The purpose of this modification is to revise work scope under Sections C.5.1.08, C.6.1.10, C.6.5.05, and C.7.2. See the continuation pages incorporated as part of this modification.

Payment:
OR for Idaho
U.S. Department of Energy
Oak Ridge Financial Service Center
P.O. Box 6017
Oak Ridge TN 37831
Period of Performance: 06/01/2016 to 09/30/2021

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)
Aaron Nebeker

16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)

15B. CONTRACTOR/OFFEROR

16B. UNITED STATES OF AMERICA

15C. DATE SIGNED

09/09/2021

16C. DATE SIGNED
Change Item 00001 to read as follows (amount shown is the total amount):

00001  Target ICP-Core DOE Mission Work  
Line item value is: $2,282,354,321.52  
Incrementally Funded Amount: $2,282,002,075.52  

This modification increases the Total Contract Value (including options) by $352,246 from $2,211,167,582 to $2,211,519,828.
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 revises the work scope under Sections C.5.2 Buried Waste Exhumation, C.6.1.10 Integrated Waste Treatment Unit (IWTU) Phase 3/4, Facility Modifications, Confirmatory Demonstration Run, System Performance Tests, and the Startup of Radioactive Operations, C.6.5.05 Cold Crucible and C.7.2 NRC Licensed SNF Storage Facilities as detailed below.

The following changes are hereby made to the contract:

1. SECTION B.21 CONTRACT COST AND FEE SCHEDULE is revised as follows:

   CLIN-1: Target ICP Core DOE Mission Work Scope (Base) is revised:
   
   The CLIN-1 estimated costs are increased by $146,685 from $72,194,490 to $72,341,175.
   
   The CLIN-1 indirect costs are increased by $74,102 from $26,587,648 to $26,661,750.
   
   The CLIN-1 fee is increased by $11,236 from $5,516,832 to $5,528,068.

   CLIN-3: Non-Target Work Scope is revised:

   The CLIN-3 estimated costs are increased by $43,418 from $5,275,949 to $5,319,367.
   
   The CLIN-3 fee is increased by $2,605 from $282,844 to $285,449.

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

   The CLIN-6 estimated costs are increased by $70,000 from $17,328,470 to $17,398,470.
   
   The CLIN-6 fixed fee is increased by $4,200 from $967,870 to $972,070.

   Summary:

   The Total Contract Value, including options, is increased by $352,246 from $2,211,167,582 to $2,211,519,828.

   The B.21 Tables are updated as follows:
2. **SECTION C.5.2 Buried Waste Exhumation**, is revised to include the following work scope:

The Contractor shall procure secondary waste containers (boxes) and shift the disposal path for MLLW from the pit to temporary on-site storage in Type A 90 cu ft boxes to make room for burial of ARP Exhumation equipment at the completion of ARP Exhumation.

*Based on this change, the CLIN-1 Direct Target Cost is increased by $187,268, and the Indirect Target Cost is increased by $53,303. The corresponding fixed fee is increased by $11,236.*

No other changes to Section C.5.2.

3. **SECTION C.6.1.10 Integrated Waste Treatment Unit (IWTU) Phase 3/4, Facility Modifications, Confirmatory Demonstration Run, System Performance Tests, and the Startup of Radioactive Operations** is revised to include the IWTU alternative fuel work scope as follows:

The Contractor shall commence preparation activities to support a pilot plant run of the 18-inch Pilot Plant at Hazen Research (18HPP) to test alternative coal(s) which is to occur at the start of FY22. Examples of such work are procuring the necessary coal, size reducing the coal for use in the additive feeder, calibrating instruments, establishing lease/rental agreements for support needed during the run (N2, CO2, etc.), reviewing/commenting on the test plan, and conducting pre-run maintenance of equipment.

*Based on this change, the CLIN-6 estimated direct cost is increased by $70,000, with a fixed fee of $4,200. The CLIN-1 Indirect Target Cost is increased by $19,925.*

No other changes to Section C.6.1.10.
4. **SECTION C.6.5.05 Cold Crucible** is added to the contract as follows:

The Contractor team with subject matter experts will evaluate the existent literature and experience both within the DOE as well as relevant external information. It is expected that the technology assessment determination will be driven primarily by constraints specific to the waste type (calcine) and facility. This task therefore will focus on identifying the site-specific technology readiness and appropriateness based on a number of system factors, including, for example:

- Vitrification potential of wastes
- Operational constraints
- Physical space requirements
- Product/system mismatch
- Material handling systems/Material Regulations & Repository
- Regulatory compliance and permitting changes
- Product acceptance
- Facility safety considerations
- Off-gas handling and system components
- Flow-sheet adaptability

The assessment will also be used to identify missing or critical information, data, performance criteria, etc. needed to achieve validation and system adequacy. This task will assess the feasibility and appropriateness of the technology for the specific site application, the potential extent of the regulatory and design challenges, and evaluation of the ability to deploy within the treatment needs the site. This assessment should be sufficient for DOE-EM to make a go/no-go decision to carry out further work on the technology (proceeding to Task 2) to proceed with critical decisions and planning.

**Deliverables:**

- Draft Report: Technology Assessment – Appropriateness and Readiness of Cold Crucible Vitrification of HLW Calcine Solids at the Idaho Site.
- Monthly reports on task progress, conference calls, and integration of project activities between ICP and SRS as required.

*Based on this change, the CLIN-3 estimated cost is increased by $43,418 with a fixed fee of $2,605. The CLIN-1 Indirect Cost is increased by $12,359.*

No other changes to Section C.6.5.05.

5. **SECTION C.7.2 NRC Licensed SNF Storage Facilities** is revised to remove the following items from the Fort St. Vrain workstations work scope:

- Prepare and Install the network printer at Fort St. Vrain, Colorado; and
- Provide 2 months of customer support.
Based on this change, the CLIN-1 Direct Target Cost is decreased by $40,583 and the Indirect Target Cost is decreased by $11,552.

No other changes to Section C.7.2.

6. **CONTRACTOR'S STATEMENT OF RELEASE:** In consideration of the modification agreed to herein as a complete equitable adjustment for the directed changed 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 is $352,246.

No other changes to the contract terms and conditions.