

<p align="center">BATTELLE MEMORIAL INSTITUTE, PACIFIC NORTHWEST DIVISION'S REQUEST FOR PROPOSAL NUMBER 662888 Design, Fabricate, and Deliver a Plug-in Hybrid Electric-Diesel Research Vessel</p>	
<p>Issued By: Battelle Memorial Institute, Pacific Northwest Division 902 Battelle Boulevard Richland, WA 99352</p>	<p>Contracts Specialist: Name: Beverly Jennings Telephone Number: 509/375-4587 Email: bev.jennings@pnnl.gov</p>
<p>Ship To Address: Contract Number: TBD Battelle Marine Sciences Lab 1529 West Sequim Bay Road Sequim, WA 98382 US</p>	<p>Anticipated Freight Terms: FOB - Destination Allowed Research Vessel shall be delivered FOB Sequim, WA – Battelle Site (Destination); all charges shall be included (door-to-door Sequim, WA – Battelle Site) in Offeror's total price.</p>
<p>Proposal Due Date: November 17, 2021, 4:00 p.m. Pacific Time</p>	<p>Anticipated Period of Performance: December 28, 2021 through December 30, 2022</p>
<p>Questions Due Date: November 9, 2021, 4:00 p.m. Pacific Time</p>	<p>Intent to Propose Due Date: October 26, 2021, 4:00 p.m. Pacific Time</p>
<p>Anticipated Contract Type: Firm Fixed Price</p>	

<p>Proposal Offeror proposes to sell the goods and/or services (or alternates as specified) at the prices indicated in accordance with the General Provisions, Performance Specification, DRAFT Contract, and other provisions/documents of the Request for Proposal.</p>	
<p>Offeror shall sign and return this page with their proposal.</p>	
<p>Firm Name:</p>	<p>Offeror's Point of Contact Name:</p>
<p>Title:</p>	<p>Telephone Number:</p>
<p>Email Address:</p>	<p>Proposal Date:</p>
<p>Payment Terms (check one or check and fill in "Other Discount"): <input type="checkbox"/> 2% 15, Net 30 <input type="checkbox"/> 3% 15, Net 30 <input type="checkbox"/> Net 30 <input type="checkbox"/> Other Discount _____</p>	<p>Signature:</p>

1. INTRODUCTION/BACKGROUND

Battelle Memorial Institute, Pacific Northwest Division (Battelle) operates the Pacific Northwest National Laboratory (PNNL) for the U.S. Department of Energy and is authorized to issue this Request for Proposal (RFP). Throughout this document, the term "Contract" is used to refer to any resultant Battelle Contract. Captions are included in this document and Battelle's General Provisions for convenience of reference only and in no other way define or delineate any of the provisions hereof or otherwise affect their construction or effect.

Under no circumstances shall the recipient of this RFP contact any individual within Battelle (excluding contact with Battelle's Ombudsman [see RFP Additional Instructions/Information for Offeror section below]), other than the Contracts Specialist named above regarding this RFP.

Unauthorized contact with Battelle staff other than indicated above may be grounds for disqualification. Contact with Battelle staff during the proposal period that shall take place by virtue of an existing contract agreement should be disclosed to the Contracts Specialist named above at the earliest possible time.

2. SCOPE OVERVIEW

Scope: This RFP is for services to design, fabricate, and deliver a plug-in hybrid electric-diesel research vessel in accordance with Performance Specification, No. RFP-662888, Revision 2, dated October 2021 (RFP Attachment 1).

DRAFT Contract: Offeror shall thoroughly review the attached DRAFT Contract and propose accordingly. It includes applicable language related to Scope, Environment, Safety, and Health Requirements and the role of the Technical Oversight Representative as well as other applicable language. The DRAFT Contract is provided for preliminary review purposes and is an example of what the final Contract will include. The content of the DRAFT Contract is subject to change prior to execution of the final Contract.

NAICS: The North American Industry Classification System (NAICS) Code for this RFP is 336612. The stated size standard is 1,000 number of employees. The stated size shall be the sole determining factor as to classification (small or large business) of an Offeror. It is the responsibility of the Offeror to certify its size on the Representations and Certifications in their proposal. If a manufacturing NAICS code is used, a wholesale trade or retail trade business concern submitting a proposal is categorized as a "nonmanufacturer" and deemed small if it has 500 or fewer employees and meets the requirements of 13 CFR 121.406.

3. BASIS OF AWARD

Contract Award (*cl 600c -- July 2020*):

Battelle may evaluate proposals received in response to this RFP without discussion (initial proposals should contain the Offeror's best price and technical terms).

Selection Method: Battelle will use a Source Selection process that is consistent with Battelle's Acquisition Guidelines. Evaluation of proposals will be conducted by a Source Selection Evaluation Panel. The selection for award will be made by a Source Selection Authority (SSA). Battelle intends to award one (1) Contract resulting from this solicitation. Award will be made to the responsible

Offeror whose proposal contains the combination of the criteria offering the best overall value to Battelle.

Battelle is more concerned with obtaining superior technical or management features than with making an award at the lowest overall price.

Build to Budget: The Build to Budget (BTB) Price is set at \$3,100,000.00 for services to design, fabricate, and deliver a plug-in hybrid electric-diesel research vessel that meets the capabilities, which includes required capabilities and highly desired capabilities, described in the Specification Requirements (RFP Attachment 1).

Rights Reserved: Battelle may:

- A. reject any or all proposals;
- B. request clarification of minor irregularities, informalities or apparent clerical mistakes;
- C. waive minor irregularities, informalities or apparent clerical mistakes in proposals received;
- D. accept any item or combination of items, unless doing so is precluded by a restrictive limitation in the RFP or the proposal;
- E. reject a proposal as non-responsive if the prices proposed are materially unbalanced between line items or sub-line items. A proposal is materially unbalanced when it is based on prices significantly less than prices for some items and prices which are significantly overstated in relation to prices for other items, and if there is a reasonable doubt that the proposal will result in the lowest overall price to Battelle even though it may be the lowest evaluated proposal, or if it is so unbalanced as to be tantamount to allowing an advance payment;
- F. conduct site visits to the home or field offices of Offerors determined to be in the competitive range (Offerors will be notified with the date and time of arrival, an outline of the duration of the visit and any assistant/information required);
- G. require oral presentations from any or all Offerors, determined to be in the competitive range (Offerors will be notified of the time and place for such presentation);
- H. request oral and/or written discussions;
- I. determine a competitive range, including all proposals that are judged to have a reasonable chance of being selected for award, and negotiate with all Offerors within it. (In the event a competitive range is determined, it will be based solely on Battelle's judgment, and Best and Final Offers will be requested at the conclusion of negotiations);
- J. negotiate only with a single Offeror to further reduce the price paid if, in the judgment of Battelle after a review of the technical and price proposals, only one Offeror has a reasonable chance of being selected for award;
- K. conduct a cost or price audit to facilitate a determination of price reasonableness; or
- L. re-solicit this requirement.

4. PROPOSAL SUBMITTAL REQUIREMENTS

General: Proposal shall be prepared simply and economically and shall provide a straightforward, concise delineation of the information required. Emphasis should be on completeness and clarity. Elaborate brochures or other presentations are neither required nor desired. Offerors that fail to meet the requirements as specified in this RFP may be deemed non responsive in their entirety and may not be considered for award.

Proposal shall be submitted in accordance with instructions outlined in this RFP. Incomplete or partial responses in any material respect, affecting the acceptability of the proposal, will not be

considered. Failure to respond or follow the instructions regarding the organization, content, layout, font size, or format of the proposal may result in the Offeror's proposal being considered deficient.

Questions: Should Offeror have questions on the RFP, they must be presented to the Contracts Specialist, in writing, by the Questions Due Date and Time provided on Page 1. Questions received late may not be answered. If applicable, the Questions should reference specific scope details. The Questions and Battelle's Answers will be transmitted in writing to all Offerors.

Intent to Propose: Offeror shall complete the Notification of Intent to Submit Proposal (RFP Attachment 4) by the Intent to Propose Due Date and Time provided on Page 1.

Submission of Proposal: Proposals are due by the Proposal Due Date and Time provided on Page 1 of this RFP. Proposals shall be submitted via email to the Contracts Specialist with a subject line that includes the words "Proposal to RFP 662888". Emails with electronic data are limited to a maximum of 25MB per email. If multiple emails are submitted (for example), submit them as Volume 1 of 3, Volume 2 of 3, Volume 3 of 3. **Do not send zipped files.**

Proposal Organization:

Proposals shall be prepared in a font size not less than 11 point. Proposals shall be organized into three (3) separate electronic files in ".pdf" format:

- Volume 1, Business Proposal
- Volume 2, Technical Proposal
- Volume 3, Pricing Proposal

Volume 1, Business Proposal – Do not include any pricing information in this Volume.

Organization shall be as follows:

Cover Page (1-2 pages)

1. Company Name
2. Include RFP number and Title of Proposal
3. Business/Administrative point-of-contact name, title, telephone, and email address
4. Technical point-of-contact, name, title, telephone, and email address
5. Small Business qualification status (if any)
6. Country where business is owned and operated

Business Forms (no page limit)

1. Signed Request for Proposal (RFP) Instructions, Page 1
 - a. Any exceptions to the provisions listed in the RFP shall be clearly listed and explained
2. Completed and signed Representations and Certifications
3. Proposal documents shall be signed by a representative of the Offeror authorized to enter legally binding commitments.
4. A Small Business Subcontracting Plan in accordance with the General Provisions 52.219-9 (applicable to large business)
5. Evidence of adequate financial resources required to manage this project.

Volume 2, Technical Proposal – Do not include any pricing information in this file.

The Technical Proposal shall be organized as follows:

Section 1: Proposed Plug-in Hybrid Electric-Diesel Research Vessel

Describe the proposed research vessel in detail. The technical proposal shall indicate compliance, bullet point by bullet point with the requirements outlined in the Performance Specification (RFP Attachment 1), considering the Evaluation Criteria (RFP Section 5) and shall be supported by cross-referenced documentation in the Requirements Checklist (RFP Attachment 2). If non-compliant, then alternative solution must be proposed. Limit to no more than 30 pages.

Section 2: Requirements Checklist

Completed Requirements Checklist (RFP Attachment 2) must be included within this volume. For the sake of consistency, Technical Proposals should be structured to match the order of the requirements listed in the Requirements Checklist.

Section 3: Quality Assurance Program

Provide evidence of documented Quality Assurance (QA) Program, compliant to the QA/QC requirements described in the Performance Specification, as well as the Draft Contract QA Clauses which includes the following, (Limit to no more than 4 pages):

1. Electrical Equipment for Measurement, Control, and Laboratory Use Clause (cl QA-159 - January 2014)
2. Nondestructive Examination (cl QA-161 - May 2019)
3. Welding/Brazing (cl QA-171 - May 2019)
4. Visual Weld Inspection (cl QA-177 - May 2019)
5. Source Inspection (cl QA-178 - Dec 2013)
6. Certificate of Conformance (cl QA-180 - November 2016)
7. Drawing Review (cl QA-182 - July 2019)
8. As-Built Drawings (cl QA-184 - July 2019)
9. Test Report: Inspection Report (cl QA-191 - September 2017)
10. Test Report: Functional Test (cl QA-192 - November 2016)
11. Contractor Nonconformance Report (cl 360 - November 2014)

Section 4: Offeror Experience / Team Experience

Provide detailed documentation of Offeror experience with similar work. A narrative of experience should detail the following (Limit to no more than 10 pages):

1. Offeror's core business market and technical capabilities / strengths as it applies to vessel design and fabrication.
2. Offeror's project management approach and responsibilities.
3. Offeror's business approach, as it relates specifically to the entire team, including what capabilities are subcontracted. Offeror may indicate other business approaches that Offeror believes to be most critical to its success in hybrid electric vessel design, fabrication and delivery.
4. Offeror's years of experience in vessel design and fabrication, average project size (revenue/ project), and average approximate annual revenue for preceding 3 years.
5. Offeror's detail associated with key team members - Project Manager, Engineering Technical Lead, Quality Assurance Manager, and Fabrication Lead, with specific evidence to the following:

- a. Years of experience in vessel design and fabrication
 - b. Education levels and specializations
 - c. Any applicable licenses or certifications (e.g., PE, PMP)
Provide supporting biographical information (e.g. resume, biographical sketch, biographical summary, or a combination thereof)
6. Offeror's prior customer references (up to three) for similar marine vessel design and fabrication work within the past 3 years, to include the following:
- a. Contact Information (including: firm/reference name, Point of Contact name, phone number, email address, and physical address);
 - b. Project Information (description of similar/related work performed, and services provided).

Volume 3, Pricing Proposal – Do not include any technical information in this file

The Offeror shall submit pricing proposal using Price Proposal form (RFP Attachment 3), considering the Evaluation Criteria (RFP Section 5). Total Price shall include all taxes, duty, and fees in accordance with Taxes General Provision in Draft Contract ("Taxes" clause 354b).

5. EVALUATION CRITERIA

General: Proposals will be evaluated on (1) technical ability/approach to design and fabrication, (2) contractor responsibility and (3) proposed pricing. Pricing and Technical factors will be taken into consideration for evaluation purposes. Offerors should be prepared to respond to requests for oral and/or written discussions seeking clarifications or additional information.

Mandatory Requirements: Within the written proposal, Offeror must address the mandatory (go/no-go) requirements. Only proposals determined fully compliant with the mandatory requirements will be eligible for continued evaluation. If an Offeror cannot meet or does not address compliance with the following mandatory (go/no-go) requirements, its proposal will be considered non-responsive and will not be evaluated further.

Mandatory Go/No-Go Requirements:

1. Offeror's proposed design, fabricated, and delivered vessel shall include a hull with a maximum beam of 16-feet
2. Offeror's proposed design, fabricated, and delivered vessel shall include a hybrid-electric propulsion with electric power-only capability for slow speed propulsion and quiet operations
3. Offeror's proposed design, fabricated, and delivered vessel shall include an A-frame [for lifting requirements]
4. Offeror's proposed design, fabricated, and delivered vessel shall include a boom crane with maximum Safe Working Load (SWL) lifting capacity of 1000 pounds at 10-feet of extension

Technical Evaluation Criteria: Technical proposals compliant with mandatory (go/no-go) requirements will be evaluated to verify they meet all requirements described in the Performance Specification (RFP Attachment 1); to determine if they are based on feasible and credible plans with clear assumptions and details; and to verify that the schedule requirements are fully understood and achieved.

Battelle will evaluate the proposals using the following evaluation criteria. In order of importance, the significance of the evaluation factors and sub-factors is as follows:

Technical Evaluation

1. Design Approach and Satisfaction of Performance Specification
 - a. Overall design of seaworthy vessel (engineering competence)
 - b. Overall design of hybrid-electric propulsion (propulsion competence)
 - c. Overall design for supporting scientific study (design competence)
 - d. Satisfies required performance specification for vessel capabilities (all except Subtask 2.2)
 - e. Satisfies highly desired capabilities for vessel (only Subtask 2.2 in Specifications)
2. Fabrication Approach and Technical Capabilities
 - a. Plan for executing fabrication
 - b. Facilities for fabrication
 - c. Technical capabilities
 - d. Specialized experience or facilities and equipment for vessel fabrication
 - e. Communication plan with Battelle during all phases of design and fabrication
 - f. Testing plan
3. Schedule of Activities from Design to Delivery
 - a. Timeline for vessel design, fabrication, testing, and delivery
 - b. Key milestones and deliverables identified and justified
4. Professional Qualifications and Key Personnel Expertise
 - a. Design team
 - b. Project Management team
 - c. Quality Assurance / Quality Control team
 - d. Fabrication team
5. Past Performance and Experience with Similar Marine Vessels of Similar Project Size
 - a. Examples of marine hybrid electric vessel
 - b. Schedule and cost of quality-based vessels built in last 3 years
 - c. Viable QA/QC program compliant to industry standards for marine vessel build
 - d. Worker safety record in last 3 years
 - e. Environmental compliance in last 3 years
 - f. Prior experience with government contracts
 - g. Prior experience with subcontracting teams

Price Evaluation

The Offeror's Price Proposal shall include CLIN 1 through CLIN 7, as well as CLIN 8.1 through 8.10 for highly desired capabilities.

The Offeror's Total Fixed Price Proposal for CLIN 1 through CLIN 8.10 shall not exceed the stated Maximum \$3,100,000 Build to Budget Price.

Schedule / Timeline:

The anticipated acquisition schedule for this RFP is as follows –

Request for Proposal Issued	October 14, 2021
Pre-Proposal Questions Due Date	Due Date and Time provided on Page 1 of this RFP
Intent to Proposal Notice Due Date	Due Date and Time provided on Page 1 of this RFP
Submission of Proposals	Due Date and Time provided on Page 1 of this RFP
Evaluation of Proposals (*)	Anticipated 4 business weeks after Proposal Due Date
Contract Award	Anticipated start date provided on Page 1 of this RFP

(*) Reference: Selection Method and Rights Reserved by Battelle.

6. **ADDITIONAL INSTRUCTIONS/INFORMATION FOR OFFEROR**

In addition to the requirements outlined herein, the Solicitation Provisions, Form A-609-SP, dated November 2014, apply to this RFP and are available at

<https://www.pnnl.gov/contracts/contractdocuments.aspx>.

Proposal Validity Period: Unless otherwise stated in Offeror's proposal, the proposal validity period is 120 days from receipt of proposal.

Ombudsman Program: Offeror is hereby notified that issues/concerns relative to this RFP and/or any resulting Contract award that are not resolved by the Contracts Specialist identified herein shall be resolved through Battelle's Ombudsman Program by email at acquisitionombudsman@pnnl.gov. Any issue/concern shall be submitted, in writing, no later than 15 calendar days after Contract award to be considered for review.

7. **FUNDING**

Funding is fully obligated for this action. However, Contract award is subject to availability of funds at the time of award.

8. **REQUEST FOR PROPOSAL ATTACHMENTS**

Attachment 1 – Performance Specification, No. RFP-662888, Revision 2, dated October 2021

Attachment 2 – Requirements Checklist (includes Mandatory Go/No-Go)

Attachment 3 – Price Proposal

Attachment 4 – Notice of Intent to Propose

Draft Contract

Representations and Certifications

DRAFT CONTRACT

BATTELLE MEMORIAL INSTITUTE, PACIFIC NORTHWEST DIVISION'S CONTRACT NUMBER TBD Design, Fabricate, and Deliver a Plug-in Hybrid Electric-Diesel Research Vessel	
Issued By: Battelle Memorial Institute, Pacific Northwest Division 902 Battelle Boulevard Richland, WA 99352	Contractor: TBD
Contracts Specialist: Name: Beverly Jennings Telephone Number: 509/375-4587 Email: bev.jennings@pnnl.gov	Contractor's Point of Contact: Name: TBD Telephone Number: TBD Email: TBD
Payment Terms: TBD	Contract Type: Firm Fixed Price
Period of Performance: TBD through December 30, 2022	Total Amount of Contract: \$TBD (USD)
Freight Terms: TBD – FOB Destination Allowed DECLARE NO VALUE, DO NOT INSURE	Ship To Address: Battelle Marine Sciences Lab 1529 West Sequim Bay Road Sequim, WA 98382 US
Submit Invoices and Invoice/Payment Inquiries To ap.invoices@pnnl.gov. Note: Invoices must list location(s) of service (U.S.: City, State; Foreign: Country).	
Award Battelle hereby agrees to award this Contract to the Contractor subject to acceptance. The rights and obligations of the parties to this Contract are subject to and governed by this document and any documents attached or incorporated by reference.	Contractor Agreement Contractor accepts and agrees to furnish and deliver the items and/or perform the services to the extent stated in this document for the consideration stated in this Contract. The rights and obligations of the parties to this Contract are subject to and governed by this document and any documents attached or incorporated by reference.

Battelle Memorial Institute, Pacific Northwest Division	Contractor shall sign and return a copy of this document
Signature of person authorized to sign	Signature of person authorized to sign
Name	Name
Beverly Jennings	
Title	Title
Senior Contracts Specialist	
Date	Date

Note: Captions in this document and in Battelle's General Provisions are included for convenience of reference only and in no other way define or delineate any of the provisions hereof or otherwise affect their construction or effect.

1. SCOPE AND PRICING

Scope: Contractor agrees to provide the scope of design, fabricate, and deliver a plug-in hybrid electric-diesel research vessel outlined in the attached Performance Specification No. RFP-662888, Revision 2, dated October 2021 for this Contract (hereinafter referred to as "Contract").

Deliverable and Payment Schedule: Payment shall be made upon receipt of acceptable deliverables as outlined in the Performance Specification. The payment for all Tasks respectively shall be made upon concurrence by the Technical Oversight Representative (see below) or delegate. The following Payment Schedule shall apply throughout completion of all deliverables.

Deliverable Number	Task Number	Description	Due Date (No Later Than)	Fixed Amount (USD)
1	1	Conceptual Drawing, including a plan for electrical load sharing and hybrid propulsion in accordance with the performance specification	Date	\$Amount
2	2	Final Design Drawings and Specification shall include a detailed description of the electrical load sharing and hybrid propulsion and calculated tonnage in accordance with the performance specification	Date	\$Amount
3	3	Deliver fully constructed research vessel in accordance with the approved final design drawings and specification	Date	\$Amount
4	4	Submit Testing Documents and Installation Functional Tests	Date	\$Amount
5	5	Submit Manufacturer equipment operations manuals and maintenance specification	Date	\$Amount
6	6	Deliver critical spare parts necessary for the fully constructed research vessel	Date	\$Amount
7	7	Complete final acceptance test, including sea trials in accordance with acceptable marine standards with Battelle, demonstrating the functionality of the vessel and various components of the final approved design plan in accordance with the performance specification	Date	\$Amount
8	2.2	Compete highly designed capabilities as described in the performance specification (Subtask 2.2, Items 8.1 through 8.10)	Date	\$Amount
TOTAL Fixed Price Amount				\$Amount

Currency: The currency of this Contract is U.S. Dollars with the amount fixed for the term of the Contract.

2. PERIOD OF PERFORMANCE/DELIVERY

Period of Performance: The period of performance will be TBD through December 30, 2022.

Performance Schedule: Contractor shall provide a performance schedule identifying major production milestones and deliverables to accomplish the requirements of this Contract. Contractor shall provide written, electronic status reports by the 15th of each succeeding month. If at any time the Contractor has reason to believe that a production milestone or delivery date may not be met, Contractor shall immediately notify the Battelle Contracts Specialist in writing, outlining the milestone or delivery date in jeopardy, the reasons, and steps the Contractor will take to recover the schedule in order to meet delivery requirements.

3. CONTRACTUAL REQUIREMENTS/INFORMATION

Shipping Instructions: Contractor is responsible for proper packaging, marking and labeling to prevent deterioration, damage or loss of products in transit. The Contract number must be reflected on all containers and documents. A packing slip must accompany the box/container; the packing slip must show the Contract number, line item number, description of the item, and quantity of items in the box/container.

For shipments utilizing DOE tender rates, the packing slip shall state "Transportation is for the U.S. DOE and the actual total transportation charges paid to the carrier(s) by the consignor or consignee are assignable to, and shall be reimbursed by, the Government."

Travel Notice: Request for any domestic and foreign travel associated with this Contract (including Contractor travel within a country of presence) shall be approved in writing by the Battelle Contracts Specialist in advance of travel arrangements being finalized. Without the advance approval of the Battelle Contracts Specialist for any such travel, any invoiced costs related to such travel may not be paid.

Additional Requirements:

Electrical Equipment for Measurement, Control, and Laboratory Use Clause (cl QA-159 - January 2014)

The following equipment designed and manufactured for laboratory use at the Pacific Northwest National Laboratory (PNNL) must be approved by PNNL's Electrical Authority Having Jurisdiction (AHJ):

a. Electrical test and measurement equipment

This is equipment which by electrical means tests, measures, indicates or records one or more electrical or non-electrical quantities; also includes non-measuring equipment such as signal generators, measurement standards, power supplies, transducers, transmitters, etc.

b. Electrical control equipment

This is equipment which controls one or more output quantities to specific values, with each value determined by manual setting, by local or remote programming, or by one or more input variables.

c. Electrical laboratory equipment

This is equipment which measures, indicates, monitors or analyses substances, or is used to prepare materials, and includes in vitro diagnostic (IVD) equipment.

d. Accessories intended for use with the above (e.g. sample handling equipment).

If any of the above equipment is not approved by a Nationally Recognized Testing Laboratory (NRTL), the electrical equipment will be subject to inspection by PNNL's AHJ to verify the equipment meets the requirements established in UL 61010-1 or an equivalent safety standard used by an approved NRTL agency. Failure of the equipment to meet such safety standards is

cause for the rejection of the equipment. Inspection against an approved standard includes but is not limited to the following:

- a. General electrical safety
- b. Marking and documentation
- c. Protection against electric shock
- d. Protection against mechanical hazards
- e. Protection against the spread of fire
- f. Equipment temperature limits and resistance to heat
- g. Protection against hazards from fluids
- h. Protection against radiation, including laser source
- i. Protection against liberated gas, explosion, and implosion.

Nondestructive Examination (c/ QA-161 - May 2019)

Specified items requiring nondestructive examination (NDE) shall be examined by qualified/certified personnel in accordance with documented procedures. The Contractor or the subcontractor that the quality affecting work will be performed under shall maintain certificates and other records of qualified NDE procedures and qualified/certified NDE personnel.

NDE includes all nondestructive testing methods including but not limited to Radiographic Testing (RT), Penetrant Testing (PT), Magnetic Particle Testing (MPT), Leak Testing (LT), Ultrasonic Testing (UT), and Eddy Current Testing (ET). Nondestructive testing procedures and personnel certification methods shall be in accordance with American Society of Nondestructive Testing standard SNT-TC-1A or CP-189, latest version in effect unless an earlier edition is specified in the contract.

Pre-Work Evaluation Requirement: Prior to performance of any NDE, Battelle's Acquisition Quality Support Services must evaluate the supplier's documentation for compliance with contractual requirements. At least 15 working days prior to performing any NDE, the Contractor shall deliver to Battelle's Contracts Representative for review and acceptance the following documentation:

NDE Procedures (e.g., NDE examination procedures(s) for the method(s) used and validation record(s) for those procedure(s)

Personnel certifications including the results of required physical examinations (e.g., eye examination)

The qualification of NDE inspection and test personnel shall be certified in writing under the entity (e.g., Contractor's or the subcontractor that the quality affecting work will be performed to). The following information is to be provided:

- employers name
- identification of the person being certified
- activities certified to perform
- basis of qualification
- education, experience, indoctrination, and training
- test results, where applicable
- capability demonstration results
- results of periodic evaluation

- results of physical examination (e.g., eye examination), when required
- signature of employer's designated representative who is responsible for such certification
- date of certification or recertification and certification expirations

Test Report: Nondestructive Examination Report

Contractor shall submit NDE report(s) containing the actual results of the examination required by this contract. The report(s) shall identify what was examined by specific section, joints, views, weld map and/or serial numbers, and shall reference the qualified procedures used and specific code/standard or contract-specific acceptance criteria (e.g., AWS D1.1, Section 9.9, Table 1). The report(s) shall contain information as required by the governing code/standard or specific contract requirement.

When radiographic examinations are performed, the radiographic film or a digital high resolution copy shall be submitted with the report(s) and identified by cross-reference of each film exposure to a weld map. Radiographic film shall meet the requirements of the applicable code or standard as specified in the contract.

Each NDE report shall be legible, reproducible, and contain, in addition to any other requirements as specified by this contract, the following:

1. The contract number
2. A clear identification of the item inspected, including, but not limited to, the use of serial, lot, batch, heat, or mill numbers
3. Date of the Inspection
4. Type of observation
5. Results or acceptability
6. Reference to information on action(s) taken in connection with any nonconformances identified
7. The report(s) shall be signed by the NDE Level II or III who performed the examination
8. The report(s) shall be signed by the NDE Level II or III who interpreted the results

Unless otherwise specified, Contractor shall deliver all documents required by this contract to the Battelle Contracts Representative. A document is not delivered until it is acknowledged by the Battelle Contracts Representative. Battelle shall have the right to reject, as not in conformity with the requirements of this contract, any supplies or services for which all required reports, procedures, or certifications are not delivered.

Welding/Brazing (c/ QA-171 - May 2019)

Welded or brazed items shall be fabricated by qualified and certified personnel utilizing qualified procedures based on contract-specified nationally recognized welding or brazing codes and standards in effect on the contract date.

The Contractor or the subcontractor that the quality affecting work will be performed under shall maintain records of qualifications and procedures including welder qualification and certification documentation. Welder qualifications and certifications shall include documented evidence of continued performance of each by welding process that the welder performs under this contract.

Pre-Work Evaluation Requirement: Prior to performance any welding, Battelle's Acquisition Quality Support Services must evaluate the supplier's documentation for compliance with contractual requirements. At least 15 working days prior to performance of any welding, the

Contractor shall deliver to Battelle's Contracts Representative for review and acceptance the following documentation:

Welding procedure specification for each applicable welding process.

Procedure qualification record for each applicable welding process and/or reference to applicable pre-qualified procedures indicating applicable code/standard and section.

Welder qualification records for personnel performing the welding as required by the contract, including documented evidence of continued welding performance of each welding processes performed under this contract. Personnel shall have demonstrated sufficient education, experienced, and training through documented test results or a demonstration of capabilities.

Welder logs, providing evident of continuous use of each process performed under this contract. Personnel shall have performed welding activities in the last 12 months, or as outlined in the applicable standard and must provide evidence of continuing satisfactory performance for each process.

Unless otherwise specified, Contractor shall provide all documents required by this contract to the Battelle Contracts Representative on or before the required due date for each contract deliverable. Battelle shall have the right to reject, as not in conformity with the requirements of this contract, any supplies or services for which all required reports, procedures, or certifications are not delivered.

Visual Weld Inspection (c/ QA-177 - May 2019)

Visual Weld Inspection (VWI) procedures shall be in accordance with and address the requirements of the applicable code or standard referenced in the contract. Unless specified otherwise in Contract documents, VWI personnel certification shall be certified in accordance with American Welding Society (AWS) requirements for a Certified Welding Inspector (CWI) or with American Society of Nondestructive Testing standard SNT-TC-1A or CP-189, latest version in effect unless an earlier edition is specified in the contract

Pre-Work Evaluation Requirement:

Prior to performance of any VWI, Battelle's Acquisition Quality Support Services must evaluate the supplier's documentation for compliance with contractual requirements. At least 15 days working days prior to performing any VWI, the Contractor shall deliver to Battelle Contracts Representative for review and acceptance the following documentation.

VWI Procedure(s) (e.g., qualification/certification procedures and VWI method/examination procedures)

Personnel Certifications including the results of required physical examinations (e.g., eye examine)

The qualifications of VWI inspection and test personnel shall be documented in writing under the entity (e.g., Contractor's or the subcontractor that the quality affecting the working will be performed to). The following information is to be provided:

- employers name
- identification of person being certified
- activities certified to perform
- basis of qualification

- education, experience, indoctrination, and training
- test results, where applicable
- capability demonstration results
- results of periodic evaluation
- results of physical examination (e.g., eye examination), when required
- signature of employer's designated representative who is responsible for such certification
- date certification or recertification and certification expirations

Test Report: Visual Weld Inspection Report

Contractor shall submit VWI report(s) containing the actual results of the examination required by this contract. The report(s) shall identify what was examined by specific section, joints, views, weld map and/or serial numbers, and shall reference the qualified procedures used and specific code, standard or contract-specific acceptance criteria (e.g., AWS D1.1, Section 6.9, Table 1). The report(s) shall contain information as required by the governing code/standard or specific contract requirement.

When radiographic examinations are performed, the radiographic film shall be submitted with the report(s) and identified by cross-reference of each film exposure to a weld map. Radiographic film shall meet the requirements of the applicable code/standard as specified in the contract

Each VWI report shall be legible, reproducible, and contain, in addition to any other requirements as specified by this contract, the following:

1. The contract number
2. A clear identification of the item inspected, including, but not limited to, the use of serial, lot, batch, heat, or mill numbers
3. Date of the inspection
4. Type of observation
5. Results or acceptability
6. Reference to information on action taken in connection with any nonconformances identified
7. The report(s) shall be signed by the AWS CWI who performed the examination
8. The report(s) shall be signed by the AWS CWI who interpreted the results

Unless otherwise specified, Contractor shall provide all documents required by this contract to the Battelle Contracts Representative on or before the required due date for each contract deliverable. Battelle shall have the right to reject, as not in conformity with the requirements of this contract, any supplies or services for which all required reports, procedures, or certifications are not delivered.

Source Inspection (c/ QA-178 - Dec 2013)

Contractor shall give Battelle ten (10) calendar days advance written notice of the date, time, and place the acceptance test and/or inspection is scheduled to be performed. Contractor shall in no event perform any such operation, inspection, or test prior to the date specified in its notice or change the date, time, or place specified therein without Battelle's prior written approval.

Battelle's authorized representative may, but is not required to, be present. In the event said representative witnesses an operation, inspection, or test performed by Contractor or conducts an inspection, surveillance, or test on Battelle's behalf, Contractor shall be provided documentary evidence to such effect.

Certificate of Conformance (c/ QA-180 - November 2016)

The Contractor shall submit a Certificate of Conformance containing the following:

1. nomenclature and part number
2. a statement that contract requirements have been met. Include, as applicable, reference to codes and/or, standards including revision

Each report shall be legible, reproducible, and contain, in addition to any other requirements as specified by this contract, the following:

1. Battelle's contract number
2. Traceability between the item(s) received and the documentation. This is achieved through a unique identifier and includes but is not limited to, the use of serial, lot, batch, heat, or mill number
3. The signature, date, and function of the individual accepting responsibility for the content of the report including clear identification if an electronic signature is used.

Unless otherwise specified, Contractor shall deliver all documents required by this contract to the Battelle Contracts Representative on or before the required due date for each contract deliverable. Battelle shall have the right to reject, as not in conformity with the requirements of this contract, any supplies or services for which all required reports, procedures, or certifications are not delivered.

Drawing Review (cl QA-182 - July 2019)

Contractor shall deliver an electronic copy of design drawings and specifications within thirty calendar days from (or as identified in the statement of work or specification) the Contract's date for Battelle's review. All such documents shall be approved by Contractor's designated engineering representative and contain all details necessary for Battelle's complete analysis of Contractor's design and its compliance with contract requirements.

Unless otherwise specified, Contractor shall provide all documents required by this contract to the Battelle Contracts Representative on or before the required due date for each contract deliverable. Battelle shall have the right to reject, as not in conformity with the requirements of this contract, any supplies or services for which all required reports, procedures, or certifications are not delivered.

As-Built Drawings (cl QA-184 - July 2019)

Prior to submission of its final payment invoice, the Contractor shall deliver to Battelle a revised electronic copy (or number of copies identified in the statement of work or specification) of all Battelle furnished or Contractor generated design drawings and specifications necessary to depict accurately all delivered supplies; provided, however, that if the supplies delivered conform exactly to all such design drawings and specifications, the Contractor shall instead so certify in writing. Such certification shall clearly specify all applicable design drawings and specifications (redline drawings are not acceptable).

Unless otherwise specified, Contractor shall provide all documents required by this contract to the Battelle Contracts Representative on or before the required due date for each contract deliverable. Battelle shall have the right to reject, as not in conformity with the requirements of this contract, any supplies or services for which all required reports, procedures, or certifications are not delivered.

Test Report: Inspection Report (cl QA-191 - September 2017)

Contractor shall submit an Inspection Data Report(s) specifying:

1. actual inspection results

2. what was inspected
3. the characteristics inspected
4. the acceptance criteria, all as required by this contract

Each report shall be legible, reproducible, and contain, the following:

1. Battelle's contract number
2. Traceability between the item(s) received and the documentation. This is achieved through a unique identifier and includes but is not limited to, the use of serial, lot, batch, heat, or mill numbers
3. The signature, date, and function of the individual accepting responsibility for the content of the report including clear identification if an electronic signature is used.

Unless otherwise specified, Contractor provide all documents required by this contract to the Battelle Contracts Representative on or before the required due date for each contract deliverable. Battelle shall have the right to reject, as not in conformity with the requirements of this contract, any supplies or services for which all required reports, procedures or certifications are not delivered.

Test Report: Functional Test (cl QA-192 - November 2016)

Contractor shall submit a Functional Test Report(s) specifying:

1. the actual test results
2. what was tested
3. requirements/parameters tested
4. the acceptance criteria, all as required by this contract.

Each report shall be legible, reproducible, and contain, in addition to any other requirements as specified by this contract, the following:

1. Battelle's contract number
2. Traceability between the item(s) received and the documentation. This is achieved through a unique identifier and includes but is not limited to, the use of serial, lot, batch, heat, or mill numbers
3. The signature, date, and function of the individual accepting responsibility for the content of the report including clear identification if an electronic signature is used.

Unless otherwise specified, Contractor shall provide all documents required by this contract to the Battelle Contracts Representative on or before the required due date for each contract deliverable. Battelle shall have the right to reject, as not in conformity with the requirements of this contract, any supplies or services for which all required reports, procedures or certifications are not delivered.

Contractor Nonconformance Report (cl 360 - November 2014)

Contractor is required to report to the Battelle Contracts Representative any nonconformance or deviation from Battelle's technical requirements. To comply with the reporting requirements the Contractor shall complete Battelle's Contractor Nonconformance Report (CNCR) which is available at <https://www.pnnl.gov/contracts/Forms.aspx?area=Procurement>. The completed CNCR shall be submitted by the Contractor to the Battelle Contracts Representative to request Battelle to accept a deliverable not meeting all of Battelle's technical requirements. The decision whether to accept or reject such a request shall be within Battelle's sole discretion, and the Contractor shall not proceed in accordance with the requested deviation or present for inspection or acceptance any product

produced in accordance with such deviation, unless and until Battelle's written approval on the CNCR is received by the Contractor.

Battelle's rights and remedies provided in this clause are in addition to any and all other rights and remedies that Battelle may have under Federal or State law.

4. CONTRACT ADMINISTRATION

Battelle Contracts Specialist: The Battelle Contracts Specialist, Beverly Jennings, is the sole point of contact for any contractual/administrative communications or questions regarding this acquisition. Contact information is on Page 1.

Technical Oversight Representative: All technical questions should be directed to the Technical Oversight Representative (TOR), To Be Determined at To Be Determined or via email at To Be Determined. The TOR cannot modify this Contract.

Key Personnel: The following named Key Personnel shall be assigned to the performance of the work and shall not be replaced without the prior written approval of the Battelle Contracts Specialist.

- To Be Determined

Lower-tier Subcontractors: The following Lower-tier Subcontractors have been pre-approved by Battelle. Any new Lower-tier Subcontracts require the prior written approval of the Battelle Contracts Specialist.

- To Be Determined

5. TERMS AND CONDITIONS

The General Provisions for Fixed Price Commercial Items - Supplies Services, Form A-409.28-CI dated July 2021, apply and may be viewed at <https://www.pnnl.gov/contracts/contractdocuments.aspx>.

6. CONTRACT ATTACHMENTS

In addition to the above, the Contract consists of:

[RFP Attachment 1] - Performance Specification – No. RFP-662888, Revision 2 dated October 2021

[RFP Attachment] - Representations and Certifications

7. ENTIRE AGREEMENT

This Contract contains the entire agreement and understanding between the parties, and there are no agreements, understandings or representations not set forth or incorporated by reference herein. This Contract supersedes all prior proposals, understandings and agreements, whether oral or written, between the parties with respect to the subject matter hereof. No subsequent Modifications of this Contract shall be of any force or effect unless in writing by authorized representatives of each party to this Contract. No communications, written or oral, by other than a Battelle Contracts Specialist shall be effective to modify or otherwise affect the provisions of this Contract.