

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE	PAGE OF PAGES 1 2	
2. AMENDMENT/MODIFICATION NO. 0103	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)	
6. ISSUED BY Idaho Operations Office Idaho Operations U.S. Department of Energy Idaho Operations Idaho Falls ID 89415	CODE 892432	7. ADMINISTERED BY (If other than Item 6) Idaho Operations U.S. Department of Energy Idaho Operations 1955 Fremont Avenue MS 1221 Idaho Falls ID 83415	CODE 00701	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) FLUOR IDAHO, LLC Attn: AMANDA JORDAN 1070 RIVERWALK DRIVE, SUITE 201 IDAHO FALLS ID 83402		(x) 9A. AMENDMENT OF SOLICITATION NO.	9B. DATED (SEE ITEM 11)	
CODE 968795604 FACILITY CODE		x 10A. MODIFICATION OF CONTRACT/ORDER NO. DE-EM0004083	10B. DATED (SEE ITEM 13) 02/04/2016	

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)

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).
x	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF I.100 52.243-2 Changes - Cost Reimbursement (Aug 1987) Alt II and III (Apr 1984)
	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.)

DUNS Number: 968795604

The purpose of this modification is to definitize a change order revising CLIN-6 - Integrate Waste Treatment Unit (IWTU) Authorized Unpriced Work (AUW) scope. Please refer to the continuation pages incorporated as part of this modification. The Contractor is directed to continue operations in accordance with contract Section B.2.

Payment:

OR for Idaho

U.S. Department of Energy

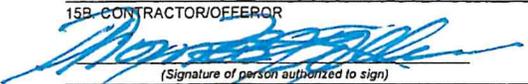
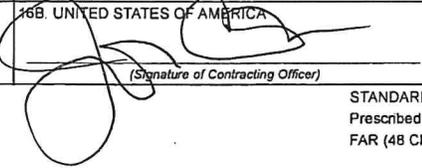
Oak Ridge Financial Service Center

P.O. Box 6017

Oak Ridge TN 37831

Continued ...

Except as provided in Amendments 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 CONTRACTOR Thomas M. Williams Director, Prime Contracts	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Jennifer K. Cate
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED 10-18-18
16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	16C. DATE SIGNED 10.18.18

NSN 7540-01-152-9070  
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-EM0004083/0103

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NAME OF OFFEROR OR CONTRACTOR  
FLUOR IDAHO, LLC

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
00001	<p>FOB: Destination Period of Performance: 06/01/2016 to 05/31/2021</p> <p>Change Item 00001 to read as follows (amount shown is the total amount):</p> <p>Target ICP-Core DOE Mission Work Line item value is: \$1,439,430,130.00 Incrementally Funded Amount: \$1,105,052,696.19</p> <p>This modification definitizes the CLIN-6 Integrated Waste Treatment Unit (IWTU) work scope for the Denitration Mineralization Reformer (DMR) Fluidization Redesign and the Carbon Reduction Reformer (CRR) Refractory Repair/Replacement.</p> <p>The Total Contract Value (including options) is increased by \$6,866,670.00 from \$1,553,726,354.00 to \$1,560,593,024.00. See continuation pages below for further details.</p>				1,439,430,130.00

This modification is being made under the authority of contract clause Section I.100, *Changes – Cost Reimbursement (AUG 1987) - Alternate II and III (APR 1984)*. This bilateral contract modification definitizes the IWTU Denitration Mineralization Reformer (DMR) Fluidization Redesign and IWTU Carbon Reduction Reformer (CRR) Refractory work scope. This work is considered incremental to the IWTU Phase 2 scope of work for CLIN-6 via DOE letters AS-CMD-ICP/Fluor-17-104 dated June 20, 2017, and AS-CMD-ICP/Fluor-17-144 dated September 28, 2017. This work scope is hereby definitized under Sections C.6.1.3 and C.6.1.4.

The following changes are hereby made to the contract:

**1. SECTION B.2 CONTRACT COST AND FEE SCHEDULE is revised as follows:**

CLIN-6: Integrated Waste Treatment Unit (IWTU) is revised to incorporate the change stated above.

The DMR Fluidization Redesign is definitized at a direct cost of \$5,659,068. Fee for Authorized Unpriced Work (AUW) added under Phase 2 is \$0.

The CRR Refractory Repair/Replacement is definitized at a direct cost of \$1,207,602. Fee for Authorized Unpriced Work (AUW) added under Phase 2 is \$0.

The increased ceiling for IWTU Phase 2 is revised by \$6,866,670 from \$66,553,245 to \$73,419,915.

Summary:

The Total Contract Value, including options, is increased by \$6,866,670 from \$1,553,726,354 to \$1,560,593,024.

The attached B.2(c) Fee Model has been updated to reflect the adjustment to CLIN-6.

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<b>B.2(c) Table</b>				
<b><u>CLIN 00001 - TARGET ICP-CORE DOE MISSION WORK (BASE)</u></b>				
	Target Cost	Max Fee	Target Fee	Total Price
Direct Target Cost w/ ID Spt (No Options Included)	740,323,646	129,524,478		1,129,713,501
Indirect Target Cost w/o ID Spt (Total Pool, PWS C.8)	259,865,377			
	1,000,189,023			
Target Fee			49,509,357	
Subtotal Milestone-Schedule & Performance Fee (B.3(d))		84,208,370		
Subtotal Incremental Cost Incentive Fee		45,316,108		
Cost Incentive Breakout				
Cost Incentive (Max)		45,316,108		12.95%
Cost Incentive (Target)			17,321,601	4.95%
<b><u>CLIN 00002 - TARGET ICP CORE NNPP PPF WORK SCOPE</u></b>				
	Target Cost	Max Fee	Target Fee	Total Price
Navy (Pieces, Parts and Fines - 102 Cans)	47,162,415	6,107,533	2,334,540	53,269,948
Milestone-Schedule & Performance		5,136,375	1,963,325	
Cost Incentive (Max)		971,158	371,215	
<b><u>CLIN 00003 - NON-TARGET ICP CORE WORK SCOPE</u></b>				
	Estimated Cost	Fee		Total Price
Total Non-Target Work Scope (See Contracting Officer for Breakout)	28,152,372	1,503,390		29,655,762
<b><u>CLIN 00004 - CONTRACT TRANSITION PERIOD</u></b>				
Transition	6,811,889	0		6,811,889
<b><u>CLIN 00005 - DEFINED BENEFIT PENSION PLAN COSTS</u></b>				
Pension	70,900,000	0		70,900,000
<b><u>CLIN 00006 INTEGRATED WASTE TREATMENT UNIT (IWTU) OPERATIONS AND TURNOVER</u></b>				
	Estimated Cost	Max Fee	Fee Gal	Total Price
IWTU Ops (C.6.1)	44,307,931	5,538,491	\$ 6.53	\$ 49,846,422
	Estimated Cost	Fee		
IWTU Phase 1 - Process Assessment (C.6.1.1) (Fixed Fee)	19,331,848	956,926		\$ 20,288,774
IWTU Phase 2 - Technical Issue Resolution (C.6.1.2) (Milestone Fee)	73,419,915	5,523,919		\$ 78,943,834
<b>Total (Excluding C.6.1 IWTU Ops)</b>	<b>\$ 92,751,763</b>	<b>\$ 6,480,845</b>		<b>\$ 99,232,608</b>
<b><u>Total Contract Cost (Excluding Options)</u></b>				
	Contract Cost	Max Fee	Target Fee	Total Price
	1,290,275,393	149,154,737	51,843,896	1,439,430,130
<b><u>Total Contract Cost (Includes Options)</u></b>				
Priced Options	Target Cost	Max Fee	Target Fee	Total Price
00001a - GrndWtr Monitoring Wells / CFA Landfill	773,962	100,228	38,311	874,190
00001b - GrdWtr Monitoring Wells/TAN Rem	676,966	87,667	33,510	764,633
00001c - Legacy Excess Radioactive/Haz Materials	24,747,535	3,204,806	1,225,003	27,952,341
00001d - RCRA Closure of AMWTP Facilities	30,476,158	3,946,662	1,508,570	34,422,820
00001e - Additional Temporary Storage	6,548,465	848,026	324,149	7,396,491
00001f - RH TRU Lot 11 Option Work (Definitized by Modification 048)	-	-	-	-
00001g - RH TRU Lot 12 Option Work	12,341,796	1,598,263	610,919	13,940,059
00001h - RH TRU Lot 11 GFY 2020 Option Work	19,099,074	2,473,330	945,404	21,572,404
00001i - RH TRU Lot 11 GFY 2021 Option Work	12,607,309	1,632,647	624,062	14,239,956
Total Options	107,271,265	13,891,629	5,309,928	121,162,894
<b>Total Contract Cost (Includes Options) and Max Fee</b>	<b>1,397,546,658</b>	<b>163,046,366</b>	<b>57,153,824</b>	<b>1,560,593,024</b>
<b><u>Contract Performance Ceiling (B.6)</u></b>				
Contract Performance Ceiling	1,217,947,710			

NOTE: Fixed Fee values from CLIN-3 and CLIN-6 are included in the max fee value for the total contract cost and total contract cost including options.

No other changes to B.2(c).

- SECTION B.6(a)(2) CONTRACT PERFORMANCE CEILING remains unchanged at \$1,217,947,710. CLIN-6 is excluded from Section B.6.

**3. SECTION C.6.1.3 IWTU DMR FLUIDIZATION REDESIGN** is incorporated as follows:

The Contractor shall provide an alternate solution for the ringheader that will support and improve fluidization. This includes the following:

- Conduct workshops to develop feasible fluidizing alternatives, rank alternatives, and recommend top three design concepts.
- Complete a design package, plus procure components for a double plenum with a conical bottom.
- Complete design package, plus procure components for a modified fluidizing gas ring with a conical bottom.
- Complete design package, plus procure components for a flat plate with bubble caps.
- Select final design for installation into the DMR vessel.
- Model each option above at the National Energy Technology Laboratory (NETL) using computational fluid dynamics modeling.
- Perform three cold flow tests at the Particulate Solids Research Inc. (PSRI) unit.
- Procure, fabricate and test each option above at the Hazen Research pilot plant.
- Procure components for fabrication and installation of the double plenum and cone mock-up.
- Develop work packages to support installation of design concepts into a mock-up vessel and DMR.

**4. SECTION C.6.1.4 IWTU CRR REFRACTORY REPAIR/REPLACEMENT** is incorporated as follows:

The Contractor shall fabricate and install the CRR refractory. This includes the following:

- Demolition and removal of existing castable refractory material from the CRR vessel.
- Design the new brick refractory layout, new 18” removable flange opening on the CRR vessel, and anchors for the refractory brick.
- Fabrication of the 18” flange.
- Procurement of all equipment necessary to execute the repairs.
- Install and test 18” opening for access, 18” Flange, Refractory anchors (weld), refractory brick with small areas of castable.
- Resolve CRR Issues including, repair/replace Brick Insulator, warranty work.
- Final disposal of construction and repair debris.

**5. CONTRACTOR'S STATEMENT OF RELEASE:** In consideration of the modification agreed to herein as a complete equitable adjustment for the directed change identified in this modification, and in accordance with contract Section I.100 52.243-2 Changes—Cost Reimbursement Alt II and III, the Contractor hereby releases the Government from any and all liability under this contract for further equitable adjustments attributable to such facts or circumstances giving rise to the proposal for adjustment. The total price of the equitable adjustment for CLIN-6 is an increase of \$6,866,670 (direct cost of \$6,866,670 and fixed fee of \$0).

No other changes to the contract terms and conditions.