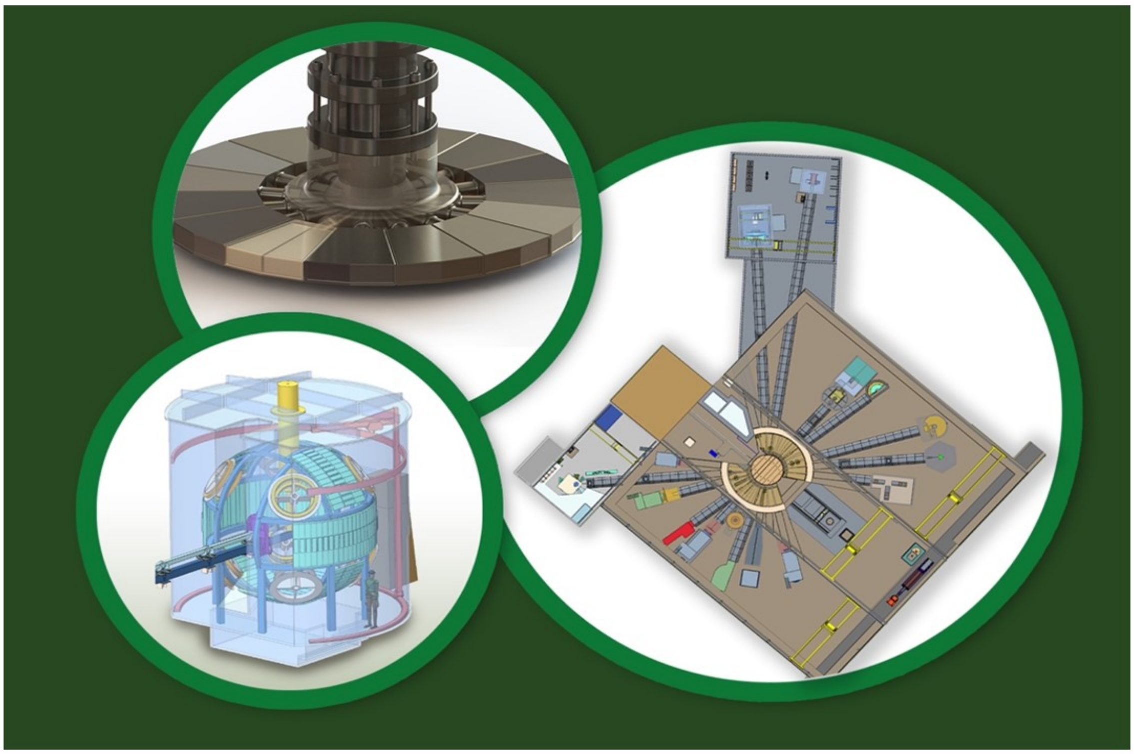
S0xxxxxxxxxxxxxxxx

Second Target Station Scope of Work 0000077806 -Target Foot Weldment



Aaron Jacques
Lukas Bearden

July 30, 2026

**Approved for public release.
Distribution is unlimited.**

ORNL IS MANAGED BY UT-BATTELLE LLC FOR THE US DEPARTMENT OF ENERGY

S0xxxxxxxxxxxxxxxx

Second Target Station

SECOND TARGET STATION
SCOPE OF WORK
0000077806 -TARGET FOOT WELDMENT

Aaron Jacques
Lukas Bearden

July 30, 2026

Prepared by
OAK RIDGE NATIONAL LABORATORY
Oak Ridge, TN 37831
managed by
UT-BATTELLE LLC
for the
US DEPARTMENT OF ENERGY
under contract DE-AC05-00OR22725

CONTENTS

LIST OF ABBREVIATIONS

CMTR Certified Mill Test Report

FAI First Article Inspection

ORNL Oak Ridge National Laboratory

1. SCOPE OF WORK

Oak Ridge National Laboratory (ORNL) requires the following in accordance with this document, referenced drawings and standards

- Phase 0 - Planning documents
- Phase 1 - 1x first article of 0000077806 -Target Foot Weldment
- Phase 2 - 2x complete 0000077806 -Target Foot Weldment
- Phase 3 - 20x complete 0000077806 -Target Foot Weldment

Table 1 delineates the breakdown of responsibilities for clarification between the Company and the Seller.

Description	ORNL	Seller
Purchase raw materials & equipment	-	X
Design and fabrication of equipment for testing [a]	–	X
Housing and travel for ORNL employees	X	–
Shipment fixtures (as req'd)	-	X
Crating	-	X
Shipment to ORNL location	–	X

[a] Testing as required when provided or indicated on field of drawings, section 6, or this contract. Fixtures developed and purchased under this contract shall be the property of ORNL. Physical hardware, software, drawings, specifications and end items shall be shipped to ORNL with the final article

Table 1. Scope of Work

2. SEQUENTIAL COMPLETION REQUIREMENT

The following shall govern the phased advancement of work:

Each phase shall be completed and formally approved in writing by the Company before commencement of the subsequent phase. Approval shall be contingent upon the successful completion of all deliverables outlined for the preceding phase and confirmation that all performance criteria have been met.

Prototype Approval: Phase 2 cannot commence until the item developed in Phase 1 is delivered, tested, and reviewed by the Company. Written notice of approval must be provided upon satisfaction of all specified requirements. ORNL will destructively examine the bonds. Welding and general workmanship prior to proceeding to Phase 2. Examination by ORNL will take 6 weeks or less.

Acceptance of 2 Units: Phase 3 cannot commence until the two units produced in Phase 2 are delivered, inspected, and approved by the Client.

The Contractor shall not initiate work on a subsequent phase until authorization is received from the Client in writing.

2.1 PAYMENT TERMS

Payment for each phase shall also be contingent upon satisfactory completion of the prior phase. Payment schedule for each phase are as follows:

- Phase 0 - 100% upon acceptance of Phase 0 deliverables
- Phase 1 - 50% Upon acceptance of pre-fab deliverables and updated documents, 50% upon inspection of first article
- Phase 2 - 10% Upon acceptance of pre-fab deliverables and updated documents, 30% with shipment of each segment, 10% with receipt of Certificate of Compliance for each segment, 10% upon receipt of outstanding documents.
- Phase 3 - 10% Upon acceptance of pre-fab deliverables and updated documents, 3% with shipment of each segment, 1% with receipt of Certificate of Compliance for each segment, 10% upon receipt of fixtures, equipment and outstanding documents at end of project.

2.2 TERMINATION OR SUSPENSION

If a phase is not completed to the satisfaction of the Client or within the timeline specified under the agreement, the Client reserves the right to terminate or suspend the project. Written notification shall be provided in such circumstances.

3. FURNISHED DOCUMENTS

1. 0000077806 -Target Foot Weldment
2. Technical Specifications

4. FURNISHED HARDWARE OR SOFTWARE

No materials are to be provided as part of this contract

5. SUBMITTAL SCHEDULE

The following table applies for the whole project and shall be updated prior to the start of each phase.

Description (section)	With Proposal	Prior to fab	Throughout production	Prior to shipment[b]	Final Acceptance
Sellers Quality Assurance Program	X				
Manufacturing plan (**??**) [U]	X				
First Article Inspection Plan (per AS-9102)	X				
A listing of all exceptions to drawings & specifications	X				
Sellers Welding Program (where applicable)	X				
Shop drawings (A/R -required for weldments)	X				
Fixture Drawings (Where applicable)	X				
First Article Inspection reports			X	X	
Factory Acceptance Report - Seller's Signature				X	X
Certificate of Compliance				X	X
Final Documentation Package					X

The list above is intended to be general; technical specifications are specified on drawings and specifications. The vendor is responsible for compliance with adhering to all referenced standards and associated reporting/documentation. Detailed reporting shall be enumerated in the First Article Inspection (FAI) plan.

[U] The manufacturing plan and associated schedule shall be maintained and updated throughout the project. (see section 8)

[a] Prior to incorporation into next level assembly, all inspection reports, material certifications, and test reports shall be submitted to ORNL for review. Review shall occur within 5 days of receipt.

[b] Items shall not be shipped to ORNL without ORNL acceptance of documentation

Table 2. Schedule of Deliverables

6. TECHNICAL SPECIFICATIONS

The 0000077806 -Target Foot Weldmentshall be fabricated in accordance with the requirements found on the drawings and supplied technical specifications. In addition, the following apply:

7. ACCEPTANCE

Final acceptance (each phase and part) shall be contingent upon the following conditions:

1. Delivery of 0000077806 -Target Foot Weldment
2. Receipt and approval of Signed Factory Acceptance Test (Seller and Company representative signatures)
3. Receipt and approval of all submittals found in section 5
4. Receipt of a Certificate of Compliance, signed by a representative of the Seller, verifying that the component meets all the requirements of this specification and conforms to the Company approved drawings.

8. STATUS REPORTING

The seller shall provide regular status reporting ensuring transparency, progress visibility, and timely identification of risks. At a minimum:

- **Frequency** The Seller shall submit written status reports bi-weekly throughout the duration of the project, unless otherwise approved in writing by the Client.
- **Format & Delivery** Status reports shall be delivered via email and in PDF form no later than noon Friday (Eastern) of each reporting period. The report shall follow the agreed-upon template unless modified by mutual agreement.
- **Meeting Requirement** The Seller shall participate in a bi-weekly status review meeting to discuss progress, risks, deliverables, and action items.
- **Report Content** Each report shall include, at minimum, the following sections:
  - Overall Project Status (Green / Yellow / Red with explanation)
  - Summary of Activities Completed During the Period
  - Planned Activities for the Next Reporting Period
  - Schedule Status (including milestones achieved, upcoming deadlines, and any schedule deviations)
  - Budget / Financial Status (planned vs. actual hours/costs, burn rate, forecast to complete)
  - Deliverable Status (submitted, accepted, pending, overdue)
  - Issues Log (new, open, closed items with ownership and due dates)
  - Risks & Mitigations (new risks, changes to existing risks, mitigation actions)
  - Dependencies that could impact progress
  - Change Requests (submitted, approved, implemented, or pending decisions)
  - Client Decisions Required (items needing customer approval or direction)
- **Escalations** Any issue or risk that is likely to impact schedule, cost, or scope beyond agreed tolerances shall be escalated to the Client within 24 hours, independent of the regular reporting cycle.
- **Accuracy and Accountability** The Seller shall ensure all information in status reports is accurate, complete, and provided in a timely manner. Failure to report status does not relieve the Seller of responsibility for project performance.

9. VENDOR QUALIFICATIONS

The seller shall possess the following qualifications:

1. ISO-9001 certification
2. AWS Certified Welding Inspectors, procedures, and personnel

10. QUALITY ASSURANCE

All work shall be conducted by the Seller under a Company approved Quality Assurance Program (QAP). The Seller shall submit a written QAP or Quality Control System for evaluation with the quote. The program shall be in sufficient detail and scope that the Company can evaluate the adequacy of quality controls from the Seller.

The QA Program shall address, at a minimum, the following elements: training and qualifications, continuous improvement, documents (including procedures) and record management, process controls (including materials control, nonconformance and deviation control, and a mature calibration program), design control (as applicable), procurement control, and inspection and test program. The Seller shall ensure all work is performed in accordance with its QA Program. The Seller is responsible for the administration and performance of all testing, inspections, and examinations, whether performed at the Sellers facilities or at other facilities. The Company reserves the right to witness all tests, inspections, and examinations.

10.1 ACCESS FOR SURVEILLANCE INSPECTIONS

As part of the Companys quality assurance program, surveillance activities may be conducted at the Sellers facility or any sub-tier facility that the Company determines necessary to ensure quality objectives are met. These surveillance activities may be defined in Company documentation or be requested by the Company as needed, or both.

Such surveillances may include auditing and monitoring of production processes, in-process inspection and controls, chemical and physical certifications, final inspection and tests, preparation for shipment, and review of certification data. The Seller shall provide the Company representatives access to all data and operating areas pertinent to the contract. Source surveillance by the Company representative shall not constitute product acceptance by the Company and shall in no way relieve the Seller of the responsibility to furnish acceptable items.

10.2 CALIBRATION PROGRAM

All equipment used in tests, inspections, and examinations shall be calibrated in accordance with the equipment manufacturers recommendations to nationally recognized standards. All equipment shall be identified in some manner to indicate the date of last calibration and the status of that calibration. Procedures shall be established for correction of out-of-tolerance equipment. The procedures shall provide for identification, segregation (if appropriate), and removal of such equipment from the work area. Procedures shall be established for re-testing or re-inspecting when out of tolerance equipment has been used for testing or inspection.

10.3 CONTROL OF NONCONFORMANCES

The Company expects to receive items (i.e., equipment, components, materials, software, and documentation) that conform to all codes, standards, specifications, and procedures contained in the procurement agreement. Any item that does not conform is classified as nonconforming.

All nonconformances shall be reported to the Company via the Sellers nonconformance process. Nonconformances, along with evidence of closure (where appropriate) shall be reported regardless of the affected item disposition (i.e., scrapped, used-as-is, repaired, replaced). In the event there are dispositions that would leave any remaining nonconformity, the Company shall approve the nonconformance report (NCR) prior to continued processing by the Seller. Nonconformance reports shall identify the purchase order number, the affected items(s) by name and serial number, citing the drawing/specification number and revision number containing the specific requirement that has not been met. It shall state the number of nonconforming items being reported. The request shall include a description of the nonconformity, identifying requirement(s) not met. The supplier may attach a description of the cause, and a corrective action plan, and schedule, if pertinent.

The issuance and acceptance of such a request in no way limits or affects the warranty provision of the Agreement. Such a request shall not establish a precedent or obligation to accept existing or future items not conforming to all provisions of the Agreement.

10.4 DEVIATIONS

The Seller may propose deviations from the specifications, drawings, or other technical requirements of this procurement. All proposed deviations or changes to shall be reported directly to the Companys Technical Project Officer (TPO). The TPO shall evaluate the technical aspects and recommend to the buyer, who will communicate acceptance or disapproval to the Seller. In all cases, the Company shall disposition the deviations prior to continued processing by the Seller.

Deviation requests shall identify the purchase order number, the affected items(s) by name and serial number, citing the drawing/specification number and revision number, cost (increase or reduction), a description of the proposed deviation, cause, description of the changes requested (including drawing or specification markups if appropriate), justification for the deviation, and the schedule impact, if pertinent.

The issuance and acceptance of such a request in no way limits or affects the warranty provision of the Agreement. Such a request shall not establish a precedent or obligation to accept existing or future items not conforming to all provisions of the Agreement.

10.5 ELECTRONIC DOCUMENTS

Wherever feasible, all documentation shall be submitted in an electronic format acceptable to the STS Electronic Information Management System, in addition to any other formats. Adobe Portable Document Format (PDF) has been listed as an acceptable format for all documents, including drawings, that would normally be printed on paper.

11. OWNERSHIP OF CONTRACT DEVELOPED PROPERTY

11.1 DEFINITION OF CONTRACT-FUNDED PROPERTY

For the purposes of this contract, Contract-Funded Property includes all physical and intellectual property developed, acquired, or utilized specifically for the performance of this contract using funds provided by ORNL. This includes, but is not limited to:

11.2 FIXTURES, JIGS, TOOLING, CUSTOM ASSEMBLIES, PROTOTYPES, AND SPECIAL TEST EQUIPMENT

Software, algorithms, or code developed for testing, operation, data handling, or control systems related to the deliverables. Documentation related to the creation, function, or operation of Contract-Funded Property (e.g., manuals, protocols, or technical drawings).

11.3 OWNERSHIP RIGHTS

All Contract-Funded Property produced or procured under this agreement shall remain the sole property of ORNL. The Seller shall surrender such property to ORNL upon completion of this agreement or upon termination by either party. The Seller shall have no right or claim to retain, sell, transfer, or otherwise use Contract-Funded Property beyond the scope of this agreement without prior, written approval from ORNL.

11.4 SELLER OBLIGATIONS

During the performance of this contract, the Seller shall ensure:

- Proper identification, tracking, and protection of Contract-Funded Property.
- Maintenance and preservation of Contract-Funded Property in accordance with industry standards.
- Delivery of Contract-Funded Property to ORNL, free of liens or encumbrances, at the conclusion of the contract.
- Where applicable, all subcontractors working under this contract shall comply with the same rules regarding Contract-Funded Property.
- Title to all Contract-Funded Property shall vest in ORNL upon fabrication, acquisition, or development, regardless of the location or phase of project completion. The Seller shall provide ORNL with a complete inventory and certificate of ownership at the conclusion of the project.

11.5 DISPOSAL OF PROPERTY

The Seller shall not dispose of, discard, or transfer any Contract-Funded Property without prior written authorization from ORNL. Disposal rights shall remain solely with ORNL.

11.6 USE RESTRICTIONS

Any Contract-Funded Property may not be reused, reverse-engineered, or repurposed by the Seller for other contracts, projects, or services outside the scope of this agreement unless explicitly authorized in writing by ORNL.

12. INTELLECTUAL PROPERTY

12.1 DEFINITIONS

For the purposes of this contract:

"Intellectual Property" refers to all patents, copyrights, trademarks, trade secrets, inventions (whether patentable or not), designs, technical know-how, software, algorithms, data compilations, documentation, and other proprietary creations developed during or in direct connection with the execution of this contract.

"Background Intellectual Property" refers to IP owned or developed by the Seller prior to entering into this agreement or independently of this contract. This includes tools, processes, designs, or software not created with contract funding.

"Contract Intellectual Property" refers to all intellectual property conceived, developed, or created exclusively under this contract, using funds provided by ORNL.

12.2 OWNERSHIP OF CONTRACT INTELLECTUAL PROPERTY

Title to all Contract Intellectual Property (including software, processes, designs, algorithms, and other intangible assets) created specifically for the purpose of executing this contract shall reside solely with ORNL. This ownership extends to all derivative works, modifications, or adaptations of the Contract Intellectual Property made during the term of the agreement.

Seller acknowledges and agrees that:

All rights, title, and interest in Contract Intellectual Property vest immediately with ORNL upon its creation. Seller shall execute all necessary assignments, declarations, or other instruments required to transfer and confirm ownership rights of Contract Intellectual Property to ORNL.

12.3 OWNERSHIP OF BACKGROUND INTELLECTUAL PROPERTY

Seller retains full ownership of Background Intellectual Property. ORNL shall have a non-exclusive, royalty-free, irrevocable license to use any Background Intellectual Property embedded within or required for the implementation of the Contract Intellectual Property, solely for ORNL's internal purposes.

12.4 USE RESTRICTIONS

Without ORNLs prior written approval, the Seller shall not use, disclose, or distribute Contract Intellectual Property for any purpose outside the scope of this contract. The Seller agrees not to include Contract Intellectual Property in the scope of other agreements or projects unless written authorization has been granted by ORNL.

12.5 SUBCONTRACTOR COMPLIANCE

The Seller shall ensure that all subcontractor agreements include provisions ensuring the transfer or vestment of intellectual property rights to ORNL when funded under this contract. The Seller remains responsible for enforcing these provisions and ensuring compliance.

12.6 LICENSING AND RIGHTS RESERVED BY ORNL

ORNL reserves rights to license, sublicense, modify, reuse, adapt, or distribute Contract Intellectual Property without limitation. The Seller agrees to provide all necessary support or documentation to enable ORNL's exercise of these rights.

12.7 CONFIDENTIALITY AND PROTECTION

The Seller shall take all reasonable measures to protect Contract Intellectual Property from unauthorized disclosure or use during the course of the agreement. Any data or documentation required for the creation, adoption, or implementation of Contract Intellectual Property must be maintained as confidential and provided exclusively to ORNL upon request.

12.8 BREACHES AND REMEDIES

Any unauthorized use, disclosure, distribution, or claim of ownership of Contract Intellectual Property by the Seller shall constitute a material breach of contract, entitling ORNL to pursue remedies including financial damages, injunctive relief, and termination of the agreement.

APPENDIX A. DEFINITION - MANUFACTURING PLAN

APPENDIX A. DEFINITION - MANUFACTURING PLAN

The Seller shall develop and submit a comprehensive Manufacturing Plan that fully describes how the product(s) will be fabricated, inspected, controlled, and delivered in accordance with the requirements of this Contract and the Contractor's Quality Management System. The Manufacturing Plan shall be submitted to the Client for review and approval prior to the start of fabrication. Note items of this plan also covered by other documents are noted by[brackets].

A.1 SCOPE AND OVERVIEW

- Description of the product(s) to be manufactured.
- Summary of the fabrication approach and process flow.
- Identification of key fabrication facilities (location, capabilities, certifications).

A.2 PROCESS FLOW AND ROUTING

- Step-by-step sequence of manufacturing operations.
- Identification of methods and special processes (welding, heat treatment, NDT, coating, etc.)[AS-9102]
- Process flow diagram or traveler/route card format.
- Identification of internal and subcontract operations.

A.3 QUALITY MANAGEMENT AND CONTROLS

- Incoming material verification.
- Identification and traceability controls (heat/lot number tracking).[AS-9102]
- In-process inspections and checkpoints.[AS-9102]
- Final inspection and testing requirements. [AS-9102]
- Records to be generated and retained.

A.4 WELDING AND SPECIAL PROCESSES (IF APPLICABLE)

- Welding Procedure Specifications (WPS) to be used.
- Procedure Qualification Records (PQR).
- Welder qualification records.
- Filler metal type, CMTR requirements, and control methods. [AS-9102]
- Controls for special processes requiring qualification or certification.

A.5 SPECIAL PROCEDURES

- Sellers procedures for leak testing, cleaning, etc. as applicable

A.6 MATERIAL CONTROL AND CERTIFICATION

- Material procurement plan.
- Requirements for CMTRs/MTRs.[AS-9102]
- Storage and handling requirements (e.g., for low-hydrogen electrodes).
- Traceability procedures.[AS-9102]

A.7 INSPECTION, TESTING, AND ACCEPTANCE CRITERIA

- Required inspection stages (incoming, in-process, final). [AS-9102]
- NDE/NDT methods, acceptance standards, and responsible parties. [AS-9102]
- Dimensional inspection plan.[AS-9102]
- Radiography or other special test requirements.[AS-9102]
- Calibration of measuring and test equipment per ISO 9001.[AS-9102]
- Examination personnel certifications

A.8 DOCUMENTATION AND RECORDS

- List of all documents to be produced (inspection reports, test reports, NDT results, CMTRs, travelers, etc.).
- Templates or sample forms.
- Records retention requirements.

A.9 SCHEDULE AND MILESTONES

- Manufacturing timeline, including major steps and critical-path activities.
- Planned inspection and test dates.
- Hold points and witness points for Client review or inspection.

A.10 SUBCONTRACTOR CONTROL

- Identification of all subcontractors.
- Evidence of subcontractor qualification or ISO certification.
- Oversight and verification methods to ensure compliance.

A.11 NONCONFORMANCE AND CORRECTIVE ACTION

- Procedures for handling nonconforming materials or processes.
- Notification requirements to the Client.
- Corrective action process and required approvals.

A.12 PACKAGING, HANDLING, AND DELIVERY

- Requirements for protection, preservation, and safe transport.
- Identification of any special handling instructions.

A.13 APPROVAL

The Manufacturing Plan shall not be considered approved until written acceptance is issued by the Company. This acceptance does not relieve the Seller of responsibility to comply with all contract requirements.

APPENDIX B. DEFINITION - FINAL DOCUMENTATION PACKAGE

APPENDIX B. DEFINITION - FINAL DOCUMENTATION PACKAGE

The Seller shall provide a single, consolidated document package at the conclusion of the project. This Final Documentation Package shall be delivered alongside the final deliverables and shall include all relevant documentation generated during the course of the project. The purpose of the package is to ensure thorough compliance with contractual requirements and facilitate effecient archival for the Company.

B.1 CONTENTS OF FINAL DOCUMENTATION PACKAGE

The Final Documentation Package shall include, but is not limited to:

- First Article Inspection (FAI) Reports: Completed reports, inclusive of AS-9102 Forms 1, 2, and 3, and all attachments (dimensional inspection reports, test results, and material certificates).
- Quality Assurance Records: Manufacturing plans, welding program documentation, certificates of compliance, and any deviation/disposition logs.
- Testing Reports: Factory Acceptance Test (FAT) results, including signed FAT reports, pressure/leak test reports, or other test results.
- Non-Conformance Documentation: Any NCRs generated during the course of the project and associated corrective action reports.
- Other Supporting Documents: All ancillary inspection reports, technical approvals, traceability records, and any other documents specified within the contract.

B.2 FORMAT AND DELIVERY

The Final Documentation Package shall be compiled into a single electronic file in Adobe Portable Document Format (PDF). Digital files shall be organized into logical sections, with bookmarks or a table of contents to ensure traceability and ease of navigation. The complete package shall be emailed or uploaded to the agreed-upon platform (e.g., STS Electronic Information Management System) no later than 10 business days after delivery of the final hardware.

APPENDIX C. DEFINITION - CERTIFIED MILL TEST REPORT

APPENDIX C. DEFINITION - CERTIFIED MILL TEST REPORT

C.1 CERTIFIED MILL TEST REPORT

The Seller shall provide Certified Mill Test Report (CMTR)s for all raw materials used in the manufacturing process, including sheet, bar, plate, and other metallic components. CMTRs shall confirm compliance with engineering specifications, material grade requirements, and applicable aerospace standards (e.g., AMS, ASTM).

C.2 INTEGRATION WITH AS9102 REPORTING:

The Seller shall attach CMTRs as part of the AS9102 First Article Inspection (FAI) documentation package. CMTRs shall verify material traceability and compliance for all major assemblies and subassemblies. CMTRs shall be referenced or appended to Form 1 and Form 2 of the AS9102 FAI documentation.

C.3 DOCUMENTATION REQUIREMENTS:

Each CMTR shall include (at minimum): Material grade and applicable standards (e.g., ASTM A516, AMS 4911). Heat number and batch identification for traceability. Chemical composition (e.g., percentages of elements such as carbon, nickel, etc.). Mechanical properties (e.g., tensile strength, yield strength). Manufacturer certification and authorization.

C.4 NON-CONFORMING MATERIALS

In the event a CMTR indicates material non-conformance, the Seller shall notify ORNL immediately and submit a corrective action plan for approval. Non-conforming materials shall not be utilized unless explicitly approved in writing by ORNL.