1&2) and the Early Production Facility (EPF). The produced fluids are oil, associated gas and produced water. Production from Wellpads 1 and2 began in the 3th quarter XXXX.

New pipelines are required to connect Wellpads 3 and 4 with the ORF. New well testing facilities are required since the number of production wells will increase. Production from Wellpad 3 will be routed to Wellpad 1 and share a common pipeline to the ORF. Wellpad 4 will have a new independent pipeline connecting to the ORF, about 10 km away.

PT. JAYA PERKASA SAMPLE(henceforth referred as “CONTRACTOR”) has been awarded an EPCI contract for Wellpad 3&4 Intra-field Flowline Project.



(Location Map - Purusa Block)

1.2 PURPOSE

Project Execution Plan (PEP) describes all aspects of the project to be implemented, monitored and controlled. It covers topics including scope definition, area of responsibility, organization, execution strategy, workflow monitoring, and invoicing.

1.3 REFERENCE

The following documents are referred in this document.

	DOC NO.	REV.	DOCUMENT TITLE
A. Indonesian Acts and Regulations			
[A1]	-		As Applicable for Project
B. Project Documents (Specifications, Datasheets, Drawing, MR/MTO etc.)			
[B1]	-		
C. COMPANY Specification			
[C1]	Appendix O Section 2 –	-	Scope of Work
[C2]	Appendix O Section 2a – Annex B	0	Service to Company
[C3]	Appendix O Section 2a – Annex D	-	Project Milestone Schedule
[C4]	PUR-GE-SP-20-010-0001	0	Wellpad 3 & 4 EPCI Deliverable Specification
[C5]	PUR-HSE-STD-00-000-001	1	HSE Management Standard
[C6]	PUR-HSE-STD-00-000-010	1	Engineering and Project HSE Management Standard
[C7]	PUR-PRJ-PRO-20-000-004	0	Project Planning & Scheduling Development Procedure
[C8]	PUR-PRJ-PRO-20-000-005	0	Change Order Procedure
[C9]	PUR-GEN-PRO-00-000-004	A	Information Delivery and Handover Procedure
D. International Codes and Standards			
[D1]]	-		
[D2]	-		

1.4 DOCUMENT ORDER OF PRECEDENCE

All WORKS shall be performed in accordance with the following order of precedence of the following codes and standards:

- Indonesian Act and Regulations.
- Project Specification and Datasheet.
- COMPANY Specification
- Internationally recognized Codes and Standards.
- Good engineering practice.

In case of conflict between the requirements of this specification with its attachments and the referenced specifications or codes and standards, CONTRACTOR/VENDOR shall bring the matter to the COMPANY's attention for resolution and Approval.

It is CONTRACTOR's/VENDOR's responsibility to present the issues and/or differences among the codes and standards above to the COMPANY for resolution. The more stringent requirement shall prevail unless otherwise advised by COMPANY.

Any latest amendments / new additions to the standard and regulation shall be incorporated.

1.5 DEFINITION

In and throughout this document, unless the context otherwise requires, the following definitions apply:

COMPANY	: COMPANY ENERGY SAMPLE PTE. LTD
CONTRACTOR	: PT. JAYA PERKASA SAMPLE
SUB CONTRACTOR/ VENDOR/SUPPLIER	: Party which supplies equipment/materials or services specified and ordered by CONTRACTOR (or COMPANY). Vendor Covers "Manufacturer"
Shall	: Means absolute requirement to be followed strictly in order to conform the philosophy
Should	: Means recommendation, alternative solutions having the same functionality and quality are acceptable
May	: Means course of action that is permissible within the limits of the philosophy

1.6 ABBREVIATION

Abbreviation	Description
3LPE	Three Layer Poly Ethylene
ANSI	American National Standards Institute
AOTS	Purusa Oil Transportation System
API	American Petroleum Institute
CIPS	Close Interval Potential survey
CP	Cathodic Protection
CPS	Central Production Station
CS	Carbon Steel

CSE	Copper Copper Sulphate Standard Reference Electrode
DCVG	Direct Current Voltage Gradient
EPCI	Engineering, Procurement, Construction and Installation
ORF	Onshore Receiving Facility
ERP	Electrical Resistance Probe
FEED	Front End Engineering Design
FBE	Fusion Bonded Epoxy
FJC	Field Joint Coating
HC	Hydrocarbon
HDD	Horizontal Directional Drilling
ID	Inside Diameter
ISO	International Organization for Standardization
MEI	Meindo Elang Indah
MEL	Mandala Energy Lemang
NPS	Nominal Pipe Size
OD	Outer Diameter
ROW	Rights of Way
SP	Standard Practice
TBC	To Be Confirmed
TP	Test Point
TQ	Technical Query
WT	Wall Thickness

2 PROJECT SCOPE

CONTRACTOR scope of work covers engineering (detail engineering, construction engineering, and as built), management services, procurement of materials and bulk materials, fabrication, installation and pre-commissioning, and assistance for commissioning.

- **Scope Summary:**

Detail Engineering:

- Management Services and Detail Engineering including but not limited to
 - Update FEED engineering documents as described in the Annex A EPCI Deliverable Specification.
 - Perform detailed engineering calculations and generation of AFC engineering documents
 - Prepare WPS
 - Preparing As Built documentation, Final Dossier/ Documentation.

Procurement:

- Supply all materials required for the performance of the Work which not included in the Section 2B COMPANY Furnished Materials
- Supply of bulk materials and consumables for fabrication & construction including materials for testing, pre-commissioning, commissioning and start up spares.
- Inspection, co-ordination, acceptance and handover, loading, unloading, handling, storage, maintenance, and transportation of COMPANY Furnished Material from COMPANY's staging area to fabrication yard and work site, and including transportation of reconciliation materials and surplus to COMPANY's staging area.

Fabrication:

- Perform all fabrication and assembly Work for Well Pad 3 & 4 facilities including manifolds and its structure, and pipes & tubing supports as per approved drawings and procedures, and inspection of the fabricated components.
- Perform NDT as per Code & Standard for all welds.
- Perform hydrostatic test as per approved procedure.
- Loading, handling, storage, maintenance, unloading and transportation of fabricated manifolds and its structure from fabrication yard to work site.

Construction & Pre-Commissioning

- Mobilization / demobilization of personnel, construction equipment and materials required to complete the work as detailed in the Scope of Work
- Installation of Wellpad C Flowlines and facilities
- Installation scope of Wellpad D Flowlines and Facilities
- Intra-field Pipelines
- Providing, maintaining and operating temporary construction facilities on site.
- Restoration/Reinstatement and cleaning up the site after completion of work
- Supply all utilities for the work performance such as water, electricity, diesel oil, fuel, lube oil, nitrogen for leak test including all equipment, materials and consumables.

- Provide all facilities and accommodation for the CONTRACTOR personnel including Vendor personnel during site work performance. CONTRACTOR planned utilize his BGP facilities located around 20 Km from Purusa Field.

Commissioning

- The COMPANY will lead the commissioning and start-up of the facilities with assistance from the CONTRACTOR.

3 GENERAL PROJECT ARRANGEMENT

3.1 PROJECT OFFICE AND WORK SITE

The Project & Engineering office for the execution of the project will be located at:

PT JAYA PERKASA SAMPLE
JAYA SAMPLE Tower One, 80th Floor
JI Sudirman, Jakarta 10220
Phone : +62-21-29XXXXXX
Fax. : +62-21-XXXXXX

Site Office for this project will be set-up and located at:

7 KM away from COMPANY staging area on the rental land at Purusa Field
RIAUi, Sumatra

Fabrication Shop & CONTRACTOR's accommodation Camp:

PT JAYA PERKASA SAMPLE Camp
Dusun Riau jaya sample RT14,
Riau

Please refer to attachment 1 for Project & Engineering Office Layout

Please refer to attachment 2 for Site Office Layout

Please refer to attachment 3 for Fabrication Shop Layout at Balaraja, Tangerang

3.2 INTERFACE MANAGEMENT

It is important to manage flow of information between the Parties in a timely manner for smooth execution of project.

Interfaces will be managed by CONTRACTOR project management and construction management team at sites.

CONTRACTOR shall manage the interfaces involved with provision of the Work and ensure that all interface data and equipment are supplied in accordance with its responsibilities. Some of the interfaces are as follow:

- Interface between CONTRACTOR & COMPANY

- Interface between CONTRACTOR and COMPANY's Vendor for COMPANY's supplied materials.
- Interface between CONTRACTOR and appointed Classification / Certification Agency.
- Interface between CONTRACTOR and other parties (PT WKS, government, other private companies, local community).
- Traffic management interface

4 PROJECT SCHEDULE

In reference to **APPENDIX O - ANNEX D**, Key Milestones which will be referred for this project is as mentioned below:

M #	KEY EVENT MILESTONE	ACTIVITY
M-0	ED + 2 weeks	Mobilization of Project PMT Key Personnel & Project Kick off Meeting is commenced
M-1	ED + 2 Months	Early Works: Commenced (Foundation Manifold & WHCP) for Wellpad C
M-1.0	ED + 6 months	Early Works: Completed (Foundation Manifold & WHCP) for Wellpad D
M-1.1	ED + 3 months	Early Works: Pre-fabricated Manifold Completed
M-1.2	ED + 3 months	Early Works: Wellpad C Manifold Installation Completed
M-1.3	ED + 6 months	Early Works: Wellpad D Manifold Installation Completed
M-2	ED + 3 months	Commencement of Piling Work at Wellpad C
M-3	ED + 4 months	Commencement of Piling Work at Wellpad D
M-4	ED + 7 months	Wellpad C – Precommisisoning handover of all systems complete & Issue Mechanical Completion Certificate
M-5	ED + 11 months	Wellpad D – Precommisisoning handover of all systems complete & Issue Mechanical Completion Certificate

Please refer to attachment 4.3.6 of the bid submission for CONTRACTOR detailed Project Schedule Level -3 which is prepared by referring to these above milestones.

5. PROJECT EXECUTION

5.1 CONTRACTOR PROJECT ORGANIZATION

Please refer to attachment 4 for CONTRACTOR Project Organization Chart

CONTRACTOR Project Team will be led by CONTRACTOR Project Manager as a CONTRACTOR representative who will be responsible for all project related matters. He will be responsible for all information exchange between COMPANY and CONTRACTOR including filtering and disseminating information to his project team.

His project team will assist him during the execution of the project.

5.1.1 Roles & Responsibilities

- Project Manager

Accountable to provide operating input and resources, coordinates the business case and is focal point for communication with management level.

Project Manager shall be responsible, to manage the entire project for execution of the Work. His work includes the planning, coordinating, scheduling and cost control of the project, including setting of the priorities and allocation of manpower to assure all required technical, engineering, cost and safety standards are fulfilled and project objectives achieved.

The Project Manager shall have access and authority to take any action required in maintaining project performance across project organization elements, such as Engineering, Procurement, and construction.

The Project Manager shall have excellent interpersonal, written, and oral communication skills and superior planning and organizational skills.

- Project Engineer

The Project Engineer will assist Project Manager in all aspect during execution of the project including resolving of all technical issues.

- Engineering Manager

The Engineering Manager with support from discipline engineers shall be responsible to review all detail engineering document provided by COMPANY and assist the construction engineering team to implement all design drawing during construction execution.

The Engineering Manager shall be proactive to discuss all engineering issues during construction process related to detail design engineering with COMPANY to find the way out for the benefit of all parties in reference to the applicable code and standard

The Engineering Manager shall have excellent interpersonal, written, and oral communication skills and superior planning and organization skills & International experience is desirable.

- Construction Manager

Construction Manager is responsible for all construction activities at site including work planning and ensures all the works are in line with project work plan and COMPANY specification. He is also responsible to implement health, safety, security and environment management plan.

Construction Manager will also provide constructability input during the development of the design drawings for the Work, if required by CONTRACTOR. Development of construction execution plan which consist of work sequences, methods, schedule, manpower loading, procedures and task sheets.

- HSSE Coordinator

The HSSE Coordinator will have the overall responsibility of all Health Safety Security and Environment related activities for the project. He will arrange for necessary HSSE training to CONTRACTOR's personnel. The HSSE Coordinator will coordinate with the Project Manager and Construction Manager to ensure adequate precautions and care are being taken during the project execution for the safety of people. He will also be responsible for all HSSE related documentation for the project.

Assist & Support Project Manager to understand and responsible for the compliance of HSSE Policies and Plan of the COMPANY and or COMPANY to employee so they shall build the skill and ability to be always alerted in providing and maintaining Health, Safety, Security and environment protection in their working locations.

- Procurement Lead

Reporting to the Project Manager, the Procurement Lead is responsible for Planning and staffing procurement team, Establishing purchasing, expediting and transportation control procedures and Planning, organizing, monitoring and controlling procurement activities as per project objectives responsibilities shall begin from the engineering phase of the project and continue until the completion of the project.

- Project Control

Establish the procedures for Progress, Cost and Material to ensure the implementation in line with procedures.

To make sure that milestone on baseline project and update schedule are as per contract Key dates.

To prepare and update project measurement procedure based on contract scope of works.

Ensure the following activities which is done by project control personnel:

- Prepare and Update of Master Schedule and Detail schedule in project
- Prepare and Develop of Engineering, Procurement and Construction Progress Report / Status,
- S-Curve and Resources Load
- Analyzing, Identifying problems and Coordination meeting with related internal Discipline Department and COMPANY/CONTRACTOR.

- QA/QC Lead

Reporting to the Project Manager, the QA/QC Lead will be responsible for establishing QA/QC related procedures for the project. He shall ensure that all necessary engineering, procurement and construction related codes and standards are being followed in the project. The QA/QC Coordinator is also responsible for coordinating inspection activities with Procurement, Project & Company representatives.

Coordinate and monitor the scope of work QA / QC Inspector, NDT Coordinator, Material Inspector, QC Engineer and Document Control in accordance with the ITP and QA / QC procedures are in the Project Requirements.

Coordinate NDT Subcontractor to comply with and support the work activities of the QA / QC Department.

- Pre-Commissioning Lead

The pre-commissioning lead will ensure that all pre-commissioning & commissioning related activities are carried out successfully. He will coordinate with project manager, construction manager and his own team for coordination of activities in accordance with the project execution plan. He will ensure following of proper documentation procedure at each and every stage of the project pre-commissioning.

6. GENERAL ADMINISTRATION AND COORDINATION

6.1 ADMINISTRATION

All formal correspondence, including letters, transmittals and instructions will be addressed to respective Project Managers and signed by respective Project Managers or their assignee.

Project correspondence filing, issuance of project notes, MOMs, letters, weekly reports, monthly reports, and other project deliverables will be handled by Document Control.

Incoming and outgoing correspondence shall have their reference numbers (as per the correspondence identification/ numbering system) and shall be entered into their respective registers before transmitting and distribution. The correspondence registers will be maintained by Document Control

6.2 COMMUNICATION

All documents shall be written in English language, and shall bear the Contract reference.

All internal and external correspondence and attachments shall be distributed in accordance with Document Distribution Matrix and to be issued separately.

All correspondence to COMPANY shall be addressed to the Project Manager, together with one set of any attachments. All correspondence to CONTRACTOR shall be addressed to Project Manager as specified address in project office.

All e-mails, meetings and discussions must be circulated to key project personnel. Verbal information provided by CONTRACTOR during a meeting deemed as inputs to the development of design or for procurement or construction shall be confirmed in writing or issued as a Project Note by CONTRACTOR. CONTRACTOR shall prepare and issue all Notes of Meetings. Matter of record is meant to be items, which affect the project deliverables content, dates and cost. General conversational comments need not be documented.

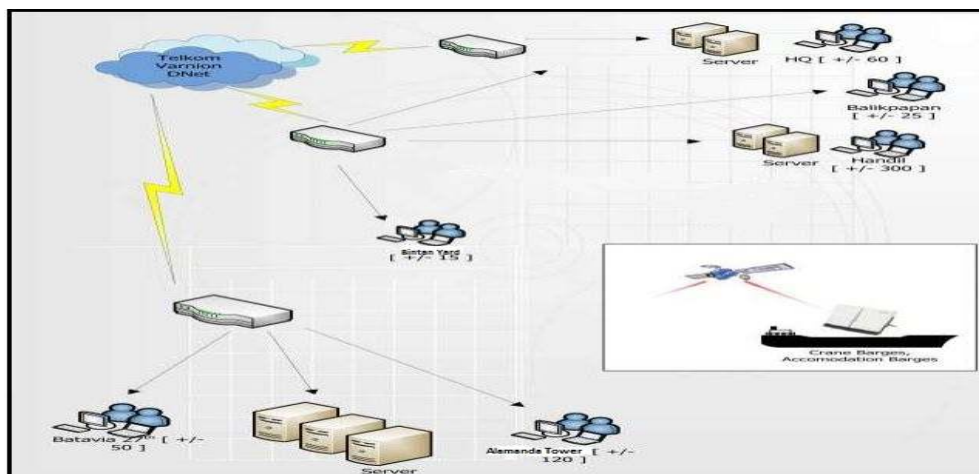
Project Communication & IT

a. Computer and Network System

CONTRACTOR project office will be equipped with PABX telephone system containing internal and external telephone lines upon project requirement. The office has been equipped also with intranet that works 24 hrs/day and 7 days/week. Some of the workstation for several key personnel are able to access the internet, where dedicated email facility is provided to all staffs.

The offices are linked by a PC based e-mail network that provides direct worldwide communications between offices. The communication network allows flexibility to perform engineering and project services as an integrated nationwide team by having direct access to all corporate resources and capabilities. This network also allows us to perform work at specific project locations, COMPANY offices or a combination of project offices at site and Jakarta office or combinations of these.

A typical scheme of IT network of CONTRACTOR is shown on the figure below:



6.3 MEETINGS

Meetings such as regular meetings and other required meetings will be planned and controlled by the person who is organizing such meetings. Meetings shall be scheduled and informed to participants using Meeting agenda in advance. All participants shall attend meetings punctually and maintain decorum. Meeting rooms shall be booked through Project Secretary.

The following regular meetings are planned for this project:

- Daily meeting between CONTRACTOR and COMPANY during construction phase whenever necessary.
- Weekly meeting between CONTRACTOR and COMPANY.
- Monthly meeting between CONTRACTOR and COMPANY.
- Discipline engineering meetings may be organized by PEM as required or on regular basis as the job requires.

Other meeting may be called as required basis by project management team or leads. Other project team members may also call for meetings to discuss specific subjects by agreeing with their leads.

Meetings with any external Third parties shall be scheduled and organized following the above guidelines. Third parties shall be allowed to enter into taskforce area only when they are escorted by project team members. Third party person shall not be given or allowed to look into any of the project documents or COMPANY provided documents or any confidential information.

MOMs shall be issued within 48 hours of any meeting conducted. The person who calls for the meeting from CONTRACTOR should prepare the MOM. MOM should be issued in server and notified. Action list shall be maintained by Project Engineer for all meetings. All open items shall be closely followed up and closed within the target dates. Action list will be reviewed during the meetings

All meetings should start with safety moment and quality minute.

6.4 REPORTS

CONTRACTOR shall submit the following regular reports including all necessary attachments in electronic format

Daily Report:

CONTRACTOR shall prepare and submit for all construction activities as Daily Progress Report (DPR). The format and content of the daily report will follow document number PUR-PG-PR-00-000-0002 Rev. C, attachment 8.1.

- **Weekly Report:**

CONTRACTOR shall prepare and submit the weekly report on every Monday. The cut-off date for weekly progress report is every Friday.

The content and template of the weekly report will follow COMPANY document number PUR-PG-PR-00-000-0002 Revision C, attachment 8.2

Project control will provide updated progress measurement figures and updated S curve

Weekly report sheets will be discussed during the weekly meetings

- **Monthly Report:**

CONTRACTOR shall prepare and submit the monthly report covering all activities relevant to the previous month's work. Every last Friday of the month is the cut-off date for progress monthly report and has to be submitted to COMPANY on the next Monday by electronic file.

Monthly meeting content and template will follow COMPANY document number PUR-PG-PR-00-000-0002 Revision C, attachment 8.3.

6.5 DOCUMENT TRANSMITTAL AND CONTROL

Letters, monthly /weekly reports, Minutes of Meetings, and other deliverables will be transmitted by CONTRACTOR Document Control to COMPANY Document Control. They will be addressed to COMPANY Project Manager.

Document control will upload those deliverables into the server and email the link to members as in distribution matrix

No hard copies will be transmitted

Document Control will transmit all deliverables using document transmittal form created in server with unique transmittal number for each transmittal form. Document transmittal form will be addressed to COMPANY Project Manager and will be delivered to COMPANY Document Control via network. Every transmittal will be accompanied with document distribution list. This will be agreed with COMPANY and will be shown in document distribution matrix. This will assist CONTRACTOR Document Control to distribute documents expeditiously

Numbering system for transmittals, letters and other correspondence will follow COMPANY document PUR-GEN-PRO-00-000-001_Revision 3 Document Numbering System.

All documents transmitted should have gone through CONTRACTOR quality systems of checking, review and approval route. Only those went through the agreed and established system of checking and approval shall be issued out.

CONTRACTOR shall not give any advance copies to COMPANY. Only CONTRACTOR Project Manager may give such advance reports or documents with those documents clearly stamped as "Advance copy requested by Company representative". No hard copy shall be issued without such stamp from Project Manager. If soft copies are requested, then they shall be scanned images of those hard copies.

7 PROJECT QUALITY MANAGEMENT

The Project Quality Management will be implemented in accordance Contract documents. CONTRACTOR will prepare Project Specific Quality Plan jointly for their respective scope of works which will encompass engineering, procurement, construction and pre-commissioning activities.

A Project Specific Quality Plan will be developed and implemented by CONTRACTOR which will incorporate all requirements of Contract Documents.

8. HEALTH, SAFETY, SECURITY AND ENVIRONMENTAL MANAGEMENT (HSSE)

Health and Safety of its people and environmental protection are treated by CONTRACTOR to be one of its greatest responsibilities.

Accordingly, CONTRACTOR undertakes measures to minimize the risks from hazards in the work place and to protect the environment, as well as to safeguard the health and safety of employees. Risk identification, management and communication to the workforce will be emphasized throughout the life of the project.

8.1 CONTRACTOR'S COMMITMENT

CONTRACTOR executive management and project managers will provide strong, visible leadership and commitment towards inculcating the culture of Cause No Harm, provide the necessary resources

to develop operate and maintain the culture, and periodically review the project HSSE performance in order to attain the policy and strategic objectives.

CONTRACTOR is committed to ensure a healthy and safe working environment for all personnel associated with the Project. CONTRACTOR believe that all work related injuries, illnesses, property losses and environmental damage are preventable, as well as maintaining a high standard of HSSE performance which is fully embodied in the responsibility and accountability of the Project Management Team to achieve these goals.

To achieve the aim of the Occupational Health, Safety and Environmental policy, the CONTRACTOR shall:

- Develop and maintain a safe work environment and system of work practices within the scope of legislative provisions.
- Provide necessary guidelines and training on principles of ergonomics, industrial hygiene, toxicology and environmental protection.
- Provide adequate personal protective equipment to protect employees from the hazards, which cannot be otherwise eliminated and / or controlled.
- Ensure that safety / medical emergency procedures are disseminated to employees, and maintain adequate clinic and first aid facilities.
- Conduct safety audits to monitor effectiveness of existing policies/procedures, identify work practices / conditions that are potentially harmful to employees and issue corrective measures as reasonably practicable.

A project specific HSSE Management Plan will be developed to focus on project specific HSSE issues. CONTRACTOR maintains and actively strives to improve its safety record while executing this project. The project goal is “CAUSE NO HARM” for the project life cycle.

8.2 HSSE MANAGEMENT TEAM

CONTRACTOR recognizes that the ultimate responsibility for HSSE management resides with executive management; however, the philosophy that everyone is responsible for their own safety and those of others, still prevails. Responsibilities are assigned throughout the organization to ensure the objectives of the HSSE Policy are achieved.

8.3 RISK IDENTIFICATION AND ASSESSMENT

Job Risk Analysis/Assessment (JRA) will be prepared prior to start the activity. This JRA will cover the following:

- Identify, assess, mitigate and monitor Project Risks,
- Categorized Risks (Schedule/Cost/Quality/HSSE/Performance),
- Categorized Probability of occurrence,
- Risk potential (High/Medium/Low),
- Assign ownership of the Risks

This JRA will be attached in the Method Statement

9 ENGINEERING

Detail engineering for this project will be executed at CONTRACTOR TCC Batavia office where they have established engineering office completed with full discipline engineers.

CONTRACTOR will have discipline engineers at project office to review all engineering document provided by COMPANY and to support procurement for reviewing vendor proposal in order to ensure the compliance with COMPANY specification. Engineering team will be led by Engineering Manager who will oversee all engineering activities throughout duration of project.

Site Engineer will be stationed at site office to prepare all construction procedures, installation and shop drawing as required by construction team. Any engineering support will be assisted by engineering team at project office in Jakarta.

CONTRACTOR responsibility on engineering work is tabulated below:

Description	Split Scope of Work
FEED	COMPANY
DETAILED ENGINEERING	CONTRACTOR
CONSTRUCTION ENGINEERING	
PRECOM ENGINEERING	

10 PROCUREMENT

10.1 PROJECT MATERIALS

COMPANY will supply the following materials:

- Carbon steel Line pipe coated 6" and 4"
- Valves 4" and Larger (Ball & Check Valves)
- Wellhead Control Panel (WHCP)
- 5D Hot Bends

Any materials required for the performance of the Work outside these items will be supplied by CONTRACTOR

COMPANY will arrange the delivery of the above mentioned supplied material to the worksite.

All materials issued by the COMPANY to the CONTRACTOR will be preserved against deterioration and corrosion

10.2 SOURCING

Based on MTO supplied by COMPANY and after verification by CONTRACTOR engineering team, Procurement Manager then will develop preliminary Procurement Monitoring Schedule (PMS). CONTRACTOR will prepare material tracking based on agreed schedule & milestone dates.

Procurement will issue a Request for Quotation (RFQ) to the Vendor/Manufacturer based on verified MTO. Procurement will assess firstly to the Vendor/Manufacturer listed in the Approved Manufacturer List (AML). In certain cases, Procurement may propose vendors outside the PML but this is subject to COMPANY approval prior to proceed with further process. A minimum three Vendors/Manufacturers shall be invited to submit their quotation.

Once quotations are received from Vendors/Manufacturers, un-priced copies will be given to engineering team to evaluate and seek technical clarifications with the vendors, and prepare a technical bid evaluation document. Brief of technical evaluation will be forwarded to Company for approval, and to procurement department for commencing commercial discussions.

Having taken into account the technical evaluation from Engineering, Procurement will prepare a Commercial Bid Evaluation (CBE) after discussions with potential bidders. CBE will cover

commercial, delivery, warranty, Local Content and other terms and conditions and to provide recommendation to the Project Manager. CBE is an internal document.

Project Management Team will review both CBE and approved technical evaluation and Project Manager will approve issuance of Purchase Order (PO) to the selected Vendors/Manufacturers.

Technical evaluation for bulk materials (such as structural bulks, paint, insulation, etc.) will be simplified as appropriate. CONTRACTOR will submit technical information, such as catalogues, mill certificates, as applicable, to COMPANY for review.

10.3 EVALUATION & PO PROCESS

The respective buyer will forward the vendor un-priced copy of the bid to engineering team for evaluation and Bid Technical Assessment. At the same time, Buyer will perform Commercial Bid Evaluation in accordance with the Commercial Bid Evaluation Form:

- Conformance to COMPANY's specifications and other applicable documents (General Specification, Project Specification, Drawings etc.)
- Cost of materials/equipment
- Delivery time

The responsible Engineering Discipline will analyses the technical bid(s) in order to check the compliance with all technical matters referenced in the technical specifications and drawings.

The technical evaluation of materials shall include a tabulation of exceptions as outlined in the bids. It should clearly mention the technical acceptance of the bids.

The CONTRACTOR's Engineering will forward the technical evaluation to the Procurement once approved by the CONTRACTOR's Project Engineering Manager and COMPANY (as required).

During the bid evaluation, the proposed delivery dates will be checked and reviewed whether the promised date is realistic and meet Project Schedule.

Upon approval of the technical evaluation, the Buyer shall promptly prepare and send a confirming commitment to the successful VENDOR in the form of Fax of Award/ Letter of Intent (FOA/LOI).

The effective date of the award commencement shall be very explicitly stated in the Fax of Award.

The Buyer shall ensure that the Purchase Order is received by the VENDOR by requesting the return of the signed Acknowledgement of Acceptance within seven (7) calendar days after issuance of the Purchase Order with VENDOR's order entry reference, clearly stated.

10.4 EXPEDITING

The expediting process begins with the receipt of the Purchase Order copy or immediately after the Fax of Award has been issued.

Material Status Report will be utilized as the expediting report. Material Status Report will be sent to COMPANY on weekly basis together with the Procurement Monitoring Schedule

Expediting process will be both telephone calls and visits to supplier works, when required. Expeditor responsible to arrange kick-off meetings, expedite vendor documents (both sides), get vendor status/ progress reports and verify for their accuracy, monitor sub-vendor deliveries, NCRs, coordinate inspections and witness testing, release notes, etc

Expeditor will check and inform the available float on delivery time to the Procurement Manager, if need the Project Control will adjust the Project Schedule accordingly

Periodical progress report shall be issued from VENDORS to the Expeditor.

Expeditor will monitor the progress and if there is delay found, it will be reported to the Procurement Manager immediately.

Five working days in advance to major activities, the Expeditor is to confirm the progress by means of telephone, email and facsimile or in person at the shop.

The Expeditor shall record the expediting activities and VENDOR actions and provide summary in the expediting report.

In case, delay in the major activity is observed, or likely to be occurred the Expeditor shall report the issue to the Procurement Manager immediately.

The Procurement Manager will report to the Project Control. The impact will be analyzed and reported to Project manager for initiating appropriate mitigation and to keep COMPANY informed of the status and action being taken.

10.5 LOGISTIC

Logistic Coordinator will be assigned to coordinate transportation activities from VENDOR works to site. Once final inspection has been done and all punch lists have been cleared, Logistic Coordinator will coordinate with VENDOR/Manufacturer for shipment.

Logistic base will be set up in Jakarta for all material that purchase locally and overseas, it will be then deliver to site either by land or sea transportation.

Material Supervisor will be assigned to arrange all the material storage in these logistic base locations with the coordination of procurement team in Jakarta project office.

10.6 TOP-UP ORDERS

To speed up the delivery of items, the initial purchase orders will be issued for bulk materials considering the initial MTO and later top-up orders shall be issued as in final MTO issued from engineering team.

PO amendment will be prepared and sent to Project Manager for review and approval. Upon approval an amendment to Purchase Order shall be executed in the same manner as issuance of Purchase Order.

11 MATERIAL MANAGEMENT

11.1 MATERIAL CONTROL

Material Receiving Report (MRR)

All materials delivered to the construction yard will be received on a Material Receiving Report (MRR), and will be prepared and issued by Warehouse. CONTRACTOR will assign warehouse supervisor in CONTRACTOR's construction yard for management all incoming material including CONTRACTOR's supplied equipment and material.

MRR Procedure

Materials delivered at the site will be checked by the warehouse supervisor at the site against the Delivery Note / Packing List.

The warehouse office will verify materials received against the PO and complete the MRR.

In the event that there is an overage, shortage or any damage to the goods, then an OSDR (Overage, Shortage, and Damage Report) will be completed.

The MRR or OSDR will be distributed as follows:

Original to CONTRACTOR Jakarta

Attn.: The Expeditor

Copy to MRR / OSDR File

A fortnightly report of the list of all materials received during the week will be sent to COMPANY Site Representative.

Material Verification Report (MVR)

CONTRACTOR's QC Material Inspector is responsible to carry out inspection of all material and verification of received material with Material Verification Report.

The traceability form of material, i.e. Material Verification Report shall be approved by CONTRACTOR's QC inspector and reviewed by COMPANY's QC Inspector. It is only when the form is fully signed that construction is authorized to proceed with cutting and other construction activities.

11.2 STORAGE

Work Site will have storage facility for safe receipt, storage, and issue of items for the construction. The warehouse supervisor will maintain records for receipt and issue of items.

All items will be stored according to the recommendation of suppliers in the following areas as appropriate:

- Indoor warehouse
- Covered area
- Outdoor storage
- Temperature and Humidity controlled area (as per manufacturer's recommendation and preservation procedures).

Items will be kept in an orderly manner in separate areas (e.g.: Electrical, Instrument, Piping, Valves, Fittings, Hardware, Spare items)

Rejected and damaged items will be stored separately for easy traceability.

Flammable and Hazardous items will be stored in separate place.

11.3 MATERIAL REQUESTS FOR CONSTRUCTION

Material request shall be issued by the construction supervisor or foreman to the warehouse controller by the material request form by attaching the drawing material to be installed for clear identification.

Material request form shall be approved by Construction Manager, Warehouse Supervisor and endorse by QC department to ensure the compliance of material before releasing to construction. Warehouse supervisor shall then update the material data base in order to have the latest material data base at the construction yard.

12 SUBCONTRACT PLAN

Following work will be subcontracted for this Project;

- Non Destructive Test (NDT)
- Pipeline Engineering
- HAZOP / HAZID
- Cathodic Protection
- PDA Test

CONTRACTOR will apply the pre-qualification for all of the subcontractors and establish a group consisting of HSE, QA/QC Persons by the CONTRACTOR and COMPANY to audit the progressing work as described in the HSE plan and QA plan

CONTRACTOR will review all factors relating to the Subcontract when considering award not limited to Terms and Conditions of the Contract, Subcontract Liability, Work Scope and general interface between Subcontract and all other work, Cost Control and Planning capabilities.

The Project Manager will have overall responsibility for all Subcontracts. Subcontracts can only be issued after liaison between the Project Engineer, and approval of the Project Manager.

13 RESOURCES PLAN

MANPOWER

Please refer to attachment 4.1.4 of this bid submission for CONTRACTOR Manpower planning for this project

CONSTRUCTION EQUIPMENTS

CONTRACTOR will mobilize the following equipment for the execution of the work:

CONSTRUCTION EQUIPMENT LIST					
NO	DESCRIPTION	TYPE/CAPACITY	UNIT	OWNED /RENT	Remark
1	Hydraulic Excavator Standard Arm	KOBELCO	4	OWNED	
2	Long Arm Excavator	KOBELCO	1	OWNED	
3	Crawler Crane 50 T	HITACHI	1	OWNED	
4	Mobile Crane 45 T	SUMITOMO	1	OWNED	
5	Truck Crane 5T	HINO	1	OWNED	
6	Piling Hammer	5T	1	OWNED	
7	Medium Truck	mitsubishi	2	OWNED	
8	Welding Machine	CUMMINS	6	OWNED	
9	Trafo	CUMMINS	8	OWNED	
10	Generator Set 75 Kva	CUMMINS	1	OWNED	
11	Generator Set 150 Kva	CUMMINS	2	OWNED	
12	Compressor	AIRMAN	1	OWNED	
13	Hydro Test pump	50KG/CM2	1	OWNED	
14	Concrete Site Mixer		2	OWNED	
15	Trailer	HINO	1	OWNED	

16	Pick-up / 4WD /Light Vehicle	MITSUBISHI	4	OWNED	
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14 CONSTRUCTION WORK STRATEGY – SUMMARY

SL.NO.	DESCRIPTION	WORK STRATEGY
1.	Structural & Piping Spools Prefabrication works	<p>Steel pre-fabrication will be performed in-house at CONTRACTOR fabrication facility in Balaraja - Tangerang, and delivered to Work site either by road or sea.</p> <p>Structure work installation will be performed by CONTRACTOR direct resources. Equipment to perform steel structure installation i.e. crane will be mobilized from CONTRACTOR own resources.</p> <p>Piping spools will be fabricated at CONTRACTOR fabrication shop in Balaraja – Tangerang.</p> <p>Please refer to attachment 3 herewith for Site Fabrication shop at Balaraja - Tangerang .</p>
2.	Civil & Concrete Works including foundations	<p>Concrete will be sourced at site using concrete mixers during the time of concrete works. For high grade concrete (K-300) CONTRACTOR intend to use local ready mix. Concrete design mix will be provided to COMPANY for approval.</p> <p>Earthwork, Civil & Foundation will be performed by local manpower under CONTRACTOR supervision. Equipment to perform earth work i.e. excavator, etc. will be mobilized from CONTRACTOR own resources.</p>
3.	Electrical & Instrumentation works	<p>Testing equipment and tools to perform Electrical and instrument installation inside Well pad D & Well pad C will be mobilized from CONTRACTOR own resources in Jakarta, and Instruments will be installed by CONTRACTOR direct manpower.</p>
4.	EQUIPMENT INSTALLATION	<p>Equipment installation will be carried out at site as per work plan and it would be done by CONTRACTOR direct employees. The responsibility of this work lies under the Mechanical Supervisor. He shall be responsible to ensure that mechanical installation progress is in line with the project schedule without sacrificing quality. Since mechanical installation would involve heavy lifts, the Mechanical Erection Supervisor needs to liaise with Lifting Supervisor and HSSE closely.</p>

		CONTRACTOR will mobilize the cranes required for the heavy lift (Crawler Crane 50T).
PIPELINE INSTALLATION		
5.	Pipeline Crossings	Pipeline crossing the road will be laid inside the metal casing which previously installed by COMPANY. Pipeline crossing the river will be laid on the supports attached at the bridge. COMPANY will build this bridge including the supports for this river crossing line installation. All necessary permits shall be arranged and temporary arrangement of traffic shall be defined and approved by all parties including local government authority. The execution of road crossing shall be well prepared in order to minimize the impact of the work to the traffic which will generate social issues.
6.	Piling and Supports	Most of the pipeline sections for this project is on above ground so will be installed over Pipe Supports which is installed by Piling. Piling will be carried out using drop hammer and will be executed by CONTRACTOR direct resources.
7.	Stringing	CONTRACTOR will have its own trailer and crane for stringing work to locate the pipeline near trenching location. Sand bag or coconut trunk will be used for temporary support of the pipe during stringing and welding activities. The stringing area shall be still inside the pipeline ROW in order not to have disturbance from other parties at the area.
8.	Fit Up and Welding	Pipeline fit up will be done at the stringing location as per approved welding map. Shop drawing shall be clearly identified which joint to be welded at stringing area over the pipe supports which is installed by Piling.
9.	NDE	CONTRACTOR will engage third party for performance of NDE. It will be performed at night time for safety reason and in order not to interference with construction team. Dark room for NDE film processing will be setup in temporary site facility (Site Office area).
10.	Installation of Pipe to the Support	Installation of pipe which has been jointed will be done by CONTRACTOR's crane with assistance of excavator. Before installation, it shall be ensure that NDE of the joint is completed and acceptable.

		<p>CONTRACTOR will perform installation after certain pipe section is ready.</p> <p>In a certain area wherever possible, CONTRACTOR will use push pull method. The pipe will be laid over the rollers installed on the pipe support, jointed by weld and pulled by excavator. This operation will be repeated for jointing the next pipe length.</p>
11.	Surface Protection & Painting	<p>Surface Preparation and painting works will be done by CONTRACTOR direct employees. The responsibility of this work lies under the Painting Supervisor. He shall be responsible to ensure that painting is performed as per COMPANY specification in timely manner and not being a bottleneck for production.</p> <p>Line Pipes will be blasted and painted prior to dispatch to the field for installation.</p> <p>Sand will be used as abrasives for the blasting process and proper tarpaulin cover will be installed to ensure that the dust which results from the blasting operation will not migrate to surrounding neighborhoods.</p>
12.	Pre-commissioning & Commissioning Assistance	<p>CONTRACTOR will appoint pre-commissioning manager to lead CONTRACTOR pre-commissioning team, pre-commissioning work will be done by CONTRACTOR direct personnel.</p> <p>Advance discussion between CONTRACTOR and COMPANY shall be arranged in order to setup the list priority of systems to be commissioned which will trigger the pre-commissioning sequence and construction priority plan.</p> <p>Schedule or plan detailing all pre-commissioning activities will be submitted to COMPANY for approval.</p>

15 ATTACHMENTS

ATTACHMENT 1: PROJECT & ENGINEERING OFFICE LAYOUT

ATTACHMENT 2: SITE OFFICE LAYOUT

ATTACHMENT 3: FABRICATION SHOP LAYOUT AT BALARAJA, TANGERANG

ATTACHMENT 4: CONTRACTOR PROJECT ORGANIZATION CHART