OAK RIDGE National Laboratory

General Project Specification for Plasma Enrichment Equipment

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1.0 INTRODUCTION

UT-Battelle, LLC (the Company), is the Management & Operations contractor for the Oak Ridge National Laboratory (ORNL) located in Oak Ridge, TN. In support of Department of Energy (DOE) funded projects, the Enrichment Sciences and Engineering Division routinely procures equipment necessary to carry out mission needs.

2.0 GENERAL

This specification describes the general requirements for the design, procurement, materials, fabrication, inspection, testing, and shipping of various components that comprise Plasma Enrichment Equipment. This specification is to be used to supplement the individual component technical specification(s) and/or associated statement of work which will provide the detailed technical requirements. The requirements defined in this specification may not be relevant to every component, consult the technical specification or statement of work for applicability.

3.0 REFERENCES

In the event of a conflict between the General Specification, Technical Specification, 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. 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.

Codes & Standards

- National Electric Code NFPA No. 70-2020
- UL508A Edition 3 Industrial Control Panels
- IPC/WHMA-A-620D Requirements and Acceptance for Cable and Wire Harness Assemblies
- ASME Process Piping Standard B31.3 – 2020
- ASME Section IX -2021 Welding, Brazing and Fusing Qualifications (as may pertain to piping for cooling water)
- AWS D1.1/D1.1M:2020 – Structural Welding Code – Steel
- AWS D1.6/D1.6M:2017 – Structural Welding Code – Stainless Steel
- ASNT SNT-TC-1A Personnel Qualification and Certification in Nondestructive Testing

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4.0 ACRONYMS

BOM	Bill of Material
Company	UT-Battelle, LLC
CRN	Contractor Release Note
DOE	Department of Energy
GS	General Project Specification
MIP	Manufacturing and Inspection Plan
MTR	Material Test Report
NDE	Non Destructive Examination
NEC	National Electric Code
NRTL	Nationally Recognized Testing Laboratory
ORNL	Oak Ridge National Laboratory
PO	Procurement Officer
POC	Point of Contact
PQR	Procedure Qualification Record
Seller	Provider of Goods or Services under this Contract (includes Seller contracted sub-suppliers)
SIPRC	Stable Isotope Production and Research Center
SOW	Statement of Work
TPO	Technical Project Officer
TS	Technical/Equipment Specification
WPS	Welding Procedure Specification

5.0 QUALITY ASSURANCE

The Seller's quality program shall be implemented and be sufficient to ensure that the quality of produced items or provided services will meet all the requirements as stated in the contract documents. The Seller must produce the items or services in accordance with its quality assurance program as identified in its contract with the Company. Changes to the program that could affect the items or services must be approved by the Company in advance. All items shall be new/unused and traceable to the original equipment manufacturer to reduce the risk of supplying suspect/counterfeit material.

Seller shall also ensure all requirements set forth in this contract are passed down to all sub-suppliers and is responsible for obtaining the necessary information, supplying required documentation to the Company for approval, and requesting approval for any deviations to sub-supplier items.

5.1 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 or the US Department of Energy (DOE), 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 and/or other representatives who visit the Seller's facility(ies), the Seller shall provide relevant information about its facility safety procedures including, for example, safety glasses, hearing and respiratory protection, emergency preparedness, rally point, and general safety rules; and shall review typical workplace hazards with the representative(s) upon their arrival.

5.2 Seller-Requested Deviations

The Seller may propose deviations from the specifications, drawings, or other technical requirements provided with the procurement. The request shall identify the applicable units, affected items, drawing/specification number and revision number, a description of the proposed deviation and the justification for it, and cost & schedule impacts for both approval & rejection of the deviation. The Company's TPO will evaluate the technical aspects and recommend to the PO, who will communicate acceptance or disapproval to the Seller. Deviations shall be noted on Deviation Form ORNL-313.

Approval of a design document does not constitute approval of a deviation and does not relieve Seller of meeting a design requirement.

Note: The acceptance of a deviation request shall in no way limit or affect the warranty provision of the subcontract/purchase order. Such a request shall not establish a precedent or obligation to accept existing or future items not conforming to all provisions of the subcontract/purchase order.

5.3 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 contract. When a nonconformance is identified, the Seller shall:

- Identify and segregate, when practicable, the non-conforming item,
- Stop any further work on the item until a decision is made, and
- Record and report the occurrence to the Company using Form ORNL-311.

5.4 Process Monitoring

For work tasks that involve fabrication, the Seller shall prepare a Manufacturing and Inspection Plan (MIP) and submit it to the Company for approval per the requirements defined in Section 8.9 of this spec. Manufacturing may not begin until notice the MIP has been approved by the Company. The requirement for an MIP shall be flowed down contractually from the Seller to the Seller's supplier & subcontractors unless the requirement is waived on a case-by-case basis by the Company.

6.0 PROJECT MANAGEMENT

6.1 Project Plan

The Seller shall designate an official single Point of Contact (POC) to work with the Company's TPO and PO. Technical issues shall be discussed with the Company's TPO or TPO designee. Contract administration issues shall be discussed with the Company's PO. Changes to the contract can only be officially authorized by the Company's PO. The Seller shall prepare a project plan that integrates each element of subcontract management into a concise written document. The project plan shall identify the Seller's key personnel in this project and describe their individual roles and responsibilities.

6.2 Project Schedules

The Seller shall prepare a schedule, which shall identify, at a minimum, all work tasks, progress meetings, progress reports to the TPO, control points, and deliverables. The TPO shall have the option to add additional items to the project schedule. The project schedule shall be updated and provided to the TPO at least monthly or whenever a change occurs.

6.3 Progress Meetings

Technical and progress teleconferences and meetings between the Company and Seller shall be held at a scheduled time and location mutually agreeable to the TPO and POC. Frequency can change depending on project needs. The discussions shall include the Seller's progress, updated project schedule, potential problems, resources, technical issues, contractual issues, manufacturing issues, testing results, and value engineering. The Seller shall prepare and send minutes of the teleconferences and meetings to the TPO for review and approval within three working days after the meeting.

7.0 DATA MANAGEMENT

7.1 Configuration Management

The Seller shall maintain a configuration management system to control changes to items / documents that define the configuration of the device(s).

7.2 Language and Units of Measure

All documentation shall be in English, and all dimensions and parameters shall be reported in metric units except for trade size components that are specified in other units. Dual Metric/Imperial units are acceptable.

7.3 Electronic Copy Format

The Seller shall provide electronic copies of all documentation. The electronic copies shall be in searchable (not scanned) Portable Document Format (pdf), SolidWorks format, or another Company approved format. If native files are required, these will be identified in the submittal schedule, technical specification, and/or the statement of work.

7.4 Control and Handling of Sensitive or Controlled Material

All "Official Use Only" or "Export Control" marked documents and/or material shall be controlled and handled as specified in the contract. The Seller is responsible for proper handling, storage, transmission, document markings, and distribution as specified in the contract.

7.5 Correspondence

Electronic documents shall be supplied to the Company using e-mail (Export Control Information must be encrypted and password protected), Company approved file transfer system, or an encrypted USB storage device with password protection. Any documentation supplied by the Seller to the Company via email shall be sent to the TPO. Documentation supplied by the Company to the Seller will be sent to the POC, who shall be responsible for distributing it to appropriate staff.

7.6 Documentation Submittals

All documentation associated with this contract that is under the control of the Seller, will become the property of, and must be made available to, the Company as requested. Specific submittals required by the contract will be defined by the Statement of Work, Submittal Schedule and/or Technical Specification. Any deviations from the provided submittal schedule shall be approved by the Company.

The submittal schedule will identify the specifying document and section reference, document type/title, when the document is required to be provided, the requested format, if approval is required before proceeding with the work, and any relevant notes specific to the document type. Seller shall identify on each submittal both the document type/category(ies) it is intended to fulfill and the applicable units. It is possible for one document to satisfy multiple document category requirements.

Unless otherwise mutually agreed upon, the Company shall review and return each document within 21 calendar days for a new submittal and within 14 calendar days for a resubmittal. Each document will be returned with a cover page (see Attachment B) and a status code indicating approval or rejection. All requested documentation shall be submitted and given a Code 1 or 4 status before release for shipment can occur. Exceptions may be granted on a case-by-case basis and will be noted on the CRN.

Note: Approval of a design document does not constitute approval of a deviation and does not relieve Seller of meeting a design requirement.

Status Codes for Seller provided documentation are as follows:

- Code 1 – Approved, no comment. Work may proceed. (Editorial or internal comments that do not require a resubmittal by the Seller are allowed)
- Code 2 – Approved, with comment. Minor comments provided, Seller to incorporate and resubmit revised document. Work may proceed with incorporation of the comments.
- Code 3 – Not approved, comments provided. Work may ***not*** proceed. Seller to incorporate comments and resubmit before proceeding.
- Code 4 – Review not required, information only. Work may proceed.

8.0 DOCUMENT SUBMITTAL TYPES

When required by the contract, the document types below shall be provided to the Company for review & approval.

8.1 Fabrication Drawings: For all Seller designed items or Seller produced drawings & 3D CAD models based on Company design to aid in manufacturing/assembly.

8.2 Electrical/Wiring Schematics: Cable routing, termination details, voltage, current, wire type (i.e. conductor size, type, color, etc).

8.3 Bill of Material (BOM)/Parts List: listing of all components to include manufacturer, full model #, quantity, material, brief description, and if applicable: assigned tag #, serial #, configuration settings, firmware version, heat/lot #, special maintenance required, & shelf life.

8.4 Spare Parts List: Seller recommended spare parts inventory for 2 years of service.

8.5 Inspection/Test Procedures & Results: See Section 12.0.

8.6 Welding Documentation: See Section 10.5 for general requirements and applicable equipment specification for component specific instructions.

8.7 Shipping/Packaging/Storage Plan: See Section 13.0 for general requirements and applicable equipment specification for component specific instructions.

8.8 Maintenance Requirements: required/recommend maintenance of all components for both long-term storage and operations and identification of components with limited shelf life.

8.9 Manufacturing And Inspection Plan (MIP): Manufacturing operations sequence of events encompassing the entire scope of work ranging from design activities, drawing submittal & reviews, procurement activities, verification of materials, manufacturing, assembly, tests & inspections, and hold points to delivery. The Company may add Company intervention points with TPO & PO acceptance before returning it "approved" to the Seller. Company shall be notified, & document updated, if changes in the process occur.

The requirement for an MIP shall be flowed down contractually from the Seller to the Seller's suppliers and subcontractors unless the requirement is waived, in writing, on a case-by-case basis by the Company.

Examples not requiring an MIP:

- Commercial Off-The-Shelf items (not modified)
- Supply of services

8.10 Contractor Release Note (CRN)

Each delivery shall have a Contractor Release Note (CRN). The CRN shall be signed by a representative of the Seller who is responsible for the Quality aspects of the organization. The components shall not be released for shipment until the CRN has been submitted to, and approved by, the Company.

The CRN shall include, but not be limited to, the following information:

- Identifies applicable requirements
- Confirms the equipment/service complies with each requirement and identifies how the requirement was met (identification of another submittal that confirms compliance is acceptable)
- Records the status of documentation submittals
- Confirms the Company has been provided (& approved) the latest revision of all applicable documentation in the requested format
- Highlights any outstanding obligations
- Identifies applicable deviation requests & non-conformance reports

9.0 LABELING/TAGGING

Major components (as defined by the Company) and any component that is shipped unattached to a labeled component, shall be assigned a unique identifier. The unique identifier (i.e., tag number) shall be used on all relevant documentation for traceability and components shall also be physically labeled. Tag #'s shall consist of the PO#, a 3-digit alpha-numeric sequence #, followed by a unique 5-digit numeric sequential # to be mutually agreed upon (e.g., 4100123456-A01-00001). The 3-digit alpha-numeric sequence # will be assigned by the Company. The alpha character will also be assigned a unique color to be used on shipping labels for quick identification (See Sec 13.2).

Unless otherwise specified, component label size, type, location, and application method shall be recommended by the supplier and approved by the Company. All labels must be designed & applied to components such that the label will remain in place and legible during anticipated conditions of shipment, storage, installation, and use without compromising the integrity of the component.

10.0 GENERAL TECHNICAL REQUIREMENTS

10.1 Nationally Recognized Testing Laboratory

All equipment provided by the Seller shall conform to applicable Occupational, Safety, and Health and National Electrical Code (NEC) regulation which are in force at the time the contract is signed. All electrical items must have a National Recognized Testing Laboratory (NRTL) certification to U.S. standards. There may be components specified in the contract that require Field Evaluations if vendors do not properly certify/mark. It will be Seller's responsibility to coordinate with vendors to perform NRTL inspection/testing or coordinate Field Evaluations prior to final acceptance and delivery. A NRTL certificate is required for items that are not physically marked or if a Field Evaluation is required.

Components must conform to the U.S. National Recognized Testing Laboratory (NRTL) requirements. All wiring and electrical components shall conform to United States standards, including voltage rating, current carrying capacity, color coding, routing, and labeling requirements. Labeling requirements include maximum voltage and current.

10.2 Wiring

All panels should be assembled to UL-508A Edition 3 standards and appropriately marked/labeled. All wiring/cables shall be labeled in accordance with UL-508A and include "FROM/TO" designation.

All cable routing should be done as close to modeled as possible, maximizing area for ingress of personnel accessing various components. No sharp edges should be exposed, especially where cabling could come in contact. No adhesive zip tie mounts should be utilized in final design. Any wiring/connections that fall outside of UL508A umbrella shall conform and be tested to IPC/WHMA-A-620 and NEC standards.

10.3 Piping

All piping & piping elements shall conform to the specifications and standards listed in the applicable ASME B31 Code (typically B31.3) as required by the technical specification or, if not prohibited by the Code, shall be qualified for use as set forth in applicable chapters in the Code. For any unlisted component, the Seller shall provide documentation showing compliance by at least one of the methods listed in the applicable code (i.e. B31.3, Paragraph 304.7.2).

10.4 Material Certifications

For all Seller fabricated metal components & all weld fill material, a material certification (MTR) for the raw material shall be provided to the Company and traceability to each components heat/lot # shall be provided on the bill of material. Each certificate must include the material's technical parameters such as chemistry, mechanical and other physical properties, heat treatment details, manufacturing route, material origin, testing results and compliance to a code/standard. Material certs for other items may also be required as noted in the technical specification.

10.5 Welding

If welding is required, all welding and weld inspections shall be performed per applicable standards listed in the contract. All welders/operators and weld inspectors shall be certified for the weld type, materials, sizes, and standards being applied and qualifications must be provided to, and approved by, the Company prior to performing any welds. Other documentation requirements to support welding operations will be defined in the submittal schedule for each contract and will be dependent on the item and type of welding to be performed.

Unless otherwise specified this would include, but not be limited to, welding procedure specifications (WPS's) to be used with the supporting procedure qualification records (PQR's), welder/welder operator performance qualification records, filler and base material control procedures, Non-Destructive Examination (NDE) examiners qualification records, ASNT Written Practice, Welder and NDE technician's continuity records and eye exams, and all applicable NDE procedures and reports.

11.0 FIRMWARE/SOFTWARE/CYBERSECURITY

The Seller shall determine if any component is supplied with firmware, software or if any software is needed to modify a setting or configuration of an item and notify the Company. This information shall be provided on the Bill of Material for each applicable component(s) and include, at a minimum, the software name & version and/or firmware version being supplied.

12.0 INSPECTION/TESTING REQUIREMENTS

Required inspections and testing will be identified in the technical specification and/or the statement of work.

12.1 Documentation

Documentation required for inspections/tests will be identified in the submittal schedule. Unless otherwise specified, all Seller performed inspections and tests will require a procedure/plan to be provided to the Company for approval prior to the activity occurring. The procedure/plan shall identify:

- All steps to be taken
- Pass/Fail Criteria
- Equipment/Software needed
- Follow-up steps (e.g., removal of temporary supports or power, drying or cleaning of any component, etc.)
- Identification of any personnel certifications necessary to complete a step (e.g., certified weld inspector, etc).

Additionally, a final report of inspection/test results shall also be provided prior to shipment release.

12.2 Test Medium

Should any testing activities require the use of a liquid or gas medium (e.g., leak or pressure testing, etc.), the selected medium shall be identified in the test plan and provided to the Company for approval. Unless otherwise specified, water shall be distilled, and extra steps shall be taken to ensure component is completely dry prior to sealing or packaging for shipment.

13.0 PACKAGING, SHIPPING, STORAGE AND DELIVERY

Following satisfactory completion of required inspections & tests and when Seller has received an approved Contractor Release Note authorizing shipment, the components shall be shipped to the facility at Oak Ridge National Laboratory.

Seller is responsible for packaging, storage, loading, and shipment of all items unless specified otherwise in the technical specification and/or statement of work. The following contains general information that is applicable to multiple types of equipment/components. If a specific shipping configuration is required, it will be detailed in the technical specification. Unless otherwise specified, all components for each unit within an order shall be shipped assembled and in one container. Alternate shipping configurations shall be approved by the Company.

13.1 Packaging Requirements

If required by the Submittal Schedule, the Seller shall provide a packing, shipping & storage plan for approval by the company prior to packaging any items. All components shall be cleaned & packaged in such a manner to protect them from contamination and/or damage while in transit. All fluid passages shall be thoroughly drained, dried completely, and sealed as to protect the item from debris, corrosion and/or freezing. Any temporary covers or seals shall be clearly marked to ensure removal prior to installation. Components shall be packaged such that casual observation of the equipment during transportation is not achievable (e.g., fully crated, non-see-through wrapping, etc.). All loose items, including movable components on an assembly shall be secured for shipment by the Seller prior to shipment. Shipping crates and packaging shall consider tip hazards as well, ensuring the base of the shipping crate/platform is adequately sized and constructed to mitigate tipping hazards.

The plan shall include the following information:

- Physical data and drawings showing dimensions, total and distributed weights, center of gravity (in 3 dimensions), shipping orientation
- Conditions or precautions to be respected when moving, loading/offloading, handling/slinging, and storing
- Unpacking instructions, identification of lifting points, identification of temporary protective covers, etc.
- Installation Instructions
- Type and number of containers with contents
- Storage requirements including any special precautions and temperature & humidity limitations
- For International shipments: Packaging specification including confirmation of compliance with international packing standards (e.g., International Standard for Phytosanitary Measures (ISPM)-15, Conformité Européenne/CE certification for relevant package lifting appurtenances such as eyes/rings), agreed barcoding requirements and regulations relating to packaging materials used. NOTE: All packaging using wood products must comply with the requirements of ISPM-15.

13.2 Package Marking

The Seller is required to mark each package with the following, at a minimum. Package markings required for a specific item will be noted in the technical specification and/or statement of work:

- Shall be marked “TO BE OPENED BY ADDRESSEE ONLY”
- Addressee
- PO number

- Delivery address
- Consignor (Seller's name, address, and contact information)
- Package number (as identified on the packing list)
- Tag Numbers on a Color-Coded label (See Sec 9 - color & minimum size to be provided by the company)
- Gross Weight (kg), if greater than 13 kgs
- Net Weight (kg), if greater than 13 kgs
- Special Handling Instructions (if applicable)
- Lifting/Lashing/Jacking points (if applicable)
- Center of gravity (in 3 dimensions), if greater than 13 kgs
- Compliance marks (e.g., ISPM-15, CE) (if applicable)

13.3 Shipping

- For shipments subject to United States export control law, the Seller is to comply with the Export Administration Regulations (EAR) and Foreign Trade Statistics Regulations (FTSR). The Seller will serve as both the Exporter (Shipper of Record) according to the EAR and the U.S. Principal Party of Interest (USPPI) according to the FTSR.
- For shipments originating from foreign locations, the Seller will also serve as the Exporter according to the origin country's export control regulations.
- Unless otherwise specified, equipment is to be shipped via air-ride/soft-ride transportation.

13.4 Weather Protection

Components shall be protected from exposure to wind, rain and snow during transport and temporary outdoor storage. Provisions for ensuring that moisture and humidity is controlled to a level that prevents damage due to freezing and/or corrosion shall be identified and implemented, including options such as vapor barriers, desiccant, and temperature/humidity monitoring.

13.5 Storage

The Seller shall store finished components in a climate controlled, safe, and secure manner that protects their condition and preserves the integrity of all components and packaging. The storage of all items shall conclude when an agreed upon ship date(s) has/have been established.

The Company, at its discretion, may require the Seller to postpone the date of shipment by up to 60 days from the agreed upon date of shipment. If the date of shipment is postponed, 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 storage is required beyond 60 days, Seller agrees to good faith negotiation of extended storage terms.

14.0 MAINTENANCE INFORMATION

Seller shall provide any required/recommended maintenance of components for both long-term storage and operations. Prior to procurement, the Seller shall also notify the Company of any components that will require regular routine maintenance (i.e batteries that need to be routinely charged, etc) and any component with a shelf life of 2 years or less. This information shall also be noted on the Bill of Materials.

PO #		PO Description:
Supplier		

Doc Category	Doc # Reference	Section Reference	Document Type/Title	Submittal Schedule	Format	Approval to Proceed?	Include hard copy w/ shipment	Notes:

Notes:

1. One document submittal may satisfy multiple documents listed above. Indicate on each submittal what category it is intended to satisfy.
2. Document # and Section Reference is the location(s) that discuss the document and can provide additonal information regarding the requirement and/or expectation.
3. Submittal Schedule provides the required timeframe when that document is expected. This can be expressed as a # of days after award, or prior to an activity. For documents that need approval to proceed, it is recommended these documents be provided at least 30 calendar days ahead of the need date to ensure the approval process does not negatively impact Supplier schedule.
4. Deviations to this submittal schedule shall be approved by the Company. All requested documentation shall be submitted and given a Code 1 or 4 status before release for shipment can occur. Exceptions may be granted on a case-by-case basis and will be noted on the CRN.
5. For additional guidance regarding documentation submittals, see EX-00-ES00086, Section 7.6.

Attachment B
Document Submittal Cover Page

Supplier Name:		PO #	
Doc # & Rev:		Date Submitted:	
Document Title:			
☐	Code 1	Approved, no comment. Work may proceed.	
☐	Code 2	Approved with comment. Work may proceed with incorporation of the comments. Seller to revise & resbumit.	
☐	Code 3	Not approved, comments provided. Work may not proceed. Seller to revise & resubmit.	
☐	Code 4	Review not required, information only.	
Note: Approval of a design document does not constitute approval of a deviation and does not relieve Seller of meeting a design requirement or contractual obligation.			
Reviewer Name	Signature	Date Returned	

Notes/Comments:

Applicable Equipment/Components	Notes/Comments

APPENDIX C

FORM ORNL-311

NON-CONFORMANCE REPORT (NCR)

ORNL NONCONFORMANCE REPORT (NCR)

1. ACTS TRACKING NUMBER:	2. NCR#:
3. DIVISION / ORGANIZATION:	4. IDENTIFICATION DATE:
5. IDENTIFIER NAME:	6. RESPONSIBILE PERSON:

7. PROJECT TITLE / JOB #

8. Type: ☐ Construction ☐ In-House Fabricated ☐ Vendor Supplied ☐ Industrial Safety ☐ Other _____	9. SUBCONTRACT #:
10. SUPPLIER:	11. BUILDING:

12. EQUIPMENT / PART / ITEM NAME:	13. HOLD/REJECT TAG # / SEGREGATION AREA	14. FACILITY SYSTEM:

15. SPECIFIED REQUIREMENTS:

16. NONCONFORMANCE:

17. EVALUATION AND TECHNICAL JUSTIFICATION:

18. SUPPLIER PROPOSED DISPOSITION: N/A ☐

SIGNATURE / DATE

19. NONCONFORMANCE DISPOSITION:

☐ Accept/Use-As-Is ☐ Approved for Alternate Use ☐ Repair to Usable Condition ☐ Rework to Spec. ☐ Return to Vendor ☐ Scrap

20. SUBJECT MATTER EXPERT, DATE N/A ☐	21. RESPONSIBLE PERSON, DATE	22. QR/QAC, DATE

23. DESIGN DRAWINGS, SPECS, OR PROCEDURE CHANGES? ☐ Yes (If yes, list) ☐ No	24. USQD/USID REQUIRED? ☐ Yes ☐ No
DESIGN AUTHORITY OR SYSTEM ENG., DATE N/A ☐	SAFETY ANALYST, DATE N/A ☐

25. CAUSE CODE:

REMEDIAL ACTION COMPLETION

26. VERIFIER, DATE	27. TARGET DATE	28. DATE CLOSED

View Instructions

Add Attachments | Print Form | Save Form

APPENDIX D

FORM ORNL-311 INSTRUCTIONS
NON-CONFORMANCE REPORT (NCR)

ORNL NONCONFORMANCE REPORT (NCR) INSTRUCTIONS

The NCR Form shall be completed by the Responsible Person or designee.

The Owning Organization, Project/Job Title, Responsible Person and Nonconformance description are to be entered into ACTS along with a .pdf version of the finalized, signed NCR form.

Enter "N/A" in fields not used. Required fields are identified by *.

1. Assessment and Commitment Tracking System - (ACTS) Tracking Number - Automatic number supplied by ACTS.
2. NCR # - Nonconformance Report - (NCR) Number assigned by the appropriate Division/Organization (eg., NCR-02-DIV-XXX).
3. Division/Organization - Name or division/organization/program responsible for resolving the NCR.
4. Identification Date - Date the nonconformance was identified.
5. *Identifier Name - Name of person initially identifying nonconformance
6. *Responsible Person - (RP) - The ORNL line or project personnel responsible for control or use of the item, material or service in question. This is the Issue Owner in ACTS.
7. Project Title/Job Number # - Project title or job number as reflected on drawings, specifications, or other documentation associated with the nonconformance.
8. *Type - Check the type of nonconformance.
9. Subcontract # - For procured items, enter the subcontract or purchase order number
10. Supplier - Name of vendor, shop, subcontractor, customer, fabricator, or other source supplying nonconforming item, material or service deliverable.
11. Building - Building number.
12. Equipment/Part/Item Name - Equipment, part or item name as reflected on drawings, specifications, or other documentation.
13. Hold/Reject Tag #/Segregation Area - Enter the hold or reject tag number and/or identify the segregation area, as applicable.
14. Facility System - Provide name of facility system.
15. *Specified Requirements - Identify the requirements associated with the nonconforming condition. Include *Requirement Source* - Indicate the drawings, specifications, procedures, statement of work or subcontract associated with the nonconforming equipment, part, item or service deliverable.
16. *Nonconformance - Identify the nonconforming condition in detail, with equipment numbers and/or other unique identifiers to clearly identify the equipment, part, item, or service, as applicable.
17. *Evaluation, Remedial Action, and Technical Justification - State the justification for the disposition selected and the remedial action(s) to be taken to make the equipment, part, or item usable. If "use-as-is" or "repair" is determined, then include a technical justification. Identify individual(s) responsible for any remedial actions
18. Supplier Proposed Disposition Signature/Date - Signature and date of the supplier representative proposing a disposition for ORNL's approval, if applicable.
19. *Nonconformance Disposition - Check the nonconformance disposition.
20. Subject Matter Expert - (SME), Date - Signature and date if SME was used in determining disposition
21. *Responsible Person - (RP), Date - Signature and date of the ORNL line or project person responsible for control or use of the of item, material or service subcontract. Signature indicates "approval" of the proposed disposition
22. *QR/QAC, Date - Signature and date of quality representative indicating concurrence with the disposition and that the NCR process was followed.
23. Design drawings, specifications, or procedure changes - List any documents requiring revision. For nuclear facilities only, check and obtain dated signature of design engineer or system engineer.
24. Unresolved Safety Question Determination - (USQD) / Unreviewed Safety Issue Determination (USID) - Check and obtain dated signature of safety analyst, if required. (Nuclear/Accelerator Facilities Only)
25. Cause Code - Cause Code Selected from ACTS:
26. *Verifier - Signature closes the NCR.
27. Target Date - Scheduled date for closure of NCR actions.
28. Date Closed - Actual date closed.

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APPENDIX E

FORM ORNL-313

DEVIATION FORM

DEVIATION FORM

1. DEVIATION NO: DR-		2. DIVISION:
3. PROJECT TITLE:	4. PROGRAM:	
5. ITEM/ACTIVITY NAME:	6. SPECIFICATION/PROCEDURE:	
7. DRAWING NO:	8. SHOP ORDER:	9. WORK/PURCHASE:

10. Description of Deviation

11. Justification and Limitations

12. Requested by:	13. Title:	14. Date:

15. Drawing/Document is to be revised ☐ **NO** ☐ **YES (if yes, list):**

Approved by:	16. Task Leader:	Date:	19. Item User:	Date:
As Appropriate	17. Requirement Originator:	Date:	20. Other:	Date:
	18. QA Group	Date:	20. Other:	Date:

Continuation Page

DEVIATION NO: DR-	PAGE_____OF _____

10. Description of Deviation

11. Justification and Limitations

INSTRUCTIONS FOR COMPLETING THE DEVIATION FORM

NOTE: Not all blocks of this form are applicable to every deviation requested. Fill out only those blocks that are appropriate to the subject deviation.

NOTE: Divisions/Programs may use a modified version of the form, provided all requirements of this procedure are met.

1. **DEVIATION NUMBER:** Record the Deviation Request number obtained from the applicable document management center. The number should be of the form DR-YY-XX-ZZZ, indicating year, division acronym, and sequential number, such as DR-98-OQS-001.

2. **DIVISION:** The applicable division requesting the deviation by name, such as Chemical Technology Division.

3. **PROJECT TITLE:** The general title of the project or activity that is requesting the deviation, such as HFIR Upgrades.

4. **PROGRAM:** The general title of the program doing the requesting such as Environmental Restoration or WasteManagement.

5. **ITEM/ACTIVITY NAME:** The name of the item or activity to which the deviation applies or for which it is being requested.

6. **SPECIFICATION/PROCEDURE:** The specific requirement document containing the requirement to be deviated.

7. **DRAWING NO.:** The applicable drawing containing the requirement that is to be deviated.

8. **SHOP ORDER:** The shop order containing the requirement or the batch/lot of items to which the deviation will apply.

9. **WORK/PURCHASE ORDER**: The work or purchase order containing the requirement or to which the deviation will apply.

10. **DESCRIPTION OF DEVIATION:** A description of how the planned action will differ from the original requirement.

11. **JUSTIFICATION AND LIMITATIONS:** The technical justification supporting the requested deviation and the exact limits as to scope, duration, or applicable batch/lot for the deviation from requirement.

12. **REQUESTED BY**: The signature of the requestor of the deviation.

13. **TITLE:** Title of the requestor.

14. **DATE**: The date the request was initiated.

15. **DRAWING/DOCUMENT IS TO BE REVISED:** If the deviation is to be incorporated as a permanent change, check the box and list the applicable document/drawing numbers that will require changing.

NOTE: Signatures required to approve a deviation vary according to the complexity of the deviation and the safety significance of the deviation. Where the requirement is specifically made by the customer, their signature of approval must be obtained.

16. **TASK LEADER:** The leader of the task or activity that is performing the work for which the deviation is being requested.

17. **REQUIREMENT ORIGINATOR:** A representative of the organization that specified the requirement from which a deviation is being requested. The deviation must not invalidate the original basis for the requirement in question.

18. **QA GROUP:** A representative of the cognizant Quality Assurance Group must approve the deviation certifying that the process was followed and that the deviation will not represent a degradation of item or service quality.

19. **ITEM USER:** The ultimate customer of the item or service, if different from the Task Leader or requirement originator.

20. **OTHER:** Additional signatures as deemed necessary to ensure all appropriate disciplines have been considered and concurred in the deviation, such as the appropriate functional or corporate policy manager if the deviation affects established policy.