

**AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT**

BPA NO. 1. CONTRACT ID CODE PAGE 1 OF 10

2. AMENDMENT/MODIFICATION NO. M003  
 3. EFFECTIVE DATE 2-16-2012  
 4. REQUISITION/PURCHASE REQ. NO. FSM-12-008  
 5. PROJECT NO. (if applicable)

6. ISSUED BY CODE 3100  
 U.S. Nuclear Regulatory Commission  
 Div. of Contracts  
 Attn:  
 Mail Stop: TWB-01-B20M  
 Washington, DC 20555  
 7. ADMINISTERED BY (if other than Item 6) CODE 3100  
 U.S. Nuclear Regulatory Commission  
 Div. of Contracts  
 Mail Stop: TWB-01-B10M  
 Washington, DC 20555

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)  
 SOUTHWEST RESEARCH INSTITUTE  
 6220 CULEBRA RD  
 SAN ANTONIO TX 782385166  
 9A. AMENDMENT OF SOLICITATION NO.  
 9B. DATED (SEE ITEM 11)  
 10A. MODIFICATION OF CONTRACT/ORDER NO.  
 NRC-41-09-011 NRC-41-09-011T022  
 10B. DATED (SEE ITEM 15)  
 09-22-2010

**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 ACKNOWLEDGMENT 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) RFFA: FSM-12-008; FAIMIS: 120129  
 B&R: 2012-55-35-4-196; JC: F1115; BOC: 252A  
 Approp. No.: 31X0200; Obligation: \$0.00

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

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(D).  
 C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:  
 D. OTHER (Specify type of modification and authority) Mutual Agreement

**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.)**

The purpose of this modification is to: (1) revise and de-scope the Statement of Work by eliminating Subtasks 2 - 4, and restructure the budget and apply Subtask 5 of the SOW as an Optional task during: 9/29/2012 thru 9/28/2013.

See Page 2 for specific changes  
 All other terms and conditions remain unchanged and in full force and effect.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as hereinafter changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) R. B. Kalmbach, Executive Director, Contracts  
 15B. CONTRACTOR/OFFEROR  
 15C. DATE SIGNED 2/9/2012  
 16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Steve Bbol, Branch Chief, MSA  
 16B. UNITED STATES OF AMERICA  
 16C. DATE SIGNED 2/16/12

**SUNSI REVIEW COMPLETE**

FEB 17 2012

TEMPLATE - ADM001

ADM002

CONTINUATION PAGE

OPTIONAL FORM 347

Block 17.(b)

- Delete the task order ceiling of "\$445,256" and replace with "\$311,578"
- Delete: "The Period of Performance is September 29, 2010 through September 28, 2012, with an option to extend the period of performance for an additional year."
- Insert: "The base Period of Performance is September 29, 2010 through September 28, 2012."
- Insert: "The Option Period is September 29, 2012 through September 28, 2013."
- Insert: "The Option Amount is \$111,143 for completion of Subtask 5."
- Change the Technical Monitor from "James Webb" to "Tanya Oxenberg".

Block 21.a. – Change Department of Interior email address to: "NRCPayments\_NBCDenver@nbc.gov"

1. CONSIDERATION AND OBLIGATION—COST PLUS FIXED FEE (JUN 1988) ALTERNATE 1 (JUN 1991)

- (a) Delete "\$445,256", "\$412,722, and "\$32,534" and replace with "\$311,578", "\$288,682", and "\$22,896", respectively.

Insert the following budget under "1. CONSIDERATION AND OBLIGATION—COST PLUS FIXED FEE" clause

**BUDGET**

CLIN: 0001

Base Period: 9-29-2010 through 9-28-2012

Total Cost: \$288,682

Fixed-Fee: \$22,896

**Total Estimated Cost-Plus-Fixed-Fee: \$311,578 (Base Amount)**

CLIN: 0002

Option Period: 9-29-2012 through 9-28-2013

Optional Subtask 5

<u>Cost Element</u>	<u>Total</u>
Direct Labor	\$32,498
Fringe Benefits (49%)	\$15,924
Overhead (54%)	\$26,148
G&A (42%)	\$20,337
CFC	\$759
Travel	\$7,300
Total Estimated Cost	\$102,966

Fixed-Fee (8%) (less CFC) \$8,177

**Total Estimated Cost-Plus-Fixed-Fee: \$111,143 (Optional Subtask 5)**

SECTION E.2: Delete the term "Project Officer" and replace with "Contracting Officer's Representative"

**STATEMENT OF WORK**

Delete the STATEMENT OF WORK in its entirety and replace with ATTACHMENT A.

ATTACHMENT A

STATEMENT OF WORK

TASK TITLE:	HYDROGEOLOGIST/HYDROLOGIST TO SUPPORT DECOMMISSIONING AND URANIUM RECOVERY ACTIVITIES
JOB CODE:	F1115
TASK ORDER NUMBER:	22
B&R NUMBER:	2012-55-35-4-196
NRC ISSUING OFFICE:	FSM
NRC PROJECT OFFICER (PO):	Edna Knox-Davin
NRC TECHNICAL PROJECT MANAGER (TPM):	Tanya Oxenberg
NRC TECHNICAL MONITOR:	
SUBTASK 1	Thomas McLaughlin
SUBTASK 5	Dominick Oriando
FEE RECOVERABLE:	YES
TAC NUMBER:	
SUBTASK 1	TBD
SUBTASK 5	TBD
DOCKET NUMBER:	
SUBTASK 1	040-08102
SUBTASK 5	TBD

1 Background

Congress enacted the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA) to provide for the disposal, long-term stabilization and control of uranium mill tailings in a safe and environmentally sound manner, and to minimize or eliminate radiation health hazards to the public.

Under the provisions of Title I of UMTRCA, Congress addressed the problem of inactive, unregulated tailing piles. Title I of UMTRCA specifies the inactive processing sites for remediation. Except at the Atlas Moab site, surface reclamation activities have been completed and approved by the U.S. Nuclear Regulatory Commission (NRC) at all Title I sites. However, groundwater cleanup is still ongoing at many of these Title I sites. When groundwater cleanup is completed, DOE will submit a revised long-term surveillance plan (LTSP) for NRC concurrence. Title 10 of the Code of Federal Regulations, Section 40.27, "General License for Custody and Long-Term Care of Residual Radioactive Material Disposal Sites," governs the long-term care of Title I sites under a general license held by either DOE or the State in which the site is located.

Title II amended the definition of byproduct material to include mill tailings and added specific authorities for the NRC to regulate this new category of byproduct material at licensed sites. Title II of the UMTRCA addresses uranium recovery operations and decommissioning of sites, which have substantial quantities of mill tailings, are licensed by the NRC or its Agreement States.

A Hydrogeologist/Hydrologist will provide technical support to the disposal, long-term stabilization, and control of uranium mill tailings in a safe and environmentally sound manner, and to minimize or eliminate environmental and radiation health hazards to the public.

2 Objective

The objective of this task is to seek assistance from the Center for Nuclear Waste Regulatory Analyses (CNWRA) to provide support for a Hydrogeologist to support decommissioning and uranium recovery activities for the following subtasks.

3 Work Requirements/Scope of Work

**Subtask 1 ExxonMobil Environmental Services**

ExxonMobil submitted a Notice of Intent (ML092720150) to prepare and submit a license amendment application to re-define the proposed long-term surveillance and monitoring (LTSM) boundary, including the establishment of new and revised alternate concentrations limits (ACL) with associated points of compliance (POC) and points of Exposure (POE) for the Highland Reclamation Project located in the State of Wyoming. CNWRA staff will review the application and other pertinent documents to determine the acceptability of the re-define proposed long-term surveillance and monitoring (LTSM) boundary, as well as, the appropriateness of the revised alternate concentration limits (ACL) on the associated points of compliance (POC) and points of exposure (POE). More specifically, to determine the acceptability, CNWRA staff will examine and evaluate the following: a) the geology and stratigraphy of the affected area and the re-defined area, b) the appropriateness of the groundwater and hydrological models used by ExxonMobil; c) appropriateness of the input parameters associated with the models; d) assumptions used to operate and validate the model; e) adjacent land and water uses; and f) the development and justification of the point of compliance (POC) and point of exposure (POE). Based on the above information, including the submitted license amendment, CNWRA shall develop a Safety Evaluation Report (SER) and an Environmental Report (ER). The contents of the SER/ER will be determined by consultation with NRC.

**OPTIONAL WORK: Subtask 5 Monument Valley Arizona Title I site  
(9/29/2012 – 9/28-2013)**

At the Monument Valley, Arizona Title I site, NRC is expecting the U.S. Department of Energy (DOE) to submit a Final Phytoremediation Study Report and Groundwater Compliance Action Plan (GCAP) in fiscal year 2011, for review and NRC concurrence.

For the Final Phytoremediation Study Report, CNWRA staff will examine and evaluate the applicability of the option selected and its impact on NRC/EPA regulations and guidance for NRC acceptance.

For the Groundwater Compliance Action Plan (GCAP), CNWRA staff will examine and evaluate the methodology, the development and the impact of the Point of Exposure (POE), as well as, the impact on NRC regulations and guidance for NRC acceptance.

4 Technical Qualifications Required

**Subtask 1 and Optional Subtask 5**

A minimum of a bachelor of science, (preferably a graduate level degree) in a science and/or engineering discipline with a minimum of 5 years of experience in hydrology, hydrogeology, geology, geochemistry, and/or groundwater assessment, or some combination thereof.

6 Meetings and Travel

**Subtask 1**

Two trips are identified for one person. One trip will be to NRC Headquarters for a kickoff meeting and the second trip to the applicant's site. During the trip to the applicant's site, CNWRA staff will participate in the collection of split samples of approximately 25 wells and the Highland reservoir.

**Optional Subtask 5**

Two trips are identified for one person. One trip will be to the site and the second trip will be to a public meeting.

7 NRC Furnished Material

**Subtask 1**

The NRC Project Manager for the site will supply one copy of the license amendment application and the relevant information listed below:

- 1973 Environmental Statement prepared by the AEC
- 1982 Exxon Seepage Study
- 1982 Review of the Seepage Study by Roy Williams
- 1984 Final Reclamation Plan submitted to the NRC by Exxon
- 1984 Reclamation Lake Water Quality by Charles Down
- 1985 Reclamation Plan submitted to WDEQ by Exxon
- Annual Reports of Seepage Migration from 1990 to 1999
- 1998 Supporting Information for ACL Application from Exxon
- 1999 EA and TER for ACL approval by NRC
- 2000 Highland Reservoir Reclamation by WDEQ
- 2007 Long Term Geochemical Evolution of the Highland Pit Lake by Exxon (ML071840894)
- 2007 Long Term Pit Lake and Groundwater Hydrology at the Highland Mine site by Exxon (ML071840772)
- 2007 Highland Pit Lake Ecological Risk Assessment (ML071840783)
- All correspondences between the licensee (Exxon), NRC, and WDEQ
- 30 years of groundwater monitoring

**Optional Subtask 5**

The NRC Project Manager for the site will supply one copy of each report and the relevant information listed below:

- 40 CFR 192
- 10 CFR 40
- 20 years of available groundwater modeling data
- Phytoremediation Pilot Study Reports
- 2005 Environmental Assessment of Groundwater Compliance
- 1996 Baseline Risk Assessment
- 1999 Final site Observational Work Plan
- 2000 NRC Approval of Final Site Observational Work Plan
- 1993 Surface Remedial Action Plan

Schedule/Deliverables

**Subtask 1**

**Work Breakdown Structure Outline**

All deliverable dates are from August 8, 2011

Level 1	Level 2	Level 3	Level 4
SER			Outline on shared drive 2 weeks Teleconference, Incorporate suggestions
		25 % completion 9 weeks (10/10) Teleconference	
		50 % completion 13 weeks (11/7) Draft RAIs Teleconference	
		75 % completion 17 weeks (12/5) Draft RAIs Teleconference	
	Draft SER 19 weeks (12/19) Draft RAIs Teleconference		
	Incorporate NRC comments 23 weeks (1/16/2012)		
	Send RAIs to licensee 24 weeks (1/23)		

Level 1	Level 2	Level 3	Level 4
	Incorporate licensee responses to RAIs into draft SER 31 weeks (3/12)		
	Staff concurrence 33 weeks (3/26)		
	OGC concurrence 35 weeks (4/9)		
	Management concurrence 41 weeks (5/21)		
	Publish SER concurrent with EA 42 weeks (5/28)		
EA			
			Outline on shared drive 3 weeks Teleconference, Incorporate suggestions
		25 % completion 6 weeks Teleconference	
		50 % completion 8 weeks Draft RAIs Teleconference	
		75 % completion 12 weeks (10/31) Draft RAIs Teleconference	
	Draft EA 17 weeks (12/5) Draft RAIs Teleconference		
	Incorporate NRC comments 19 weeks (12/19)		
	Send RAIs to licensee 21 weeks (1/2)		
	Incorporate licensee responses to RAIs into draft EA 25 weeks (1/30)		
	Staff concurrence 27 weeks (2/13)		
	OGC concurrence 29 weeks (2/27)		
	Management concurrence 33 weeks (3/26)		
	Draft EA to WDEQ for comments 37 (4/23)		
	Incorporate State comments 38 (4/30)		
	Final staff, OGC, management		



Level 1	Level 2	Level 3	Level 4
	concurrency 42 weeks (5/28)		
Public meeting in Casper			
FRN (Opportunity for a Hearing)			

**Optional Subtask 5**

Deliverable

Schedule

Review all relevant data submitted by DOE to NRC for this site and write a summary of the action(s) taken by DOE to date and those action(s) approved by the NRC

6 Weeks from award of contract

Submit a written summary to the NRC for review and comment.

7 Weeks from award of contract

Resolve NRC comments on written summary

4 Weeks after NRC comments on written summary

Submit final written summary to NRC

5 Weeks after NRC comments on written summary

Review the Final Phytoremediation Report and the Groundwater Compliance Action Plan

8 Weeks from receipt by NRC

Prepare draft Request for Additional Information and draft TER for each document and submit to NRC for review and approval.

9 Weeks from receipt by NRC

Resolve NRC comments on RAIs/draft TER

4 Weeks after NRC comments on RAIs

Submit final RAIs to NRC for submittal to DOE

5 Weeks after NRC comments on RAIs

Prepare final Technical Evaluation Report

4 Weeks after receipt of DOE response to RAIs

Submit final Technical Evaluation Report to NRC for review and comment

5 Weeks after receipt of DOE response to RAIs

Resolve NRC comments on final TER

4 Weeks after receipt of NRC comments on TER

**Optional Subtask 5 – Cont'**

Deliverable

Schedule

Submit final Technical Evaluation Report  
to NRC

5 Weeks after receipt of NRC  
comments on TER

**8 Technical Direction**

Thomas McLaughlin is the designated NRC Technical Monitor for Subtask 1 and Dominick Oriando is the Technical Monitor for Subtask 5 for this procurement. Edna Knox-Davin is the designated NRC Project Officer. Tanya Oxenberg is the NRC Technical Project Manager. Any final decisions regarding technical direction must come from the NRC COR. Technical directions shall not constitute new assignments of work or changes of such a nature as to justify an adjustment in cost or the period of performance. Directions, if any, for changes in scope of work, cost, or period of performance will be issued by the NRC Contracting Officer.

**9 Technical Reports**

Technical reports for the task shall be submitted via electronic mail with electronic attachments consistent with the word processor in use at the NRC or portable document format (pdf), as appropriate. The CNWRA shall also provide one copy of each technical report to the NRC COR and Technical Project Manager.

**10 Financial and Technical Status Reports**

The CNWRA shall submit periodic technical and financial reports in accordance with the contract. The estimated staff effort should be recorded at the subtask level. The work accomplished and the degree of completeness should also be tracked by subtask. The reports are due within 20 calendar days after the end of the report period (i.e., each four week period). The Technical Project Manager has received two copies of the periodic status report and the COR has received one copy. See the contract for further distribution requirements.