

**ORDER FOR SUPPLIES OR SERVICES**

PAGE OF PAGES  
1 8

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

BPA NO.

1 8

1. DATE OF ORDER <b>9/19/12</b>		2. CONTRACT NO. (if any) NRC-HQ-12-C-42-0057		8. SHIP TO:	
3. ORDER NO. T001		4. REQUISITION/REFERENCE NO.		a. NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission	
6. ISSUING OFFICE (Address correspondence to) U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Valerie Whipple Mail Stop: TWB-01-B20M Washington, DC 20555				b. STREET ADDRESS Kris Jamgochian Mail Stop T4P25M	
7. TO:				c. CITY Washington	d. STATE DC
a. NAME OF CONTRACTOR SOUTHWEST RESEARCH INSTITUTE S W R I				e. ZIP CODE 20555	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
9. ACCOUNTING AND APPROPRIATION DATA RPPA: NSR-12-142; FAIMIS: 123226 B&R: 2012-11-17-4-186; Job Code: N4128; BOC: 252A APPN.: 31X0200.211; Obligation: \$25,000; DUNS: 007936842				10. REQUISITIONING OFFICE NSR	
11. BUSINESS CLASSIFICATION (Check appropriate box(es)) <input type="checkbox"/> a. SMALL <input checked="" 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. SERVICE-DISABLED VETERAN-OWNED <input type="checkbox"/> g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM <input type="checkbox"/> h. EDWOSB				12. F.O.B. POINT N/A	
13. PLACE OF		14. GOVERNMENT B/L NO.	15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)		16. DISCOUNT TERMS
a. INSPECTION		b. ACCEPTANCE			

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: "Characterizing Explosive Effects on Underground Structures."</p> <p>Total CPFF Amount Exclusive of Options: \$122,403</p> <p>Total Obligated Amount: \$25,000</p> <p>Period of Performance: 9-19-2012 through 9-18-2013</p> <p>(NRC COR: Kris Jamgochian 301-415-6656 Technical Monitor: Pete Lee 301-415-8111</p> <p>DUNS: 007936842 NAICS: 541990 PSC: R499</p> <p>ACCEPTED: Signature: <i>R. B. Kalmach</i> Print Name/Title: 09/19/12 R. B. Kalmach Executive Director, Contracts</p>					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		\$122,403.00	17(h) TOTAL (Cont. pages)  17(i) GRAND TOTAL
	21. MAIL INVOICE TO:							
	a. NAME Department of Interior / NBC NRCPayments_NBCDenver@NBC.gov		PHONE:		FAX:			
	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	
22. UNITED STATES OF AMERICA BY (Signature) <i>[Signature]</i>				23. NAME (Typed) Valerie Whipple Contracting Officer TITLE: CONTRACTING/ORDERING OFFICER				

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OPTIONAL FORM 347 (REV. 2/2012)  
PRESCRIBED BY GSA/FAR 48 CFR 53.213(f)

**SUNSI REVIEW COMPLETE**

SEP 21 2012

**TEMPLATE - ADM001**

**ADM002**

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**STATEMENT OF WORK.....ATTACHMENT**

## DELIVERY ORDER TERMS AND CONDITIONS NOT SPECIFIED IN THE CONTRACT

### A.1 BRIEF PROJECT TITLE AND WORK DESCRIPTION (AUG 2011)

(a) The title of this project is: **CHARACTERIZING EXPLOSIVE EFFECTS ON UNDERGROUND STRUCTURES**

(b) Summary work description:

The objectives of this task, include the following: identify and review available information and consolidate information and analytical tools publically (and not publically) available on characterizing explosive effects on underground structures, identify design standards or guidance on structural responses to withstand explosive loads, identify and review available computational calculations and codes to model explosive effects, identify analytical tools available to evaluate structural response, compare and differentiate explosive and seismic loads on underground structures and characterize the differences in required structural designs, document results in NUREG and supplemental appendices on non-public information, and develop guidance and acceptance criteria to supplement staff's standard review plan, NUREG 0800 as needed, and provide technical support for reviews of technical reports. The required contractor support should provide access to experts with competencies, accrued knowledge, and highly specialized skills in the areas of, but not limited to: explosives and characterizing their effects, structural and geotechnical engineering, mechanical engineering, and computational analysis.

### A.2 CONSIDERATION AND OBLIGATION--COST-PLUS-FIXED-FEE (AUG 2011) ALTERNATE I (AUG 2011)

(a) The total estimated cost to the Government for full performance of this contract is **\$122,403**, of which the sum of represents the estimated reimbursable costs, and of which represents the fixed-fee.

(b) There shall be no adjustment in the amount of the Contractor's fixed fee.

(c) The amount currently obligated by the Government with respect to this contract is **\$25,000**, of which the sum of represents the estimated reimbursable costs, and of which represents the fixed-fee.

(d) This is an incrementally-funded contract and FAR 52.232-22 - "Limitation of Funds" applies.

(e) In accordance with FAR 52.216-8 - Fixed Fee, it is the policy of the NRC to withhold payment of fee after payment of percent of the fee has been paid in order to protect the Government's interest. The amount of fixed-fee withheld from the contractor will not exceed percent of the total fee or , whichever is less. Accordingly, the maximum amount of fixed-fee that may be held in reserve is

### A.3 PACKAGING AND MARKING (AUG 2011)

(a) The Contractor shall package material for shipment to the NRC in such a manner that will ensure acceptance by common carrier and safe delivery at destination. Containers and closures shall comply with the Surface Transportation Board, Uniform Freight Classification Rules, or regulations of other carriers as applicable to the mode of transportation.

(b) On the front of the package, the Contractor shall clearly identify the contract number under which the product is being provided.

(c) Additional packaging and/or marking requirements are as follows: N/A

#### A.4 BRANDING (AUG 2011)

The Contractor is required to use the official NRC branding logo or seal on any publications, presentations, products, or materials funded under this contract, to the extent practical, in order to provide NRC recognition for its involvement in and contribution to the project. If the work performed is funded entirely with NRC funds, then the contractor must acknowledge that information in its documentation/presentation.

Access the following websites for branding information and specifications:  
<http://www.internal.nrc.gov/ADM/branding/> and Management Directive and Handbook 3.13 -

(internal NRC website): <http://www.internal.nrc.gov/policy/directives/toc/md3.13.htm>

(external public website): <http://pbadupws.nrc.gov/docs/ML1122/ML112280190.pdf>

#### A.5 PLACE OF DELIVERY--REPORTS (AUG 2011)

The items to be furnished hereunder shall be delivered, with all charges paid by the Contractor, to:

[Kris.Jamgochian@nrc.gov](mailto:Kris.Jamgochian@nrc.gov)

[Pete.lee@nrc.gov](mailto:Pete.lee@nrc.gov)

[Valerie.whipple@nrc.gov](mailto:Valerie.whipple@nrc.gov)

#### A.6 TASK/DELIVERY ORDER PERIOD OF PERFORMANCE (AUG 2011)

This order shall commence on September 19, 2012 and will expire on September 18, 2013.

#### A.7 2052.215-70 KEY PERSONNEL (JAN 1993)

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

Dr. Todd Mintz

Dr. Asad Chowdhury

Dr. Thomas Wilt

Program Manager

Principal Investigator

Senior Research Engineer

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 COR 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.

**A.8 2052.215-71 CONTRACTING OFFICER'S REPRESENTATIVE AUTHORITY (NOVEMBER 2006)**

(a) The contracting officer's authorized representative (hereinafter referred to as the COR) for this contract is:

Name: Kris Jamgochian

Address: Mail Stop T4F25M  
Washington, DC 20555

Telephone Number: 301-415-6656

(b) Performance of the work under this contract is subject to the technical direction of the NRC COR. The term "technical direction" is defined to include the following:

(1) Technical direction to the contractor which shifts work emphasis between areas of work or tasks, authorizes travel which was unanticipated in the Schedule (i.e., travel not contemplated in the Statement of Work (SOW) or changes to specific travel identified in the SOW), fills in details, or otherwise serves to accomplish the contractual SOW.

(2) Provide advice and guidance to the contractor in the preparation of drawings, specifications, or technical portions of the work description.

(3) Review and, where required by the contract, approval of technical reports, drawings, specifications, and technical information to be delivered by the contractor to the Government under the contract.

(c) Technical direction must be within the general statement of work stated in the contract. The COR does not have the authority to and may not issue any technical direction which:

(1) Constitutes an assignment of work outside the general scope of the contract.

(2) Constitutes a change as defined in the "Changes" clause of this contract.

(3) In any way causes an increase or decrease in the total estimated contract cost, the fixed fee, if any, or the time required for contract performance.

(4) Changes any of the expressed terms, conditions, or specifications of the contract.

(5) Terminates the contract, settles any claim or dispute arising under the contract, or issues any unilateral directive whatever.

(d) All technical directions must be issued in writing by the COR or must be confirmed by the COR in writing within ten (10) working days after verbal issuance. A copy of the written direction must be furnished to the contracting officer. A copy of NRC Form 445, Request for Approval of Official Foreign Travel, which has received final approval from the NRC must be furnished to the contracting officer.

(e) The contractor shall proceed promptly with the performance of technical directions duly issued by the COR in the manner prescribed by this clause and within the COR's authority under the provisions of this clause.

(f) If, in the opinion of the contractor, any instruction or direction issued by the COR is within one of the categories as defined in paragraph (c) of this section, the contractor may not proceed but shall notify the contracting officer in writing within five (5) working days after the receipt of any instruction or direction and shall request the contracting officer to modify the contract accordingly. Upon receiving the notification from the contractor, the contracting officer shall issue an appropriate contract modification or advise the contractor in writing that, in the contracting officer's opinion, the technical direction is within the scope of this article and does not constitute a change under the "Changes" clause.

(g) Any unauthorized commitment or direction issued by the COR may result in an unnecessary delay in the contractor's performance and may even result in the contractor expending funds for unallowable costs under the contract.

(h) A failure of the parties to agree upon the nature of the instruction or direction or upon the contract action to be taken with respect thereto is subject to 52.233-1 -Disputes.

(i) In addition to providing technical direction as defined in paragraph (b) of the section, the COR shall:

(1) Monitor the contractor's technical progress, including surveillance and assessment of performance, and recommend to the contracting officer changes in requirements.

(2) Assist the contractor in the resolution of technical problems encountered during performance.

(3) Review all costs requested for reimbursement by the contractor and submit to the contracting officer recommendations for approval, disapproval, or suspension of payment for supplies and services required under this contract.

(4) Assist the contractor in obtaining the badges for the contractor personnel.

(5) Immediately notify the Security Branch, Division of Facilities and Security (SB/DFS) (via e-mail) when a contractor employee no longer requires access authorization and return of any NRC issued badge to SB/DFS within three days after their termination.

(6) Ensure that all contractor employees that require access to classified Restricted Data or National Security Information or matter, access to sensitive unclassified information (Safeguards, Official Use Only, and Proprietary information) access to sensitive IT systems or data, unescorted access to NRC controlled buildings/space, or unescorted access to protected and vital areas of nuclear power plants receive approval of SB/DFS prior to access in accordance with Management Directive and Handbook 12.3.

(7) For contracts for the design, development, maintenance or operation of Privacy Act Systems of Records, obtain from the contractor as part of closeout procedures, written certification that the contractor has returned to NRC, transferred to the successor contractor, or destroyed at the end of the contract in accordance with instructions provided by the NRC Systems Manager for Privacy Act Systems of Records, all records (electronic or paper) which were created, compiled, obtained or maintained under the contract.

**A.9 2052.215-78 TRAVEL APPROVALS AND REIMBURSEMENT -ALTERNATE 1 (OCT 1999)**

- (a) Total expenditure for travel may not exceed **\$6,707** without the prior approval of the contracting officer.
- (b) All foreign travel must be approved in advance by the NRC on NRC Form 445, Request for Approval of Official Foreign Travel, and must be in compliance with FAR 52.247-63 Preference for U.S. Flag Air Carriers. The contractor shall submit NRC Form 445 to the NRC no later than 30 days prior to the commencement of travel.
- (c) The contractor will be reimbursed only for those travel costs incurred that are directly related to this contract and which are allowable subject to the limitations prescribed in FAR 31.205-46.
- (d) It is the responsibility of the contractor to notify the contracting officer in accordance with the FAR Limitations of Cost clause of this contract when, at any time, the contractor learns that travel expenses will cause the contractor to exceed the travel ceiling amount identified in paragraph (a) of this clause.
- (e) Reasonable travel costs for research and related activities performed at State and nonprofit institutions, in accordance with Section 12 of Pub. L. 100-679, shall be charged in accordance with the contractor's institutional policy to the degree that the limitations of Office of Management and Budget (OMB) guidance are not exceeded. Applicable guidance documents include OMB Circular A-87, Cost Principles for State and Local Governments; OMB Circular A-122, Cost Principles for Nonprofit Organizations; and OMB Circular A-21, Cost Principles for Educational Institutions.

**A.10 ELECTRONIC PAYMENT (AUG 2011)**

The Debt Collection Improvement Act of 1996 requires that all payments except IRS tax refunds be made by Electronic Funds Transfer. Payment shall be made in accordance with FAR 52.232-33, entitled "Payment by Electronic Funds- Central Contractor Registration".

To receive payment, the contractor shall prepare invoices in accordance with NRC's Billing Instructions. Claims shall be submitted on the payee's letterhead, invoice, or on the Government's Standard Form 1034, "Public Voucher for Purchases and Services Other than Personal," and Standard Form 1035, "Public Voucher for Purchases Other than Personal - Continuation Sheet." The preferred method of submitting invoices is electronically to the Department of the Interior at [NRCPayments\\_NBCDenver@nbc.gov](mailto:NRCPayments_NBCDenver@nbc.gov). If the contractor submits a hard copy of the invoice, it shall be submitted to the following address:

Department of the Interior  
National Business Center  
Attn: Fiscal Services Branch - D2770  
7301 West Mansfield Avenue  
Denver, CO 80235-2230

**A.11 WHISTLEBLOWER PROTECTION FOR NRC CONTRACTOR AND SUBCONTRACTOR EMPLOYEES (AUG 2011)**

(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 entitled: "Your Rights Under the Energy Reorganization Act".

(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.

#### **A.12 GREEN PURCHASING (JUN 2011)**

(a) In furtherance of the sustainable acquisition goals of Executive Order 13514, "Federal Leadership in Environmental, Energy, and Economic Performance" products and services provided under this contract/order shall be energy- efficient (Energy Star or Federal Energy Management Program (FEMP) designated), water-efficient, biobased, environmentally preferable (e.g., Electronic Product Environmental Assessment Tool (EPEAT) certified), non-ozone depleting, contain recycled content, or are non-toxic or less toxic alternatives, where such products and services meet agency performance requirements. <http://www.fedcenter.gov/programs/eo13514/>

(b) The contractor shall flow down this clause into all subcontracts and other agreements that relate to performance of this contract/order.

#### **A.13 USE OF AUTOMATED CLEARING HOUSE (ACH) ELECTRONIC PAYMENT/REMITTANCE ADDRESS (AUG 2011)**

The Debt Collection Improvement Act of 1996 requires that all Federal payments except IRS tax refunds be made by Electronic Funds Transfer. It is the policy of the Nuclear Regulatory Commission to pay government vendors by the Automated Clearing House (ACH) electronic funds transfer payment system. Item 15C of the Standard Form 33 may be disregarded.