June 17, 2020

Dear Interested Parties:

**Expression of Interest (EOI):** To Provide Carbon Steel Immobilized Low Activity Waste (ILAW) Containers

**Introduction/Scope**

Washington River Protection Solutions, LLC (WRPS) as a prime contractor to the U.S. Department of Energy is issuing this request for Expression of Interest (EOI) as a means of conducting market research. This will enable WRPS to identify firms having an interest in and the resources to fabricate, package and ship carbon steel ILAW containers for use in accordance with the attached draft specification (ILAW-SP-0001). The containers are generally depicted in the attached draft sketches, SKETCH-ILAW-ME-001/002/003/004. The containers are intended for use at the Waste Treatment and Immobilization Plant (WTP) Low Activity Waste (LAW) facility currently under construction and commissioning at the Hanford site. Production and delivery of the containers is anticipated to occur in two phases:

1. Phase 1 would include initial delivery of a minimum of 10 containers for use in testing at the LAW facility during normal production operations (anticipated to be 2023)
2. Phase 2, if authorized based on test results from Phase 1, would be the delivery of up to 1825 containers per year at a maximum rate of about 152 containers per month for an initial period of 5 years.

Any future subcontract is anticipated to be Firm Fixed Priced (FFP) with provision for economic adjustment. Interested parties (potential offerors) are requested to provide a non-binding rough order of magnitude (ROM) lump sum (LS) estimate and non-binding forecasted delivery schedule for each of the two phases.

**Expression of Interest Submittals**

Interested firms are invited to submit an expression of interest letter to include a response to the following:

1. Potential offeror shall provide discussion which demonstrates experience with high volume fabrication and delivery of large steel items. The potential offeror shall provide up to three (3) written examples of past experience of similar scope.

2. Potential offeror must agree to sign a Non-Disclosure Agreement in order to receive copies of design drawings and other design documentation which will be provided upon release of any future Request for Proposal.

3. Potential offeror chosen to participate in the bidding process will be evaluated to ensure adequate quality assurance in the manufacture of the containers to meet the codes and standards identified in Section 2.2 of the draft specification and therefore must provide an uncontrolled copy of the QA manual used to control fabrication when submitting the EOI response letter.
4. Potential offeror shall provide a discussion which describes the technical approach and process quality controls used to fabricate the containers.

5. Potential offeror shall provide a non-binding rough order of magnitude (ROM) lump sum (LS) estimate for budgetary planning purposes to include fabrication, packaging and shipping of containers for each of the two phases described above.

6. Potential offeror shall provide a non-binding estimated production and delivery schedule for planning purposes. Capability to accelerate the schedule should be discussed.

7. Potential offer shall confirm current holding of at least one of the following U Designations, U1, U2, U4 and/or U9.

WRPS reserves the right to use information submitted by, or obtained from, a potential offeror in a manner WRPS determines is appropriate, including, but not limited to, the creation of a competitive solicitation based on submitted responses.

Technical questions must be received via email to christopher_j_franz@rl.gov no later than July 7, 2020. WRPS may choose to open discussions with any potential offeror submitting an EOI response.

Expression of interest letters must be received via email to christopher_j_franz@rl.gov no later than July 20, 2020. Expression of interest responses should be limited to less than twenty pages of information.
WASTE TREATMENT AND IMMOBILIZATION PLANT (WTP)

ENGINEERING SPECIFICATION

FOR

Immobilized Low Activity Waste Carbon Steel Containers
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1.0 SCOPE

1.1 Project Description and Location

The Office of River Protection (ORP) and its contractors manage 177 underground radioactive waste storage tanks at the Hanford Site in Washington. These tanks contain approximately 56 million US gallons of radioactive waste. The Hanford Tank Waste Treatment and Immobilization Plant (WTP) is being designed, constructed and commissioned to process and vitrify this waste into a stable form that is suitable for permanent storage. The WTP will be constructed in the 200 East Area of the Hanford Site, near Richland, Washington. The main facilities within the WTP complex associated with this specification are the Low-Activity Waste facility (LAW), Analytical Laboratory (Lab), and the Effluent Management Facility (EMF).

1.2 Equipment, Material, and Services Required

1.2.1 This specification applies to the manufacture of Immobilized Low Activity Waste (ILAW) Container Assemblies, and Container Lid Assemblies, which are used to contain and handle low-activity vitrified waste.

1.2.2 SELLER shall:

- Procure and supply all materials necessary to fabricate and assemble the required items.
- Fabricate, examine, and test.
- Design and manufacture tooling and equipment as needed to fabricate.
- Prepare items for shipment per Section 6, including purchase of shipping containers, fabrication of any required shipping support frames, handling beams, and tie-down fixtures.
- Prepare Shop Detail Drawings as required.
- Supply required documentation.
- Notify the BUYER of any conflicts between the procurement documentation.

1.3 Work by Others

1.3.1 Installation of Container Lid Assemblies

1.3.2 Provision of serial numbers to be applied to the containers.

1.4 Definitions

1.4.1 BUYER — Washington River Protection Solutions (WRPS).

1.4.2 SELLER — supplier, vendor, subcontractor, etc.
1.5 **Safety/Quality Classifications**

1.5.1 The equipment covered by this specification is non-safety. The equipment and materials listed in Section 1.2 are classified as Commercial Quality (CM).

2.0 **APPLICABLE DOCUMENTS**

2.1 **General Requirements**

2.1.1 Work shall be performed in accordance with the referenced codes, industry standards and documents listed in Sections 2.2 and 2.3.

2.1.2 When specific chapters, sections, parts, or paragraphs are listed following a code, industry standard, or referenced document, only those chapters, sections, parts, or paragraphs of the document shall apply. When more than one code, standard, or referenced document covers the same topic, the requirements for all shall be met with the most stringent governing.

2.1.3 For the codes and industry standards listed below, the specific revision or effective date identified, as well as the specific revision or effective date of codes and standards that they incorporate by reference (daughter codes and standards), shall be followed. If a date or revision is not identified, the latest issue, including addenda, at the time of award shall apply.

2.1.4 In case of conflict between this specification, drawings, other specifications and referenced codes and standards, the SELLER shall call attention to the conflict and request an interpretation by the BUYER. Requests for any deviations shall include a recommended disposition and be in accordance with a Request for Information (RFI) Form to be provided by the BUYER upon contract award.

2.2 **Codes and Industry Standards**

2.2.1 ASME B&PVC Section II — Materials, Part C – Specification for Welding Rods, Electrodes, and Filler Metals

2.2.2 ASME B&PVC Section V – Nondestructive Examination (NDE)

2.2.3 ASME B&PVC Section VIII, Division 1 – Rules for Construction of Pressure Vessels

2.2.4 ASME B&PVC Section IX – Welding, Brazing, and Fusing Qualifications

2.2.5 ANSI/ASME B46.1 – Surface Texture (Surface Roughness, Waviness, and Lay)

2.2.6 ASNT SNT-TC-1 A (2006) — Recommended Practice, Personnel Qualification and Certification in Nondestructive Testing

2.2.7 AWS A2.4 – Standard Symbols for Welding, Brazing, and Nondestructive Examination
2.2.8 AWS A4.2 – Standard Procedures for Calibrating Magnetic Instruments to Measure the Delta
2.2.9 ASME SA-36 – Specification for Carbon Structural Steel, ASME BPVC.II.A-2019

2.3 Reference Documents/Drawings

2.3.1 SKETCH-ILAW-ME-0001, Rev. A, LAW Vitrification System LRH Product Container Assembly Sketch.
2.3.2 SKETCH-ILAW-ME-0002, Rev. A, LAW Vitrification System LRH Product Container Weldment Details Sketch.
2.3.3 SKETCH-ILAW-ME-0003, Rev. A, LAW Vitrification System LRH Product Container Details Sketch.
2.3.4 SKETCH-ILAW-ME-0004, Rev. A, LAW Vitrification System LRH Product Container Details Sketch.

3.0 MATERIALS

3.1 Material thickness shall be as shown on the drawings listed in Section 2.3.
3.2 Abrasive blasting is not permitted.
3.3 The materials of construction shall be as shown in BOM in sketch SKETCH-ILAW-ME-0001.
3.4 Material traceability using Certified Material Test Reports (CMTRs) shall be maintained by the SELLER for BUYER review to verify all carbon steel material for shop-fabricated items.

3.5 Welding Filler Materials

3.5.1 For all filler metal, (including filler metal/flux combinations), a Material Test Report (MTR) for the type of material being purchased is required. The SELLER shall submit a procedure to the BUYER for how only the filler metal with the MTR will be used.
3.5.2 The storage, baking and drying of all welding consumables (i.e., covered electrodes, flux cored electrodes and fluxes) shall be as recommended by the manufacturer.
4.0 FABRICATION

4.1 General

4.1.1 SELLER shall manufacture the ILAW Container Assemblies and Container Lid Assemblies in accordance with the drawings listed in Section 2.3.

4.1.2 BUYER is invoking ASME B&PVC Section VIII as a recognized industry standard for manufacturing processes. The ILAW Container Assemblies are not pressure vessels. Specific tolerances, QA documentation, and weld inspections are modified as stated in this document and in the drawings listed in Section 2.3.

4.1.3 The manufacturer of the ILAW Container Assemblies shall hold a Certificate of Authorization to use the ASME B&PVC U Designator*. The ILAW Container Assemblies shall be manufactured in accordance with the requirements of ASME B&PVC Section VIII, Division 1, but an ASME Certification Mark shall not be applied to the container.

4.1.3.1 *Note: The SELLER shall have at least one of the following U Designations, U1, U2, U4 and / or U9.

4.1.3.2 **Note: The requirements of ASME B&PVC Section VIII, Division 1 are modified and relaxed in this specification and in the referenced drawings.

4.1.4 The Top Head (Item 3) may be formed from two pieces and welded together if necessary. Top Heads formed in this manner shall be reformed and stress relieved after welding.

4.2 Welding

4.2.1 All welds shall be performed using welders, welding operators, and welding procedures qualified under the provisions of the ASME B&PVC, Section IX. The responsibility for welding to be used in ASME B&PVC construction rests with the Seller. The Seller’s responsibility includes the Welding Procedure Specifications (WPSs), Welding Procedure Qualification Records (PQRs), and Welder Performance Qualifications (WPQs), which shall be available for use by the welders/welding operators and for reference by the Buyer.

4.2.2 The Seller is responsible for complying with all applicable Code requirements, as modified by Section 4.1.2, relating to welding and associated considerations, spanning from the design of the welded joint, consumables control and preheat, to final NDE of the joints as modified by Section 5.2.

4.2.3 All welding shall be protected from wind, rain and other harmful weather conditions which may affect weld quality. All surfaces to be welded shall be dry and free of mill scale, oil, grease, dirt, paint, coating, and other contaminants.

4.2.4 Permanently installed backing rings or straps may be used only if there are no stress issues. Temporary backing rings or straps may also be used only if there are no
stress issues. Methods of removing temporary backing rings must conform to Section 5.5.

4.2.5 The individual weld layer thickness for all processes shall not exceed 3/8 inch for materials less than 1-1/4 inches thick, or ½ inch for greater material thicknesses.

4.2.6 Where joints are welded from both sides, the first pass shall be back chipped, ground or arc-gouged to sound metal before welding the second side. This requirement shall be stated on the Welding Procedure Specification (WPS).

4.2.7 Peening shall not be used. The use of pneumatic tools for slag removal is not considered peening.

4.2.8 Each weld layer shall be completed prior to starting the next layer (no block welding).

4.2.9 Vertical welding shall be vertical up unless approved otherwise by Buyer for each specific application.

4.2.10 Shielding and purging gases shall be welding grade, with a dew point of less than or equal to 40°F.

4.2.11 Welding shall be in accordance with the manufacturer’s ASME B&PVC Section VIII, Division 1 Quality Control System.

4.3 **Welding Process Limitations**

4.3.1 No undercut, porosity, or cracking is permitted.

4.3.2 Autoogenous welding is prohibited.

4.3.3 Gas Tungsten Arc Welding (GTAW) – Filler material is required.

4.3.4 Gas Metal Arc Welding (GMAW)

4.3.4.1 GMAW-P – Pulsed spray transfer; – No Limitations.

4.3.4.2 GMAW-S – Short circuiting or globular transfer - maximum base metal thickness 3/8-inch.

4.3.4.3 Spray transfer (non-pulsed) – No Limitations.

4.4 **Heat Treatment**

4.4.1 Heat treatment shall be in accordance with the manufacturer’s ASME B&PVC Section VIII, Division 1 Quality Control System.

4.5 **Coating**

4.5.1 Coating shall be applied in accordance with the drawings listed in Section 2.3 and the Material Requisition.

4.5.2 Coating shall be of high emissivity type *Aremco*, HiE-Coat 840-M

4.5.3 Coating shall be applied in accordance with the manufacturer’s instructions.
4.6 **Container Labeling**

4.6.1 Serial Numbers used in Container Labeling shall be provided by the BUYER.

4.6.2 The numeric labeling on the top head may be aligned as curved or straight.

4.6.3 Container labels shall be formed by bead welding directly to the container using an appropriate weld rod. SELLER shall develop and use a procedure to ensure uniform characters. Freehand welding, without any guide or visual aid, is not acceptable.

4.6.4 Weld profile shall not have undercutting or areas that could trap foreign materials.

4.7 **Surface Defects**

4.7.1 Defects, such as pits or scratches, less than 0.010-inches deep in 10-gage walls do not require repair. Surface markings, such as stamping and etching, shall not be greater than 0.010-inches deep in 10-gage wall thickness.

4.8 **Personnel Qualifications**

4.8.1 Welders and welding operators (performance) shall be qualified in accordance with ASME Section IX.

4.8.2 Personnel performing nondestructive examination (NDE) shall be qualified according to a written practice that meets the requirements of SNT-TC-1A.

4.9 **Non-Destructive Examinations (NDE)**

4.9.1 NDE procedures, including visual examination, shall meet the requirements of ASME B&PVC Sections V & VIII, as modified by Section 5.2.

4.9.2 Nondestructive examinations shall be in accordance with the manufacturer’s ASME B&PVC Section VIII, Division 1 Quality Control System.

4.10 **Weld Maps**

4.10.1 One weld map is required that will cover all containers. The weld map will show joint type, material specification, material thickness at the joint, whether back grinding and back welding is used, weld preheat, PWHT if applicable and WPS’s to be used for each weld joint. The weld map may be by drawing or spreadsheet.
5.0 WORKMANSHIP, TESTS, AND INSPECTIONS

5.1 Each layer of welding shall be smooth and free of slag inclusions, excessive undercut, cracks and lack of fusion prior to beginning the next layer. In addition, the final weld layer shall be free of coarse ripples, nonuniform bead patterns, high crown, and deep ridges in order to permit the performance of any required NDE. All arc strikes, starts, and stops shall be confined to the welding groove or shall be removed by grinding/sanding (minimum wall thickness, as required by design, shall not be encroached upon). Welds containing cracks shall not be blended in by grinding, rather, such welds shall be repaired. The repairs may be a complete weld replacement or a local repair in accordance with the ASME B&PVC. Weld porosity or pinholes shall be removed based on the requirements of the ASME B&PVC.

5.2 All welds will be visually inspected (VT) using qualified NDE personnel in accordance with the fabricator’s quality control documents required for a U-stamp holder.

5.3 Weld spatter that will interfere with any visual examinations as determined by the Buyer’s Supplier Quality Representative (SQR) shall be completely removed in the area of examination. Containers shall have all weld spatter removed in the area to be coated.

5.4 Contact surfaces of temporary attachments shall match the material of the container.

5.5 Temporary attachments shall be removed, and the areas finished smooth and flush. Temporary attachments shall not be hammered off or knocked off. Temporary attachments shall be flame-cut, arc-gouged, or cut by abrasive wheel to a distance no closer than 1/8 in. from the parent materials. The remainder of the temporary piece and the attachment weld shall be ground smooth and flush. Visual examination shall be performed on areas where temporary attachments have been removed to ensure there are no material cracks. See Section 4.7 regarding surface defects.

5.6 Examination and inspection shall be in accordance with the manufacturer’s ASME B&PVC Section VIII, Division 1 Quality Control System and this section.

5.7 The surface finish of the container and container lid shall be inspected after the completion of fabrication, cleaning, and prior to final packaging.

5.8 SELLER shall inspect the container serial numbers prior to final packaging for the following requirements:
1. Unique
2. Dimensional requirements specified by the drawings in Section 2.3
3. Top and side serial numbers match

5.9 SELLER shall inspect the container dimensions during the manufacturing process. All inspections shall be complete prior to final packaging. At a minimum, key geometry, container height, container diameter, and cylindricity shall be inspected. The key geometry features of the container are as follows:

5.9.1 Thickness of the Body Shell (0.1345 in)
5.9.2 Container Height (90 in)
5.9.3 Diameter of the Body Shell (48 in)
5.9.4 Thickness of the Bottom Head (0.5 in)
5.9.5 Thickness of the Top Head (0.375 in)
5.9.6 Diameter at opening in Top Head (30 in)
5.9.7 Thickness of the Top Flange (1.5 in)
5.9.8 Outer Diameter of the Top Flange (36 in)
5.9.9 Inner Diameter of the Top Flange (Clearance for Lid Diameter) (16.77 in)

5.9.9.1 NOTE: Dimensions listed above are nominal. Tolerances are per the drawings listed in Section 2.3.

5.10 SELLER shall inspect the high emissivity paint application prior to final packaging. Dimensions and locations shall be as shown on the drawings in Section 2.3. Dry film thickness shall be inspected per ASTM D7091.

6.0 PREPARATION FOR SHIPMENT

6.1 Cleanliness
6.1.1 Items shall be inspected for cleanliness immediately before packaging. Contaminants (dirt, oil, residue, metal chips, etc.) shall be removed.
6.1.2 Items shall contain no free liquids.
6.1.3 Contaminants also include organic material that may not be harmful to the container materials but will ignite upon contact with molten glass.

6.2 Painting
6.2.1 Temporary items used for packaging, including nuts and bolts, shall be painted a bright contrasting color. Wood is not required to be painted.
6.3 Packaging

6.3.1 General

6.3.1.1 All Items must be prepared for shipment such that it can be secured for protection against shifting and falling cargo as specified in Department of Transport (DOT) 49 CFR 393 Subpart I. For all cargo that cannot be crated or that requires direct securement to a transport vehicle, the SELLER shall ensure that the cargo is packaged with sufficient and adequate attachment points to limit movement in accordance with the requirements of 49 CFR 393 Subpart I.

6.3.1.2 Items shall be packaged to prevent corrosion, contamination, physical damage, or other effects that would cause the components to deteriorate during shipping, handling, or storage.

6.3.1.3 Items shall be packaged to allow handling using typical material handling equipment (e.g., forklifts) during receipt and storage prior to use.

6.3.1.4 All Items shall be wrapped individually in shrink wrap for coverage during shipment.

6.3.1.5 Packaging shall be suitable for storage on concrete pad inside a large outdoor tent.

6.3.2 ILAW Container Lid Assembly Packaging

6.3.2.1 SELLER shall package the ILAW Container Lid Assemblies such that the container locking bars, lid seal spring clip, and seal ring are protected from impact during shipping.

6.3.2.2 Packaging shall be clearly marked with Lid Assembly Identification Numbers.

6.3.2.3 Lid assemblies shall be individually wrapped and shipped inside a cardboard box.

6.3.3 ILAW Container Assembly Packaging

6.3.3.1 SELLER shall package the ILAW Container Assemblies such that the top flange is protected from impact during shipping.

6.3.3.2 SELLER shall palletize ILAW Container Assemblies individually.

6.3.3.3 SELLER shall package the ILAW Container Assemblies allowing visibility of, or access to the Container Body Identification Number.

6.3.3.4 SELLER shall identify the type of bracing to be used.

6.3.3.5 SELLER shall be responsible to block, brace, and any other preparations required to avoid shipping damage to the ILAW containers.

6.3.3.6 SELLER shall provide any special bracing, saddles or other supports required for shipping.

6.4 Documentation

6.4.1 Seller shall submit a proposed tie-down plan to be used to transport the containers in accordance with Department of Transportation requirements found in 49 CFR 393.
Subpart 1. Evidence that the tie down plan attachment points meet these requirements must be submitted with the plan. The plan shall include any restrictions that must be implemented to prevent damage to the containers during transportation. NOTE: WRPS prohibits the use of “friction”, without the use of appropriate friction mats, to be included in any securement calculations as a contributor to meet the restraint per DOT 49 CFR 393 Subpart 1 requirements. WRPS also prohibits the use of snap type binders to secure chains due to safety concerns. All chain binders shall be ratchet type binders.

6.4.2 SELLER shall submit drawings of the load in its transport configuration. The drawings shall accurately and clearly identify the following:

6.4.2.1.1 Location of the center of gravity (e.g.) in all three directions

6.4.2.1.2 Accurate shipping dimensions and weight

6.4.2.1.3 Tie-down locations and details

6.4.2.1.4 Off Loading Pick Point

6.4.3 SELLER shall specify handling procedures, storage instructions, and any maintenance procedures required to preserve the container assembly and container lid assembly.

6.4.4 Transportation and Shipping Documentation (drawing(s) and proposed tie down plan(s) with supporting evidence) identified in Section 6.4.2 shall be submitted to the BUYER for review and acceptance, at least three (3) months prior to date of shipment.

7.0 QUALITY ASSURANCE

7.1 The required elements of the SELLER’S quality assurance program shall be as shown on the CM Datasheet of Quality Assurance Program Requirements included in the procurement documents.

8.0 DOCUMENTATION AND SUBMITTALS

8.1 General

8.1.1 SUPPLIER shall submit to BUYER the Engineering and Quality Verification documents outlined below. Detailed instructions will be provided in the Statement of Work associated with a Request for Proposal. Submittals specific to a single filter shall reference the full serial number of the filter.

8.1.2 Engineering submittals are defined in Section 8.2.
8.1.2.1 SELLER shall submit these documents for BUYER review and acceptance.

8.1.3 Quality verification documents are defined in Section 8.3. Quality verification documents shall be labeled with the container serial number to which they apply. Quality verification documents for the container lids shall be traceable to the lid by serial number, lot number or other method established by SELLER.

8.1.3.1 These documents are used to verify that work was performed in accordance with the applicable requirements.

8.1.3.2 During fabrication, SELLER shall maintain quality verification documents for work in progress.

8.1.4 Inspection procedures shall document the acceptance criteria for the inspection and the recorded values to be taken. An example of the form used to document the inspection shall be included in the procedure. The procedures shall also include the type of measuring devices used.

8.2 Engineering Submittals

8.2.1 SELLER shall submit a Certificate of Conformance (CoC) showing that the SELLER procured and used materials with CMTRs.

8.2.2 SELLER shall submit a Tie Down Plan in accordance with Section 6.4.1.

8.2.3 SELLER shall submit Load Transportation Configuration Drawings in accordance with Section 6.4.2.

8.2.4 SELLER shall submit instructions for BUYER site storage and handling as required by Section 6.4.3.

8.2.5 SELLER shall submit their written quality assurance manual. The quality assurance manual shall meet the requirements of the QA Datasheet contained in the Material Requisition.

8.2.6 SELLER shall submit an inspection and test plan for fabrication of the containers and the container lid assemblies. The inspection and test plans shall include, at a minimum:

1. Equipment to be inspected and tested
2. Description of inspections and tests to be performed
3. Identification of the organization responsible for performing the inspection
4. Sequential hold and notification points for inspection and tests to be performed, including Buyer designated source inspections/witness
notification point in accordance with the Buyer’s quality surveillance plan included in the material requisition.

5. Each characteristic or attribute to be evaluated

6. Identification of a sampling plan, as applicable

7. Measuring and test equipment to be used to perform the inspection/test as applicable

8. Acceptance criteria that is measurable and verifiable

9. The inspection and test report form to be used

8.2.7 SELLER shall submit Safety Data Sheets for any paint or hazardous material that will remain on the equipment when shipped to BUYER. This does not apply to paint or hazardous material used during shop fabrication that is completely removed prior to shipment.

8.2.8 SELLER shall submit a procedure that details the method to be used in welding the numeric labels required by Section 4.6.

8.2.9 SELLER shall submit Welding Procedure Specifications (WPS).

8.2.9.1 It is not the Buyer's intent to require revisions to the Seller's standard WPS to meet these requirements, yet the limitations must be clearly acknowledged, and the instructions must be employed by the welders during fabrication. To accommodate this, Sellers may revise WPS or issue job-only amendments or addenda to standard WPS. Any amendment or addenda shall become part of the WPS for the purchase order and shall be issued to the welders employed in the work.

8.2.10 SELLER shall submit WPS together with PQR, prior to Submitting the Weld Map.

8.2.11 SELLER shall submit a procedure for Repair Plan

8.2.11.1 Repair plans that use welding for repairs of welds or base metals shall be maintained by the SELLER and available for review by the BUYER. This applies to the repair of cavities that exceed 3/8” or 10% of the section thickness (whichever is smaller), or in
the case of fillet welds, when the entire fillet weld needs to be replaced. A repair plan shall include the following:

8.2.11.1.1 The method of defining the type and the extent of the defect
8.2.11.1.2 The methods used for removing the defect
8.2.11.1.3 The NDE conducted to ensure that the defect has been removed
8.2.11.1.4 The welding procedure employed
8.2.11.1.5 The NDE methods used to inspect the completed repair
8.2.11.1.6 A review status of "Work May Proceed" for the repair plan must be obtained prior to use.

8.2.12 SELLER shall submit a single Weld Map that governs all containers in accordance with Section 4.10.
8.2.13 SELLER shall submit visual examination procedures.
8.2.14 SELLER shall maintain procedures for repair of defects and correction of nonconformities in accordance with their ASME U stamp requirements.
8.2.15 SELLER shall submit a shipping preparation procedure. The procedure shall detail the steps taken to meet the requirements of Section 6.

8.3 **Quality Verification Documentation**

8.3.1 Records required to be submitted are identified below:

8.3.1.1 One weld map - in accordance with Section 4.10 of this specification.
8.3.2 SELLER shall provide coating verification reports. Coating verification reports shall contain the information recommended by ASTM D7091.
8.3.3 SELLER shall provide a certificate of compliance for each shipment. The certificate shall contain the following:
   1. PO Number
   2. PO Line Item Number(s) and quantity shipped
   3. Description of Material(s)
   4. Identification of the manufacturer of the assembled items
   5. Certification that the items were manufactured in accordance with an ASME B&PVC Section VIII Division 1 Quality Control System
   6. The certificate shall be signed by an authorized SELLER representative
   7. Serial Number (S/N) of Containers and/or Lids in shipment.

8.3.4 SELLER shall provide records that document the surface finish inspection required by Section 5.7.
8.3.5 SELLER shall provide records that document the serial number inspection required by Section 5.8.

8.3.6 SELLER shall provide records that document the dimensional inspection required by Section 5.9.

8.3.7 SELLER shall provide records that document the visual examination performed.
NOTES:
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH TECHNICAL SPECIFICATION No. 24590-LAW-MO-LRH-00004003.
2. MATERIAL WEIGHT:
   - EMPTY CONTAINER: 1,600 LBS.
   - CONTAINER LID: 44 LBS.
3. ESTIMATED INTERNAL CAPACITY VOLUME (CUBE FULL) = 4.3 cu. ft.
4. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE STATED.
5. DIMENSIONS AND TOLERANCES ARE PER ASME Y14.5.
6. BREAK ALL SHARP EDGES AND REMOVE ALL BURRS.
7. HIDDEN LINES MAY BE REMOVED FOR CLARITY.
8. HIGH ENERGY FATE SHALL BE APPLIED AS A 7/16" WIDE BAND AND CENTERED ON ALL SURFACES.
9. REFER TO SPECIFICATION No. 24590-LAW-MO-LRH-00004003 FOR TYPICAL AND APPLICATION REQUIREMENTS.
10. ITEM 2, SHOULDER SCREW, SHALL BE TRIMMED SUCH THAT THE THREAD LENGTH DOES NOT EXCEED 0.25 IN.
11. NOTES CONTAINED ON DRAWING (SKETCH-LAW-ME-0001).

I. LAW PRODUCT
   1. CONTAINER ASSEMBLY
II. LAW CONTAINER
   6. LID ASSEMBLY

LID ENGAGEMENT CONFIRMATION MARKS

LID UNLOCKED POSITION
SCALE: 1" = 1-

LID LOCKED POSITION
SCALE: 1" = 1-
NOTES:

A. LAW CONTAINER SHALL BE SEQUENTIALLY LABELED WITH A FIVE CHARACTHER NUMBER CODE, SUCH AS "AA0004".

B. ENDCAPS AND BODY LUNCHES SHALL BE LOCATED 1.25 INCH APART. GRAY - OR DIRT. DIFFERENT DISCOLORATION OF THE ENDPLATES MAY BE NOTED.

C. ORIGINALLY H разMETICALLY OR RIGHT HAND LABELS WILL BE APPLIED WITHIN ONE INCH OF SEAM WELDS. Labels will be either aligned on a 180° arc or on a horizontal plane 19" from first point of attachment on the top and 30 inches from the weld on the bottom. Circular arc shall be ± 90°.

D. MAXIMUM WELD CIRCULARITY IS 0.040.

E. THE BASE OF THE BOTTOM HEAD UNIT IS TO BE MACHINED INTO 45° TO 50° ANGLES FOR A COINCIDENT ARCCIRCULARITY.

F. TOP HEAD UNIT IS TO BE MACHINED INTO A PARABOLIC CURVE, B2, THE OUTER DIAMETER MINIMUM WALL THICKNESS IS 3/64 INCHES.

G. PRIOR TO MACHINING, THE MILL, DRILL, OR LATHE SHALL BE ADJUSTED TO THE PRODUCT CONTAINER LID, OR TO OTHER SPECIFIED.

H. ALL MILLING AND DRILLING SYMBOLS PER ASMEY 12.4.

LID ENVELOPMENT CONFIGURATION WHEN REPEATED TO SPECIFICATION IS NOT LABELED FOR PART TYPE AND THICKNESS.