

Intent to Award Sole Source Contract

Title	Sole Source Award for laboratory and scientific equipment, i.e. low temperature transport system, cryocooler
Notice Date	2/19/19
Response Due Date	2/29/19
Reference Number	0012955
Contract Description	The University of the District of Columbia intends to award a contract on a sole source basis for laboratory and scientific equipment (cryocooler) pursuant to the sole source determination and findings attached.
Vendor Name	Advanced Research Systems Inc.
Point of Contact	James Jenkins, Senior Contract Specialist 202-274-5624 james.jenkins@udc.edu

**DETERMINATION AND FINDINGS
FOR
SOLE SOURCE PURCHASE**

Agency: University of the District of Columbia (UDC)
Caption: Laboratory and Scientific Equipment, i.e. low temperature transport system
Contractor: Advanced Research Systems Inc. (ARS)

FINDINGS

1. Authorization:

The Procurement Practices Reform Act of 2010 Section 404 and Title 8 DCMR Section 3019

2. Minimum Need:

The UDC minimum need is for Advanced Research Systems Inc. to provide laboratory and scientific equipment, i.e. a cryocooler, which is a low temperature transport system.

3. Estimated Reasonable Cost:

The estimated reasonable cost is \$31,824.00.

4. Facts Which Justify A Sole Source Purchase:

- A. The equipment is necessary for the Dean's Office of Engineering and Applied Science to accomplish its educational mission.
- B. No contractor was identified during a search of the Department of Small and Local Business Development's database for contractors certified by that agency to provide goods or services under commodity code 4904300 as requisitioned.
- C. ARS manufactures its own cold head, not like other vendors purchase from the cold head manufacturer. They have more flexible capability to modify and customize the cryocooler.
- D. ARS use polished stainless steel for the vacuum chamber. Stainless is more durable and less susceptible to adsorbing water vapor making it higher vacuum compatible with results in a cleaner sample environment. ARS also use nickel-plated OFHC copper for radiation shield for low emissivity. Most cryogenic vendors use aluminum for both vacuum shroud and radiation shield, which has lower thermal conductivity and higher emissivity to result in higher heat load and the base temperature.
- E. The sample area is custom reduced to fit in a narrow pole gap of the electromagnet.

- F. The 450K high-temperature interface has fast temperature ramp rates that 10 K- 450K < 8 mins. It dramatically decreases the measurement time.
- G. The sample holder is specially designed for magneto-transport research out of high-vacuum-compatible stainless steel, on which the copper wires and temperature sensor can be installed and mounted for accurate measurements.
- H. The cold head they manufacture is pneumatic-drive, which means less vibration in the z-direction (10^{-14} microns) due to pneumatic drive displacer. Transverse vibration is much less than other cold head models.
- I. The weight of the pneumatic-drive cold head is light that helps easily manipulate the system for lab arrangement. Moreover, it only consists of a displacer, rotary valve, and some o-ring parts, which makes the maintenance easy to be done in the field, not sending back to the factory.
- J. The maintenance of a GM cryocooler is very easy and simple because there are only 2 moving parts and every component is self-aligning. The maintenance can be easily carried out in-house.

5. **Certification by the Contract Specialist:**

I hereby certify that the above findings are correct and complete to the best of my knowledge.

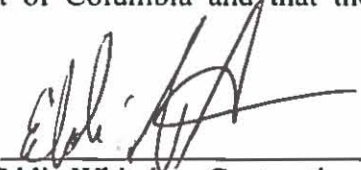
2/19/19
Date


James Jenkins
Senior Contract Specialist

DETERMINATION

Based on the above findings and in accordance with The Procurement Practices Reform Act of 2010 and Title 8 DCMR Section 3019, I hereby determine that the award of the subject contract to Advanced Research Systems Inc. (ARS) is in the best interest of the University of the District of Columbia and that the price for the services proposed is reasonable.

2/19/19
Date


Eddie Whitaker, Contracting Officer
Deputy Director OSS&P