

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE	PAGE 1 OF PAGES 5
2. AMENDMENT/MODIFICATION NO. Amendment Seven (7)	3. EFFECTIVE DATE 5/14/2012	4. REQUISITION/PURCHASE REQ. NO. N/A	5. PROJECT NO. (if applicable)	
6. ISSUED BY NASA Ames Research Center William E. Hale Mailstop 213-1 Moffett Field, CA 94035-0001	CODE JAC: 241-1	7. ADMINISTERED BY (if other than Item 6) William Hale (650) 604-2849		CODE JAC
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) TO ALL PROSPECTIVE OFFERORS			(X)	9A. AMENDMENT OF SOLICITATION NO. NNA1226099R
			X	9B. DATED (SEE ITEM 11) 3/1/12
				10A. MODIFICATION OF CONTRACT/ORDER NO.
				10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
(X) The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers (X) 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 _____ copies 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 ACKNOWLEDGEMENT TO BE RECEIVED AT THE PALCE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your 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 date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (if required)				
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT /ORDER NO. AS DESCRIBED IN ITEM 14.				
CHECK ONE	A. THIS ORDER ID 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, (X) is required to sign this document and return <u>1</u> copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible) a. The purpose of this amendment is to post responses to offerors' questions, RFP replacement pages and attachment 1 referenced to in Section 44 10 00 of the specification for Pollution and Waste Control Equipment, K90032, Section 3.7 (page 25). b. Steam Vacuum System NOx Emission Reduction System Question Set 4 is attached. c. RFP Replacement Pages L-9 (attachment 3) and M-3 (attachment 4) removing the C-21 Building Moving/Demolition contractor license requirement. d. Attachment 1 referenced to in Section 44 10 00 of the specification for Pollution and Waste Control Equipment, K90032, Section 3.7 (page 25). "Arc Jet Test Schedule/Performance Requirements for Design of NOx Reduction System". (Attachment 1)				
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)		
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
_____ (Signature of person authorized to sign)		_____ (Signature of Contracting Officer)	_____ (Signature of Contracting Officer)	_____ (Signature of Contracting Officer)
NSN 7540-01-152-8070 Previous edition unusable			STANDARD FORM 30 (REV. 10-83) Prescribed by GSA FAR (48 CFR) 53.243	

Arc Jet Test Schedule/Performance Requirements for Design of Nox Emission Reduction System

	Typical	Minimum			
	Current	Current	Future		
Arc Jet Test Days per Year	160	120	120		
Total SVS Operating Time (standby plus testing), hrs/day	6	2	2		
Frequency of Tests	4 per day 5 days per week	2 per day 2 days per week	2 per day 2 days per week		
Duration of Tests	15 min	5 min	5 min		
Inflow Conditions					
Test Gas Mass Flow, kg/sec	0.07-0.7	0.02	0.2-0.4		
NOx Concentration, ppmv	30,000	1,000	1,000		
NO Mass Flow, kg/sec	0.00218-0.0218	0.0000207	0.000207-0.000414		
Added Steam, kg/sec	0.105-1.05	0.03	0.3-0.6		
Pressure, bar	1.005	1.005	1.005		
Temperature, °F (°C)	195 (90.6)	195 (90.6)	195 (90.6)		
Outflow Conditions					
Treated Gas NOx	<4.54 kg/day	<4.54 kg/day	<4.54 kg/day		
Spent Scrubber Solutions	<5,000 mg/L TDS	<5,000 mg/L TDS	<5,000 mg/L TDS		
<p>Note 1: The test gas is air. Use mass composition 76.85% N₂/Inerts and 23.15% O₂. Use molar composition 79.05% N₂/Inerts and 20.95% O₂. Use average molecular weight 28.97 kg/kg-mole.</p> <p>Note 2: There is no net change in molar flow in the arc jet – N₂ + O₂ ⇌ 2NO</p> <p>Note 3: The test gas exiting the arc jet is dry. Passing through the SVS, the test gas becomes saturated with water vapor.</p> <p>Note 4: BACT trigger point is 4.54 kg NOx per day, prefer to stay below the trigger point.</p> <p>Note 5: Spent scrubber solutions discharge to city sewer, must be <5,000 mg/L TDS</p>					

ATTACHMENT 1, AMENDMENT 7

**Steam Vacuum System NOx Emission Reduction System
 NNA1226099R
 Question Set 4
 May 14, 2012**

RFP Reference	Question/Comment	Answer(s)
1 RFP Section M-3	<p>Item A.1 on page M-3 states that the Offeror and Subcontractors shall provide copies of c) California C-21 Building Moving/Demolition contractor license. This requirement does not include any demolition of buildings or structures. However, this requirement does require the demolition of water/gas lines and concrete pads that can be accomplished with a California A license. Are Offerors required to have a subcontractor with a C-21 license?</p>	<p>No, Offers and subcontractors do not need a C-21 Building Moving/Demolition contractor license for this requirement. RFP Sections L and M have been amended to reflect the change. See attachments 3 and 4.</p>

Note: The following outline should not be construed as an indication of the order of importance or relative weighting within individual elements of Technical Acceptability subfactors as there are no discrete point values to any of the elements.

The aforementioned paragraphs are further explained as follows:

A. Technical Approach (Subfactor): The Statement of Work included in this solicitation serves as the Government's baseline requirement (Base Period (CLIN 0001) and Option 1 (CLIN 0002)). The proposal must demonstrate that the offered items(s)/services(s) meet the baseline requirement.

The Government baseline elements listed in the following table must be met with a rating of Acceptable in order to be considered technically acceptable:

Government Baseline Elements	All of the following must be met with a rating of Acceptable:		
Refer to Section C, DESCRIPTION/SPECIFICATION/ STATEMENT OF WORK	1)	The offeror shall demonstrate prior to contract award that the offeror and subcontractors are currently licensed to perform work within the State of California. The offeror and subcontractors shall provide copies of their a) California A. General Engineering contractor license and b) California C 10 Electrical contractor license.	
	2)	The offeror or subcontractor shall provide "U" or "PP" stamp welding certification.	
	3)	The offeror shall provide an initial Process and Instrumentation Diagram (P&ID) for the proposed design.	
	4)	The offeror shall provide system life cycle cost including cost per unit pound of NOx that is abated.	
	a	Maintain the chemical usage at or below the following levels:	
	1	36% H2SO4 by weight equal to or less than 296.3 gal/day at an assumed cost of \$2.58/gal.	
	2	25% NaClO2 by weight equal to or less than 1028 gal/day at an assumed cost of \$1.70/gal	
	3	30% NAOH by weight equal to or less than 175.9 gal/day at an assumed cost of \$2.91/gal	
	4	45% NaHS by weight equal to or less than 334.2gal/day at an assumed cost of \$1.00/gal	
	b	Provide supporting calculations for the chemical usage proposed above.	

resources proposed, the evaluation team may determine this to be a technical weakness, adversely affecting the offeror's technical rating, if appropriate. This integration between technical findings and price is critical to accomplishing price reasonableness.

A. Technical Approach (Subfactor): The Statement of Work included in this solicitation serves as the Government's baseline requirement. The proposal must demonstrate that the offered items(s)/services(s) meet the baseline requirement. This subfactor's acceptability evaluation will be based on a met/unmet basis, with assigned ratings of Acceptable (A) or Unacceptable (U). The Government baseline elements listed below must be met with a rating of Acceptable in order to be considered technically acceptable.

The Government baseline elements listed in the following table must be met with a rating of Acceptable in order to be considered technically acceptable:

Government Baseline Elements	All of the following must be met with a rating of Acceptable:	
Refer to Section C, DESCRIPTION/SPECIFICATION/ STATEMENT OF WORK	1)	The Government will evaluate whether the offeror and subcontractors are currently licensed to perform work within the State of California, with reference to their a) California A. General Engineering contractor license and b) California C 10 Electrical contractor license.
	2)	The Government will evaluate whether the offeror's or its subcontractor has the required "U" or "PP" stamp welding certification.
	3)	The Government will evaluate the offeror's initial Process and Instrumentation Diagram (P&ID) for the proposed design.
	4)	The Government will evaluate the offeror's system life cycle cost including cost per unit pound of NOx that is abate, and
	a	... whether the chemical usage is maintained at or below the following levels:
	1	36% H2SO4 by weight equal to or less than 296.3 gal/day at an assumed cost of \$2.58/gal.
	2	25% NaClO2 by weight equal to or less than 1028 gal/day at an assumed cost of \$1.70/gal
	3	30% NAOH by weight equal to or less than 175.9 gal/day at an assumed cost of \$2.91/gal
4	45% NaHS by weight equal to or less than 334.2gal/day at an assumed cost of \$1.00/gal	
b	The Government will evaluate the offeror's supporting calculations for the chemical usage proposed above.	