

**AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT** 1. CONTRACT ID CODE PAGE OF PAGES  
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2. AMENDMENT/MODIFICATION NO M0008 3. EFFECTIVE DATE 4. REQUISITION/PURCHASE REQ. NO RES-14-0133 5. PROJECT NO. (If applicable)

6 ISSUED BY CODE NRCHQ 7. ADMINISTERED BY (If other than Item 6) CODE NRCHQ  
 U.S. NRC - HQ Acquisition Management Division Mail Stop: 3WFN-05-C64MP Attn: Hugo O Alcantara 301-287-0844 Washington DC 20555-0001  
 U.S. NRC - HQ Acquisition Management Division Mail Stop: 3WFN-05-C64MP Washington DC 20555-0001

8. NAME AND ADDRESS OF CONTRACTOR (Nu., street, county, State and ZIP Code) EMC2 3518 RIVERSIDE DR STE 202 COLUMBUS OH 432211735  
 9A AMENDMENT OF SOLICITATION NO. (x)  
 9B. DATED (SEE ITEM 11)  
 10A. MODIFICATION OF CONTRACT/ORDER NO. NRC-HQ-11-A-04-0027 NRC-HQ-11-O-04-0001  
 10B. DATED (SEE ITEM 13) 09/30/2011  
 CODE 014083161 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 \_\_\_\_\_ 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 PLACE 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 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 date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required) Net Increase: \$25,000.00  
 2014-X0200-FEEBASED-60-60D001-11-6-213-V6245-252A

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 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 FAR Clause 52.243-3 - Changes - Time-and-Materials or Labor-Hours  
 D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor  is not.  is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)  
 GSA Contract #: GS10F0145T  
 The Purpose of this Modification is to (1) increase the Task Order ceiling by \$79,341.00 from \$613,473.00 to \$692,814.00 (2) increase the Level of Effort by 420 hours from 3,342 to 3,762 hours, and (3) incorporate the revised Statement of Work.  
 Task Order Ceiling Amount: \$692,814.00  
 Task Order Obligated Amount: \$635,000.00  
 Period of Performance: September 30, 2011 - September, 29 2014

LIST OF CHANGES:  
 Reason for Modification : Supplemental Agreement for work within scope  
 Continued ...

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

15A NAME AND TITLE OF SIGNER (Type or print) GARY HATICKY D. DIRECTOR OF OPERATIONS  
 15B. CONTRACTOR/OFFEROR  
 15C. DATE SIGNED 2/25/14  
 16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) STEPHEN M. POOL  
 16B. UNITED STATES OF AMERICA  
 16C. DATE SIGNED 2/26/14

TEMPLATE - ADM002

SUNSI REVIEW COMPLETE

ADM002

**CONTINUATION SHEET**

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
NRC-HQ-11-A-04-0027/NRC-HQ-11-O-04-0001/M0008

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NAME OF OFFEROR OR CONTRACTOR  
EMC2

ITEM NO (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Total Amount for this Modification: \$79,341.00 New Total Amount for this Award: \$692,814.00 Obligated Amount for this Modification: \$25,000.00 New Total Obligated Amount for this Award: \$635,000.00</p> <p>See continuation page for Modification details.</p>				

Accordingly, the task order is modified as follows:

- Section A. 4 of the task order entitled: "Price Schedule" is modified as follows:

**A.4 PRICE SCHEDULE**

PERIOD OF PERFORMANCE – 36 MONTHS						
CLIN	GSA LABOR CATEGORY	LABOR RATE*	REVISED ESTIMATED HOURS	REVISED ESTIMATED TOTAL	TOTAL ESTIMATED HOURS	ESTIMATED TOTAL
0001b	Senior Program Manager	\$193.46	20	\$3,869.00	193.5	\$37,434.31
<b>Subtotal for CLIN 001</b>			<b>20</b>	<b>\$3,869.00</b>	<b>193.5</b>	<b>\$37,434.31</b>
0002a	Senior Research Leader	\$222.34	255.0	\$56,697.00	2,006.00	\$446,014.34
0002b	President	\$243.25	0.0	\$0.00	3.0	\$729.75
0002c	Research Leader	\$171.46	0.0	\$0.00	8.0	\$1,371.68
<b>Subtotal for CLIN 002</b>			<b>255</b>	<b>\$56,697.00</b>	<b>2,017.0</b>	<b>\$448,115.77</b>
0003a	Senior Regulatory Advisor	\$199.94	0.00	\$0.00	0.0	\$0.00
0003b	Principle Engineer	\$137.53	65.0	\$8,939.00	260	\$35,757.35
0003c	Research Engineer	\$118.86	40.0	\$4,754.00	1,006.00	\$119,572.76
0003d	Engineer	\$95.58	0.0	\$0.00	6.0	\$573.48
0003e	Master Technician	\$89.53	40.0	\$3,581.00	254.5	\$22,785.19
0003f	Administrative Assistant	\$51.17	0.0	\$0.00	25.0	\$1,278.25
<b>Subtotal for CLIN 003</b>			<b>145</b>	<b>\$17,274.00</b>	<b>1,551.5</b>	<b>\$179,968.03</b>
<b>Subtotal Labor for TASK ORDER 1</b>			<b>420</b>	<b>\$77,840.00</b>	<b>3,762</b>	<b>\$665,518.11</b>
10	Travel** (Cost Reimbursable) (NOT TO Exceed) The government will pay up to the rates specified in the Government Federal Travel Regulations (FTR) for travel destination. Hotel reservations will be made by the contractor and will be reimbursed for actual costs only, with receipts/back up documentation attached to the invoice. PAYMENTS WILL NOT BE MADE WITHOUT SUPPORTING DOCUMENTATION			\$1,500.00		\$27,294.89
<b>TRAVEL SUBTOTAL</b>				<b>\$1,500.00</b>		<b>\$27,294.89</b>
<b>TASK ORDER 1 GRAND TOTAL</b>				<b>\$79,341.00</b>		<b>\$692,814.00</b>

\*Labor rates shall remain constant over the life of the contract, as stated in proposal.

- Section A.5 of the task order entitled: " Consideration and Obligation – Labor hour contract" is modified to read as follows:

**A.5 CONSIDERATION AND OBLIGATION – LABOR HOUR CONTRACT**

- The total estimated cost to the Government for full performance under this Task Order is **\$692,814.00**.
- The amount obligated by the Government with respect to this Task Order is **\$635,000.00**. This obligated amount may be unilaterally increased by the Contracting Officer by a written modification to the contract. The obligated amount shall, at no time, exceed the Task Order ceiling as specified in paragraph (a) above. When and if the amount(s) paid and payable to the Contractor hereunder shall equal the obligated amount, the Contractor shall not be obligated to continue performance of the work unless and until the Contracting

Officer shall increase the amount obligated with respect to this contract. Any work undertaken by the Contractor in excess of the obligated amount specified above is done so at the Contractor's sole risk.

3. The following sections of section 4.0 entitled: "Specific Tasks" are modified as follows:

#### Background

Due to budget adjustments resulting from sequestration in FY13, the scope of work for several tasks on this contract was reduced to accommodate the budget situation while attempting to perform a limited amount on meaningful testing. Recent developments in the ASME Code regarding the development of critical flaw size requirements and relief requests potentially being submitted to the NRC for the use of HDPE piping has made it necessary to increase the scope of work on certain tasks in order to confirm requirements being proposed by the ASME and in relief requests that may be submitted. Specifically, the resistance of HDPE piping fusion joints to slow crack growth is of great concern and the minimal amount of testing currently planned based on modification 7 of the contract do not include fusion joints produced under conditions that simulate cold fusion of the joint or the range of possible defects. Additionally, the NRC has learned of testing methods developed by TWI (the waisted tensile test or WTT) to detect a cold fused joint that may be more sensitive than current testing methods being proposed by the ASME (the high speed tensile test, or HSTT). Therefore, additional fusion joint specimens are needed to determine if the WTT might be a better test of fusion joint integrity.

#### Statement of Work Modifications

Modifications to the statement of work are outlined below. Details regarding sample preparation and schedule will be determined through discussions with the NRC Project Manager.

*Task 2 – Critical Flaw Size – Fusion Joints:* Fusion specimens from HDPE Piping shall be prepared such that some of the joints will be free of intentional flaws, some joints will contain embedded flaws ranging from approximately 0.5 to 6 mm, some joints will contain circumferential surface flaws, flaws and some joints will be produced using fusing parameters believed to result in a cold fused joint. The actual sizes and number of flaws will be determined through discussions with the NRC PM. Two pipe diameters are available: 4 inches and 12 inches. Due to the small thickness of the 4-inch diameter pipe, it may be too difficult to embed flaws. Therefore, the embedded flaws may have to be confined to the 12-inch diameter pipes. Furthermore, due to the potential difficulty of performing whole pipe tensile testing on the 12-inch diameter pipes, the 12-inch pipes shall be used for mechanical testing (WTT and HSTT) and the 4-inch pipe shall be used for the whole pipe tensile testing with the 360° circumferential sharp notch. Specimen design details and testing parameters shall be determined via discussion with the NRC PM.

*Task 6 – Technical Assistance:* Any technical assistance needed by NRC staff with regard to ASME BPV Code activities shall continue as needed. Only one additional ASME BPV Code meeting in Feb 2014 shall be covered during FY14.

**All other terms and conditions remain unchanged.**