

2. AMENDMENT/MODIFICATION NO. 0037  
 3. EFFECTIVE DATE See Block 16C  
 4. REQUISITION/PURCHASE REQ. NO.  
 5. PROJECT NO. (If applicable)

6. ISSUED BY CODE 00701  
 Idaho Operations  
 U.S. Department of Energy  
 Idaho Operations  
 1955 Fremont Avenue  
 Idaho Falls ID 83415  
 7. ADMINISTERED BY (If other than Item 6) CODE 00701  
 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, county, State and ZIP Code)  
 FLUOR IDAHO, LLC  
 Attn: AMANDA JORDAN  
 1070 RIVERWALK DRIVE, SUITE 201  
 IDAHO FALLS ID 83402  
 9A. AMENDMENT OF SOLICITATION NO. (x)  
 9B. DATED (SEE ITEM 11)  
 10A. MODIFICATION OF CONTRACT/ORDER NO. x  
 DE-EM0004083  
 10B. DATED (SEE ITEM 13)  
 02/04/2016  
 CODE 968795604 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)

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE X	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. Section I.100, Changes - Cost Reimbursement (AUG1987) and Alternate II and II (APR 1984)
	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  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)

Tax ID Number: 45-2724914  
 DUNS Number: 968795604  
 Please refer to the continuation pages incorporated as part of this modification. The Contractor is directed to continue operations in accordance with 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  
 FOB: Destination  
 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.

16A. NAME AND TITLE OF SIGNER (Type or print) <i>Director, Prime Contracts</i>	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Maria M. Mitchell-Williams
16B. CONTRACTOR/OFFICER <i>[Signature]</i>	16B. UNITED STATES OF AMERICA <i>[Signature]</i>
16C. DATE SIGNED 4/18/17	16C. DATE SIGNED 4/18/17

**CONTINUATION SHEET**

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
DE-EM0004083/0037

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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)
00006	<p>Period of Performance: 06/01/2016 to 05/31/2021</p> <p>Change Item 00006 to read as follows (amount shown is the total amount):</p> <p>NOTE: The IWTU Operations and Turnover Option CLIN 00006 was exercised at time of contract award.</p> <p>IWTU Operations and Turnover (Option CLIN) Line item value is:: \$142,359,812.00 Incrementally Funded Amount: \$68,097,134.82</p> <p>This modification increases the total amount of line 0006 by \$72,077,164.00 from \$70,282,648.00 to \$142,359,812.00. See continuation pages below for scope of work.</p>				142,359,812.00

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 modification definitizes a Change Order per Modification 016, dated September 29, 2016, for work scope incorporated under CLIN-6 Section C.6.1.2, Integrated Waste Treatment Unit (IWTU) Phase Two, Facility Modifications and Pilot-Scale Testing.

The following changes are hereby made to the contract:

- SECTION B.2 (c) CONTRACT COST AND FEE SCHEDULE** is revised as follows:

CLIN-6: Integrated Waste Treatment Unit (IWTU) Operations and Turnover:

IWTU Phase Two, IWTU Facility Modifications and Pilot-Scale Testing, is negotiated at a direct cost of \$66,553,245. Fee is 8.3% of the direct cost, totaling \$5,523,919 and is based on the following milestones:

<b>Total Fee Amount</b>			<b>\$ 5,523,919</b>
<b>Milestone #</b>	<b>% of Fee</b>	<b>Description</b>	<b>Amount</b>
1	10%	Hazen Pilot Plant Test #1	\$ 552,392
2	20%	Demonstration Run #1	\$ 1,104,784
3	10%	Hazen Pilot Plant Test #2	\$ 552,392
4	30%	Demonstration Run #2	\$ 1,657,176
5	10%	Hazen Pilot Plant Test #3	\$ 552,392
6	20%	Demonstration Run #3	\$ 1,104,784
<b>SUM</b>	<b>100%</b>		<b>\$ 5,523,919</b>

The completion requirement for each milestone is shown in Attachment A – IWTU Phase 2 Milestone Fee Plan.

Summary:

The Contract Value is increased by \$72,077,164 (estimated direct cost and fee) from \$1,548,309,767 to \$1,620,386,931.

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)	771,344,754	138,026,963		1,203,872,237
Indirect Target Cost w/o ID Spt (Total Pool, PWS C.8)	294,500,520			
	1,065,845,274			
Target Fee			52,759,341	
Subtotal Milestone-Schedule & Performance Fee (B.3(d))		87,609,346		
Subtotal Incremental Cost Incentive Fee		50,417,617		
Cost Incentive Breakout				
Cost Incentive (Max)		50,417,617		12.95%
Cost Incentive (Target)			19,271,599	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)	61,158,338	7,920,005	3,027,338	69,078,343
Milestone-Schedule & Performance		5,148,003	1,967,770	
Cost Incentive (Max)		2,772,002	1,059,568	
<b><u>CLIN 00003 - NON-TARGET ICP CORE WORK SCOPE</u></b>				
	Estimated Cost	Fee		Total Price
Navy (SNF)	18,197,776	900,790		19,098,566
NE	6,625,003	439,661		7,064,664
Incumbent Close-Out	350,000	10,890		360,890
<b>Total</b>	<b>25,172,779</b>	<b>1,351,341</b>		<b>26,524,120</b>
<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)	44,438,999	5,554,875	\$ 6.53	\$ 49,993,874
	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)	66,553,245	5,523,919		\$ 72,077,164
<b>Total (Excluding C.6.1 IWTU Ops)</b>	<b>\$ 85,885,093</b>	<b>\$ 6,480,845</b>		<b>\$ 92,365,938</b>
<b><u>Total Contract Cost (Excluding Options)</u></b>				
	Contract Cost	Max Fee	Target Fee	Total Price
	1,360,212,372	159,334,028.57	55,786,679	1,519,546,401
<b><u>Total Contract Cost (Includes Options)</u></b>				
	Target Cost	Max Fee	Target Fee	Total Price
00001a - GrndWtr Monitoring Wells / CFA Landfill	776,251	100,525	38,424	876,776
00001b - GrdWtr Monitoring Wells/TAN Rem	678,969	87,926	33,609	766,895
00001c - Legacy Excess Radioactive/Haz Materials	24,820,741	3,214,286	1,228,627	28,035,027
00001d - RCRA Closure of AMWTP Facilities	30,566,310	3,958,337	1,513,032	34,524,647
00001e - Additional Temporary Storage	6,567,836	850,535	325,108	7,418,371
00001f - RH TRU Lot 11 Option Work	13,490,500	1,747,020	667,780	15,237,520
00001g - RH TRU Lot 12 Option Work	12,378,304	1,602,990	612,726	13,981,294
Total Options	89,278,911	11,561,619	4,419,306	100,840,530
Total Contract Cost (Includes Options) and Max Fee	1,449,491,283	170,895,648	60,205,985	1,620,386,931
<b><u>Contract Performance Ceiling (B.6)</u></b>				
Contract Performance Ceiling	1,304,935,248			

**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 Section B.2.

2. **SECTION C.6.1.2, INTEGRATED WASTE TREATMENT UNIT (IWTU) PHASE TWO, FACILITY MODIFICATIONS AND PILOT-SCALE TESTING** is definitized as follows:

The Contractor's IWTU Technical Issues Resolution Phase 2 Project Plan, dated October 20, 2016, is incorporated herein and attached hereto (Attachment B).

Attachment B is included with this contract modification.

3. **CONTRACTOR'S STATEMENT OF RELEASE:** In consideration of the modification agreed to herein as a complete equitable adjustment for the directed change to incorporate the work scope under CLIN-6 Section C.6.1.2, Integrated Waste Treatment Unit (IWTU) Phase Two, Facility Modifications and Pilot-Scale Testing, 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 \$72,077,164.

No other changes to the terms and conditions.

## Attachment A

### IWTU Phase 2 Milestone Fee Plan

#### **Hazen Pilot Plant Test #1 – (~Feb/Mar 2017) – 10%**

Objective: Demonstrate DMR product particle size control via seed particle addition.

Completion Requirement: Completion of test run #1 (target 160 hours operating time) and assessment of the seed particle addition process and the effect on product particle size.

Authorization to Submit Fee Invoice: Issuance of draft test report and fee invoice. This Draft Test Report must be accepted by DOE before the fee invoice will be approved.

#### **Demonstration Run #1 - (~Mar/Apr 2017) – 20%**

Objective: Validate operation of revised auger-grinder design under plant operating conditions.

Accomplishment: Perform demonstration run (projected to last 20 days of waste-feed-on) per TI-102, Revision 2. Conduct test targeting or 16 test objectives in Appendix A of Fluor Idaho's plan, with the noted uncertainty that some of the items performed may not fully meet the acceptance criteria. Perform a post run inspection of the auger-grinder and verify the minimum product transfer rate.

Completion Requirement: Auger-grinder processes and transfers product throughout the entire run and the 16 test objectives are evaluated.

Authorization to Submit Fee Invoice: Conduct demonstration run #1 and collect the data for evaluation of the auger-grinder performance. Provide DOE with summary of results and recommendations for path forward with accompanying fee invoice. The summary of results and path forward must be accepted by DOE before Fluor Idaho will be paid fee.

#### **Hazen Pilot Test #2 - (~Apr/May 2018) – 10%**

Objective: Demonstrate wall scale control testing by evaluating parameters that are responsible for production of wall scale.

Completion Requirement: Completion of test run #2 and assessment of data collected (nominal target of 250-500 hours operating time depending on final test plan).

Authorization to Submit Fee Invoice: Issuance of draft test report and fee invoice. This Draft Test Report must be accepted by DOE before the fee invoice will be approved.

#### **Demonstration Run #2 - (~Jul/Aug 2017) – 30%**

Objective: Validate fluidization improvements, i.e. particle size control, and DMR related modifications.

Accomplishment: Evaluate measures used to control bed particle size and the DMR relative to fluidization performance during demonstration run (scheduled for 30 days of waste-feed-on).

Completion Requirement: Assess measures to control particle size. Collect data to update particle size control strategy. Evaluate modified fluidizing gas rails and replacement gas header ring function as desired.

Authorization to Submit Fee Invoice: Conduct demonstration run #2 and collect data for evaluation. Provide DOE with summary of results and recommendations for path forward with accompanying fee invoice. The summary of results and path forward must be accepted by DOE before Fluor Idaho will be paid fee.

**Hazen Pilot Test #3 – (~Sep 2017) – 10%**

Objective: Test anticipated to target extended testing/long term operations, with startup and transition to a full carbonate bed, to demonstrate DMR particle size control, minimization of wall scale formation and variable operations at or near boundary conditions. Nominal target of 350-800 operating hours depending on final test plan.

Completion Requirement: Completion of test run #3 and assessment of data collected.

Authorization to Submit Fee Invoice: Issuance of draft test report and fee invoice. This Draft Test Report must be accepted by DOE before the fee invoice will be approved.

**Demonstration Run #3 - (~Oct/Nov/Dec 2017) – 20%**

Objective: Validate operating, control and recovery strategies.

Accomplishment: Evaluate plant performance and control strategies at normal operating conditions and also when recovering back to normal operating conditions when the plant is operating at or near selected boundary conditions.

Completion Requirement: DMR operated over an extended period (the duration of this run is 50 days of waste-feed-on). Evaluate ability to recover DMR operation back to normal when operating at or near boundary conditions.

Authorization to Submit Fee Invoice: Conduct demonstration run # 3 and collect data for evaluation. Provide DOE with summary of results and recommendations for path forward with accompanying fee invoice. Provide status of spare parts inventory and identify items needed to proceed with radioactive operations. The summary of results and path forward must be accepted by DOE before Fluor Idaho will be paid fee.

**Attachment B**

**Contact the Contracting Officer for  
questions related to Attachment B**