

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.	
0410		See Block 16C		5. PROJECT NO. (If applicable)	
6. ISSUED BY		7. ADMINISTERED BY (If other than Item 6)		CODE	
CODE		00901			
Savannah River Operations U.S. Department of Energy Savannah River Operations P.O. Box A Aiken SC 29802					
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)		(x)		9A. AMENDMENT OF SOLICITATION NO.	
SAVANNAH RIVER REMEDIATION LLC Attn: Jeffrey J. Bair Savannah River Site Building 766-H Aiken SC 29808					
				9B. DATED (SEE ITEM 11)	
		x		10A. MODIFICATION OF CONTRACT/ORDER NO.	
				DE-AC09-09SR22505	
				10B. DATED (SEE ITEM 13)	
CODE 808376193		FACILITY CODE		12/08/2008	

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)

No change in accounting or appropriation data

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).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)
X	Clause I.95 and Mutual Agreement Between the Parties

BE 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)

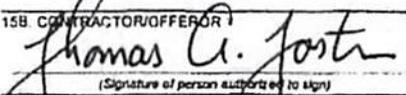
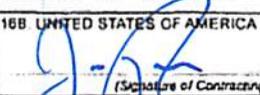
See Pages 2-6.

Payment:

FOB: Destination

Period of Performance: 09/28/2016 to 04/30/2017

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.

15A. NAME AND TITLE OF SIGNER (Type or print)		18A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
Thomas A. Foster President and Project Manager		Jordan C. Rhoades	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
	9/28/2016		9/29/16
(Signature of person authorized to sign)		(Signature of Contracting Officer)	

SF30 Block 14

- A. The purpose of this modification is to authorize Savannah River Remediation, LLC, to develop a Conceptual Design Package (CDP) and associated estimate of all project activities, actions, and total cost needed to successfully design and build modifications to the Salt Waste Processing Facility to implement Next Generation Solvent.
- B. The CDP shall be developed in accordance with the attached Statement of Work.
- C. The parties hereby agree that the estimated cost for this effort is \$1,512,699.00 and the available fee is \$105,888.93.
- D. As a result of the authorized work stated above, the total estimated cost of CLIN 0002, Option 1 – 2-Year Option Period, is increased by \$1,512,699.00, changing it from \$891,165,547.70 to \$892,678,246.70.
- E. As a result of the authorized work stated above, the Option 1 total available award fee is increased by \$105,888.93, changing it from \$49,138,886.00 to \$ 49,244,774.93.
- F. The work described in this modification shall be performed using funds obligated under CLIN 0002 in accordance with FAR 52.232-22 Limitation of Funds.
- G. In consideration of the modification agreed to herein as complete equitable adjustments for SRR Proposal No. CAA-CP-2015-004, 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 SRR Proposal No. CAA-CP-2015-004.
- H. All other terms and conditions remain unchanged.

Scope of Work for Next Generation Solvent Implementation at SWPF

The deployment of Next Generation Solvent (NGS) at the Salt Waste Processing Facility (SWPF) offers the opportunity to achieve significant improvement in both throughput and Cesium (Cs) decontamination factor as compared to the baseline flow sheet. As a result DOE intends to implement the NGS at SWPF in a phased approach. This scope of work includes developing a Conceptual Design Package (CDP) and associated estimate of all project activities, actions, and total cost needed to successfully design and build modifications to SWPF to implement NGS.

Conceptual Design Estimate has been evaluated and DOE has determined to proceed with development of a Design and associated cost estimate for implementation of NGS. A number of assumptions were identified from conceptual estimate proposals and DOE has concluded the following requirements for NGS.

1. An alternative analysis has been completed to select the preferred option for deployment of NGS in the SWPF and the results are documented in SRR-SWPF-2015-00001, RO, and Salt Waste Processing Facility Next Generation Solvent (NGS) Deployment Study. This preferred option is required for this scope of work.
2. The Contractor will use the existing SWPF Code of Record/Design Criteria Database for the new NGS Cold Chemical Building (NGS CCB). If later codes and standards are recommended it shall be clearly delineated in the CDP with appropriate technical justification.
3. DOE will have the role as Owner for the facility. The Contractor will provide the Design Authority role.
4. The Contractor will develop a Basis of Design document that incorporates applicable information presently contained in the SWPF Functional Specification, Basis of Design, Balance of Plant Basis of Design, and Operational Requirements document. This document will be reviewed and approved by DOE. Once issued, no changes shall be made unless DOE concurs and approves those changes via approval of the Basis of Design.
5. The Savannah River Site (SRS) Major Modification Evaluation Form (Attachment 1) shall be used to determine if the NGS CCB is a major modification. This shall be submitted to DOE for review and approval. The Major Modification Evaluation Form shall be submitted to DOE for review

and approval within 90 days of contract authorization. DOE will complete its review within 10 days of submission.

6. The existing Cold Chemical Truck bay will be used for receipt of concentrated boric acid unless the Contractor can demonstrate that a new truck bay in the new NGS CCB is more cost effective considering all capital and long term operating costs.
7. The NGS modification shall include the capability to provide boric acid to DWPF in the event that SWPF is down for an extended period of time. Boric acid is typically received in DWPF in the strip solution (diluted). An opportunity exists to improve DWPF batch cycle time and reduce wastewater generated if the boric acid can be provided in concentrated form. The CDP shall clearly describe how this requirement will be met.
8. This NGS modification shall provide for minimal effort to switch from the original solvent process to the NGS process. This is envisioned as manual valves that will valve out original solvent process lines and valve in NGS process lines. Also, the design shall provide the ability to reverse back to an original solvent process even after the NGS has been placed into service. Again this is expected to be by manual value operation. All utilities and process interface connections will be provided to the exterior of the CCB, and will be available for future tie-in by the SWPF Operating Contractor at the direction of DOE. Utilities and interface connections will also be clearly delineated in the CDP.
9. Operation of the NGS CCB shall be automated and be integrated into the existing SWPF Basic Process Control System (BPCS).
10. Due to the nature of the SWPF modifications to support NGS implementation, the conceptual design shall be sufficiently mature such that a Preliminary Design Phase will not be estimated nor utilized. Specifically, this conceptual design effort should convert the initial concepts to a more mature design sufficient to develop detailed and reliable cost and schedule estimates that are ready for independent review. Following DOE review and comments on the CDP, the Contractor shall proceed to Final Design and Construction after contract authorization.
11. Most of the design drawings and documents required during Final Design shall be developed during the conceptual design effort. All drawings and documents not developed for the CDP

that are required for Final Design, shall be identified in the CDP Cost Estimate. These deliverables shall be identified by type (P&ID, Electrical Single Line, Equipment Specifications, etc.) and number of each type of deliverable required shall be included in the estimate.

12. The NGS CCB CDP shall be delivered to DOE on or before 4/30/2017. Further the CDP shall provide for the Final Design and Construction phase to begin by 7/1/2017. Construction shall be completed no later than August 31, 2018. NGS operational readiness review and startup is scheduled for execution after SPWF first year of operation.
13. This facility modification will be executed under the existing 413.3B Line Item Project so no Critical Decision gates will be required.
14. The Contractor shall use the WBS Organization provided in Attachment 2 as written and organized. Further, the Contractor shall develop the WBS Dictionary for each element and submit to DOE for review and approval. The Contractor may change the WBS numbering to match up with Contractor systems but not the organization or levels. Further the Contractor may develop WBS elements at lower levels beneath the structure provided.
15. A Design Review using a formalized and structured approach shall be conducted with DOE within 30 days prior to the delivery of the CDP. The design review team shall include reviewers external to the Project. DOE shall be provided 15 day notification of the scheduling of the Design Review.
16. The expected minimum content of the Conceptual Design Package shall be as follows:
 - A. Design Documents / Design Basis - to include:
 - Design drawings and documents (see Paragraph 11)
 - Code of Record for the modification
 - Functions and requirements documentation
 - Identification of Key Performance Parameter
 - B. Safety Basis - to include:
 - Major Modification Determination per Attachment 1 (DOE-ST-1 189-2008)
 - Preliminary safety documents (as appropriate given the Major Modification Determination)

- C. Project Description and Strategy - to include:**
- **Work Breakdown Structure and Statement of Work**
 - **Procurement Plan**
 - **Construction Plan**
 - **Operations/Startup Plan**
 - **Project Risk Analysis and Management Plan**
 - **Listing of any Exclusions or Key Assumptions**
- D. Reliable Project Schedule - to include schedule activities for:**
- **Design and Construction**
 - **Long lead and major procurements**
 - **Safety basis development**
 - **Environmental permitting**
 - **Construction work planning and non-intrusive field work (construction activities that have no impact to SWPF base operations)**
 - **Intrusive field work tie-ins (construction activities that require a process or testing outage)**
 - **Turnover, construction testing, and final construction acceptance**
- E. Reliable Project Cost - estimate to include:**
- **Time phasing of budget to include long lead and major procurements**
 - **List of design deliverables (e.g. P&IDs, Process Flow Diagrams, Plot Plans, General Arrangements, Electrical Single Lines, HVAC Air Flow and Control Diagrams, System Descriptions, Procurement Specifications, software documentation, safety basis documentation, etc.)**
 - **List of long lead and major procurements and associated costs**
 - **Cost estimates for bulk material**
 - **Labor task analysis to include resource type and number of hours estimated**