



CLASSIFICATION Unclassified Non-Sensitive	EDRM UID 8070bcee - 1.0	ICP Number
EXTERNAL REFERENCE	VERSION CREATED ON / STATUS 05 Sep 2024 / Published	
PA DESIGN DOCUMENT TYPE N/A	DRAWING NUMBER	DRAWING REV
PA/TA NUMBER(s) 3.1.P2.US.01 - RPS		iDOCS UID

Statement of Work (SOW) for RPS Cryostat Roughing and Regeneration (CRRR) Non-Active Skid SubFrames

Abstract or description:

Statement of Work for RPS Cryostat Roughing and Regeneration (CRRR) Non-Active Skid SubFrames

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Reviewer	Tippens, Jared	27 Aug 2024	Recommended
Reviewer	White, Andrew	26 Aug 2024	Recommended
Approver	Smith III, Charles	05 Sep 2024	Approved

Final

Change Log

Version	State	Date	Version Change Description
v1.0	Published	05 Sep 2024	

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1 INTRODUCTION

ITER is an international research project with a programmatic goal of demonstrating the scientific and technological feasibility of fusion energy for peaceful purposes. The ITER device is being designed by the European Union, India, Japan, the People’s Republic of China, the Republic of Korea, the Russian Federation, and the United States. The European Union is the host party for the ITER facility which is being constructed in Cadarache, France. The ITER Organization Central Team (IO) is responsible for the conceptual design, performance parameters, schedules, integration management, systems engineering, and on-site assembly, installation, testing and commissioning. Governing regulations, codes, and standards for the design and construction of all ITER components are determined by the European Union and France. The US portion of ITER is managed by the US ITER Project Office (USIPO) which is hosted by Oak Ridge National Laboratory (ORNL) under contract with UT-Battelle (hereinafter referred to as the “Company”), and located in Oak Ridge, Tennessee. Responsibility for operating the completed ITER facility will belong to the IO.

2 SCOPE

This Statement of Work (SOW) outlines the requirements which must be followed by the selected vendor to ensure the provided five RPS Cryostat Roughing and Regeneration (CRRR) Non-Active Skid Subframes meet all the fabrication, inspection, documentation, quality and shipping requirements needed for acceptance by US ITER and the IO. The Subframes are classified as Non-SIC (Safety Important Classification) and Quality Classification 2 (QC-2). The requirements for developing the quality documentation needed to satisfy these requirements are outlined in this document. All work performed per this SOW will conform to the requirements of the Technical Specification [[3.1.1](#)].

3 APPLICABLE DOCUMENTS

Unless otherwise specified, the correct revisions of National and International Standards, US ITER technical documents, drawings, specifications, and other job-related documents will be identified on the “Current Reference List (CRL) for RPS Cryostat Roughing and Regeneration (CRRR) Non-Active Pump Skid Subframes” (80709a3d / ITER_D_BXDZPZ) provided at the time of award and as reference documents are updated.

3.1 Requirements

- 3.1.1 Technical Specification for RPS Cryostat Roughing and Regeneration (CRRR) Non-Active Pump Skid Subframes (806d7cc4 / ITER_D_B8G4AF).
- 3.1.2 EN-10204, Metallic Products: Types of Inspection Documents

3.2 US ITER Procedures and Forms

- 3.2.1 Quality Plan Template for Suppliers and Subcontractors (8043657d)
- 3.2.2 Deviation Request Procedure (803fee84)
- 3.2.3 Deviation Request Form (803f59df)
- 3.2.4 Non-Conformance Report Procedure (803f913f)
- 3.2.5 Non-Conformance Report Form (8043b412)
- 3.2.6 Contractor Release Note Procedure (8041191f)
- 3.2.7 Contractor Release Note Form (803f4967)
- 3.2.8 Inspection Plan (IP) Template (80411682)

4 PERFORMANCE REQUIREMENTS

4.1 Performance Requirement 1 – Project Planning and Schedule

4.1.1 Project Kick-Off Meeting

- 1) The Project Kick-Off Meeting shall be scheduled at a mutually agreeable time as soon as practical after the award of the subcontract. The primary purpose of the Project Kick-Off Meeting is to meet the principal participants and to ensure the scope and expectations of the subcontract are understood.
- 2) Discussion topics at the Project Kick-Off Meeting shall include:
 - Overview of the Technical Specification [\[3.1.1\]](#)
 - Overview of Quality Requirements for a QC-1 project
 - Selection of Coating to be used on frames
 - Discussion of Material Requirements
 - Discussion of Cutting Fluids
 - Overview of fabrication drawing methodology
 - Overview and discussion of welding program.
 - Final Documentation Package (Manufacturing Dossier)
 - Project Schedule
 - Inspection Plan (IP) and Control Points
- 3) If requested, the Seller shall arrange for a tour of the facility(s) where the frame fabrication, inspection, and packaging occur. Seller and USIPO shall also discuss means of remote surveillance including, remote witnessing of requested Control Points, in case it is deemed necessary.
- 4) The Seller shall prepare the Project Kick-Off Meeting Minutes within 5 working days of the meeting. If Seller has a presentation for the Kick-Off meeting as a response to the requirements of the Kick-

Off meeting, Seller may submit presentation with a list of any resultant action items as suitable meeting minutes. Company approval of the minutes represents a Control Point.

4.1.2 Project Schedule

- 1) The Seller shall prepare a Project Schedule which outlines, at a minimum, all tasks, meetings, deliverables, milestones, and Control Points. The US ITER Technical Project Officer (TPO) has the option to add additional items to the Project Schedule.
- 2) During the project Kick-Off meeting, the Seller shall indicate projected start and end of support fabrication, final documentation, and packaging activities. Seller shall include the location of all fabrication operations as well as provide a draft quality plan for themselves as well as any major subcontractors used (if applicable). Seller shall also provide any internal Standard Operating Procedures (SOPs) to be used either by themselves, or any applicable major subcontractor, in the fulfillment of safety and quality critical operations.
- 3) As the USIPO reserves the right to witness any fabrication and inspection event, dates shall be scheduled to comply with USIPO travel requirements.

4.1.3 Point of Contact

- 1) The Seller shall designate an official single Point of Contact (POC) to work with the Company's TPO and Procurement Officer (PO).
- 2) Technical issues shall be discussed with the Company's TPO.
- 3) Subcontract administration issues shall be discussed with the Company's PO.

4.1.4 Project Plan

- 1) The Seller shall prepare a Project Plan that integrates each element of subcontract management into a concise written document.
- 2) The Project Plan shall identify the Seller's key personnel in this project and describe their individual roles and responsibilities. In addition to the POC, the key personnel identified shall include, at a minimum, the Quality Manager, Logistics Officer, and shop floor supervisor for machining and welding operations.
- 3) The Project Plan shall include the proposed Project Schedule.

4.1.5 Progress Meetings

- 1) Bi-weekly progress meetings shall occur at a reoccurring time and day via a method mutually agreed upon between the Seller and USITER. TPO or Seller POC may also request progress meetings outside of the regularly scheduled meeting at a mutually agreed upon

date, time, and format.

- 2) The discussions may include the Seller's progress, potential problems, resources, technical issues, contractual issues, fabrication and assembly issues, inspection results, and value engineering.
- 3) The Seller shall prepare and send minutes of the teleconferences and meetings to the TPO for review and approval within 5 business days.
- 4) Seller shall also provide in writing notification of completion of each hold point, regardless of verbal notification being given at meetings.

4.2 Performance Requirement 2 – Inspection Plan

- 1) For items fabricated by the Seller, all steps in the manufacturing process from receipt of material to final packaging shall be documented in an IP. This plan shall also outline all document submittals the Seller is to provide the USIPO and include all material verification, fabrication drawings and processes, and quality documents. The USIPO shall review and approve the IP prior to commencement of any fabrication operations including procurement of materials and commencement of fabrication. The IP will be used to monitor quality control and inspection reports. **Control Points shall be assigned to the IP activities to notify the Seller when submittals and authorizations are required to proceed.**
- 2) The requirement for an IP shall be flowed down contractually from the Seller to the Seller's suppliers and subcontractors (if deemed applicable) unless the requirement is waived in writing on a case-by-case basis by the Company.
- 3) The Seller shall include Control Points in the IP. The Company will add any Control Points needed to the IP and will then send the IP to the ITER IO for addition of their Control Points, review, comment, or acceptance. A standard form is provided by the Company for documenting the IP [3.2.8].
- 4) Any point designated as an Authorization to Proceed Point (ATPP) on the IP requires a written authorization to proceed notification from the USIPO TPO.
- 5) The Seller shall not proceed with any fabrication processes until the IP has been reviewed and approved by the USIPO and the ITER IO. Doing so will result in an NCR ([Section 5.6](#)) and may result in fabricated parts being rejected at Seller's expense.

4.3 Performance Requirement 3 - Material Procurement

The Seller is responsible for providing all materials required for fabrication and assembly of the frames and any required constituent components. Seller shall ensure that all raw materials and prefabricated components meet the requirements of the technical specification. **Additionally, Seller shall provide**

the USIPO with inspection reports documenting the ‘as received’ condition of all items listed below. Satisfaction of these requirements constitutes an Review control point.

4.3.1 Raw Materials

All raw material used for the fabrication and assembly of the frame shall be accompanied by a Type 3.1 Certificate of Conformity [3.1.2].

4.3.2 COTS Items

Any commercial off-the-shelf components (COTS) used in fabrication or assembly shall be accompanied by a Type 2.1 Certificate of Conformity [3.1.2].

4.4 Performance Requirement 4–Fabrication, Coating, and Inspection

4.4.1 Fabrication Drawings and Design

Sellers shall produce fabrication drawings as required to successfully fabricate and deliver the hardware. **Review of the Seller generated drawings shall constitute a Review control point on the IP.** Note that the final dimensional and acceptance inspection shall be performed to the US ITER provided drawing and not to the Seller generated fabrication drawing.

4.4.2 Fabrication Welding Documentation and Procedures

100% Visual Inspection (VT) shall be performed on each weld.

Prior to commencement of welding operations, Seller shall submit, for approval all WPS and PQRs to be utilized to perform the required welds. Additionally, certifications for the welders and weld inspectors to the required codes as stated in the technical specification shall also be provided. **Review and approval of the welding documentation shall constitute an ATPP on the IP.**

Records shall be maintained as appropriate for the currently qualified personnel, processes, and equipment of each special process.

4.4.3 Fabrication Operations

Once all required pre-fabrication documentation (IP, QP, weld certs, etc.) has been approved and returned to the Seller, the Seller may begin fabrication. As part of the Kick-Off Meeting, Seller shall provide applicable SOPs used for non-welding fabrication operations for review by USIPO. SOP delivery and review by USIPO shall constitute a Review control point on the IP. Fabrication process must conform to those steps identified in the IP. Commencement and conclusion of fabrication shall constitute a Notification Point on the IP.

4.4.4 Coating

Prior to commencement of coating application, Seller shall submit the product name and any available data sheets for the selected coating for review and approval. Coating must conform to the requirements of the Technical Specification [3.1.1]. Additionally, Seller shall submit the proposed plan to verify coating application thickness. **Review and approval of the proposed coating and verification plan shall constitute an ATPP on the IP.**

4.4.5 Inspection

Once fabrication of each support is complete, Seller shall perform all dimensional verification and inspection operations as prescribed in quality assurance provisions section of the Technical Specification [3.1.1].

Volumetric NDE (RT or UT method) records shall be preserved for each inspection performed. Traceability between the record and inspection should be clear. Digitized copies of the records are preferred. Records should be transmitted periodically, such as at the conclusion of final inspection for each major component. Manufacturing Dossier (section 4.5.3) records would consist of a compilation of these previously transmitted records plus any additional records not previously transmitted.

QA record receipt controls shall provide a method for identifying records received, receipt and inspection of incoming records, record retention, and transmittal of records.

All inspection operations performed by the Seller shall be detailed on the IP. These operations shall also be listed with sign off verification on the support traveler. The final dimensional inspection and final volumetric welding inspections shall be listed as an ATPP on the IP.

4.5 Performance Requirement 5 – Documentation

4.5.1 Contractor Release Note:

- 1) The seller is to prepare a Contractor Release Note [3.2.6] for each delivery. The Contractor Release Note (CRN) is a document that, for an equipment/service:
 - identifies the applicable requirements,
 - certifies that the equipment/service complies with these requirements,

- records the status of the documentation, and
 - highlights any outstanding obligation.
- 2) The frames shall not be deemed ‘ready to ship’ until the TPO provides the Seller with an approved Contractor Release Note. A standard form [3.2.7] is provided by the Company for documenting the CRN.
 - 3) The Seller shall not submit the CRN until all manufacturing and inspection operations are complete. Note that the CRN cannot be approved until the final documentation package (e.g., manufacturing dossier, Section 4.5.3) has been submitted. **Approval of the CRN represents an ATPP control point.**

4.5.2 Certificate of Conformity

- 1) The Seller shall prepare a Certificate of Conformity for the frames. The Certificate of Conformity shall state that the items meet all requirements defined in the Technical Specification [3.1.1] and this statement of work. The designated POC shall submit the completed Certificate of Conformity to the TPO.
- 2) The Seller may use any suitable format for the Certificate of Conformity. At a minimum, the Certificate of Conformity shall include:
 - Manufacturer’s details (name, address, etc.)
 - Item identification details (frame number and PNI designator)
 - Declaration that the equipment meets the applicable requirements (specifically list requirements documents)
 - Any standards the item complies with
 - Signature of Sellers authorized representative.

4.5.3 Manufacturing Dossier

- 1) The Seller shall prepare a Manufacturing Dossier for the support structures and submit it to the Company for approval. The Manufacturing Dossier shall consist of the documents agreed upon during the first progress meeting and organized in a fashion which allows traceability from the supplied documentation to the individual support to which it is applicable. **Approval of the Manufacturing Dossier represents an ATPP Control Point.** At minimum, the Manufacturing Dossier shall contain the documents listed below, when applicable:
 - Contractor Release Note
 - A fully executed copy of the approved IP, including all control points signed off or evidence of completion attached to the IP. In

the case of evidence, each item shall be clearly related to the specific control point it addresses.

- Any supplemental drawings or detail drawings developed by or for the Seller for this scope of work
- Material certifications
- Documentation certifying the painting/coating applied
- Supplier Inspection Reports – Dimensional and Welding
- Welding Certification (per Code of Construction), including but not limited to, PQR, WPS, and certification records for personnel used to perform welding operations in fulfillment of this SOW.
- Approved Deviation Requests (if applicable)
- NDE inspector personnel qualifications, processes / methods used, and equipment used (if applicable).
- QA records for NDE inspection, VT, MT, UT, and RT
- Approved Non-Conformance Reports (if applicable)
- Certificate of Conformity

2) The Manufacturing Dossier shall also include:

- Cover page that identifies the item(s) (part and /or serial number, and name) as well as a space for signature of the Sellers's authorized representative and dates signed
- Table of Contents with the page number on which each section begins
- Summary page describing key points relevant to fabrication of the part(s)
- Inclusive page numbers (x of x) for the entire dossier
- Optical Character Recognition (OCR) of the dossier before delivery to the Company.

4.6 Performance Requirement 6 – Data Management

4.6.1 Language and Units

- 1) All documentation submitted for satisfaction of this SOW shall be in the English language.
- 2) All dimensions and parameters shall be reported in SI units (e.g., mm, kg, N, MPa, °C) as the primary units.

4.6.2 Company Provided Information

Information provided by the Company to the Seller shall not be used for any activity except those specified by this Statement of Work.

4.6.3 Original Copies

The Seller shall keep and maintain the original copies of all signed documents. Copies shall be supplied to the Company as part of the Manufacturing Dossier. The Seller shall provide electronic copies of all documentation in searchable Portable Document Format (.pdf). Electronic documents shall be supplied to the Company using email, USB storage device, or file transfer tools such as the ORNL File Upload System, Drop Box, or other such electronic tool for securely transferring large files.

5 QUALITY ASSURANCE

5.1 Conflicts

In the event of a conflict between the Technical Specification [3.1.1] and this Statement of Work, or between either of these documents and a requirement in a specified code or standard, the Seller shall notify the Company's TPO and PO in writing. The TPO and PO will determine which document takes precedence and advise the Seller accordingly. Failure to notify the Company of any such conflict shall not relieve the Seller of any responsibility to meet all requirements.

5.2 Quality Program

The Seller's Quality Program shall be implemented and sufficient to ensure that the quality of items produced, or services provided will meet all the requirements as stated in this document and as contracted. The Seller must produce the items or services in accordance with their quality assurance program as identified in their subcontract with the Company. Changes to the program that could affect the items or services must be approved by the Company in advance.

5.3 Quality Plan

ITER requires that a Quality Plan be prepared by the Seller that incorporates the requirements specifically for the subcontract, identifying how they will fulfill the specific subcontract requirements.

NOTE: This plan is *in addition* to the pre-established Quality Program of the Seller's organization as detailed in [Section 5.2](#).

Work on the subcontract may not begin until notice is received that the Quality Plan is approved by the Company. The requirement for a subcontract-specific Quality Plan shall be flowed down contractually from the Seller to the Sellers suppliers and subcontractors, unless the requirement is waived in writing on a case-by-case basis by the Company. [Example: COTS items (not modified for ITER)].

A revised Quality Plan (at all levels) shall be subject to the same approval and acceptance procedure as the original Quality Plan. In case of revision, work

should continue in accordance with the current approved Quality Plan until the revised Quality Plan is accepted.

A standard template, *Quality Plan Template for Suppliers and Subcontractors* [3.2.1], is provided by the Company for documenting the contract-specific Quality Plan.

5.4 Access for Source Surveillance Inspections

As part of the Company's quality assurance program, source surveillance activities may be conducted at the Seller's facility or any sub-tier seller facility that the Company determines necessary to ensure quality objectives are met. Representatives of the Company, US Department of Energy, or other ITER-affiliated organizations (e.g., IO) may accompany the source surveillance team and inspectors as observers. Such surveillance may include auditing and monitoring of production processes, in-process inspection and controls, chemical or physical certifications, final inspection and tests, preparation for shipment, and review of certification data. The Seller shall provide the source surveillance team and inspectors, including observers, access to all data and operating areas pertinent to the subcontract without exception. Source surveillance by the Company representatives, source surveillance team, or inspectors shall not constitute equipment acceptance by the Company and shall in no way relieve the Seller of the responsibility to furnish acceptable items.

To ensure the safety of Company's representatives and observers that visit the Seller's facilities, the Seller shall provide relevant information about their facility safety procedures including, for example, safety glasses, hearing and respiratory protection, emergency preparedness, rally point, and general safety rules. Upon arrival, the Seller shall review typical workplace hazards with the representatives and discuss the applicable facility safety procedures.

5.5 Seller-Requested Deviation

The Seller may propose deviations from the specifications, drawings, or other technical or administrative requirements of this procurement, via the *Deviation Request Procedure* [3.2.2]. Where time is a consideration, the Seller may communicate the proposed deviation directly to the TPO (via e-mail correspondence), with a copy to the Company's Procurement Officer. The request should identify the affected items, drawing/specification number and revision number, a **description of the proposed deviation, and the engineering justification for it**. A form is provided to assist the Seller in requesting a Deviation from the company [3.2.3]. The Company's TPO will evaluate the technical aspects and document a recommendation (cannot be verbal) to the Procurement Officer, who will communicate acceptance or disapproval to the Seller.

NOTE: The acceptance of a deviation request in no way limits or affects the warranty provision of the subcontract. Such a request shall not establish a precedent or obligation to accept existing or future items not conforming to all provisions of the subcontract.

5.6 Non-Conformances

The Company expects to receive equipment items, components, materials, software, and documentation that conform to all codes, standards, specifications, and procedures in the subcontract. When a nonconforming condition is identified, the Seller shall follow the US ITER *Nonconformance Report Procedure* [3.2.4] to control the nonconforming item or process, document the condition and bring the issue to closure.

The Seller shall:

- 1) Identify and segregate when practical, the non-conforming item,
- 2) Stop any further work on the item until a decision is made,
- 3) Provide written notification of the discovered nonconformance and the discovery date (via email, copy of internal NCR form, US ITER NCR form partially filled out) to the TPO, with a copy to the Procurement Officer and QARO, as soon as possible but no longer than five (5) business days from discovery.
- 4) After discovery process is complete, provide any additional details, proposed dispositions, and justifications (as necessary) to the Company in a Nonconformance Report using US ITER's *Non-Conformance Report Form* [3.2.5].

NOTE: The issuance and acceptance of a nonconformance report in no limits or affects the warranty provision of the subcontract. Such a request shall not establish a precedent or obligation to accept existing or future items not conforming to all provisions of the subcontract.

Two categories of nonconformances are considered: Major and Minor. The categorization will be made by the Company with concurrence from the IO Technical Responsible Officer. Generally, a Major nonconformity is one that could affect a critical requirement, such as performance, safety, reliability, operability, traceability, interchangeability, or regulatory requirements. Minor nonconformances normally are those with no such impact.

Major Non-Conformance

Nonconformances identified as Major will require completion of a Root Cause Analysis (RCA). Following the RCA, the proposed remedial action for a major nonconformance shall be implemented only after written acceptance from the Company.

In addition, if the Seller does not adhere to the requirements of this SOW or proceeds past an ATPP without written authorization from the TPO, the USIPO may issue a Major Non-Conformance against the Seller which will require immediate amelioration prior to the continuation of work.

Minor Non-Conformance

If the Company decides the non-conformance is not a major non-conformance, the Seller shall take actions to resolve the non-conformance within its own quality system. However, the remedial action may only be implemented following written approval by the company.

Examples of minor nonconformances could include (but are not limited to) the following:

- Slight variance from a tolerance specified on a design drawing that has no impact on equipment form, fit, or function.
- Noncompliant cleanliness of material at receipt inspection that is remedied during fabrication by an approved cleaning process.
- Failure of packaging that did not result in damage to the material or equipment.
- Failure to adequately complete an administrative process (e.g., document review & approval matrix) that does not affect the quality of final product.
- Flow controller accuracy range not consistent with manufacturer's data sheet, but data was correctable after calibration of the device

6 TRANSPORTATION

6.1 Packaging Loading and Storage

6.1.1 Packaging

The Seller shall package and prepare each support for shipment to the ITER site in Cadarache, France. The packaging shall protect the equipment from any conditions (e.g., shock, impact, weather, etc.) which could cause damage to the frames resulting in nonconformity with applicable requirements. The seller shall provide a Package Design Document which includes the proposed packaging design as well as analysis showing it can withstand air, land, and sea transport.

The Seller is required to mark each package with the following:

- Subcontract number
- Delivery address
- Consignor (Seller's name, address, and contact information)
- Package number (as identified on the packing list)
- ITER frame Identification Number(s)
- Vacuum Class (VQC-4)
- Gross Weight (kg)

- Net Weight (kg)
- Handling instructions (in English)
- Lifting/Lashing/Jacking points
- Center of Gravity (in 3 dimensions)
- Compliance marks (e.g., ISPM-15, CE) (if applicable)

6.1.2 Loading

The Seller is required to load items to be transported onto the LSP conveyance (e.g., truck, van, trailer, vessel, ocean container, air freight container, rail car) at the factory. In doing so, Seller shall provide all necessary and customary equipment, personnel, and safety equipment for proper loading into the vehicle.

6.1.3 Storage of finished Products

The Company, at its discretion, may require Seller to postpone the date of shipment by up to sixty (60) days from the agreed upon shipment. If the date of the shipment is postponed, the Seller shall, at no additional cost, store finished products in a safe and secure manner that protects their condition and preserves the integrity of all components and packaging. If the storage is required beyond sixty (60) days, Seller agrees to good faith negotiation of extended storage terms.

6.2 **Creation and Submittal of Pre-Shipment Documentation**

NOTE: All documentation must be completed in the English language.

The Seller shall provide information and documentation required for international shipment in accordance with the following schedule:

6.2.1 Pre-Shipment Deliverable Package No. 1

A pre-shipment Deliverable Package shall be provided by the Seller no later than *10 business days after the Project Kick-off Meeting*.

Pre-Shipment Deliverable Package #1 is to contain the following items:

- 1) Written notice of the planned date on which the goods will be packaged and available for shipment.
- 2) Contact information for Seller's Shipping/Logistics coordinator.
- 3) Technical characteristics of the packaged components as follows:
- 4) Physical data and drawings showing dimensions, total and distributed weights, center of gravity (in 3 dimensions), shipping orientation;
- 5) Address of the location where items are to be picked up by the LSP.
- 6) Documentation (e.g., Material Safety Data Sheet) regarding relevant compliance regimes, such as Export Control, Transportation of Dangerous Goods, and Environmental Protection;

- 7) Identification of any items that have been identified as Safety Important Components (SIC) or Protection Important Components (PIC).
- 8) Conditions or precautions to be respected when moving, loading/offloading, handling/sliding, and storing/marshaling to include, when required, specific provisions and controls to be performed and recorded while under the control of the LSP;
- 9) Documentation confirming that packaging is designed to protect components from damage and contamination, considering anticipated environmental conditions and multimodal (e.g., highway, ocean) handling/transit accelerations;
- 10) Packaging specification including confirmation of compliance with international packing standards (e.g., International Standard for Phytosanitary Measures (ISPM)-15, Conformance Europeenne/CE certification for relevant package lifting appurtenances such as eyes/rings), agree barcoding requirements and regulations relating to packaging materials used. **NOTE: All packaging using wood products must comply with the requirements of ISPM-15;**
- 11) Definition of packaging/frame, when the components are packed or tarped, including any particular procedures for handling, moving, clean-up, maintenance, storage;
- 12) Specification for securing and hanging packages/frames including jacking/lifting/lashing conditions, procedures, and acceptable securing points;
- 13) Identification of specialized equipment/hardware (e.g., custom lifting fixture) interface requirements between each point of use within the supply chain. **NOTE: any specialized packing/handling frame or tool should be detailed in drawings, meet relevant domestic and international requirements (e.g., Occupational Safety and Health Administration, CE), and is subject to approval by LSP.**
- 14) Description of Interface between Seller and LSP (e.g., release conditions for loads, Seller's loading means, etc.);
- 15) Technical data concerning monitors (e.g., shock, vibration, tilt, acceleration, temperature) utilized to detect events during transit which may cause damage to components.

6.2.2 Pre-Shipment Deliverable Package No. 2

Pre-Shipment Deliverable Package #2 is to be provided no later than ninety (90) days prior to planned date of shipment.

Pre-shipment Deliverable Package #2 is to contain the following items:

- 1) Written confirmation of the date goods will be ready for shipment or submit revised shipment date for approval.
- 2) Contact information for Seller's Shipping/Logistics coordinator
- 3) Fabrication value of goods (for insurance purposes-should not include destination site support services)
- 4) Transport drawings with sufficient detail to facilitate lifting/lashing/stowage and approval of the operators (e.g., steamship line, air carrier).
- 5) The following business documents (in English language):

- a) **Pro-Forma**/commercial invoice on Seller's letterhead listing at a minimum:

- Subcontract number
- Description and quantity of goods
- Value of goods
- Incoterm 2010 rule
- Schedule B number (for U.S. exports) or Harmonized System code
- Country of origin
- Export control determinations (e.g., "ECCN: EAR99, No Export License required")
- **Consignee: Note – If shipped to the ITER site, use the address below:**

ITER Organization
Route de Vinon sur Verdon, CS90 046
13067 St. Paul lez Durance CEDEX, France
Contact: Yanchun Qiao (+33-4-42-17-62-57;
Cell: +33-6-26-31-29-96) Yanchun.Qiao@iter.org

- **Duty Free Declaration**

Shipments on behalf of the ITER International Fusion Energy Organization ("ITER Organization") for its official use are eligible to duty-free customs clearance under the Agreement on the Privileges and Immunities of the ITER International Fusion Energy Organization for the Joint Implementation of the ITER Project, done in Paris on 21 November 2006 and ratified, accepted and approved by the People's Republic of China, EURATOM (for the European Union and Switzerland), the Republic of India, Japan, the Republic of Korea and the Russian Federation.

DIPLOMATIC SHIPMENT on behalf of the ITER Organization. FOR DUTY-FREE CUSTOMS CLEARANCE.

- **Consignor** (Seller's name, address, and contact information)
- b) Itemized packing list on Seller's letterhead detailing the following at a minimum for each package:
- Subcontract Number
 - Package number (sequential number assigned to each package.
 - Package type (e.g., wooden crate, item on pallet, etc.)
 - Seller's equipment/component identification number(s)
 - ITER Support Identification Number (s)
 - Item Description
 - Quantity of each item
 - Gross Weight (kg)
 - Net Weight (kg)
 - Dimensions (cm)
 - Volume (m³)
 - Special Handling Instructions
 - Storage Instructions (e.g., indoor, conditioned space)
 - **Declaration of Integrity**

The undersigned hereby certifies that the components and package(s) described on this Packing List meet the contractual requirements with the exception of any approved deviations and non-conformance reports specified in the associated documentation.

NOTE: The invoice, packing list and other documents, where appropriate, must be acceptable to the country's Customs agency. The LSP shall review submitted documents and request amendments where required. If amendments are requested, Seller must update and submit revised documents within seven (7) days.

- c) Export Control License(s) or other authorized documents if required.

6.2.3 Pre-Shipment Package No. 3

Pre-Shipment Deliverable Package #3 is to be provided no later than two weeks prior to planned date of shipment.

Pre-shipment Deliverable Package #3 is to contain the following items:

Evidence of appropriate proof testing and certification for any custom lifting apparatus that will travel with the item and be utilized during loading and unloading operations.

6.2.4 Pre-Shipment Package No. 4

Pre-Shipment Deliverable Package #4 is to be provided no later than one week prior to planned date of shipment.

Pre-Shipment Deliverable Package #4 is to contain the following:

1. Any remaining information needed to facilitate appropriate completion of transport documents such as Bills of Lading or Air Waybills.
2. Data elements and authorizations (e.g., Shipper's Letter of Instruction, Power of Attorney) required for LSP submission of electronic filings in the Automated Export System (AES) when necessary
3. Dangerous Goods Declaration if required for Transport.

6.2.5 Package Marking

The Seller is required to mark each package with the following

- Subcontract number
- Delivery address
- Consignor (Seller's name, address, and contact information)
- Package number (as identified on the packing list)
- ITER Frame Identification Number(s)
- Gross Weight (kg)
- Net Weight (kg)
- Special Handling Instructions
- Lifting/Lashing/Jacking points
- Center of gravity (in 3 dimensions)

6.2.6 Deviations from Planned Date of Shipment

Seller shall immediately notify the TPO and procurement Officer, in writing, of any actual or potential change to the agreed-upon date of shipment.

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7 DELIVERABLES

The following deliverables shall be submitted according to a timeframe which supports the approved schedule for this work and subcontract closeout. These deliverables include the supports as well as all documentation generated to show compliance and satisfactory completion of this statement of work and the associated technical specification.

7.1 Supports

Supports are defined by the drawings listed in the Section 3.2 US ITER Documents of the Technical Specification [[3.1.1](#)].

Hardware Deliverable Identifier	Hardware Name	Drawing Reference	Quantity
HD1	Non-Active Skid Subframe, RPS CRRR 31CRRR-FR-0002	068856 (PNI IOOB74VES)	1
HD2	Non-Active Skid Subframe, RPS CRRR 31CRRR-FR-0003	052228 (PNI IOOARESQ2)	1
HD3	Non-Active Skid Subframe, RPS CRRR 31CRRR-FR-0004	068818 (PNI IOOB8NLX4)	1
HD4	Non-Active Skid Subframe, RPS CRRR 31CRRR-FR-0005	068854 (PNI IOOB8QSZD)	1
HD5	Non-Active Skid Subframe, RPS CRRR 31CRRR-FR-0006	068855 (PNI IOOB8QT7A)	1

Table 1 Hardware Deliverables

7.2 Interface Hardware

The table below lists the required Interface Hardware to be supplied. Note that the interface hardware are COTS items. Seller must include a section dedicated to the interface hardware within the dossier accompanying its shipment.

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Hardware Deliverable Identifier	Description	Material	Quantity
HD1	Nelson Stud CFL M16-2.00 X 54	ASTM A276 / A493 TYPE 304	35
HD2	Nelson Ferrule M16 100 101 028	Ceramic Ferrule	35
HD3	NUT, HEAVY, M16-2.00	ASTM F836M, CLASS A1-50 TYPE 304	80
HD4	WASHER, PLAIN, M16	SST, TYPE 304	120
HD5	BOLT, M16-2.00 X 50	ISO 4017, A2-70	45
HD6	SHIM PACK - SET 1 for 31CRRR-FR-0003 (PNI-BXDZPZ)	ASTM A240, TYPE 304	3
HD7	SHIM PACK - SET 2 for 31CRRR-FR-0003 (PNI-052228-08)	ASTM A240, TYPE 304	3
HD8	SHIM PACK - SET 3 for 31CRRR-FR-0003 (PNI-052228-09)	ASTM A240, TYPE 304	6
HD9	SHIM PACK - SET 1 for 31CRRR-FR- 0002/0004/0005/0006 (PNI-068856-07)	ASTM A240, TYPE 304	24

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7.3 Documentation

The documentation deliverables and the corresponding sections of this SOW are listed in the table below.

Document Deliverable Identifier	Document Name	Referenced Section
DD1	Project Kick-Off Meeting Minutes	Section 4.1.1
DD2	Project Plan	Section 4.1.4
DD3	Progress Meeting Notes	Section 4.1.5
DD4	Material Certifications and Receiving Inspection Reports	Section 4.3
DD5	Inspection Plan	Section 4.2
DD6	Support Fabrication Drawings	Section 4.4.1
DD7	Welding Procedures and Qualification Records	Section 4.4.2
DD8	Applicable Fabrication SOPs	Section 4.4.3
DD9	Selected Coating and Application Procedure	Section 4.4.4
DD10	Acceptance and Inspection Test Plan	Section 4.4.5
DD11	Contractor Release Note	Section 4.5.1
DD12	Certificate of Conformity	Section 4.5.2
DD13	Manufacturing Dossier	Section 4.5.3
DD14	Package Design Documentation	Section 6.1

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DD15	Pre-shipment Transportation Documentation	Section 6.2
DD16	Quality Plan	Section 5.3
DD17	Deviation Requests (if applicable)	Section 5.5
DD18	Non-Conformance Reports (if applicable)	Section 5.6

Table 2 Document Deliverables