

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE: 11EM004129
 PAGE OF PAGES: 1 / 3
 2. AMENDMENT/MODIFICATION NO.: 144
 3. EFFECTIVE DATE: See Block 16C
 4. REQUISITION/PURCHASE REQ. NO.: 11EM004129
 5. PROJECT NO. (If applicable):

6. ISSUED BY CODE: 00901
 Savannah River Operations
 U.S. Department of Energy
 Savannah River Operations
 P.O. Box A
 Aiken SC 29802
 7. ADMINISTERED BY (If other than Item 6) 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)
 SAVANNAH RIVER REMEDIATION LLC
 Attn: Katy Burnau
 Savannah River Site
 Building 766-H
 Aiken SC 29808
 CODE: 808376193 FACILITY CODE:
 9A. AMENDMENT OF SOLICITATION NO.:
 9B. DATED (SEE ITEM 11):
 X 10A. MODIFICATION OF CONTRACT/ORDER NO.: DE-AC09-09SR22505
 10B. DATED (SEE ITEM 13): 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)
 See Schedule

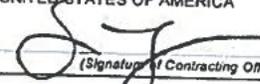
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

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: FAR 52-243-2 Changes - Cost Reimbursement (Aug 1987) ALT II & ALT 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.)
 See Page 2.

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) Lyden D. Olson President and Project Manager	18A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Scott D. Langston
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED 9/30/2011
15B. CONTRACTOR/OFFEROR	18B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)
	16C. DATE SIGNED 9-30-11

The purpose of this modification is to issue a change order revising the Statement of Work (SOW) and to incorporate the scope changes described in the DOE letters of June 24, 2011 and July 21, 2011 (Subject Fiscal Year (FY) 2011 Expected Funding Guidance) to make certain other changes to the contract terms associated with the revised SOW. These revisions are being made under the authority of the contract clause contained in Section I, entitled "Changes – Cost Reimbursement (Aug 1987) – Alternate II (Apr 1984) & Alternate III (Apr 1984)."

The work described in this modification shall be performed using funds obligated under CLIN 00001 in accordance with FAR 52.232-22 Limitation of Funds.

1. Section B, Supplies or Services and Prices/Costs is modified as follows:

A. Paragraph B.1 is modified to add the following:

The Contractor shall, in accordance with the terms of this contract, provide the personnel, materials, supplies, and services and do all things necessary for, or incidental to, performing the changed work. The detailed description of the changed work is contained in Section C of this modification (Modification 144).

B. Paragraph B.3 is modified to add the following:

No fee shall be paid to the Contractor for the changed work under this change order (Modification 144), including provisional fee, prior to definitization.

2. Section C, Description/Specifications/Statement of Work is modified as follows:

A. Section C: The scope deletions to the existing Statement of Work (SOW) are described in Attachment 1.

B. The following award fee items are anticipated to require negotiated adjustments:

1. SRR-SSI-01.02 Award Fee Milestone (ELAWD Design Modification 090)
2. SRR-SSI-02 Award Fee Milestone (Utilities & Services Design Modification 087)
3. SRR-SSI-03.06 Award Fee Milestone (SCIX Design Modification 097)
4. ARP/MCU Design Award Fee (Modification 106)

Adjustments related to the work performed on the Utilities & Services Other Than Design Package (OTDP) #1 (Modification 096) will be handled as a separate action (Modification 143).

Some of the ARP/MCU SOW deletions are included in the negotiated agreement on OTDP #1. These agreements were handled as a separate action (Modification 141).

Adjustments to CLIN 5 will be handled as a separate action.

Adjustments to provide necessary FY 2012 support to the remaining SCIX OTDP #1 activities will be handled as a separate action.

3. Section E, Inspection and Acceptance is modified as follows:

Remains unchanged.

4. Section F, Deliveries or Performance, clause F.2 is modified as follows:

(e) The period of performance for the changed work specified in Modification 144 Section C shall be for the period of performance beginning with the date of this signed modification (Modification 144) through November 21, 2011.

5. Section G, Contract Administration Data, clause G.7 is modified as follows:

(e) The Contractor may invoice costs for both the changed work and other work in the same invoice. However, the Contractor shall separately identify costs in its invoices that pertain to the changed work until the parties agree to an equitable adjustment for the changes ordered by the Contracting Officer per Modification 144.

6. In reference to this change order, incorporate clause FAR 52.216-24 Limitation of Government Liability (Apr 1984)

Remains unchanged.

7. FAR 52.243-6 Change Order Accounting (Apr 1984) is hereby invoked.

8. Section J, List of Attachments is modified as follows:

Remains unchanged.

9. Proposal Due Date

The Contractor must assert its right to an adjustment under this clause by submitting a proposal no later than November 11, 2011.

10. All other terms and conditions remain unchanged.

ATTACHMENT 1

The following changes are made to the requirements stated in Modification 060:

B. Section C (page C-4), Description/Specifications/Statement of Work is modified as follows:

FROM: (1) Small Column Ion Exchange (SCIX) Fabrication and Installation

Design a SCIX system no later than October 31, 2013. The system, as designed, will be installed in Tank 41H and will reflect a design composition of 2 ion exchange columns, a rotary microfilter module, a spent resin disposal module, submersible mixing and transfer pumps, and ancillary supporting equipment and structures. The system shall be designed to process nominally 2.5 Mgal per year of decontaminated salt solution (DSS).

TO: (1) Small Column Ion Exchange (SCIX) Fabrication and Installation

Design a SCIX system no later than September 30, 2011. The system, as designed, will be installed in Tank 41H and will reflect a design composition of 2 ion exchange columns, a rotary microfilter module, a spent resin disposal module, submersible mixing and transfer pumps, and ancillary supporting equipment and structures. The system shall be designed to process nominally 2.5 Mgal per year of decontaminated salt solution (DSS).

FROM: (3) Actinide Removal Process/Modular Caustic Side Solvent Extraction Unit (ARP/MCU) Process Improvements and Operations

Design such components as necessary to enable the life extension of ARP/MCU until six months prior to the start-up of SWPF. This design (should take into account) relocation of the current ARP/MCU facility from 96 H to an interim staging area and ultimately 512S. This design task shall incorporate the use of the next generation solvent. Design is to incorporate operational improvements to the current system with minimal impact to operations. The design should take into account the requirement to continue to operate ARP/MCU until approximately 6 months prior to startup of the SWPF.

TO: (3) Actinide Removal Process/Modular Caustic Side Solvent Extraction Unit (ARP/MCU) Process Improvements and Operations

Design such components as necessary to enable the life extension of ARP/MCU until six months prior to the start-up of SWPF. Delete the interim relocation and 512S installation requirement. This design task shall incorporate the use of the next generation solvent. Design is to incorporate operational improvements to the current system with minimal impact to operations. The design should take into account the requirement to continue to operate ARP/MCU until approximately 6 months prior to startup of the SWPF.

FROM: (6) SSPS Common Infrastructure Upgrades

Design upgrades to air, water, steam, and electrical utility systems required to support the SCIX system, the ARP/MCU life extension, and other tank farm

utility systems needed to ensure reliable utility services are available to support the significantly greater volume of waste transfers and system operating requirements associated with the overall SSPS.

TO: (6) SSPS Common Infrastructure Upgrades

Design upgrades to air, water, steam, and electrical utility systems (for the 4 Pack of tanks only) required to support the SCIX system, the ARP/MCU life extension, and other tank farm utility systems needed to ensure reliable utility services are available to support the significantly greater volume of waste transfers and system operating requirements associated with the overall SSPS.

The following changes are made to the requirements stated in Modification 070:

2. Section C, Description/Specifications/Statement of Work is modified as follows:

- A. Section C is modified to add the Supplemental Salt Processing Initiative Scope of Work to the Overview of the Contract Workscope (page C-2) as follows:

FROM: Small Column Ion Exchange (SCIX) Fabrication and Installation

Design support required to mature SCIX Fabrication and Installation to the Final Design stage includes design activities to specify equipment as well as design activities in support of detailed changes to existing tank top structures and equipment for installation of the SCIX process. The scope does not include Title III Design activities during the construction phase.

Design activities to support SCIX are the following:

- Design services support for the ion exchange columns (IXC), the ion exchange media crystalline silicotitanate, two IXCs, piping to transfer the salt solution between the two IXC units and from the lag IXC to Tank 50, and all process connections required for operation and maintenance of the IXC. It includes specification development and issuance, installation design and interface design for the IXCs, IXC support/suspension connections, and flow path tie-ins.
- Design services support for the rotary microfilter (RMF) which includes a pumping system, four RMF units operating in parallel, submersible pump, and piping to transfer the filter effluent or clarified salt solution to the IXC. It includes all labor and miscellaneous material required to design the submersible pump/RMF assembly, filter assembly support/suspension connections, and flow path tie-ins.
- Design services support for the spent resin disposal system (SRD) to grind the resin to less than 38 microns. It includes design of the grinder and piping to transfer the spent CST from the IXC to the SRD and from the SRD to Tank 40H.
- Design services support for Common Plant Equipment (CPE) needed to support the SCIX process. It includes design for chemical feed components to supply de-ionized water (DIW), plant air (PA), instrument air (IA), nitric acid, and caustic to SCIX equipment and processes. It includes design for resin preparation and additional common plant equipment needed to support the SCIX process.
- Design services support for Testing and Integrated Acceptance (TIA) in support of the Integrated Systems test at TNX and the process controls.
- Design services support for shielding and supports (S&S) needed for Tank 41 to accommodate equipment to process waste using SCIX process equipment. Design

should be included for providing supports that stay within tank top loading requirements and providing shielding to reduce the background radiation on the SCIX process.

In addition to the specific design activities identified above, the scope of work also includes design-related program support activities involving managing and monitoring execution of the design work and support of long lead procurement and other than design consent packages. Such activities include project management, project controls, quality assurance, design authority support and design input, ES&H support (including safety basis reviews) and design input, construction services support, D&R including design support of construction and design input, and waste determination/regulatory support and design input. Design-related laboratory support services acquired from SRNL and/or other specialized laboratories are also included where applicable. The scope also includes any external reviews to the extent required and ancillary facility support where applicable. Associated design-related travel and other direct cost for materials, supplies and offices are similarly included within this design scope.

Final design to support fabrication and construction, with the exception of design pending from procurements, is complete by September 30, 2011.

TO: Small Column Ion Exchange (SCIX) Fabrication and Installation

Design support required to mature SCIX Fabrication and Installation to the Final Design stage includes design activities to specify equipment as well as design activities in support of detailed changes to existing tank top structures and equipment for installation of the SCIX process. The scope does not include Title III Design activities during the construction phase.

Design activities to support SCIX are the following:

- Design services support for the ion exchange columns (IXC), the ion exchange media crystalline silicotitanate, two IXCs, piping to transfer the salt solution between the two IXC units and from the lag IXC to Tank 50, and all process connections required for operation and maintenance of the IXC. It includes specification development and issuance, installation design and interface design for the IXCs, IXC support/suspension connections, and flow path tie-ins.
- Design services support for the rotary microfilter (RMF) which includes a pumping system, four RMF units operating in parallel, submersible pump, and piping to transfer the filter effluent or clarified salt solution to the IXC. It includes all labor and miscellaneous material required to design the submersible pump/RMF assembly, filter assembly support/suspension connections, and flow path tie-ins.
- Design services support for the spent resin disposal system (SRD) to grind the resin to less than 38 microns. It includes design of the grinder and piping to transfer the spent CST from the IXC to the SRD and from the SRD to Tank 40H.
- Design services support for Common Plant Equipment (CPE) needed to support the SCIX process. It includes design for chemical feed components to supply de-ionized water (DIW), plant air (PA), instrument air (IA), nitric acid, and caustic to SCIX equipment and processes. It includes design for resin preparation and additional common plant equipment needed to support the SCIX process.
- Design services support for Testing and Integrated Acceptance (TIA) in support of the Integrated Systems test at TNX and the process controls.
- Design services support for shielding and supports (S&S) needed for Tank 41 to accommodate equipment to process waste using SCIX process equipment. Design should be included for providing supports that stay within tank top loading

requirements and providing shielding to reduce the background radiation on the SCIX process.

In addition to the specific design activities identified above, the scope of work also includes design-related program support activities involving managing and monitoring execution of the design work and support of long lead procurement and other than design consent packages. Such activities include project management, project controls, quality assurance, design authority support and design input, ES&H support (including safety basis reviews) and design input, construction services support, D&R (five risers only) including design support of construction and design input, and waste determination/regulatory support and design input. Design-related laboratory support services acquired from SRNL and/or other specialized laboratories are also included where applicable. The scope also includes any external reviews to the extent required and ancillary facility support where applicable. Associated design-related travel and other direct cost for materials, supplies and offices are similarly included within this design scope.

Final design to support fabrication and construction, with the exception of design pending from procurements, is complete by September 30, 2011.

The following changes are made to the requirements stated in Modification 071:

2. Section C, Description/Specifications/Statement of Work is modified as follows:

- B. Section C is modified to add the Supplemental Salt Processing Initiative Scope of Work to the Overview of the Contract Workslope (page C-2) as follows:

FROM: ARP/MCU Life Extension Fabrication and Installation

Design support for the ARP/MCU Life Extension includes necessary design activities to specify equipment and detailed changes to extend the operational life of the ARP/MCU and to conduct demonstrations of the Next Generation Solvent (NGS) and modified monosodium titanate (mMST). The scope of work does not include Title III Design activities during the construction phase

The following design activities support ARP/MCU Life Extension:

- Design services required to support design which includes all research and development (R&D), testing, and operation activities required to demonstrate compatibility and performance capabilities of the next generation solvent (NGS), modified monosodium titanate (mMST), and in-line solvent monitoring technology.
- Design services support for ARP/MCU Life Extension facility modifications to relocate the ARP monosodium titanate (MST) chemical addition equipment within the 241-96H building on an interim basis.
- Design services support for ARP/MCU Life Extension In-Line Monitoring for ISOPAR which includes special materials associated with the design of the MCU in-line ISOPAR monitoring system.
- Design services support for ARP/MCU Life Extension MCU next generation solvent implementation to demonstrate the effectiveness of a modified solvent in providing improved performance characteristics.
- Design services support for ARP/MCU Life Extension Piping Modifications for Operations Recovery which includes design for piping modifications required to establish transfer paths to enable recovery from process upsets in order to mitigate risks associated with the NGS demonstration and reduce/minimize impact on subsequent operations.
- Design services support for ARP/MCU Life Extension SE and DSS Coalescer Modifications which will include redesigning the coalescers to enable remote change-out.
- Design services support for 512-S Life Extension Facility Modifications to relocate the ARP chemical addition and strike functions from the 241-96H building to building 512-S.
- Design services support for DWPF modifications required as a result of the new solvent/strip acid implementation at MCU and the modified MST (mMST) implementation at 512-S. It includes design activities required to make modifications to the DWPF to install a boric acid addition system with associated jumpers to accommodate chemical changes in waste feed.

In addition to the specific design activities identified above, the scope of work also includes design-related program support activities involving managing and monitoring execution of the design work and support of long lead procurement and other than design consent packages. Such activities include project management, project controls, quality assurance, design authority

support and design input, ES&H support (including safety basis reviews) and design input, construction services support and design input, and waste determination/regulatory support and design input. Design-related laboratory support services acquired from SRNL and/or other specialized laboratories are also included where applicable. The scope also includes any external reviews to the extent required and ancillary facility support where applicable. Associated design-related travel and other direct cost for materials and supplies are similarly included within this design scope.

Final design associated with ARP/MCU Life Extension and BGS implementation at ARP/MCU and DWPF to support fabrication and construction, with the exception of design pending from procurements, is scheduled to complete August 31, 2011. Final design to implement mMST striking capability at 512-S to support fabrication and construction, with the exception of design pending from procurements, is scheduled to complete September 30, 2012.

TO: ARP/MCU Life Extension Fabrication and Installation

Design support for the ARP/MCU Life Extension includes necessary design activities to specify equipment and detailed changes to extend the operational life of the ARP/MCU and to conduct demonstrations of the Next Generation Solvent (NGS). The scope of work does not include Title III Design activities during the construction phase.

The following design activities support ARP/MCU Life Extension:

- Design services required to support design which includes all research and development (R&D), testing, and operation activities required to demonstrate compatibility and performance capabilities of the next generation solvent (NGS), and in-line solvent monitoring technology NOTE: R&D associated with mMST was suspended as of June 24, 2011.
- Design services support for ARP/MCU Life Extension In-Line Monitoring for ISOPAR which includes special materials associated with the design of the MCU in-line ISOPAR monitoring system.
- Design services support for ARP/MCU Life Extension MCU next generation solvent implementation to demonstrate the effectiveness of a modified solvent in providing improved performance characteristics.
- Design services support for ARP/MCU Life Extension Piping Modifications for Operations Recovery which includes design for piping modifications required to establish transfer paths to enable recovery from process upsets in order to mitigate risks associated with the NGS demonstration and reduce/minimize impact on subsequent operations.
- Design services support for ARP/MCU Life Extension SE and DSS Coalescer Modifications which will include redesigning the coalescers to enable remote change-out.

In addition to the specific design activities identified above, the scope of work also includes design-related program support activities involving managing and monitoring execution of the design work and support of long lead procurement and other than design consent packages. Such activities include project management, project controls, quality assurance, design authority support and design input, ES&H support and design input, SMS Safety reviews and documentation, construction services support and design input, and waste determination/regulatory support and design input. Design-related laboratory support services acquired from SRNL and/or other specialized laboratories are also included where applicable.

The scope also includes any external reviews to the extent required and ancillary facility support where applicable. Associated design-related travel and other direct cost for materials and supplies are similarly included within this design scope.

Final design associated with ARP/MCU Life Extension and NGS implementation at ARP/MCU and DWPF to support fabrication and construction, with the exception of design pending from procurements, is scheduled to complete August 31, 2011.

The following changes are made to the requirements stated in Modification 072:

2. Section C, Description/Specifications/Statement of Work is modified as follows:

- C. Section C is modified to add the Supplemental Salt Processing Initiative Scope of Work to the Overview of the Contract Workslope (page C-2) as follows:

FROM: Enhanced Low Activity Waste Disposition (ELAWD)

Design support for ELAWD includes necessary design activities to specify equipment and detailed changes to increase the capacity and attainment of the Saltstone facility. The scope of work includes safety bases review and modifications as needed to support design activities and Design Authority support. The scope does not include Title III Design activities during the construction phase.

The following design activities support ELAWD:

- Design services support for ELAWD activities required to establish 24/7 operational support facilities. Included are design activities for infrastructure upgrades for trailer support facilities to house additional support personnel required for 24/7 operations.
- Design services support for ELAWD Dry Feed Modifications which includes activities associated with dry feed system upgrades.
- Design services support for ELAWD Mixing and Transfer System Modifications. It includes design support for pig valve replacement, mixer upgrades, mixer isolation device, grout hopper upgrades, and D&R of existing equipment.
- Design services support for ELAWD Balance of Plant Modifications. Included are all design activities associated with compressor replacement, lighting upgrades, and lightning protection upgrades.

In addition to the specific design activities identified above, the scope of work also includes design-related program support activities involving managing and monitoring execution of the design work and support of long lead procurement and other than design consent packages. Such activities include project management, project controls, quality assurance, design authority support and design input, ES&H support (including safety basis reviews) and design input, construction services support and design input, and waste determination/regulatory support and design input. Design-related laboratory support services acquired from SRNL and/or other specialized laboratories are also included where applicable. The scope also includes any external reviews to the extent required and ancillary facility support where applicable. Associated design-related travel and other direct cost for materials and supplies are similarly included within this design scope.

Final design to support fabrication and construction, with the exception of design pending from procurements, is complete by September 19, 2012.

TO: Enhanced Low Activity Waste Disposition (ELAWD)

Design support for ELAWD includes necessary design activities to specify equipment and detailed changes to increase the capacity and attainment of the Saltstone facility. The scope of work includes safety bases review and modifications as needed to support design activities and Design Authority support. The scope does not include Title III Design activities during the construction phase.

The following design activities support ELAWD:

- **Design services support for ELAWD Dry Feed Modifications which includes activities associated with dry feed system upgrades.**
- **Design services support for ELAWD Mixing and Transfer System Modifications. It includes design support for pig valve replacement, mixer upgrades, mixer isolation device, grout hopper upgrades, and D&R of existing equipment.**
- **Design services support for ELAWD Balance of Plant Modifications. Included are all design activities associated with compressor replacement, lighting upgrades, and lightning protection upgrades.**

In addition to the specific design activities identified above, the scope of work also includes design-related program support activities involving managing and monitoring execution of the design work and support of long lead procurement and other than design consent packages. Such activities include project management, project controls, quality assurance, design authority support and design input, ES&H support (including safety basis reviews) and design input, construction services support and design input, and waste determination/regulatory support and design input. Design-related laboratory support services acquired from SRNL and/or other specialized laboratories are also included where applicable. The scope also includes any external reviews to the extent required and ancillary facility support where applicable. Associated design-related travel and other direct cost for materials and supplies are similarly included within this design scope.

Final design to support fabrication and construction, with the exception of design pending from procurements, is complete by September 19, 2012.

The following changes are made to the requirements stated in Modification 073:

2. Section C, Description/Specifications/Statement of Work is modified as follows:

D. Section C is modified to add the Supplemental Salt Processing Initiative Scope of Work to the Overview of the Contract Workscope (page C-2) as follows:

FROM: Utilities and Services Upgrades

Design support for the SSI Utilities and Services upgrades effort includes necessary design activities to specify equipment and detailed changes to existing tank utilities and services to support the SSI. The scope of work includes safety bases review and modifications as needed to support design activities and Design Authority support. The scope does not include Title III Design activities during the construction phase.

The following Design activities support SSI Utilities and Services upgrades:

- Design services support for SSI Utilities and Services electrical system improvements. It includes all design work necessary to modify and upgrade electrical systems furnishing electricity to tank farm facilities to meet increased demand generated by implementation of the SSI.
- Design services support for SSI Utilities and Services steam system improvements. It includes design work necessary to modify and upgrade steam systems furnishing steam to tank farm facilities to meet increased demand generated by implementation of the SSI.
- Design services support for SSI Utilities and Services air system improvements. Included is all design work necessary to modify and upgrade plant air and instrument air systems furnishing air to tank farm facilities to meet increased demand generated by implementation of the SSI.
- Design services support for Utilities and Services water system improvements. Included is design work necessary to modify and upgrade well water systems furnishing water to tank farm facilities to meet increased demand generated by implementation of the SSI.
- Design services support for SSI Utilities and Services bridge. It includes design activities required for a new utility bridge for accessing the East Hill of H Tank Farm. Work activities will include designing the new bridge and necessary supporting structures.

In addition to the specific design activities identified above, the scope of work also includes design-related program support activities involving managing and monitoring execution of the design work and support of long lead procurement and other than design consent packages. Such activities include project management, project controls, quality assurance, design authority support and design input, ES&H support (including safety basis reviews) and design input, construction services support and design input, and waste determination/regulatory support and design input. Design-related laboratory support services acquired from SRNL and/or other specialized laboratories are also included where applicable. The scope includes any external reviews to the extent required and ancillary facility support where applicable. Associated design-related travel and other direct cost for materials and supplies are similarly included within this design scope.

Final design to support fabrication and construction, with the exception of design pending from procurements, is complete by December 29, 2011.

TO: Utilities and Services Upgrades

Design support for the SSI Utilities and Services upgrades effort includes necessary design activities to specify equipment and detailed changes to existing tank utilities and services to support the SSI. The scope of work includes safety bases review and modifications as needed to support design activities and Design Authority support. The scope does not include Title III Design activities during the construction phase.

The following Design activities support SSI Utilities and Services upgrades:

- Design services to produce a specification for procurement of the Electrical Substation to support the additional electrical demands of Small Column Ion Exchange (SCIX).
- Design services support for SSI Utilities and Services steam system improvements. It includes design work necessary to modify and upgrade steam systems furnishing steam to tank farm facilities to meet increased demand generated by implementation of the SSI (4 Pack of Tanks only).
- Design services support for SSI Utilities and Services air system improvements. Included is all design work necessary to modify and upgrade plant air and instrument air systems furnishing air to tank farm facilities to meet increased demand generated by implementation of the SSI (4 Pack of Tanks only).
- Design services support for Utilities and Services water system improvements. Included is design work necessary to modify and upgrade well water systems furnishing water to tank farm facilities to meet increased demand generated by implementation of the SSI (4 Pack of Tanks only).
- Design services support for SSI Utilities and Services bridge. It includes design activities required for a new utility bridge for accessing the East Hill of H Tank Farm. Work activities will include designing the new bridge and necessary supporting structures.

In addition to the specific design activities identified above, the scope of work also includes design-related program support activities involving managing and monitoring execution of the design work and support of long lead procurement and other than design consent packages. Such activities include project management, project controls, quality assurance, design authority support and design input, ES&H support (including safety basis reviews) and design input, construction services support and design input, and waste determination/regulatory support and design input. Design-related laboratory support services acquired from SRNL and/or other specialized laboratories are also included where applicable. The scope includes any external reviews to the extent required and ancillary facility support where applicable. Associated design-related travel and other direct cost for materials and supplies are similarly included within this design scope.

Complete Design for New Utility Bridge and the electrical substation for Small Column Ion Exchange (SCIX) by July 31, 2011.

Complete Design for upgrades to the water, steam and air systems for the 4 Pack of Tanks by September 30, 2011.