

A. SECTION C– DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

Section C, DESCRIPTION/SPECIFICATIONS/WORK STATEMENT, is being revised as a result of TPBAR declassification, as follows:

1. Subsection C.6, PHASE IV SCOPE OF WORK, is being revised to remove material control and accountability requirements, and other security requirements as a result of TPBAR declassification, as follows:

C.6 PHASE IV SCOPE OF WORK

The Contractor shall furnish all labor, materials and equipment necessary to fabricate TPBARs in accordance with this Statement of Work. The manufacture and delivery of TPBARs requires that the contractor provide management support to the Tritium Sustainment Program, and support technology development of the TPBAR design, manufacturing process development, and enhancements. The contractor shall perform required inspections, tests, and any special processes or procedures based on Designer of Record (DOR) specifications, drawings and other documents transferred through the interface agreement. The DOE-NNSA will provide the contractor with projected quantities of TPBARs needed to support irradiation schedules at least 15 months prior to TPBAR Delivery. The projection will cover production quantities covering the next three (3) years. Provided below is the most current nominal schedule of TPBAR use through October 2025. The actual number of TPBARs to be manufactured will be provided by the technical contracting officer representative (COR) via letter or other official correspondence.

(a) TPBAR FABRICATION AND ASSEMBLY

- (1) Provide a facility certified to handle hardware to fabricate and assemble TPBARs.
- (2) Provide for storing components and interim storage of assembled TPBARs until shipment. Provide for storage of components and necessary material inventory. Examples include bare cladding tubes, full length getters, and SS 316 ingots. Storage will be in accordance with current requirements identified by the DOR and concurred by the COR.
- (3) Provide all labor and material required to procure or fabricate all required materials, components, and equipment to assemble the TPBARs, in accordance with the DOR drawings and specifications, approved and provided by the COR.
- (4) Prior to the start of a fabrication campaign, the Contractor shall verify with the DOR and the COR that the current versions of design drawings and specifications are being used. Contractor and sub-contractor procedures and MAQPs, including the associated MOP's and QCI's, shall be submitted to the PNNL for subject matter review.
- (5) Perform inspections, tests, and develop special processes or procedures required to ensure that the TPBARs are assembled in accordance with the requirements defined in the current drawings and specifications provided by the DOR and approved by the COR.
- (6) Manufacture basic lead use assembly (LUA) rods per design agency drawings and specifications as a part of the TPBAR build requirement. Extra costs (over/above the standard cost) associated with manufacturing LUAs will be covered under a separate Basic Ordering Agreement between DOE-NNSA and PNNL.
- (7) Manufacture the specified number of TPBARs identified by the COR via letter or other official correspondence. The

actual quantities of TPBARs required by the DOE-NNSA, to coincide with reactor irradiation schedules, will be based on DOE-NNSA's established tritium requirements to support national security requirements plus sufficient spares to cover possible damage or failures in production or during incorporation into fuel assemblies and shipment to TVA.

- (8) Provide a Product Certification to TVA, the irradiation utility, the DOR and the utility's fuel fabricator at the time of TPBAR delivery. This certification will list the TPBARs by unique identification numbers and certify that: (1) they were built in accordance with the approved Quality Assurance Program and the approved Manufacturing and Quality Plan and (2) they meet the requirements of applicable engineering drawings, specifications and acceptance criteria. A reference to each previously approved nonconformance dispositioned "repair" or "use-as-is" will be included as part of the Product Certification. Copies of all such certifications shall be sent to the DOE-NNSA COR at the same time. The format and sample content of the certifications are identified in Part I, Section F.8 (see example in Part III, Section J, Attachment 3).
- (9) Receive and store TPBAR components from component fabrication sub- contractors and PNNL/DOE-NNSA (i.e., liners, pellets, and FLGs).
- (10) Manufacture of development components to support evolution of TPBAR design.
- (11) Provide for ultimate disposal of waste products, including coordination with PNNL, as appropriate, from the fabrication processes that the contractor is responsible for.
- (12) Arrange for appropriate off-site storage for inventory items not able to be stored at the TPBAR facility (.e.g., bare cladding tubes). Storage will be in accordance with current requirements identified by the DOR and concurred by the COR.

(b) PACKAGING AND SHIPMENT

- (1) The Contractor shall coordinate with the Fuel Vendor (i.e., Westinghouse), the delivery of the TPBARs to TVA.

- (2) The Contractor shall provide shipment services for hardware when required. The numbers of shipments and places of shipment will depend on program requirements.
- (3) The Contractor shall ship TPBARs per agreed upon schedules provided by the COR. In order to accomplish this requirement, the Contractor shall provide the following services:
 - (-) WesDyne will deliver TPBARs to the Fuel Vendor (i.e., Westinghouse) in time for final assembly to meet delivery of fuel as agreed upon between the fuel vendor and TVA.