

ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

BPA NO.

1

4

1. DATE OF ORDER 4/8/10		2. CONTRACT NO. (if any) NRC-41-09-011		6. SHIP TO:	
3. ORDER NO. T015		4. REQUISITION/REFERENCE NO. NRC-41-09-011		a. NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission	
5. ISSUING OFFICE (Address correspondence to) U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Valerie Whipple Mail Stop: TWB-01-B10M Washington, DC 20555				b. STREET ADDRESS James Webb Mail Stop TWFN 8F5	
7. TO:		c. CITY Washington		d. STATE DC	e. ZIP CODE 20555
a. NAME OF CONTRACTOR SOUTHWEST RESEARCH INSTITUTE				f. SHIP VIA	
b. COMPANY NAME				8. TYPE OF ORDER	
c. STREET ADDRESS 6220 CULEBRA RD				<input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY	
d. CITY SAN ANTONIO		e. STATE TX	f. ZIP CODE 782385166	REFERENCE YOUR Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.	
9. ACCOUNTING AND APPROPRIATION DATA B&R: 0-5515-355-226 JC: F1115 BOC: 252A APPN: 31X0200 FFS: 5510R067 \$99,850 DUNS: 007936842				10. REQUISITIONING OFFICE FSM	
11. BUSINESS CLASSIFICATION (Check appropriate box(es))				12. F.O.B. POINT Destination	
<input type="checkbox"/> a. SMALL <input type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> d. WOMEN-OWNED <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. EMERGING SMALL BUSINESS <input type="checkbox"/> g. SERVICE-DISABLED VETERAN-OWNED					
13. PLACE OF		14. GOVERNMENT B/L NO.		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date) September 15, 2010	
a. INSPECTION		b. ACCEPTANCE		16. DISCOUNT TERMS Net 30	

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	<p>The Contractor shall provide services in accordance with the attached Statement of Work Entitled "Evaluation of Land Application as Appropriate Method for Disposal of Liquid Wastes at Uranium In Situ Recovery Facilities."</p> <p>The total CPFF amount: \$103,634</p> <p>The total obligated amount: \$99,850</p> <p>The Period of Performance is Date of Award (Block 1 above) - September 1, 2010</p> <p>NRC Project Officer: Tira Patterson 301-415-7808</p> <p>Technical Monitor: James Webb (301) 415-6252</p> <p>List of Attachments: Statement of Work</p> <p>DUNS: 007936842</p>					

18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.	
21. MAIL INVOICE TO:					
a. NAME Department of Interior / NBC NRCPayments@nbc.gov					
b. STREET ADDRESS (or P.O. Box) Attn: Fiscal Services Branch - D2770 7301 W. Mansfield Avenue					
c. CITY Denver		d. STATE CO	e. ZIP CODE 80235-2230	\$103,634 CPFF	

22. UNITED STATES OF AMERICA
BY (Signature)

23. NAME (Typed)
Valerie Whipple
Contracting Officer
TITLE: CONTRACTING/ORDERING OFFICER

AUTHORIZED FOR LOCAL REPRODUCTION
PREVIOUS EDITIONS ARE OBSOLETE

FORM 347 (REV. 4/2006)
ISSUED BY GSA/FAR 48 CFR 53.213(f)

TEMPLATE - ADMIN


QUASI REVIEW COMPLETE

APR 09 2010

ADMIN

Please indicate your acceptance of this order by having an official who is authorized to bind your organization, execute this document in the space provided below.

ACCEPTED:

Signature: 

Name: R.B. Kalmbach

Title: Executive Director, Contracts

Date: April 8, 2010

TASK ORDER TERMS AND CONDITIONS

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

(a) The total estimated cost to the Government for full performance of this contract is \$103,634, of which the sum of \$[REDACTED] represents the estimated reimbursable costs, and of which \$[REDACTED] represents the fixed fee

(b) There shall be no adjustment in the amount of the Contractor's fixed fee by reason of differences between any estimate of cost for performance of the work under this contract and the actual cost for performance of that work.

(c) The amount currently obligated by the Government with respect to this contract is \$99,850, of which the sum of [REDACTED] represents the estimated reimbursable costs, and of which [REDACTED] represents the fixed fee.

2. PERIOD OF PERFORMANCE

The period of performance of this order shall be **Date of Award – September 15, 2010.**

3. 2052.215-70 KEY PERSONNEL (JAN 1993)

(a) The following individuals are considered to be essential to the successful performance of the work hereunder:

Name

Position

[REDACTED]

Project Manager/Principal Investigator

The contractor agrees that personnel may not be removed from the contract work or replaced without compliance with paragraphs (b) and (c) of this section.

- (b) If one or more of the key personnel, for whatever reason, becomes, or is expected to become, unavailable for work under this contract for a continuous period exceeding 30 work days, or is expected to devote substantially less effort to the work than indicated in the proposal or initially anticipated, the contractor shall immediately notify the contracting officer and shall, subject to the concurrence of the contracting officer, promptly replace the personnel with personnel of at least substantially equal ability and qualifications.
- (c) Each request for approval of substitutions must be in writing and contain a detailed explanation of the circumstances necessitating the proposed substitutions. The request must also contain a complete resume for the proposed substitute and other information requested or needed by the contracting officer to evaluate the proposed substitution. The contracting officer and the project officer shall evaluate the contractor's request and the contracting officer shall promptly notify the contractor of his or her decision in writing.
- (d) If the contracting officer determines that suitable and timely replacement of key personnel who have been reassigned, terminated, or have otherwise become unavailable for the contract work is not reasonably forthcoming, or that the resultant reduction of productive effort would be so substantial as to impair the successful completion of the contract or the service order, the contract may be terminated by the contracting officer for default or for the convenience of the Government, as appropriate. If the contracting officer finds the contractor at fault for the condition, the contract price or fixed fee may be equitably adjusted downward to compensate the Government for any resultant delay, loss, or damage.

4. SEAT BELTS

Contractors, subcontractors, and grantees, are encouraged to adopt and enforce on-the-job seat belt policies and programs for their employees when operating company-owned, rented, or personally owned vehicles.

5. WHISTLEBLOWER PROTECTION FOR NRC CONTRACTOR AND SUBCONTRACTOR EMPLOYEES (JULY 2006)

(a) The U.S. Nuclear Regulatory Commission (NRC) contractor and its subcontractor are subject to the Whistleblower Employee Protection public law provisions as codified at 42 U.S.C. 5851. NRC contractor(s) and subcontractor(s) shall comply with the requirements of this Whistleblower Employee Protection law, and the implementing regulations of the NRC and the Department of Labor (DOL). See, for example, DOL Procedures on Handling Complaints at 29 C.F.R. Part 24 concerning the employer obligations, prohibited acts, DOL procedures and the requirement for prominent posting of notice of Employee Rights at Appendix A to Part 24.

(b) Under this Whistleblower Employee Protection law, as implemented by regulations, NRC contractor and subcontractor employees are protected from discharge, reprisal, threats, intimidation, coercion, blacklisting or other employment discrimination practices with respect to compensation, terms, conditions or privileges of their employment because the contractor or subcontractor employee(s) has provided notice to the employer, refused to engage in unlawful practices, assisted in proceedings or testified on activities concerning alleged violations of the Atomic Energy Act of 1954 (as amended) and the Energy Reorganization Act of 1974 (as amended).

(c) The contractor shall insert this or the substance of this clause in any subcontracts involving work performed under this contract.

STATEMENT OF WORK

TASK TITLE: EVALUATION OF LAND APPLICATION AS AN APPROPRIATE METHOD FOR DISPOSAL OF LIQUID WASTES AT URANIUM IN SITU RECOVERY FACILITIES

JOB CODE: F1115

TASK ORDER NUMBER: TASK 15

B&R NUMBER: 05515355226

NRC ISSUING OFFICE: FSME

NRC PROJECT OFFICER (PO): TIRA PATTERSON (301) 415-7808

NRC TECHNICAL PROJECT MANAGER (TPM): JIM WEBB (301) 415-6252

NRC TECHNICAL MONITOR (TM): ELISE STRIZ (301) 415-0708

FEE RECOVERABLE: NO

TAC NUMBER: J21090

DOCKET NUMBER: NOT APPLICABLE

1.0 Background

Uranium in situ recovery (ISR) facilities generate significant quantities of liquid wastes as 11e.(2) byproduct material during operations. The wastes primarily derive as bleed from uranium recovery operations and subsequent groundwater restoration activities. The bleed flow rate is typically 1 percent of production or extraction flow rates. Although bleed waste is usually processed (e.g., reverse osmosis) before it is disposed by land application, the waste can contain a variety of both radioactive (e.g., radium) and chemical contaminants (e.g., selenium, manganese, arsenic). As such, there may be health and safety risks associated with land application of ISR facility liquid wastes via direct radiation, vegetation, or other pathways to humans.

2.0 Objective

The objective of this task is to seek assistance from the Center for Nuclear Waste Regulatory Analyses (CNWRA) in the development of appropriate criteria and guidance for review of proposals for the use of land application as an acceptable method for disposal of liquid wastes at ISR facilities.

3.0 Work Requirements/Scope of Work

The Center for Nuclear Waste Regulatory Analyses (CNWRA) staff shall develop an Appendix to revised NUREG-1569 to provide appropriate criteria and guidance on the use of land application for the disposal of treated ISR waste liquids. This work shall be coordinated with CNWRA's ongoing broad scope revision of NUREG-1569 under a separate task order.

- 3.1 CNWRA staff shall review current guidelines from other Federal and State agencies on land application of liquids containing metals and radionuclides to assess the regulation, design, operation, and monitoring of such facilities.
- 3.2 CNWRA staff shall review current land application permits and data from any currently licensed ISR facilities to evaluate the current regulation, design, monitoring and operations of facilities using land application for the disposal of ISR waste liquids. CNWRA shall also identify any impacts from land application to the public health and safety at these licensed sites.
- 3.3 Based on their assessment of current guidelines and regulations and existing operating data, CNWRA staff shall develop guidelines for the design, operation, and monitoring of land application of ISR waste

liquids necessary to protect public health and safety at these facilities. Land application of ISR liquid wastes must meet the dose requirements of 10 CFR 20.2002 and the disposal criteria of 10 CFR 40, Appendix A, Criterion 6.

- 3.4 CNWRA shall develop critical elements that should be included in ISR license applications which request the use of land application for ISR liquid wastes. These critical elements may include but would not be limited to:

3.4.1. Land application site geology and geomorphology:

1. Site geology, stratigraphy, and hydrogeology
2. Site slope, aspect, and surface topography
3. Proximity to surface waters
4. Groundwater resources
5. Meteorology

3.4.2. Soil Properties (pre-operational and operational):

1. Soil morphological properties
 - a. soil types
 - b. soil profile horizon characteristics
2. Soil physical properties
 - a. texture
 - b. Infiltration rates
 - c. available water holding capacity
 - d. porosity
 - e. bulk density
 - f. hydraulic conductivity
 - g. runoff characteristics
3. Soil chemical properties
 - a. chemical composition
 - b. cation exchange capacity
 - c. total organic content
 - d. soil attenuation capacity for metals and non-metals
4. Vegetation analysis
 - a. vegetation on land application site
 - b. crops to be grown on land application site

3.4.3 ISR Liquid Waste properties:

- a. source (e.g., effluent from reverse osmosis or a storage pond)
- b. chemical analysis
- c. radiological analysis
- d. volume

3.4.4 Land Application Design and Operating Criteria:

- a. acceptable waste composition
- b. acceptable weather conditions
- c. acceptable soil saturation conditions
- d. acceptable temperature conditions
- e. acceptable application rates
- f. acceptable monitoring data ranges for operation
- g. runoff control
- h. crop schedules and harvest rates

- i. need for exclusion of wildlife/public
- j. procedures and contingency plans for cessation of waste application if operating parameters are violated
- k. procedures and contingency plans for soil cleanup, if necessary

3.4.5 Land Application Monitoring and Reporting Requirements:

- a. liquid waste characteristics, radiological and non-radiological
- b. rates, timing, volume of applications
- c. soil samples
- d. lysimeter and water samples
- e. groundwater wells and samples
- f. vegetation samples
- g. runoff samples
- h. wind magnitude and direction and rainfall
- i. schedule of reporting requirements

3.4.6 Instrumentation and Inspections:

- a. land application system design and equipment
- b. operating instrumentation
- c. inspection and monitoring schedule
- d. spill and other event reporting

3.5 CNWRA shall develop criteria to enable NRC staff to review the critical elements that must be included in license applications which request the use of land application for disposal of ISR liquid wastes.

3.6 CNWRA staff shall coordinate and discuss the evaluation of land application of ISR liquid wastes with the NRC technical monitor. Discussions with the NRC technical monitor should be initiated by CNWRA at major points during the task and also on a regular schedule, agreed to by CNWRA and the NRC technical monitor.

4.0 Technical Qualifications Required

The CNWRA shall provide the services of appropriate staff with primary expertise in health physics, environmental science, surface water hydrology, and hydrogeology for the evaluation of land application as an acceptable method for disposal of liquid wastes at ISR facilities.

5.0 Meetings and Travel

No travel will be required for this task. CNWRA staff will participate in conference, videoconference, or telephone calls, as needed, to address and resolve issues or questions that may arise during the evaluation of land application methods for liquid waste disposal.

6.0 NRC Furnished Material

None.

7.0 Schedule/Deliverables

The following schedule of the CNWRA staff time required is based on estimates of time intervals to accomplish this task.

Calendar Time To Accomplish Task

Elapsed Time

Participate in a teleconference to discuss issues related to land application of liquid wastes.

5 working days from task initiation

Prepare draft Appendix for land application of liquid wastes and submit to NRC.

67 working days from task initiation

Receive NRC comments on draft Appendix.

Within 13 working days after draft Appendix due

Prepare draft final Appendix for land application and submit to NRC.

14 working days after receive NRC comments on draft Appendix

8.0 Technical Direction

Elise Striz is the designated NRC TM for this procurement. Jim Webb is the designated NRC TPM for this procurement. Tira Patterson is the designated NRC PO. Technical instructions may be provided to the CNWRA staff by the TM or TPM during the duration of this requested task. Technical instructions shall not constitute new assignments of work or changes of such a nature as to justify an adjustment in cost or 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.

9.0 Technical Reports

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

10.0 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 TPM shall receive two copies of the periodic status report, and the PO shall receive one copy. See the contract for further distribution requirements.