AMENDMENT OF SOLICITATION/MODIFIC	ATION OF C	ONTRACT		CONTRACT ID CODE		OF PAGES
2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE	DATE 4	I. REQI	JISITION/PURCHASE REQ. NO.	5. PROJECT	NO. (If applicable)
184	See Bloc	k 160 1	OEE	007644		
6. ISSUED BY CODE	00701		7. ADN	INISTERED BY (If other than Item 6)	CODE 00	701
Idaho Operations U.S. Department of Energy Idaho Operations 1955 Fremont Avenue Idaho Falls ID 83415			Idaho Operations U.S. Department of Energy Idaho Operations 1955 Fremont Avenue MS 1221 Idaho Falls ID 83415			
8. NAME AND ADDRESS OF CONTRACTOR (No., street	t, county, State and		100	AMENDMENT OF SOLICITATION NO.		
BATTELLE ENERGY ALLIANCE, LLO Attn: Lisa A. Sehlke P.O. BOX 1625 IDAHO FALLS ID 834150001	C	×	9B.	DATED (SEE ITEM 11) MODIFICATION OF CONTRACT/ORDER NO -AC07-05ID14517 DATED (SEE ITEM 13)	D.	
CODE 152020629	FACILITY COD	E	11	_/09/2004		
	11. THIS ITE	M ONLY APPLIES TO AM	IENDM	ENTS OF SOLICITATIONS		
☐ The above numbered solicitation is amended as set for Offers must acknowledge receipt of this amendment putterns 8 and 15, and returning conseparate letter or telegram which includes a reference THE PLACE DESIGNATED FOR THE RECEIPT OF virtue of this amendment you desire to change an offer to the solicitation and this amendment, and is received.	orior to the hour a pies of the amend to the solicitation OFFERS PRIOR or already submitt	nd date specified in the so dment; (b) By acknowledgi n and amendment number TO THE HOUR AND DAT ed, such change may be n	olicitation ing rece s. FAII TE SPE made b	n or as amended, by one of the following metropy of this amendment on each copy of the offu LURE OF YOUR ACKNOWLEDGEMENT TO CIFIED MAY RESULT IN REJECTION OF YO	nods: (a) By co er submitted; o BE RECEIVED OUR OFFER.	or (c) By O AT If by
12. ACCOUNTING AND APPROPRIATION DATA (If rec RA FIN PLAN 10-10, August 10		Net	Inc	cease: \$5	26 , 015.	.00
13. THIS ITEM ONLY APPLIES TO M	ODIFICATION O	F CONTRACTS/ORDERS.	IT MO	DIFIES THE CONTRACT/ORDER NO. AS DES	SCRIBED IN IT	ГЕМ 14.
				ES SET FORTH IN ITEM 14 ARE MADE IN TH		
appropriation date, etc.) SET FORTH C. THIS SUPPLEMENTAL AGREEMEN				IINISTRATIVE CHANGES (such as changes of pages) of FAR 43.103(b). TY OF:	n paying office	ь,
D. OTHER (Specify type of modification	and authority)					
X IAW DEAR 970.5232-4	"Obligat	ion of Funds"				
E. IMPORTANT: Contractor X is not,		sign this document and re		O copies to the issuing	office.	
14. DESCRIPTION OF AMENDMENT/MODIFICATION Tax ID Number: 68-0588324 DUNS Number: 152020629 The purpose of this modifica						Aug. 10
See Continuation page for sp modification and obligation FOB: Destination Period of Performance: 11/09	ecific ir amounts.	nformation and				
Change Item 00001 to read as	follor:	(amount charre				
is the total amount):	IOIIOWS	(allounc Shown				
is the total amount).						
Continued Except as provided herein, all terms and conditions of the 15A. NAME AND TITLE OF SIGNER (Type or print)	ne document refer			etofore changed, remains unchanged and in fu		
						/
15B. CONTRACTOR/OFFEROR	ı			ette M. Olson NITED STATES OF AMERICA		16C. DATE SIGNED
13B. GONTRACTOR/OFFEROR		ISO. DATE SIGNED		gnature on File		
(Signature of person authorized to sign)			(Signature of Contracting Officer)		08/20/2010	

NSN 7540-01-152-8070 Previous edition unusable STANDARD FORM 30 (REV. 10-83) Prescribed by GSA FAR (48 CFR) 53.243
 CONTINUATION SHEET
 REFERENCE NO. OF DOCUMENT BEING CONTINUED DE-AC07-051D14517/184
 PAGE DE-AC07-051D14517/184
 OF DE-AC07-051D14517/184

NAME OF OFFEROR OR CONTRACTOR

BATTELLE ENERGY ALLIANCE, LLC

ITEM NO.	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
00001	MANAGEMENT AND OPERATIONS OF THE INL Line item value is:\$8,500,000,000.00 Incrementally Funded Amount: \$4,743,850,898.75	, , , ,	/	(-/	8,500,000,000.00

Contract No: DE-AC07-05ID14517 Modification No: 184 SF 30Continuation Sheet

A. This modification is issued to obligate additional funds originally obligated under Modification 168 for American Recovery and Reinvestment Act (Recovery Act) of 2009 funds. The Idaho National Laboratory will continue to conduct experiments for evaluating the effect of supercritical carbon dioxide, at elevated temperatures, on precipitation and dissolution of mineral phases that are typical of geomedia found in geothermal reservoirs; develop a physics-based rock deformation and fracture propagation simulator by coupling a discrete element model for fracture generation with a continuum-based multiphase fluid flow and heat transport model; identify and resolve issues that are associated with using air-cooled condensers in the next-generation energy conversion systems, achieve the full benefits of using mixed working fluids in air cooled binary cycles, evaluate the benefits of using air-cooled condensers with flash steam cycles, and establish criteria for designing air-cooled binary plant turbines; and develop a set of tracer test planning and analysis tools to define the parameters necessary for successful testing. Identify new tracers suitable to a wide range of potential reservoir volumes and permeabilities, and demonstrate the utility of newly developed tracers in a system representative of Enhanced Geothermal Systems

B. Accordingly, pursuant to Section I, Contract Clause I.44, DEAR 970.5232-4 entitled "Obligation of Funds," funds in the amount of (\$\$526,015.00) is hereby de-obligated in support of Recovery Act activities. The total amount of funds obligated under this contract since its inception is: **SEE ATTACHED INFORMATION SHEETS**.

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-5000003-20685-10	Enhanced Geothermal Systems Research &		
	Development		

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. The funds de-obligated hereunder shall only be used to accomplish the work as set forth in paragraph C. above and may not be used for any other purpose without the prior written consent of the Contracting Officer.

E. 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.

SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS

Clause B. 5, Obligation of Funds is revised to read as follows:

The amount presently obligated under this Contract is as follows:

Details regarding the obligational authority for this modification are provided separately in the RA Financial Plan # 10-10 August 10

Contract DE-AC07-05ID14517

Contract DE-11C07-031D14317	
Funds Obligated by Contract Award	\$ -
FY 05 Funding Mod Totals 05-01 thru 05-15	\$ 623,283,031.13
FY 06 Funding Mod Totals 06-01 thru 06-27	\$ 774,328,122.14
FY 07 Funding Mod Totals 07-01 thru 07-14	\$ 975,295,354.03
FY 08 Funding Mod Totals 08-01 thru 08-22	\$ 740,655,029.30
FY 09 Funding Mod Totals 09-01 thru 09-22 to include RA1 thru 6	\$ 819,161,791.66
Funds Obligated by Modification No.154 (RA 10 #1)	\$ 594,000.00
Funds Obligated by Modification No.155 (FIN 10-01)	\$ 46,930,310.71
Funds Obligated by Modification No.157 (RA 10 #2)	\$ 146,280.00
Funds Obligated by Modification No.158 (FIN 10-02)	\$ 35,328,850.56
Funds Obligated by Modification No.160 (FIN 10-03)	\$ 149,734,095.37
Funds Obligated by Modification No.162 (RA 10 #3)	\$ 1,113,136.00
Funds Obligated by Modification No.163 (FIN 10-04)	\$ 183,958,527.00
Funds Obligated by Modification No.164 (FIN 10-05)	\$ 70,112,722.32
Funds Obligated by Modification No.165 (FIN 10-06)	\$ 68,445,348.44
Funds Obligated by Modification No.168 (RA 10 # 4 & 5)	\$ 6,301,000.00
Funds Obligated by Modification No.169 (FIN 10-07)	\$ 34,792,841.16
Funds Obligated by Modification No.170 (FIN 10-08)	\$ 24,078,365.91
Funds Obligated by Modification No.170 (RA 10 #6)	\$ -
Funds De-Obligated by Modification No.171 (RA 10 #7)	\$ (612.86)
Funds Obligated by Modification No.173 (FIN 10-09)	\$ 54,821,072.69
Funds De-Obligated by Modification No.175 (RA 10 #8)	\$ (128,820.06)
Funds Obligated by Modification No.176 (FIN 10-10)	\$ 28,394,194.60
Funds De-Obligated by Modification No.177 (RA 10 #9)	\$ (782.29)
Funds Obligated by Modification No.178 (FIN 10-11)	\$ 20,165,520.53
Funds Obligated by Modification No.179 (FIN 10-12)	\$ 2,856,290.36
Funds Obligated by Modification No.181 (FIN 10-13)	\$ 49,680,864.05
Funds Obligated by Modification No.182 (FIN 10-14)	\$ 24,491,985.26
	, , -,,

Total Funds Obligated	\$	4,743,850,898.75	
Funds Obligated by Modification No.184 (RA 10 #10)	\$	526,015.00	
Funds Obligated by Modification No.183 (FIN 10-15/16)		8,786,365.74	

The following table tracks available budgetary resources for work appropriated under the American Recovery and Reinvestment Act of 2009, Pub. L. 1115 (Recovery Act) and as such is subject to special statutory conditions. Budget Authority in the following table is already included in the total funding table above and is <u>not</u> an additional obligation of funds.

Contract DE-AC07-05ID14517		Funds Obligated by ARRA Funding	
Funds Obligated by Modification No.141 (RA #1)		8	
Funds Obligated by Modification No.143 (RA #2)	\$ \$	200,000.00 150,000.00	
Funds Obligated by Modification No.144 (RA #3)	\$ \$	3,000.00	
Funds Obligated by Modification No.147 (RA #4)	\$ \$	1,850,000.00	
Funds Obligated by Modification No.149 (RA #5)			
Funds Obligated by Modification No.149 (RA #5)	\$	2,353,000.00	
	\$	1,742,000.00	
Funds Obligated by Modification No.151 (RA #6)	\$	100,000.00	
Funds Obligated by Modification No.154 (RA #1)	\$	594,000.00	
Funds Obligated by Modification No.157 (RA #2)	\$	146,280.00	
Funds Obligated by Modification No.162 (RA #3)	\$	1,113,136.00	
Funds for RA FIN PLAN #4 (Zero dollar no formal modification)	\$	1,113,130.00	
Funds Obligated by Modification No.168 (RA #5)		6 201 000 00	
Funds for RA FIN PLAN #6(Zero dollar no formal modification)	\$	6,301,000.00	
runds for KA ran FLAN #0(Zeto donar no formal modification)	\$	-	
Funds De-Obligated by Modification No.171 (RA #7)	\$	(612.86)	
Funds De-Obligated by Modification No.175 (RA #8)	\$	(128,820.06)	
Funds De-Obligated by Modification No.177 (RA #9)	\$	(782.29)	
Funds Obligated by Modification No.184 (RA #10)		· · · · · · · · · · · · · · · · · · ·	
		526,015.00	
Total Funds Obligated	\$	14,948,215.79	