



AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE	PAGE OF PAGES 1 OF 2
2. AMENDMENT/MODIFICATION NO. A215	3. EFFECTIVE DATE See Block 16c.	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
6. ISSUED BY CODE		7. ADMINISTERED BY (If other than Item 6)	
U.S. Department of Energy Chicago Integrated Support Center 9800 South Cass Avenue Argonne, Illinois 60439		U.S. Department of Energy Berkeley Site Office 1 Cyclotron Road, MS 90-1023 Berkeley, CA 94720	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, country, State, and ZIP Code)		()	9A. AMENDMENT OF SOLICITATION NO.
The Regents of the University of California Office of the President, Laboratory Management Office 1111 Broadway, 14 th Floor Oakland, CA 94607-4081			
			9B. DATED (SEE ITEM 11)
		(X)	10A. MODIFICATION OF CONTRACT/ORDER NO. DE-AC02-05CH11231/A000
			10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE		April 19, 2005
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 ex-tended. 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 25, 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) See Page 2			
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.			
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN 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 data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103 (b).			
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: FAR 43.102 and 43.103(a) .			
D. OTHER (Specify type of modification and authority)			
E. IMPORTANT: Contractor ___ is not, X is required to sign this document and return <u>2</u> copies to the issuing office.			
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)			
Continued on Page 2			
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) Sandra M. Vinson , Director, Contracts & Administration University of California Office of the President Laboratory Management		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Charles W. Marshall , Contracting Officer U.S. Department of Energy	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED 09/18/2009	16B. UNITED STATES OF AMERICA By  (Signature of Contracting Officer)	16C. DATE SIGNED 09/18/2009

Block 12 "ACCOUNTING AND APPROPRIATIONS DATA," continued.

Funds Obligated for Recovery Act Projects:

All required accounting and appropriations data, including the Treasury Accounting Symbol and Fund Code is hereby provided as Attachment A to this modification. (See *Chicago Operations Office, FY2009 Approved Funding Program No. 43*, page 1).

Block 14 "DESCRIPTION OF AMENDMENT/MODIFICATION," continued.

- A. This modification is issued to obligate American Recovery and Reinvestment Act (Recovery Act) of 2009 funds for the purpose of providing \$511,200 in operations funding for project # 20685 – EGS R&D (2004190). These funds are to be distributed to Agreement #19975-Coupled Thermal-Hydrological-Mechanical-Chemical (THMC) Model and Experiments for Optimization of Enhanced Geothermal System Development and Production, in accordance with field work proposal #ESD09-012. Lawrence Berkeley National Laboratory will 1) develop a novel model and high performance code for analysis of coupled THMC processes in EGS, 2) determine quantitatively the permeability of sheared fractures and its long term changes through THMC processes, refine and validate the models and codes to laboratory experiments, and 4) model couple THMC processes in near wellbore hydrofracture systems..
- B. Accordingly, pursuant to Section I Contract Clause I.104– DEAR 970.5232-4 entitled "Obligation of Funds," funds in the amount of \$511,200.00 consisting of operations funds are hereby obligated in support of Recovery Act activities. The total amount of funds obligated under this contract since its inception is increased from \$3,039,448,557.08 to \$3,039,959,757.08.
- C. The specific Contractor Recovery Act Statement of Work, Milestones, Outcomes and Measures, and Deliverables funded by this modification are identified in the following referenced Work Authorization:

Work Authorization Number	Work Authorization Title
GT-480010-20685-09 Rev. 1	EGS R&D (ARRA Project #2004190)

- D. The work described in this modification shall be performed using funds obligated under this contract, which have been appropriated under the Recovery Act of 2009, (Pub. L. 111-5), and as such, is subject to the special statutory conditions and the additional contractual terms and conditions that are listed and referenced in paragraphs E through I below. The funds obligated hereunder shall only be used to accomplish the work as set forth in paragraph B. above and may not be used for any other purpose without the prior written consent of the Contracting Officer.
- E. Reserved
- F. The Contractor shall complete all Recovery Act Work funded by this modification in accordance with Recovery Act requirements, including the required completion dates specified therein, and by the completion date identified in the approved work authorization for the activity.
- G. Reserved
- H. See item 4 a. of Appendix P of the contract for additional requirements related to Section E. of the contract.
- I. See item 4 b of Appendix P of the contract for additional requirements related to Section G of the contract.
- J. See item 4 c. of Appendix P of the contract for additional requirements related to Section J, Appendix I of the contract.
- K. See item 4 d. and e. of Appendix P of the contract for additional requirements related to Section I of the contract.
- L. All other terms and conditions remain unchanged.