AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE: 00701
2. AMENDMENT/MODIFICATION NO: 0027
3. EFFECTIVE DATE: See Block 16C
4. REQUISITION/PURCHASE REQ. NO: 00701
5. PROJECT NO: (if applicable) 0027
6. ISSUED BY: IDAHO OPERATIONS
   U.S. Department of Energy
   1550 Freamont Avenue
   IDAHO FALLS ID 83415

7. ADMINISTERED BY: (if other than item 6) 00701
8. NAME AND ADDRESS OF CONTRACTOR: FLAVOR IDAHO, LLC
   Attn: AMANDA JORDAN
   1070 RIVERWALK DRIVE, SUITE 201
   IDAHO FALLS ID 83402

9. AMENDMENT OF SOLICITATION NO: 0027
10. DATED (SEE ITEM 11) 02/04/2016
11. MODIFICATION OF CONTRACT ORDER NO: EK-EN000493
12. DATED (SEE ITEM 13) 02/04/2016
13. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS. 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 16 (Section 1:100, Changes-Cost Reimbursement: (Aug 1987) 161 101 II AND III (Aug 1984).
B. THE ABOVE MODIFIED CONTRACT ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in payee, appropriate data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.150(b).
C. THIS SUPPLEMENTAL AGREEMENT ENTERED INTO PURSUANT TO AUTHORITY OF:
   0. OTHER (Specify type of modification and authority)

D. IMPORTANT: Contractor is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Drafted by UGF section headings, including solicitation and subject matter where feasible)
TAX ID NUMBER: 45-2724914
DUHS Number: 96879504

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(c).

Payment:
OR for Idaho
U.S. Department of Energy
Oak Ridge Financial Service Center
P.O. Box 6017
Oak Ridge TN 37831
FOR: Destination
Continued...

15A. NAME AND TITLE OF SIGNER (Type or print):
Nazia M. Mitchell-Williams
16C. DATE SIGNED: 2-13-17
16B. UNITED STATES OF AMERICA: 2-13-17

NSN 764001-152-6070
Previous edition unavailable
STANDARD FORM 40 (REV 10 92)
Prepared by OSG
FAR (48 CFR) 2.242
<table>
<thead>
<tr>
<th>ITEM NO. (A)</th>
<th>SUPPLIES/SERVICES (B)</th>
<th>QUANTITY (C)</th>
<th>UNIT (D)</th>
<th>UNIT PRICE (E)</th>
<th>AMOUNT (F)</th>
</tr>
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<tbody>
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<td>00001</td>
<td>Target ICP-Core DOE Mission Work</td>
<td></td>
<td></td>
<td></td>
<td>1,195,327,103.00</td>
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<tr>
<td></td>
<td>Line item value is:: $1,195,327,103.00</td>
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<tr>
<td></td>
<td>Incrementally Funded Amount: $321,733,551.56</td>
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<tr>
<td></td>
<td>This modification increased CLIN-1 value by $5,333,916 (direct cost plus max fee). Refer to the continuation pages.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Change Item 00003 to read as follows(amount shown is the total amount):</td>
<td></td>
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<tr>
<td>00003</td>
<td>Non-Target ICP-Core Naval Nuclear Propulsion Program (NNPP) - Spent Nuclear Fuel (SNF)</td>
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<td></td>
<td></td>
<td>25,409,868.79</td>
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<td>Incrementally Funded Amount: $25,409,868.79</td>
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<tr>
<td></td>
<td>This modification definitizes the Navy Fuel Inversion under CLIN-3, estimated cost of $678,707 and fixed fee of $33,596. The contractor is directed to continue operations in accordance with Section B.2(c).</td>
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</tr>
</tbody>
</table>
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 incorporates work scope under Sections C.6.5 Calcine Retrieval Project and C.7.3 Navy Nuclear Propulsion Program (NNPP) SNF.

The following changes are hereby made to the contract:

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

   CLIN-1: Target ICP Core DOE Mission Work Scope (Base) is revised to incorporate the revised work scope under Section C.6.5 Calcine Retrieval Project:

   - The Direct Target Cost is increased by $4,722,370 from $759,056,971 to $763,799,341.
   - The Indirect Target Cost remains unchanged at $294,500,520.
   - The Total Target Cost is increased by $4,722,370 from $1,053,557,491 to $1,058,279,861.
   - The Cost Incentive (Target) is increased by $233,757 from $18,663,354 to $18,897,111.
   - The Cost Incentive (Maximum) is increased by $611,546 from $48,826,350 to $49,437,896. The overall CLIN-1 Max Fee, including milestones and performance fee, is correspondingly increased by $611,546 from $136,435,696 to $137,047,242.

   CLIN-3: Non-Target ICP Core Work Scope is revised to incorporate work scope under Section C.7.3 Navy Nuclear Propulsion Program (NNPP) SNF:

   - The estimated direct cost for this new scope is $678,707.
   - The fixed fee is $33,596.

   **Summary:**
   - The Total Contract Value, including options, is increased by $6,046,220 (target cost and max fee for CLIN-1, and estimated cost and fixed fee for CLIN-3) from $1,522,286,395 to $1,528,332,615.

   NOTE: Previously, the fixed fee in CLIN-3 was incorrectly included in both the Max Fee and Target Fee values. The CLIN-3 total fixed fee value has been removed from the Target Fee total value.

   The B.2(c) Fee Model has been updated to reflect the adjustment to CLIN-1 and CLIN-3.
No other changes to Section B.2(c).

2. **SECTION B.6 (a)(2) CONTRACT PERFORMANCE CEILING**, is revised as follows:

The current Contract Performance Ceiling (CPC) is increased by $6,046,220 from $1,279,584,990 to $1,285,597,613. This includes the work scope incorporated with this contract modification.
3. **SECTION C.6.5 Calcine Retrieval Project** is revised to incorporate the following scope:

The scope of work includes work necessary to conduct proof-of-concept tests, initiate regulatory closure discussions and prepare a Safety Analysis Report (SAR) addendum.

A. Conduct six proof-of-concept tests to reduce design risk, safety hazards and unknowns. The six proof-of-concept tests include:

1. **CSSF 1 distributor/fill line clean-out**
   - Development and fabrication of an apparatus and method for removing residual calcine from the CSSF 1 distribution and fill line network.

2. **Thermowell conversion**
   - Development of an approach for removing the thermocouple wires from the thermowell pipes, cutting off the bottom thermowell cap, and installing the retrieval system platform.

3. **Top-down residual calcine retrieval**
   - Development of supporting equipment for clean-out of residual calcine.

4. **Bottom-up retrieval testing**
   - Test thermowell vacuum retrieval apparatus to define operating parameters and evaluate retrieval rate, flow characteristics and bin cleanliness.

5. **D&D Pipe crimping and removal**
   - Evaluate methods for crimping CSSF-1 piping in order to safely remove the piping while containing residual calcine.

6. **Riser installation**
   - Development of an approach for installing bin group retrieval access risers.

B. Initiate discussions with the regulatory agencies (i.e., DOE, the U.S. Environmental Protection Agency, and DEQ) on the path forward for RCRA closure, CERCLA NTCRA, and NDAA 3116 closure. Work shall include the following:

1. Conduct scoping meetings with DEQ, EPA, and NRC.
2. Hold performance assessment/composite analysis scoping meetings with NRC/DEQ.
3. Initiate preparation of a draft performance assessment/composite analysis based upon predicted level of calcine retrieval.
4. Initiate preparation of background documents to support RCRA closure, CERCLA EE/CA, and NDAA 3116 closure.
5. Development of a Permit Modification Request for submittal to DOE for review and certification for transmittal to DEQ to support grouting of vault, demolition of above grade structures, and construction of retrieval and transfer system.

C. Safety basis
   1. Draft SAR/TSR-105 Addendum for CSSF-1 D&D.
   2. Complete DOE approval of SAR/TSR-105 Addendum and implement the addendum.

D. FY17-18 Deliverables
   1. Draft SAR/TSR-105 Addendum for CSSF-1 D&D.
   2. CRP Test Report documenting the results of the six proof-of-concept tests.
   3. Residual clean out technology selection report (for environmental support).
   4. Draft RCRA Permit Modification Request (as necessary to support grouting, demolition, retrieval, and transfer).

The negotiated estimated direct cost under CLIN-1 is $4,722,370 with a target fee of $233,757 and a max fee of $611,547.

No other changes to Section C.6.5.

4. SECTION C.7.3 Navy Nuclear Propulsion Program (NNPP) SNF is revised to incorporate the following scope:

The Contractor shall re-orient 48 half clusters that are currently stored in an inverted orientation (i.e., the operational top of the cluster is at the bottom of the storage bucket) in Chemical Processing Plant (CPP)-666.

The negotiated estimated direct cost under CLIN-3 is $678,707 with a fixed fee of $33,596.

No other changes to Section C.7.3.

5. 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(s) 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-1 is $5,333,916 (target direct cost and max fee), and the total price of the equitable adjustment for CLIN-3 is $712,303 (estimated direct cost and fixed fee); totaling $6,046,220. NOTE: If DOE-ID elects to have the Contractor continue the Calcine Disposition Project (CDP) subsequent to this effort, both parties agree not to incorporate any follow-on CDP work under CLIN-1.
No other changes to the terms and conditions.