**EXHIBIT I**

**SCOPE OF SUPPLY**

**FPSO PETROBRAS 91 (P-91)**

**\*\*\*\*\*\*\*\*\*\*\*\*Revision Control\*\*\*\*\*\*\*\*\*\*\*\*\***

**Rev 0: Bid original version**

**SUMMARY**

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# GENERAL

* 1. This Exhibit allocates the overall responsibilities of Seller and Buyer for the provision of a Stationary Production Unit (Unit) classified as Floating Production Storage and Offloading facility (FPSO), also called Unit, until the conclusion of the Agreement.
  2. Seller shall fully provide the Unit as described through Exhibit II – General Technical Description (GTD) – and in the Agreement and its attached Exhibits.
  3. In case of discrepancy among documents, the present Exhibit takes precedence over other Exhibits, always considering the most comprehensive alternative for this Exhibit I - Scope of Supply.
  4. In case of conflict between GTD and Safety Guidelines for BOT Offshore Production Units, Buyer shall be consulted.
  5. The requirements set forth in this Exhibit, and all the other Exhibits of the Agreement shall apply to the entire Unit.
  6. Buyer has the right to participate in technical meetings held between Seller, the Classification Society or any other Subcontractor. This item shall be passed on to contracts with them. Buyer shall receive prior communication for these meetings.
  7. In all documents, the word “shall” and equivalent expressions like “is to”, “is required to”, “has to”, “must” and “it is necessary” are used to state that a provision is mandatory.
  8. In all documents, the verb “consider” and “foresee” and all their forms (considered, considering, etc.) are used as “taking into account” and state that a provision shall be complied with.
  9. Unless otherwise expressed, any reference to “Seller’s responsibility” or “Seller’s responsibilities” means that Seller will design, supply, install, operate and maintain according to the Agreement provisions with no commercial interference or responsibility from Buyer.
     1. Wherever it is mentioned Contractor, Petrobras and Contract, these terms mean Seller, Buyer and Agreement, respectively.
  10. Seller’s Scope of Supply comprises all services, supplies and works required to Handover of the Unit, fully functional and operable, as described in the Agreement and its Exhibits and annexes, during onshore and offshore, excluding only the items which Buyer will provide, as indicated in Section 2 – Buyer’s scope of this Exhibit I.
  11. Seller shall comply with the Exhibit IV – Directives for Product Fabrication.
  12. Seller shall comply with the Brazilian local content requirements calculated in accordance with the ANP criteria, as described in the Article 4 – Brazilian Local Content of the Agreement.
  13. Seller shall provide the certification and classification of the Unit, including detailed engineering design, equipment, fabrication, assembly, Pre-Commissioning and commissioning of the systems, in accordance with the Exhibit III – Directives for Product Development and Exhibit XV – Directives for FPSO Classification.
  14. Seller shall sign contract for rendering services of Classification and Statutory Survey of the Unit, as stated in Exhibit XV – Directives for Fpso Classification.
  15. Seller shall deliver the Unit in accordance with Section 9 of Exhibit VIII - Directives for Commissioning Process. The part of the Scope of Supply achievable in the onshore phase, shall be carried out before Unit leaves the Integration Yard. Any deviation therefrom shall be previously submitted to Buyer for acceptance.
  16. The Certificate of Class to be issued for the Unit shall consider the Classification notations as per Exhibit XV – Directives for Fpso Classification, according to CS Rules in force at the time of Agreement signature. All certificates, interface requirements and documents listed in Exhibit XV – Directives for Fpso Classification shall also be issued by Seller.
  17. Seller shall comply with the interface communication (Table 1 – Interface Communication) to contact entities including but not limited to Local Authorities, Classification Society, Marine Warranty Surveyor, Regulatory Bodies, Flag State. Seller is responsible for providing all documents and information required by Buyer or by these entities, in order to comply with the requirements to obtain licenses and approvals, even if the interface communication is the responsibility of Buyer. Seller shall manage and control all activities related to these entities together with Buyer. Seller is responsible to address and clear all outstanding items raised by these entities, related to the scope of supply.

| **Interface Communication** | | |
| --- | --- | --- |
| **Entities** | **SELLER** | **BUYER** |
| National Telecommunications Agency (Anatel) | Support | Responsible |
| Integrated Center for Air Defense and Air Traffic Control / Air Force (CINDACTA / Aeronáutica) | Support | Responsible |
| National Agency of Petroleum, Natural Gas and Biofuels (Agência Nacional do Petróleo, Gás Natural e Biocombustíveis - ANP) | Support | Responsible |
|
| National Health Surveillance Agency (Agência Nacional de Vigilância Sanitária – Anvisa) | Responsible | Support (Note 1) |
| Classification Society | Responsible | Support |
| Flag State Authority | Responsible | Support |
| Brazilian Institute of the Environment and Renewable Natural Resources (Instituto Brasileiro do Meio Ambiente e Recursos Naturais Renováveis – IBAMA) | Support | Responsible |
|
| Brazilian Navy (Marinha) – “Nada a Opor” | Support | Responsible (Note 2) |
|
| Brazilian Navy (Marinha) - helideck certification, AIT, AJB and CTS | Responsible | Support |
|  |  |  |
| Federal Police (Polícia Federal) | Responsible | Support |
| Customs Clearance of completed Unit (Receita Federal) | Support | Responsible |
| Special Secretariat for Social Security and Labor  (Secretaria Especial de Previdência e Trabalho) | Responsible | Support |
| CNEN (Comissão Nacional de Energia Nuclear) | Responsible | Support |

Table 1 – Interface Communication

Note 1: Buyer is responsible to issue ANVISA taxes payment forms. All payments are under Seller´s responsibility.

Note 2: Buyer is responsible to contact Brazilian Navy to receive the “Navy Project Installation Authorization “(Nada a Opor)” for mooring system deployment. SELLER shall provide technical information needed to obtain this Authorization.

* 1. Seller shall carry out procurement of services, Equipment, materials and consumables for the Unit in accordance with Exhibit V – Directives for Acquisitions.
  2. Seller shall plan, execute and control all phases of the works, including all activities performed by any Vendor and Subcontractor, assuring full compliance with Exhibit VI - Directives for Planning and Control.
  3. As part of Seller’s Scope of Supply, in any phase of the work, including all activities performed by any Vendor and Subcontractor, Seller shall implement and observe full compliance with a Quality Assurance System, in accordance with Exhibit VII – Directives for Quality Assurance System.
  4. Seller shall perform all necessary activities described in the Agreement and its Exhibits, in accordance with international standards applicable to design, construction and operation of maritime production units, and directives, regulations and recommendations issued by Brazilian authorities and Classification Society rules and regulations.
  5. As part of Seller’s Scope of Supply, during all phases of the works, including all activities performed by any Subcontractor, Seller shall implement and observe full compliance with a Health, Safety and Environment Plan, in accordance with Exhibit IX – Directives for Health, Safety and Environment.
  6. Seller shall provide facilities for Buyer’s team, as described in Exhibit X - Facilities for Buyer’s Representatives. All direct and indirect costs for the provision of all facilities and services, as described in Exhibit X – Facilities for Buyer’s Representatives are included in the Contract Price, under Seller’s responsibility, unless otherwise specified.
  7. Requirements set forth hereunder as well as under all other Exhibits of this Agreement shall be fully complied with by Seller during the works execution.
  8. Seller shall comply with the insurance requirements as per Exhibit XII – Insurance Requirements.

# BUYER’s RESPONSIBILITIES

* 1. **Equipment supplied by Buyer**
     1. Buyer shall supply the equipment mentioned on Exhibit II – General Technical Description (GTD) and its annexes.
     2. Seller is responsible for transportation of the equipment supplied by Buyer, from state of Rio de Janeiro to Seller’s job site.
        1. If Seller chooses to install this equipment outside Brazil, Buyer will take care of export formalities and deliver the equipment through Incoterm FCA (free Carrier)/ Port of Rio de Janeiro to Seller. Seller scope of work shall comprise all the activities necessary to collect the equipment at the Port of Rio de Janeiro and to transport it to the final destination, including the customs clearance costs of such equipment at their job site and all costs inherent to the pickup process including but not limited to storage, taxes, transportation fees and insurance, etc.
        2. If Seller chooses to install this equipment in Brazil, Seller’s scope of work shall comprise all the activities necessary to collect the cargo from Petrobras’ facility in Rio de Janeiro and to transport to the job site and all costs inherent to the pickup process including but not limited to storage, taxes, transportation fees and insurance, etc.
     3. Seller shall install the referred equipment during the onshore job sites activities. In case Buyer were to deliver some of the equipment after the Integration / commissioning works have been completed, Seller shall install such equipment during the offshore phase, being the insurance, handling, loading and unloading, customs and all other related costs under the Seller’s responsibility.
     4. Seller shall provide facilities for access and handling in order to install Subsea Equipment Control Panels. The installation of such panels falls within Seller`s Scope of Supply and shall take place during both the Integration and offshore phases.
     5. Buyer shall confirm all information related to riser system when issuing the Agreement signature.
     6. Seller shall proceed with a receiving inspection at state of Rio de Janeiro – Brazil, being responsible for repairing any deviation in materials and equipment provided by Buyer not previously identified in the mentioned receiving inspection, related to preservation, unloading, movement, installation, materials control, completion etc.
        1. Upon the completion of the receiving inspection, Seller shall issue a report, which shall be signed by both, Seller and Buyer.
     7. Seller shall, by its own means, unload, receive, move, properly store, preserve, commission and control any materials, equipment or spare parts supplied by Buyer in the same manner as described in Exhibit V – Directives for Acquisitions.
     8. All materials, equipment and spare parts supplied by Buyer shall be treated as the materials supplied by Seller, including with respect to engineering, storing, preserving, adapting, installing, testing, etc, except for their warranty that is Buyer's responsibility.
     9. Seller must provide all documents regarding the equipment supplied by Buyer on FPSO, to allow the customs clearance in Brazil by Buyer.
  2. **Commissioning**
     1. Buyer’s responsibility shall be in accordance with Exhibit VIII – Directives for Commissioning Process.
  3. **Mooring**
     1. Buyer will supply, install and certify torpedo piles, as well as provide necessary soil analysis, studies and procedures related to this matter, including class necessary approvals. Seller will be responsible for the mooring analysis and mooring lines supply (Mooring Components) in accordance to Exhibit II – General Technical Description (GTD) and its annexes.
     2. Buyer will install the torpedo piles and pre-install the mooring lines. Buyer will also supply the vessels for handling the hook-up of the mooring lines with the Unit.
     3. Buyer will supply vessels to transport the mooring lines and other necessary materials to the Unit. The sequence and delivery date of the mooring lines will be notified by Buyer. The transfer of lines and other materials for transportation by Buyer will take place from a port located in Brazil – location defined by Buyer.
     4. Seller shall supply and deliver the moorings and other materials of the mooring system, including its accessories, at the port and date to be notified by Buyer. After receipt, Buyer will have up to 30 (thirty) consecutive days to collect this material at no additional cost.
     5. The entire mooring system will be designed and specified by Seller and shall meet the requirements established in Exhibit II - General Technical Description.
     6. Seller will be responsible for all materials and resources necessary to perform mooring operations onboard of the FPSO in order to obtain the final tension of the anchoring lines. Seller will also be responsible for cutting and disposing of excess moorings. Buyer will provide boats to transport the chain and messenger chains from Unit to an agreed port where Seller shall collect and dispose all components.
  4. **Logistics during the offshore phase of the works:**
     1. Buyer will be responsible for the transportation of all necessary materials, Equipment and tools from Buyer’s onshore base to the Unit at the offshore final location and from the Unit at the offshore final location to Buyer’s onshore base. Insurance coverage for such transportation shall be provided and borne by Buyer. The materials, Equipment and tools shall be delivered packed and unitized in containers at Buyer’s onshore base without additional cost to Buyer. Where applicable, after the transportation of Equipment and tools, containers shall be made available at Buyer’s onshore base for Seller to collect, without additional cost to Buyer. The transportation will be provided considering a schedule previously agreed between Buyer and Seller.
        1. For materials, equipment and tools inherent to the services performed by the Seller in the offshore phase and which will be stored at the Seller’s onshore base (or another place), Seller will be responsible for the transportation until to the Buyer’s onshore base. Insurance coverage for such transportation shall be provided and borne by Seller.
     2. Buyer will be responsible for the helicopter transportation of Seller’s personnel from Buyer’s onshore base to the Unit in Brazilian jurisdictional waters. Specifically in relation to Seller’s personnel, the insurance coverage for such transportation shall be provided and borne by Seller. The transportation will be provided considering an agreed schedule between Buyer and Seller.
  5. **Builder’s Risk Insurance:**
     1. Buyer will be responsible for providing the Builder’s Risk Insurance, in accordance with Exhibit XII – Insurance Requirements.
  6. **Additional Items.**
     1. All risers to be tied to the Unit will be supplied in accordance with Exhibit II – General Technical Description (GTD).
     2. Buyer will supply all the risers, and hang-off kits, that will be connected with the Unit, according to Exhibit II – General Technical Description (GTD).
     3. Not applicable.
     4. Not applicable.
     5. Buyer will supply pigs to be used during the operation lifetime, detailed information regarding to pig system requirements is stated in Exhibit II – General Technical Description (GTD).
     6. Satellite link, for use by Buyer’s team, is stated in Exhibit II – General Technical Description (GTD).
     7. Not applicable.
     8. Not applicable.
     9. The Unit shall be registered by Buyer, in accordance with Exhibit XV – Directives for FPSO Classification.

# SELLER’s SCOPE

* 1. **General**
     1. Seller shall ensure that the Unit will be properly dimensioned, in accordance with the requirements defined in Exhibit II - General Technical Description (GTD), with the objective of achieving its performance operating at its maximum production, processing, storage and offloading.
     2. Seller shall execute and control Seller’s Scope of Supply, throughout all phases of the Agreement, and this will include all activities performed by any Vendor, supplier, and Subcontractors, based on the requirements of the Agreement and its Exhibits.
     3. All documents required by the local authorities, Classification Society, Marine Warranty Surveyor (MWS), regulatory entities, rules and regulations of the flag authority, as well as by the insurance company, shall be issued, provided, prepared, dispatched, and delivered by Seller to Buyer and those entities.
     4. Seller shall grant free access to all places of performance of services, related to this scope, so that Buyer’s representatives can carry out any type of inspection, support or technical services, in accordance with the HSE rules of that place.
     5. Seller shall be responsible for the performance of all inspections by authorities necessary to secure the customs clearance of the Unit, as per Brazilian customs requirements, and shall obtain all licenses and authorizations required by the Classification Society and the flag and Brazilian authorities. Seller shall provide all material and manpower necessary to clear punch list items arising from inspections by authorities.
     6. Seller shall comply with the regulation of the Brazilian National Agency of Petroleum, Natural Gas and Biofuels (ANP), including those related to the Operational Safety Management System (SGSO). To fulfill the SGSO requirements, Seller shall implement a lessons learned process, adressing a set of SGSO conditions (‘condicionantes’) linked to subsequent Project milestones stablished by ANP during audits of other Buyer’s projects (whether owned or leased).
        1. An SGSO audit may be carried out by ANP during the integration phase at the shipyard. The purpose of this audit is to verify compliance with Seller’s SGSO requirements and assess the implementation of safety practices aligned with ANP regulations. Seller shall ensure full cooperation and provide all necessary documentation and access to support the audit process.
        2. As a result of the audit, Seller will receive a report containing non-conformities as well as a list of conditions (‘conditionantes’) required for First Oil and subsequent milestones. Seller shall be fully responsible for addressing the conditions imposed by ANP, including the elaboration of responses and, in case of rejections by ANP, the preparation of follow-up responses until all conditions have been duly approved by ANP. Buyer will prepare a technical note for each condition and submit it to ANP along with the respective response prepared by Seller. For the avoidance of doubts, the fact that Buyer is responsible for communication with ANP, as well as for issuing technical notes, does not exempt Seller from its full responsibility to comply with ANP requirements until all conditions are approved and the First Oil (and subsequent milestones) authorization is formally granted by ANP.
     7. Buyer, at any time, may request Seller to remake any service, or a part of it, without additional costs to Buyer, whenever the work is not performed in accordance with the standards and requirements stated in Exhibit VII – Directives for Quality Assurance System, engineering design and construction Drawings approved by Classification Society, subject to the Inspection and Warranty provisions set forth in Article 17 of the Agreement.
     8. Seller shall implement, at its own cost, all necessary actions to mitigate impacts in the performance of works due to adverse weather conditions and their consequences, as specified in the Agreement and its Exhibits.
     9. Seller shall be responsible, whenever required by Buyer, to support the execution of services in its job Sites by third party companies during the time of the execution of the services related to this Agreement, with no impact in contract price to Buyer.
     10. For all activities under the Scope of Supply, including the transfer of FPSO systems and subsystems, Seller shall consider the availability of the Operation Contract.
     11. Not applicable.
     12. For any activities under the Scope of Supply for which Seller desires any support from the Operation Team, or any other service under the Operation Contract scope, it is the responsibility of the companies (Seller and contractor of the Operation Contract) for these services and costs.
  2. **Product Development**
     1. Engineering services shall be performed in accordance with Exhibit III - Directives for Product Development. The Unit shall be designed, constructed, equipped and completed in accordance with the provisions of the Agreement and Exhibits thereto. All of the works undertaken in the fabrication of the FPSO shall be carried out by Seller in a good, sound and workmanlike manner in accordance with the Agreement, first class shipbuilding standards and industry best practices for the construction and outfitting of floating production, storage and offloading facilities similar to the Unit.
     2. Seller shall consider and incorporate into the Agreement scope all documents of the engineering design and its changes that occur during the Agreement period.
     3. Seller shall carry out a HAZOP (Hazard and Operability Technique) study, Preliminary Risk Analysis (PRA), Human Reliability Analysis (HRA) for the entire Unit and any other related study that is required by Health, Safety and Environment (HSE), in accordance with Exhibit II - General Technical Description (GTD) and Exhibit III - Directives for Product Development.
     4. Any change or corrective action indicated in the HAZOP (Hazard and Operability Technique), PRA (Preliminary Risk Analysis), risk analysis, HRA (Human Reliability Analysis) and HSE (Health, Safety and Environment) studies shall be incorporated to the detailed engineering design and all field modifications shall be implemented as part of Seller’s Scope of Supply. After execution of the safety studies, any design changes that impact these studies shall trigger additional safety studies and these new recommendations shall be implemented and documented. The management of safety studies changes shall comply with Exhibit III - Directives for Product Development. All design changes from safety studies recommendations or results are within Seller’s Scope of Supply.
     5. Seller shall implement and be responsible for the management and control of any design changes, keeping traceable and auditable all documents related to them, including design, procurement, inspection reports and as-built documentation, which shall be considered as evidence of the implementation of the changed scope.
     6. Seller shall provide and conduct all required technical studies, analysis and tests, according to the Classification Society requirements, Applicable Laws, flag authority and Brazilian Governmental Authorities.
     7. All changes deriving from Applicable Codes and Standards, and detailed design requirements of the Classification Society, the flag authority and Governmental Authorities, shall be included in Seller’s Scope of Supply, at Seller’s sole cost, with the exception of changes deriving solely from an alteration, modification, addition or other change to Applicable Law that occurs after the Proposal Submission Date and is proven to impact Seller’s cost and/or the Project Schedule, as set forth in Section 3.2.9 of Exhibit XIV.
     8. Seller shall hold design review sessions with the participation of Buyer in order to verify, clarify and solve issues found throughout the progress of the project. Design review sessions shall comply with Exhibit III – Directives for Product Development. All design changes requested by Buyer due to detailed engineering design faults shall fall within Seller’s Scope of Supply.
     9. Seller shall submit the reasoning, calculations (if applicable) and philosophies considered during the design to specify the materials, for all piping, valves, fittings and equipment, according to each type of fluid, considering the corrosion allowance as well as the protection.
     10. Buyer will supply the chemical consumables during the offshore operation, according to Operation Contract. Nevertheless if, during the design phase, Seller identifies that other chemicals are necessary, this shall be submitted to Buyer for approval.
     11. Seller shall control all field modifications and issue to Buyer the as-built mark-up drawings in electronic files for all technical documents. If the construction is performed without any changes to the design, Seller shall return the document to Buyer with a stamp confirming that no field changes were made.
     12. Seller shall be responsible for keeping an engineering team with experts of each discipline during the whole Agreement period, in order to provide the complementary engineering services required by the Agreement and to support the construction, assembly and commissioning phases.
     13. Seller shall consider the design, supply and installation of vents and drains necessary to the execution of hydrostatic tests, cleaning procedures and any other commissioning activities, for all systems and subsystems, where necessary. These materials shall be detailed by Seller.
     14. All documents, including as-built documents, manuals, data-books, Classification Society approved documents and all documents issued by Vendors, shall be organized and delivered to Buyer, in accordance with the Exhibit III – Directives for Product Development and Exhibit VII – Directives for Quality Assurance System.
     15. Seller shall comply with the provision of Article 13 of the Agreement regarding title to Scope of Supply, improvements and license.
     16. Seller shall contract the safety studies and electrical studies related to the Unit as described in the Exhibit III – Directives for Product Development. The implementation of all recommendations derived from these studies shall be part of the Seller’s Scope of Supply and is included in the Lump Sum Price.
     17. Seller shall prepare and keep updated a complete three–dimensional scale model of the entire Unit, as described in the Exhibit III – Directives for Product Development.
  3. **ACQUISITIONS**
     1. Seller shall be responsible for the provision of all systems, Equipment, components, materials, spare parts, and consumables required to carry out the Scope of Supply (except for those explicitly defined as Buyer’s scope of supply, if any), according to Exhibit V – Directives for Acquisitions and shall be responsible for its delivery to the Site in due time so as not delay the performance of the work or any part thereof. Without limiting the generality of the foregoing, Seller shall:
        1. Supervise, inspect, expedite and control all phases of the manufacture, fabrication or inspection of the Equipment and materials, including such parts thereof as are carried out by sub-manufacturers or sub-suppliers.
        2. Provide all facilities, Equipment, materials, tools and supplies required for the works hereunder and shall transport, load and unload, handle, receive, store, preserve and safeguard all items needed for the works and protect and keep safe the Equipment and materials in a proper controlled and suitable environment.
        3. Seller shall also be responsible for procuring all temporary materials such as joints, gaskets, unions, additional supports, dummy spools, drain and vent valves and other materials needed for hydrostatic tests, as well as all other materials deemed necessary for construction, assembly, inspections and commissioning.
        4. Appendix 3 presents categories of goods, as well as information on transport, delivery, storage, custom clearance characteristics and responsible parties.
     2. Operational Goods and Operational Spare Parts
        1. The supply of Operational Goods is Seller’s responsibility. Operational Goods shall mean all the goods required to guarantee the uninterrupted operation of the Unit for the maximum possible period (“Operational Goods Coverage Period”), not less than 6 (six) months, according to the physical storage capacity of the Seller’s warehouses onboard the Unit. The Operational Goods will be incorporated directly into the Unit and will be transported to the final location onboard the Unit and kept there until its application.
           1. For other definitions regarding Operational Goods, see Agreement, Exhibit I - Appendix 1 - Operational Goods.
           2. The Seller shall prepare and submit to Buyer up to 24 months after the Effective Date, as defined in the Agreement, a first version of detailed list of all recommended goods by the manufacturer and the Seller (‘Operational Goods List’) for the ‘Operational Goods Coverage Period’. This list must be concluded and validated by the Operation Contract Team and Buyer up to 2 (two) months before the Substantial Completion. Seller shall consider the guidelines from Appendix 1 to elaborate the list.
           3. If additional items are necessary due to failure in the “Operational Goods list” (missing items or consumption greater than expected), these items must be provided by the Seller at its own expense. The obligation described in this item is limited to the Final Acceptance Certificate. For this case, the customs clearance for the importation, including all costs, of Operational Goods shall be the responsibility of Seller, when applicable.
        2. The supply of Operational Spare Parts is Seller’s responsibility. Operational Spare Parts shall mean all the required spare parts to guarantee the operation of the Unit for the Operation Contract term, from the end of “Operation Goods Coverage Period” until the start of the assisted operation defined in the Operation Contract - the ‘Operational Spare Parts Coverage Period'. The Operational Spare Parts shall be complementary to the Operational Goods.
           1. For other definitions regarding Operational Spare Parts, see Agreement and Exhibit I - Appendix 2 - Operational Spare Parts.
           2. The Seller shall prepare and submit to Buyer up to 24 months after the Effective Date, as defined in the Agreement, a first version of detailed list of all recommended operational spare parts by the manufacturer and the Seller (‘Operational Spare Parts List’) for the ‘Operational Spare Parts Coverage Period’. This list must be validated by the Operation Contract Team and Buyer. Seller shall consider the guidelines from Appendix 2 to elaborate the list.

Whenever needed, but limited to the Final Completion, the ‘Operational Spare Parts List’ may be updated by Seller and submitted for Operation Contract Team and Buyer revalidation.

For exceptional cases, Buyer, at its sole discretion, may accept the revision of ‘Operational Spare Parts List’ based on justification presented by Seller and validated by Operation Contract Team, up to 3 months before Final Acceptance.

The beginning of Operational Spare Parts delivery to Buyer is conditioned to the “Operational Spare Parts List” validation by Operation Contract Team and Buyer.

* + - * 1. If additional items are necessary due to failure in the “Operational Spare Parts List” (missing items or consumption greater than expected), these items must be provided by the Seller at its own expense. The obligation described in this item is limited to the Final Acceptance Certificate.
        2. After the Final Acceptance Certificate, if additional items are necessary due to failure in the Operational Spare Parts list (absence) or consumption greater than expected, these items must be provided by the Operation Contract contractor under that contract scope.
        3. For all Operational Spare Parts Seller shall submit detailed information, as required by Buyer, necessary for Buyer’s internal procedures for material registration and customs clearance (when applicable). Such information shall be provided by Seller in a timely manner to the abovementioned Buyer’s procedures and any costs resulting from failures or delays by the Seller shall be under Seller’s charge.
        4. At its sole discretion, Buyer may request technical and personnel support from Seller to research and define material classifications according to internal parameters of Buyer’s systems.
        5. The Operational Spare Parts shall be delivered at least 6 (six) months before the expected need date in the operation and maintenance plan, or 3 (three) months before the Final Acceptance Certificate, whichever occurs first, in order to ensure uninterrupted operation and prevent any failures in the supply of spare parts.
        6. The Operational Spare Parts shall be delivered and exported to a bonded warehouse ("recinto alfandegado") designated by Operation Contract contractor and approved by Buyer in Brazil. Seller shall take all necessary steps, including customs clearance procedures, such as customs licenses, taxes, any duties, issuance of commercial invoice and packing list, and covering any associated costs, in accordance with DPU incoterm 2020. The customs clearance for the importation of Operational Spare Parts, including all costs, shall be the responsibility of Buyer, except for the cases described on item 3.3.2.2.3. For these cases, the customs clearance, including all costs, for the importation of Operational Spare Parts shall be the responsibility of Seller.

If delays occur in the material removal from bonded warehouses due to Seller’s responsibilities, all taxes or other related costs shall be borne by Seller.

Not applicable.

The transportation from the bonded warehouse to the Operation Contract facility is under the Operation Contract scope.

* + - 1. Seller shall store and preserve the Operational Good and Operational Spare Parts according to Vendor’s recommendations, from the time of their reception by Seller until their final application.
      2. Operational Goods and Operational Spare Parts shall mean item to be applied to maintenance and repairs that can be carried out on board by the Operational Contract team, with or without specialized technical assistance.
      3. Operational Goods and Operational Spare Parts shall not include maintenance and repairs that require specialized services carried out onshore or complete replacements of main equipment.
    1. The Capital Spares and Capital Goods below are Seller’s responsibility. “Capital Spares” shall mean the goods of significant cost and/or long lead-time that are strategic to the spares inventory. “Capital Goods” shall mean the goods of significant cost and/or long lead-time that are essential to the operation of the Unit and, therefore, must be on board from Substantial Completion and must be maintained and preserved on board until their application. Note 5.
       1. For centrifugal compressors for main compression systems (main, export, injection and CO2) Seller shall supply the following items as Capital Spares:
          1. Gearbox

Capital Spares: One (1) set of gears of the gearbox for each service, if applicable;

* + - * 1. Spare bundles

Capital Spares: One (1) spare bundle for each compressor section (stage) of each compression service;

* + - * 1. Gas generator turbine

Capital Spares: One (1) gas generator turbine (or complete gas turbine in case of single shaft turbine) for each group of up to four (4) of identical gas turbines models. Note 4

* + - * 1. Electric Motor:

Capital Spares: One (1) electric motor driver when compressor service operation without stand-by is necessary to cover a specific operating condition or mode.

* + - * 1. Printed Circuit Heat Exchanger (PCHE)

Capital Spares: One (1) PCHE per compressor stage in case of PCHE is used in gas coolers.

* + - 1. For VRU compression system Seller shall supply the following items as Capital Spares (Note 3):
         1. Capital Spares: One (1) set of gears for the gearbox;
         2. Capital Spares: One (1) complete compressor (casing with internals) for each compressor section (stage);
      2. For Power Generation Package (GTGs) Seller shall supply the following items as Capital Spares:
         1. Capital Spares: One (1) set of gears of the gearbox, if applicable;
         2. Capital Spares: One (1) gas generator turbine (or complete gas turbine in case of single shaft turbine) for each group of up to four (4) of identical gas turbines models. Note 4
      3. Not applicable.
      4. Spread Mooring System
         1. Capital Spares: One (1) spare mooring line complete with all its accessories and the same specification as that of the longest mooring line;
      5. Riser Mooring System
         1. Capital Spares: One (1) spare rope/cable for each pull-in winch;
      6. Offloading system
         1. Capital Spares: Two (2) hose intermediate segments and one (1) hose end section for the offloading hose string.

Note 3: If VRU compressors are centrifugal type, the capital spares shall be as per item 3.3.3.1, all components being classified as Capital Spares.

Note 4: The capital spare turbine shall be shipped in a container, nitrogen pressurized, with manometer and suitable for long term storage.

Note 5: Capital Goods are not applicable to this Agreement.

* + - 1. Seller shall store and preserve the Capital Spares and Capital Goods, according to Vendor’s recommendations, from the time of their reception at the job Sites until their delivery to Buyer.
      2. The Capital Spares shall be delivered before Handover.
    1. Seller shall use the Unit to transport the Operational Goods and Capital Goods from the job Site where Integration is carried out to Brazil, in the event that such integration takes place outside Brazil. For the purposes of the export process of the Unit, the Unit inventory shall include the Operational Goods and Capital Goods.
    2. The Mooring Components are Seller’s responsibility. “Mooring Components” shall mean the goods under the Seller's responsibility to supply, such as chains, polyester ropes and devices, as per the specifications and battery limits set out in Exhibit II – General Technical Description (GTD) and its annexes.
       1. The Mooring Components shall be delivered within 30 months after the Effective Date.
    3. The (i) Special Tools Stored On Shore and (ii) Special Tools Essential for the Safe Operation of the Unit are Seller’s responsibility. Special Tools Stored On Shore are the special tools that Seller, Buyer and Contract Operation Team agree that must be kept on shore during the operation phase, therefore, these cannot be transported on board the Unit until the final location. Special Tools Essential for the Safe Operation of the Unit are the special tools that the Seller, Buyer and Contract Operation Team agree shall be carried on board to the final location and kept on board during the operation phase of the Unit.
       1. The Special Tools Stored On Shore shall be delivered before Handover.
    4. The Capital Spares, Mooring Components and Special Tools Stored On Shore shall be delivered and exported to a bonded warehouse in Brazil ("recinto alfandegado") designated by Buyer. Seller shall take all necessary steps, including customs clearance procedures, such as customs licenses, taxes, any duties, issuance of commercial invoice and packing list, and covering any associated costs, in accordance with DPU incoterm 2020. The customs clearance for the importation of Capital Spares, Mooring Components and Special Tools Stored On Shore, including all costs, shall be the responsibility of Buyer.
       1. The Seller shall submit detailed information, as required by Buyer, necessary for Buyer’s internal procedures for material registration (when applicable) and customs clearance.
       2. If delays occur in the material removal from bonded warehouses due to Seller’s responsibilities, all taxes or other related costs shall be borne by Seller.
       3. The transportation from the bonded warehouse to the Buyer facility is Buyer responsibility.
    5. All costs related to transportation and custom clearance shall be included as part of Seller’ Scope of Supply, except where otherwise defined in this .
    6. Seller shall be responsible for providing Technical Support of Vendors for all phases and for all systems, equipment sets, and components of its scope of supply.
    7. Seller shall supply Equipment and materials from Vendors established in the Vendor List attached to the Exhibit II – General Technical Description.
    8. Equipment and materials under Seller Scope of Supply shall have their design and fabrication duly certified by the Classification Society, whenever required.
    9. Seller shall provide complete Data Books for all Equipment and materials under its scope of supply, in accordance with Exhibit V – Directives for Acquisitions.
    10. Seller shall provide training to Buyer’s personnel as described in Exhibit V – Directives for Acquisitions, exclusively for those Equipment and materials under Seller scope of supply.
    11. Seller shall be responsible for the custody, safeguarding and preservation of all materials and equipment supplied by Buyer.
    12. Seller shall implement and maintain material traceability according with the requirements described in Exhibit VII – Directives for Quality Assurance System.
  1. Modules fabrication, assembly, erection, transportation, lifting **and installation**

Construction, assembly and integration activities shall strictly comply with provisions included in this Agreement and its Exhibit, including but not limited to the following:

* + 1. Fabrication of utilities, process and accommodation Modules, complying with requirements of the Exhibit II - General Technical Description (GTD).
    2. Lifting, installation and Integration of all projected Modules and Equipment of the Unit.
    3. Supply of any complementary materials and devices necessary to assist the lifting operation of the Modules, and their installation on the Unit.
    4. Execution of all necessary load outs, tie-downs, sea fastening, preparation for towage and transportation, load-in, lift, skid, installation, integration and temporary mooring of Hull and/or any Equipment/Module or whatever sub-assemblies under its responsibility. Seller shall prepare all documents and items related to load-out, transportation and lifting operations.
    5. Transportation, lifting and installation of Modules.
       1. Seller is responsible for the transportation of the Modules from the Modules’ construction yards to the Integration Yard, as well as their load in or lifting directly onto the Hull.
       2. The load out of the Modules on barges or vessels and their transportation to the Integration Yard is within Seller’s Scope of Supply. Seller shall provide the barges or vessels, all design related to sea-fastening, grillage, barge or vessel reinforcements and Marine Warranty Surveyor approvals. Seller shall also provide all Equipment, materials and any other means necessary for the load out, sea-fastening and transportation of the Modules, including any other naval resources and all necessary licenses.
       3. Seller shall be familiar with all of the designated Marine Warranty Surveyor’s requirements in respect to the load-out, tie-down and transportation of the Modules and also with respect to all marine activities in relation to the barges/transportation vessels.
       4. Seller shall comply with any relevant merchant shipping legislation.
       5. Seller shall notify Buyer promptly in writing of any damage to, or loss of, components of the Modules. Subject to the provisions in the Agreement, the cost of repair or replacement of such damage or loss shall be borne by Seller.
       6. Seller shall monitor the weight and center of gravity of the Modules throughout the construction and assembly phases. Before their load out or lifting, Seller shall perform a weight test on the Modules and shall provide details about their respective final weight and the Center of Gravity Report to be furnished to the Buyer, Classification Society and Marine Warranty Surveyor, for analysis and approval.
       7. Before the load out operation, and prior to releasing any of the following reports, Seller shall:
          1. Analyze the last Classification Society survey report of the barge or vessel in dry condition and, in the event that the Classification Society has changed, Seller shall also analyze the Class Change documentation.
          2. Analyze the last Classification Society survey report of the barge or vessel in wet condition (floating) and, in the event that the Classification Society which prepared that report has since changed, Seller shall also analyze the Class Change documentation.
          3. Check the barge or vessel structural calculation to ascertain whether the barge or vessel can handle the Module being loaded unto it.
          4. Check the Bollard Pull calculation for the tugboats.
       8. If deemed necessary by Marine Warranty Surveyor, Seller shall hire a third-party company to undertake, by means of diver or ROV, a visual inspection of the barge, or hull of the vessel to be employed in the transportation of the Module, in order to verify the hull or barge integrity. The corresponding visual inspection report shall be issued to Marine Warranty Surveyor for it comments.
       9. Additionally, in the event of transportation by means of a barge:
          1. Seller shall verify the integrity and corrosion conditions of the welds, especially bottom junctions and including junctions between the bottom and the bulkheads both internally and externally.
          2. The tugboat must have a Data Logging System for acquisition and storage (minimum of 45 days) and shall make data and information available, via software compatible with MS Office, included but not limited to:

1. Fuel conditions (consumption and fuel ROB – Remaining On Board);
2. Position, speed and course of the vessel provided by the Reference Satellite Position Systems (recording rate of one position per second);
3. All weather and environment conditions (wind, current, wave height, etc.);
4. Tugboat speed;
5. Tugboat movements (roll, pitch, heave);
6. Towing distances (distance covered and distance remaining);
7. Towing line tension;
   * + 1. For all transportation operations involving the Modules, Seller shall submit a transportation plan for approval by Marine Warranty Surveyor and for comments by Buyer, which shall include but not be limited to the following documents and items:
          1. Location of all transported items on the barge or vessel.
          2. Engineering design and supply of all required load spread bars, guides and bumpers, tie-downs and sea fastenings and methods of sea fastening removal.
          3. Load out procedure report, including a ballasting procedure as well as a contingency plan in the event of breakdown or failure of mechanical equipment.
          4. Load out analysis report with calculations showing the adequacy of elements of load out procedure and system, including skidways and barges or vessels structures.
          5. Stability analysis.
          6. Inventory list of all items to be loaded out.
          7. “Bills of Lading” in triplicate originals for all materials and Equipment supplied at load out, to be issued before loading.
          8. Lift analysis report with calculations showing the adequacy of elements of both the load out procedure and system, including skidways and barges or vessels structures.
          9. Transportation analysis report, including calculations demonstrating that the Modules can be safely transported over the planned route, Marine transportation manual, sea-keeping criteria and tow hawser.
          10. The transportation procedure report shall include the relevant information on schedules, barges, vessels, tugs and any other related equipment, emergency procedures and contingency plans, risk analysis, anchoring and mooring facilities, stand by and support vessels, tow program, weather forecasting plans, safety refuge plan, navigation aids, lighting, etc.
          11. Health, Safety and Environment transport issues planned for the route to the Integration Yard.
          12. Vessel surveys.
       2. Seller shall issue a daily report with the location and weather conditions during the transportation of the Modules.
       3. Seller shall lift and install the Modules from the transportation barges or vessels onto the Hull or from the Integration Yard onto the Hull. In case the lifting works are subcontractor, Seller shall present the respective agreement at least three hundred (300) days prior to the execution of the service, as per the detailed Project Schedule.
       4. Seller shall submit detailed lifting plans for Marine Warranty Surveyor approval.
       5. The lifting plans shall comprise drawings, specifications and procedures, including at least the following items:
8. Lifting vessel/support vessel positioning;
9. Lifting devices;
10. Lifting vessel ballast and mooring systems to be used during the operation;
11. Dimensional controls and checks;
12. Lifting sequence and procedure;
13. Risk assessments and recommended actions to minimize possible damages;
14. Weather contingency;
15. Safety;
16. Detailed rigging plan;
17. Structural analysis for all items involved on the operations (including, but not restricted to, spreader-bars, padeyes, modules, hull, supports, guides and bumpers).
    * + 1. Seller shall cause the Marine Warranty Surveyor to issue a certificate to Buyer stating that all marine operations are approved, including all on-hire surveys of lifting vessels, cranes, barges, vessels, tugs and other facilities.
      1. Seller shall carry out all necessary mobilization, demobilization and transportation of personnel, Equipment and offshore marine spread required for the Work. Seller shall bear and pay all mobilization/demobilization costs (packing, freight, clearing/forwarding fees and similar expenses) in respect thereof.
      2. Seller shall provide and pay for the transportation of its own personnel to and from any site where the Scope of Supply is being performed, as well, all logistic assistance and related costs.
      3. Proper sea freight packing necessary for the transportation of Equipment and materials to the Sites shall be the full responsibility of Seller.
    1. **Hull fabrication, assembly, erection, transportation, preservation, Pre-Commissioning, commissioning and tests**
       1. Seller shall provide a specific hull, in accordance with the provisions of Exhibit II - General Technical Description (GTD).
       2. Seller shall perform weight and center of gravity control for the Hull, which will also include all equipment supplied by Buyer, if any, from the beginning of the design up to the delivery of the Hull to Integration Yard, as stated in the Exhibit III – Directives for Product Development.
       3. Seller shall control the Hull overall weight including all necessary consumables and temporary weights in order to avoid Hull draft figures that exceed the maximum acceptable shipyard navigation channel drafts.
       4. Seller shall satisfy all requirements specified and recommendations issued by the local port authority, “Brazilian Navy Port States - Control Authority” (Capitania dos Portos - Marinha do Brasil), if in Brazil, pilots entities, environmental authorities and other Governmental Authorities, necessary to carry out all marine operations.
       5. Seller shall comply with commissioning procedures according to Exhibit VIII – Directives for Comissioning Process.
       6. Hull conversion activities, if applicable, shall comply with provisions included on Exhibit II - General Technical Description (GTD) and Exhibit IV – Directives for Product Fabrication.
       7. Seller shall be responsible for monitoring berthing lines, and for taking appropriate measures in response to changes in the weather and tides. While the Unit is at the shipyard, all berthing lines shall be provided by Seller. The mooring plan for the Unit shall be approved by Classification Society, the Marine Warranty Surveyor and Buyer. Seller shall provide approved mooring plans for other adjacent hulls/vessels/platforms. Seller shall also provide a contingency plan to be applied in the event of an incident involving units adjacent to the Unit.
          1. Seller shall present valid certificates of temporary mooring lines and berthing lines, and all mooring equipment and accessories, whether on the Unit (bollards, eyebolts, chocks) or on the pier (bollards, fenders, spacers) properly marked with their SWL (Safe Working Load).
          2. Buyer may also request Seller to report lines' certificates and safety conditions of vessels near FPSO due to eventual risk mitigation assessment.
          3. In case Buyer assessment consider temporary mooring and berth lines in unacceptable conditions accordingly to OCIMF - Mooring Equipment Guidelines, such lines must be replaced by Seller with no additional cost to this Agreement.
          4. While the Unit is at the shipyard, all berthing lines shall be periodically inspected and exchanged accordingly to OCIMF - Mooring Equipment Guidelines.
          5. If there is more than one vessel berthed within the shipyard at any point throughout the Integration phase, Seller shall submit to Buyer the mooring plans approved by any Marine Warranty Surveyor for these other adjacent hulls/vessels/platforms.
    2. **Construction, assembly and integration**

Construction, assembly, and integration activities shall strictly comply with provisions included on this Agreement and its Exhibits, including, but not limited to, the following:

* + 1. Seller shall perform the weight control for the Unit throughout the execution of the Scope of Supply, preparing a weight control report which shall be updated on a monthly basis, in order to reflect the assembly of new structures or piping, installation of new equipment, Modules and packages, and any other changes performed by Seller.
    2. Seller shall perform the Unit inclining test and shall provide all necessary resources for this purpose, including crew and pilot, and in accordance with the procedures approved by Buyer, Classification Society and Marine Warranty Surveyor. After approval, Seller shall request to the load master Vendor that the load master software to be made ready and fully operational before Sail Away. The execution of the inclining tests will allow the determination of the Unit lightweights and center of gravity before the transportation to the offshore final location. In addition, Seller shall carry out the structural test of the tanks.
    3. Seller shall foresee provisions to send low-density foam pigs to the gas export riser.
    4. Not applicable.
    5. Seller shall remove all materials containing asbestos from the Unit and assure that the materials are disposed of properly, in case of hull conversion. No materials containing asbestos shall be used for converted hull and new construction.
    6. Seller shall be responsible for providing adequate ways for handling and storage (onboard of the Unit) the materials and consumables supplied loose by Buyer.
    7. Seller shall receive, store and load in the Unit, and subsequently organize, all items provided by Operation Contract Team, including but not limited to, materials, tools, consumables, foodstuffs, catering material and equipment, before the transportation of the Unit to the final location.
    8. Seller shall be responsible for all manpower and resources necessary for the offshore installation of sea water lift suction hoses.
    9. Automation and Instrumentation activities shall strictly comply with the provisions included in Exhibit II - General Technical Description (GTD).
  1. **Preservation, Pre-Commissioning, commissioning, tests, pre-operation, support to start-up and assisted operation**

Preservation, Pre-Commissioning and Commissioning, Tests, Pre-operation Works, Support to Start-Up and Assisted Operation, shall be performed in accordance with Exhibit VIII – Directives for Commissioning Process, related, but not limited to, the following:

* + 1. All Modules shall be commissioned, as much as technically possible, before the Modules final assembly and Integration to the Unit, including activities such as calibration, loop test, blank test, flushing, piping insulation, etc.
    2. Seller shall perform internal cleaning by mechanical or chemical method, hydrostatic test, tightness test and inertization of all equipment, structural and independent tanks, valves and piping systems under the Scope of Supply.
    3. Seller shall provide all tools, equipment, materials, manpower, consumables (including start-up fuel load) and spare parts, lubricants, replacement parts, utilities (including electrical power, load banks for all generators/turbo-generators tests, electrical cables, interconnections, diesel fuel, instrument air, potable water), in order to comply with the Scope of Supply, except for those items explicitly defined as Buyer’s scope of supply in item 2 above.
    4. Seller shall implement, keep and update a database to record the commissioning related activities and tests on equipment, instruments, components, special items and systems.
    5. Seller shall preserve all systems, equipment, and installations of the Unit, as per Vendors’ recommendations.
    6. Seller shall prepare and issue the final NR-13 and SPIE books and logs, according to the Exhibit IV and Exhibit VIII.
    7. Seller shall provide technical support from Vendors for the phases of commissioning, testing, pre-operation and start-up for all systems equipment and components of its scope of supply.
    8. Seller shall acquire and keep updated an integrated tool with the commissioning information, considering all applicable commissioning and preservation activities to be performed on the Unit. As an option, Buyer will make available its Integrated Commissioning Tool for use by Seller, according to the Exhibit VIII and Exhibit XVI requirements.
    9. Seller shall carry out a full load test on the power generators (auxiliary, emergency and main generators), including the supply, installation and operation of the load bank, as described in Exhibit VIII – Directives for Commissioning Process.
    10. Seller shall conduct the functional running tests of all gas compressor trains during the Integration phase under Buyer technical supervision, as described in Exhibit VIII – Directives for Commissioning Process.
    11. Seller shall reactivate all systems and provide all necessary facilities in order to achieve the Habitability of the Unit in accordance with Exhibit VIII - Directives for Commissioning ProcesS and Exhibit II – General Technical Description (GTD) prior to the transportation to Brazil. Seller shall provide, under the Lump Sum Price, onboard hospitality facilities from 45 days before Substantial Completion Milestone achievement. This provision shall include kitchen utensils supply, bedding and all items necessary for this scope execution. Seller shall comply with ANVISA requirements (Resolução Nº 216).
    12. Seller’s responsibilities regarding to NR-10, NR-13, NR-17, NR-37 and SPIE activities are presented in the Exhibit IV – Directives for Product Fabrication, Exhibit VII – Directives for Quality Assurance System and Exhibit VIII – Directives for Commissioning Process.
    13. Seller shall be responsible for obtaining Technical Support from Vendors, manufacturers and/or suppliers, onshore and offshore, whenever required, during the phases of assembly, commissioning, testing, pre-operation, start-up and operation specialized support, for all systems equipment and components within Seller’s Scope of Supply. This support shall include, but not be limited to, labor (manpower), handling (including crane), tools, equipment, materials, consumables, lubricants, replacement parts and utilities (including electrical power, instrument air, potable water and other necessary items).
    14. The Substantial Completion Certificate will be issued in accordance with Exhibit VIII – Directives for Commissioning Process.
    15. The Final Completion Certificates will be issued in accordance with Exhibit VIII – Directives for Commissioning Process.
  1. **Transportation of the Unit to the offshore final location and installation.**
     1. All transportation activities regarding the Unit shall be performed under Seller’s Scope of Supply.
     2. All towing operations, except that specified in item 4, shall be performed by Seller. The towing procedure, including in sheltered waters, shall be performed by Seller under the guidance of the towing master. The scheme shall be submitted to the Classification Society, to MWS and for comments by Buyer.
     3. All customs clearance activities, harbor fees and fulfillment of the requirements of the local authorities, as well as all necessary procedures, interfaces and approvals related to transportation of the Unit, shall be on Seller’s own responsibility until the final delivery of the Unit.
     4. The conditions established in NORMAM-401 (Ballast Water Management and Control) and IMO Resolution MEPC. 207(62) - Guidelines for the Control and Management of Ships’ Biofouling to Minimize the Transfer of Invasive Aquatic Species shall be applied.
     5. It is Seller's responsibility to supply, during the towing operation, steel cables, slings, sisal or nylon rope and ropes in general, necessary for mooring the support boats and the auxiliary cables for positioning the Unit and towing certification.
     6. It is Seller's responsibility to contract pilot services for shifting of the vessel in sheltered waters.
     7. It is Seller's responsibility to tow the Unit to the final location, including in sheltered waters. Seller's responsibility for towing in sheltered waters goes as far as the use of ocean tugs is possible.
     8. Seller may, at its discretion and at its cost, use vessels and helicopters contracted by Seller, provided that it is done by companies accredited by Buyer and always informing Buyer’s Inspection before each scheduled trip.
     9. Seller shall bear the transport costs of the Unit and diesel oil in case of any necessary dry docking resulting from unforeseeable circumstances or force majeure, as defined in Article 23 - Force Majeure of the Agreement.
     10. Seller shall provide all devices, facilities and handling on board to perform the mooring hook-up, pull-in of the risers, in addition to all the load tests required by Buyer or other authorities, according to Exhibit II – General Technical Description (ET – Spread Mooring and Riser System Requirements).
     11. Not applicable.
     12. Seller will also be responsible for the materials and Equipment necessary for mooring.
     13. Seller will be responsible for providing mockups and winch tests for pull-in preparation activity.
     14. Seller shall inspect and issue a damage report upon arrival of the FPSO in final location or sheltered waters in Brazil.
     15. SELLER shall consider to meet the following during the transit from Integration Yard to the final location:
     + Provide the material resources and teams complementary to the resources provided by the Operation Contract;
     + Provide Offshore Installation Manager (OIM)Manning of the Unit with operational, construction and commissioning teams;
     + Provide all resources and logistics needed (man power, equipment, consumables, fluids, tools, stagging, materials, parts, etc) to finalize any construction, pre-commissioning and commissioning works carried over from the integration yard;
     + Provide vendor technical assistance if needed;
     + Provide power supply from Turbo-Generators if needed;
     + Provide all logistics for crew changes, including assistance for Buyer personnel;
     + SELLER shall present a plan for the activities during the transit from integration yard to Brazil which will be subjected to Buyer approval;
     + SELLER shall present a detailed emergency response plan, including international medvac services;
     + SELLER shall account for the full utilization of the Unit’s 100% POB capacity during transit conditions. Out of this capacity, 10 beds shall be reserved for Buyer’s representatives. Additionally, SELLER shall ensure the provision of all necessary shipboard infrastructure, including, but not limited to, communications and accommodation arrangements, to support the BUYER representatives.

Note: despite the presence of the entire Operation Contract command team, as well as the performance of the Operation Contract Team in catering, maintenance and operation of the Unit and the subsystems already transferred, it is the Seller's responsibility to transport the Unit to the final location.

* + 1. It is Seller responsibility to provide sufficient diesel oil for the transportation and required consumption up to Ready for First Oil.
  1. **Marine Warranty Surveyor, towing master and mooring master**
     1. It is Seller’s responsibility to contract a Marine Warranty Surveyor, not only internationally recognized but also accept by builder’s risk insurers for working in Brazil or any other place, in order to approve site conditions, inspect, witness, perform studies and approve weight experiments, load outs, load ins, lifting, inclining test, sea fastening, tow out, tow operations, calculations, analysis and procedures related to the Modules, Hull and Unit and all other marine operations within Seller`s Scope of Supply.
     2. Seller shall contract a Marine Warranty Surveyor after obtaining the approval of Buyer. Seller shall deliver to Buyer copies of all technical procedures, reports, certificates and letters exchanged between Seller and the Marine Warranty Surveyor at the same time that they are issued or received by Seller.
     3. The Marine Warranty Surveyor, on behalf of Seller, shall certify and verify the seaworthiness of all marine transportation of the project components and the loading out and sea-fastening thereof on to towed barges or the decks of the subject vessels and all marine installation activities involving lifting from and onto floating vessels, lifting on any kind of dynamic positioning, as well as emplacements, float-over, mating, launching, docking, loading or off-loading at sea.
     4. Seller shall give full co-operation and assistance to, and comply with any instructions or requirements of, the Marine Warranty Surveyor in respect of, or arising from, any surveys to be carried out hereunder by the Marine Warranty Surveyor.
     5. On the basis of such requirements, provided pursuant to the professional responsibility of the Marine Warranty Surveyor, Buyer may issue instructions to be complied by Seller.
     6. Any costs or expenses incurred by Seller in complying with the item 3.9.5 above shall also be borne by Seller, who shall not be entitled to any compensation therefor or in respect thereof from Buyer.
     7. Before accepting any vessel as part of the offshore marine spread, Buyer will inform if these vessels are acceptable for use in the offshore work and fit for purpose by a marine survey being conducted by the Marine Warranty Surveyor.
     8. Each such marine survey and the results thereof shall be without prejudice to the obligations and liabilities of Seller under the Agreement.
     9. All costs associated with the preparation of the vessels for marine survey and the time-related charges and other costs during the survey(s) are included in the Contract Price.
  2. **Marine growth/biofouling**
     1. Seller shall apply tin-free antifouling paint on the Hull underwater surfaces (flat and vertical bottom, including all associated structures and sea chests) of the Unit. The anti-fouling painting scheme shall follow NORMAM -401/DPC and IMO Convention on Anti-Fouling Systems. The certificates of paint application must be presented to Buyer.
     2. If the Unit is transported from a site outside Brazilian waters, Seller shall ensure the Hull to be free of marine growth/biofouling as follows:
        1. Hull and niche areas cleaning shall be performed and properly reported within 30 days before sailing to Brazilian waters according to local legislations where the cleaning will be executed. Cleaning reports with cleaning method description and representative photos of the hull and niche areas after the cleaning shall be submitted to Buyer appraisal and shall be attested and signed by a qualified professional, as biologists or oceanographers, capable to state that the hull and all niche areas are entirely free of macrofouling. Seller shall also deliver to Buyer videos and photos of all the cleaning process in a separate report. Seller shall identify each photograph with a reference Hull area.
        2. Monthly under water hull and niche area inspecting and cleaning (grooming) shall be performed by Seller during the hull stay at Brazilian yard or sheltered waters (whenever those areas have proven occurrence of sun coral) to prevent any marine growth/biofouling. Periodic Cleaning reports and a final report as per item above shall be performed. All reports shall be attested and signed by a qualified professional with a knowledge of marine biology, such as a biologist or oceanographer, stating that the hull and niches areas are free from sun coral / macrofouling and shall be submitted to Buyer appraisal.
        3. In any other areas, Seller shall evaluate the best way to prevent and ensure the hull and niche areas will be free of sun coral before Sail Away to final location or other regions. If the presence of sun coral is confirmed then hull and niche areas cleaning shall be performed, following the requirements of the competent environmental agency and the Brazilian legislation. Cleaning report with cleaning method description and photos after the cleaning shall be submitted to Buyer appraisal and shall be attested and signed by a qualified professional, as biologists or oceanographers, capable to state that the hull and all niche areas are free of sun coral. Seller shall also deliver to Buyer videos and photos of all the cleaning process in a separate report. Seller shall identify each photograph with a reference Hull area.
        4. Within 30 days before Sail Away to final location or other regions Seller shall perform hull and niche areas inspection to confirm that the hull and niche areas are free of macrofouling and/or sun coral. Inspection report with inspection method description and photos shall be submitted to Buyer appraisal and shall be attested and signed by a qualified professional, as biologists or oceanographers, capable to state that the hull and all niche areas are free of sun coral. During the cleaning activity, shall be provided contention for removed residues. Seller shall also deliver to Buyer videos and photos of all the cleaning process in a separate report. Seller shall identify each photograph with a reference Hull area.
        5. Seller shall perform a Hazards Identification (HAZID) study focusing on the risks associated to the transportation of the Unit from the abroad shipyard to Brazil.
     3. The requirements set forth in NORMAM-401/DPC - Ballast Water Management and Control – shall be applied.
  3. **Other Obligations**
     1. Seller shall provide, no later than 1 (one) month after Buyer notification, all documents, in Brazilian Portuguese language, including design documents, as per IBAMA requirements, so that Buyer can obtain, at its own expenses, the proper environmental licensing from the referred organ.
     2. Seller shall respect the routes and restricted areas of navigation and anchoring, according to the Obstacle Management System (SGO), provided by Buyer, when applicable, and the nautical chart, which is Seller’s responsibility.
     3. All permits, approvals or licenses required for performance of the works for which Buyer has not assumed responsibility under item 2 of this Exhibit, shall be considered Seller’s responsibility, except as otherwise expressly provided in the Agreement.
     4. All certificates, permits, and authorizations, including, without limitation, completion certificates and operating permits, as required by applicable laws, to conduct the Performance Tests, Demonstration Test or Operational Tests, except for test performed in the final location of the Unit, shall be considered Seller’s scope.
     5. Seller shall also provide assistance, information and documentation required by Buyer in order to make it possible for the latter to obtain the permits listed as Buyer’s scope.
     6. Buyer shall provide the following consents and permits:
        1. LI – “Licença de Instalação” (Site Installation Permit), related to the installation of the oil and gas production facilities at final location.
        2. LO – “Licença de Operação” (Operation Permit), related to the operation of the oil and gas production facilities at final location.
  4. **Classification / Certification**
     1. Seller shall take all necessary actions in order to guarantee that the Unit will be designed for the specified functional requirements, including the design life of continuous operation without the necessity of dry-docking, according Exhibit II – General Technical Description (GTD).
     2. Seller shall allow audits, inspections, surveys and checks to be carried out during all phases of the project's life cycle, when requested by Buyer, in order to comply with the regulations of the regulatory bodies. These checks shall be previously agreed between Seller and Buyer.

# UNIT HANDOVER

* 1. The Handover shall be carried out at the offshore final location in Brazil, after Substantial Completion and once all the conditions stated in the Agreement have been complied with. Buyer shall have the right to require Seller to Handover any Modules, materials or Equipment irrespective of whether or not Seller has completed all work associated with that portion of the Scope of Supply which was scheduled to be performed prior to the Handover Date. The issuance by Buyer of a Handover Certificate shall not relieve Seller of any of its obligations under this Agreement or at law, including without limitation Seller’s obligation to complete its scope.
  2. For the Handover, Seller shall provide Buyer with all technical documents, including the as-built mark-up drawings for handover, manuals, data books, Classification Society certified documents, and all documents provided by suppliers, Subcontractors and Vendors.
  3. The documentation shall be organized and delivered in accordance with Exhibit III – Directives for Product Development and Exhibit V – Directives for Acquisitions of the Agreement.
  4. The documentation related to the construction and assembly activities shall be organized and supplied to Buyer in accordance with the Exhibit IV – Directives for Product Fabrication of the Agreement.
  5. Seller shall comply with all requirements for Handover described in this Agreement and its Exhibit VIII – Directives for Commissioning Process.
  6. Seller shall maintain, in the Unit, all legally required technical documents at disposal of authorities for consultation.
  7. Seller shall ensure the release of the Unit helideck by the competent Brazilian authorities (Port Authority and National Civil Aviation Agency) and Petrobras Technical Authority (SCA), bearing all costs arising. Before Handover, Seller shall ensure that the helideck is ready to receive flights carrying the operational team. If the Integration Yard is located abroad, Seller shall also provide an international helideck certification, which will include a registered helicopter test flight landing and taking off from the Unit.
  8. Radio-communication equipment deemed necessary aboard the Unit shall be operated by Seller that will be responsible for obtaining the licenses and frequencies for the operation of such equipment.
  9. Seller shall take steps to obtain the deeds of inspection from the competent authorities for the onboard radio station in order to be ready for all necessary operations.
  10. All documents required by the local authorities, Classification Society, MWS, rules and regulations of the flag authority, as well as by the insurance company, shall be provided, dispatched and prepared by Seller.
  11. Seller shall develop, implement and maintain a functional safety plan on board of the Unit, in accordance with Chapter XI-2 of SOLAS and the ISPS Code. Seller shall also consider the rules, regulations and resolutions of the Brazilian regulatory bodies, such as ANP, IBAMA, the Brazilian Navy and others;
  12. Seller shall provide all legal requirements, such as forms, certificates, training programs, safety and protection procedures, audits and verifications, and obtain approvals and authorizations from the Brazilian port authority, flag, navy, regulatory agencies, Federal Police, Brazilian Federal Revenue, CNEN, Ministry of Labor and other Brazilian regulatory bodies.
  13. Seller will be responsible for the release of the Unit before the Brazilian authority - Directorate of Ports and Coast, to operate the Unit in Brazilian jurisdictional waters.
  14. Upon the request for extraordinary burning authorization to be filed at the ANP by Buyer, Seller shall participate in the preparation of the necessary previous documents and send the documents requested by Buyer, as well as their revisions, to include them in the set of documents that will be filed with the regulatory agency.
  15. Seller shall be responsible for Unit’s delivery at its final offshore location. The Handover point will be approximately 3-5 NM away from the FPSO final mooring hook-up position. At the agreed hand-over point, the FPSO will be connected to Buyer station keeping tugs and Seller’s tow master will instruct the tugs to head to mooring hook-up position. Buyer will provide 4 (four) station keeping tugs at agreed hand-over point (with required bollard pull of 180 tons) for final positioning and mooring hook-up operations until achieve storm safe condition. Harbor tugs or Station keeping tugs and Pilots for the FPSO, whenever required before the Handover at the Handover Point, will fall under Seller’s scope.
      1. Seller may take decision to go straight from Integration Yard to final location, if approved by Brazilian authorities and Buyer.
  16. After completing all the steps required in item 16.4 of the Agreement, the Unit will be connected to the ocean tugs under Buyer’s responsibility and Seller's towing captain will instruct the tugs to proceed to the final location. After the arrival of the Unit at the final location, Buyer will supply tugs enabled for the final positioning and the start of the mooring connection operations. Port pilots, whenever necessary, will be paid by Seller.
  17. All activities and support for connection/disconnections on board the Unit, are under Seller's responsibility.

# APPENDIX

APPENDIX 1 - Operational Goods

APPENDIX 2 - Operational Spare Parts

APPENDIX 3 - Goods categories - transport, delivery, storage, custom clearance characteristics and responsible parties