

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE	PAGE OF PAGES
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2. AMENDMENT/MODIFICATION NO. <b>Amendment #02</b>	3. EFFECTIVE DATE <b>9/24/2009</b>	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
6. ISSUED BY NASA Dryden Flight Research Center Acquisition Management Office PO Box 273 Edwards, CA 93523-0273		7. ADMINISTERED BY (If other than Item 6)	CODE

8. NAME AND ADDRESS OF CONTRACTOR (No. Street, county, State and ZIP Code)  <b>TO ALL PROSPECTIVE OFFERORS</b>	(X)	9A. AMENDMENT OF SOLICITATION NO. <b>RFQ4-NND09308924Q-MLV</b>
	X	9B. DATED (SEE ITEM 11) <b>September 16, 2009</b>
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE	

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers  is extended,  is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning one (1) copy of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATA SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and data specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

(X)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER: (Specify type of modification and authority)

**E. IMPORTANT:** Contractor  is not,  is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

See page 2 of this amendment for description.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) <b>Rosalia Toberman, Contracting Officer</b>	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
_____ (Signature of person authorized to sign)		BY _____ (Signature of Contracting Officer)	

14. Continued:

The following Government answers to questions are provided for the information of prospective offerors in preparing their technical proposals:

Question #1: Available power: To meet the +80F GN2 temperature requirement for the winter, we will need to install an electric trim heater downstream of the LN2 vaporizer. Preliminary calculations indicate a 65KW electric heater is required for the 2000 SCFM flow. Is the 150A 480VAC 3PH power available? If so how far from the LN2 system is the power? How much of this run is underground and how much can be run above ground?

Answer #1: Currently, NASA/DFRC does not have a 150A, 480VAC, 3PH power supply available. This power supply would have to be installed in one of our breaker cabinets. The cabinet that will most likely be used is approximately 120 feet (120') from the proposed location of the cryo system. It is estimated that about 20' to 30' can be run underground from the cryo system location to the building, then approximately 80' to 100' can run above ground.

Question #2: LN2 flowrate. There is no design flowrate for the LN2 supply. Can we assume 4000 gal / 8 hour or 8.3 GPM LN2 as a design flowrate?

Answer #2: Prior heating tests using a 4000 gal LN2 trailer at a supply pressure of 50 psi resulted a maximum usage rate of approximately 15-20 GPM. Typical tests run in the 8-12 GPM range.

Question #3: Volumes listed in the RFQ. According to the estimated consumption of gaseous nitrogen (2000 SCFM for 8 hours), this volume would empty the specified 10,000 gallon bulk tank in one day. Additional draw of product from the tank in the form of liquid nitrogen is not specified, but would increase the product consumption to the point that the 10,000 gallon tank would empty in less than 8 hours, and thus not meet your requirement of operating continuously for 8 hours. Please confirm that the tank size and consumption rates specified are what we should be quoting.

Answer #3: NASA/DFRC does not require a tank larger than 10,000 gallons or additional draw of product from another source. Testing Time would be adjusted to not allow the tank to be emptied during test operations. In addition, the 2000 SCFM requirement is a maximum requirement. It is anticipated that typical tests would result in the volume flowrate changing during test operations (increasing and decreasing as required).