

Questions and Answers  
RFP N00173-14-R-VH01

Q: What is the previous history of the chamber? Was it ever used in conjunction with hazardous materials?

A: In the 40 year history of the facility there has been many times that potentially hazardous materials (ionizing radiation, chemical, etc.) have been used in performance of tests. In every case the hazard has been managed by project and/or NRL safety personnel; and the chamber certified hazard-free at the conclusion of every test, to include chamber cleaning and hazard neutralization as required. On three occasions in the past 18 years the chamber has undergone extensive cleaning and de-greasing. The most recent being in 2012 when the original shroud was removed. There have not been any hazardous materials in the chamber since this time.

Q: The SOW states that Hodge Boiler Works built the Chamber in 1975. Is the chamber ASME Code stamped?

A: No the chamber is not ASME code stamped.

Q: Is the chamber painted with lead based paint?

A: No. The paint on the chamber has been tested and it does not contain lead.

Q: Were the diffusion pumps originally on the chamber oil or mercury diffusion pumps?

A: The diffusion pumps were oil diffusion pumps.

Q: Are there electronic or hardcopy detail drawings available of the:

- a. Chamber
- b. Shroud
- c. Facility
- d. GN<sub>2</sub> TCU Piping schematics
- e. LN<sub>2</sub> systems
- f. Details of existing shroud sections in/out chamber wall feedthrus.

A: A variety of drawings of wide age range, both electronic and hardcopy, for the chamber and associated systems do exist. However we consider these to be more of design documentation nature rather than as-built, as-installed, or as-altered current condition; their accuracy to current condition is suspect due to working experience history. For this reason they are only recommended for general information and reference purpose use. Caution is advised that any and all features on these drawings be physically verified for the purpose of developing new designs prior to finalization. This is the principal reason and logic for specifying Phase II of the project as Final Design and Shroud Removal, as specified in SOW section 3.5, and leading up to critical design review (CDR).

Q: Regarding the existing GN<sub>2</sub> TCU units, what are the rated capacities?

A: As stated in section 1.2 of the SOW. The available documentation shows a temperature range of -175C to +150C and a pressure range of 3psig to 50psig. The TCUs run under constant density control. The control system allows the density set point to be changed; we are currently running a set point of 0.30. We have measured the pressure drop at 20C to be 1.3psi. This measurement was taken at test ports on the inlet and outlet of each blower, with all zones approximately the same. Each blower motor is rated at 3450 rpm. The blower housing and impeller drawings will be provided so that the flow can be calculated. The procedure to flood the shrouds would require cooling to -175C with gas before flooding with LN<sub>2</sub>. No other technical data is available for the existing system.

Q: What is the temperature range of the TCU's?

A: As stated in section 1.2 of the SOW "The available documentation shows a temperature range of -175C to +150".

Q: Are there Piping & Instrumentation Drawings (P&ID's) for the TCU, Vent, Drain, GN<sub>2</sub>, & LN<sub>2</sub> systems?

A: Yes. All drawings will be made available after award of contract.

Q: Will the vendor connect to existing drains/vents?

A: The vendor will connect to the existing supply and return piping. The vendor may have to modify the existing piping to connect to the new shroud.

Q: Does the existing shroud meet the uniformity requirement of  $\pm 5^{\circ}\text{C}$  with a test load of 100 watts per square foot as specified in the SOW, paragraph 3.1.3 using the existing TCUs?

A: The original shroud met the requirements. Testing to date with the current shroud has not been sufficient to verify this requirement.

Acceptance test at NRL:

Q: Does vendor supply an evenly distributed heat load (100 watts/ft<sup>2</sup>) to test shroud performance? Or does NRL have an existing heat load system?

A: The vendor will supply the heat load.

Q: Does vendor supply instrumentation system to record shroud temperature values during ATP?

A: NRL will supply the data acquisition system and thermocouples for the ATP.

Q: Is there a port to be specified for housing the feed-through(s) for the thermocouples and chamber lighting power?

A: As stated in section 3.1.22.7 of the SOW, “The external patch panel shall connect to the thermocouple feed-through(s) located at port 8W.

Q: Where does the chamber [interior] lighting circuit(s) [electric] power connect to, [and] is there an existing chamber penetration or feed-through?

A: Two 15 amp circuits control the chamber interior lights. The switches are mounted on the west side of the chamber adjacent to the door controls. There is an existing feed-through which may need to be moved or replaced.

Q: Our offer is based on NRL furnishing all utilities, consumables and make available a secure space to store tools and materials during installation, test and training. It is also based on NRL providing office space for the installation manager.

A: The Government is not clear on what the vendor’s definition of consumables, utilities, secure storage or office space are. CLIN 0005 is for materials and supplies and is a Firm Fixed Price CLIN in which the potential offeror is required to submit a price for. Connections to standard electric power utilities will be provided. Standard HVAC utilities are provided for office and laboratory spaces. Warehousing areas do not have dedicated HVAC utilities. Laydown and staging areas will be provided within and around building A-59 as necessitated by the installation. Desk space, layout table, phone and internet access will be provided for management of the on-site activities at NRL. Secure storage of vendor tools and equipment will be the responsibility of the vendor. NRL will provide space for vendor tool and equipment cabinets.

Q: Will NRL furnish a reflectometer to measure the shroud emissivity during system test as specified in the SOW, paragraph 3.1.12?

A: Yes. NRL will furnish a reflectometer.

Q: Assistance will be required with off loading the shroud sections. Does NRL have a preferred Rigger or list of preferred Riggers?

A: NRL does not have a preferred rigger or list of preferred riggers.

Q: The PDF drawings provided in the RFP are unclear and dimensions are blurred. Can the government provide a set of drawings that are clearer?

A: The Government will upload higher resolution PDF’s of the drawings to FBO. These are the only available drawings the Government has available.