1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) RATING 3. EFFECTIVE DATE 4. REQUISITION/PROJECT NO. 2. CONTRACT NO. RES-95-037 7/10/95 NRC-04-95-057 6. ADMINISTERED BY Code: 5. ISSUED BY Code: (If other than Item 5) U.S. Nuclear Regulatory Commission U.S. Nuclear Regulatory Commission Division of Contracts Division of Contracts, M/S T 712 Technical Acquisition Br. #1 Technical Acquistion Br. #1 Washington, D.C. 20555 Washington, D.C. 20555 8. DELIVERY 7. NAME AND ADDRESS OF CONTRACTOR [] FOB ORIGIN AAC International OTHER (See below) [X] 54 Mechanic Street Lebanon, NH 03766 9. DISCOUNT FOR PROMPT PAYMENT N/A Principal Investigator/Technical Contact: Dr. Sun, Xiaoging Telephone No: (603) 448-6177 10. SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN ITEM: 6 12. PAYMENT WILL BE MADE BY CODE 11. SHIP TO/MARK FOR CODE U.S. Nuclear Regulatory Commission U.S. Nuclear Regulatory Commission Division of Accounting & Finance Div. of Regulatory Applications GOV/COM Accounting Sect.; T9E2 ATTN: Jacob Philip, M/S T 9B3 Washington, D.C. 20555 Washington, D.C. 20555 13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION [] 10 U.S.C. 2304(c)[] [] 41 U.S.C. 253(c)[] 14. ACCOUNTING AND APPROPRIATION DATA APPN: 31X0200.560 JOB Code: W6481 RES ID: RES-C95-413 B&R: 56015335005 BOC: 252A Obligated Amt. \$49,976.00 15C.QUANTITY 15D.UNIT 15E.UNIT 15F.AMOUNT 15A.ITEM 15B.SUPPLIES/ PRICE SERVICES NO. The NRC hereby accepts the contractor's SBIR Phase I technical proposal dated 1/3/95, for an effort entitled "Experimental Modal Analysis for Seismic Response

EXCEPTION TO STANDARD FORM SF26 (REV.4-85) FAR (48 CFR) 53.214(a)

Prescribed by GSA

Assessment of Underground Facilities, which is hereby

incorporated by reference and made a part of this firm fixed

9507210176 950706 PDR CONTR NRC-04-95-057 PDR

price contract.

AWARD/CONTRACT

15G. TOTAL AMOUNT OF CONTRACT

Page 2 of 2 Pages

\$49,976.00

TABLE OF CONTENTS 16. PAGE (S) DESCRIPTION X SEC PART I - THE SCHEDULE SOLICITATION/CONTRACT FORM A SUPPLIES OR SERVICES AND PRICES/COSTS B DESCRIPTION/SPECIFICATIONS/WORK STATEMENT C PACKAGING AND MARKING INSPECTION AND ACCEPTANCE DELIVERIES OR PERFORMANCE CONTRACT ADMINISTRATION DATA G SPECIAL CONTRACT REQUIREMENTS H PART II - CONTRACT CLAUSES CONTRACT CLAUSES PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS LIST OF ATTACHMENTS PART IV - REPRESENTATIONS AND INSTRUCTIONS REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS K INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS EVALUATION FACTORS FOR AWARD CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE 17. [X] CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return 3 copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.) [] AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number _____, including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary. 20A. NAME OF CONTRACTING OFFICER 19A. NAME AND TITLE OF SIGNER (Type or print) Mary H. Mace Xiaoging Sun, Manager 20B. UNITED STATES OF 19B. NAME OF CONTRACTOR Throwing sun (Signature of/Contracting Officer) (Signature of person authorized to sign) 19C. DATE SIGNED 20C. DATE SIGNED July 3, 1995 EXCEPTION TO STANDARD FORM 26 (REV.4-85)

	TABLE OF CONTENTS	PAGE
AWARD/CONT	RACT	
PART I - T	HE SCHEDULE	3
	- SUPPLIES OR SERVICES AND PRICES/COSTS	3
	PROJECT TITLE	3
B.2 B.3	BRIEF DESCRIPTION OF WORK (MAR 1987)	3
	- DESCRIPTION/SPECIFICATIONS/WORK STATEMENT	4
C.1	STATEMENT OF WORK	4
C.2	NRCAR 2052.215-83 TRAVEL APPROVALS (JAN 1993)	4
SECTION D	- PACKAGING AND MARKING	5
D.1	PACKAGING AND MARKING (MAR 1987)	5
SECTION F	- INSPECTION AND ACCEPTANCE	6
	52.252-2 CLAUSES INCORPORATED BY REFERENCE (JUN 1988)	-
E.2	PLACE OF INSPECTION AND ACCEPTANCE (MAR 1987)	6
SECTION F	- DELIVERIES OR PERFORMANCE	7
	52.252-2 CLAUSES INCORPORATED BY REFERENCE (JUN 1988)	7
F.2	PLACE OF DELIVERYREPORTS (JUN 1988)	7
F.3	DURATION OF CONTRACT PERIOD (MAR 1987)	7
F.4	REPORTS, DOCUMENTATION, AND OTHER DELIVERABLE END ITEMS	7
SECTION G	- CONTRACT ADMINISTRATION DATA	9
G.1	NRCAR 2052.215-72 PROJECT OFFICER AUTHORITY	9
	ALTERNATE 1 (JAN 1993) NRCAR 2052.215-82 TRAVEL REIMBURSEMENT	0
G.2	- ALTERNATE 1 (JAN 1993)	
G.3	USE OF AUTOMATED CLEARING HOUSE (ACH)	10
	ELECTRONIC PAYMENT	
	INVOICE REQUIREMENTS	
G.5	PAYMENT	11
	- SPECIAL CONTRACT REQUIREMENTS	
	NRCAR 2052.215-70 KEY PERSONNEL (JAN 1993)	
	NRCAR 2052.235-70 PUBLICATION OF RESEARCH RESULTS (JAN	
Н.3	NRCAR 2052.235-72 SAFETY, HEALTH, AND FIRE	14
H.4	GOVERNMENT FURNISHED EQUIPMENT/PROPERTY - NONE PROVIDED (JUN 1988)	15
PART II -	CONTRACT CLAUSES	16
SECTION T	- CONTRACT CLAUSES	16
T 1	52 252-2 CLAUSES INCOPPORATED BY REFERENCE (JUN 1988)	

TABLE OF CONTENTS		PAGE
PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS	34 T	18
SECTION J - LIST OF ATTACHMENTS		 18 18

PART I - THE SCHEDULE

SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 PROJECT TITLE

The title of this project is as follows:

"Experimental Modal Analysis for Seismic Response Assessment of Underground Facilities"

[End of Clause]

B.2 BRIEF DESCRIPTION OF WORK (MAR 1987)

The objective of this Phase I effort is to conduct tests with limited scale to investigate the feasibility of applying experimental modal analysis to underground facilities for seismic characterization purpose.

[End of Clause]

B.3 CONSIDERATION AND OBLIGATION -- FIRM FIXED PRICE (JUN 1988)

The firm fixed price of this contract is \$49,976.00.

NRC-04-95-057 Section C

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 STATEMENT OF WORK

The work to be performed and the objectives to be met in this contract shall be in accordance with the contractor's technical proposal, which was submitted in response to the NRC's FY 95 Small Business Innovation Research Program, and which is incorporated herein by reference.

[End of Clause]

C.2 NRCAR 2052.215-83 TRAVEL APPROVALS (JAN 1993)

- (a) All domestic travel requires the prior approval of the project officer.
- (b) All foreign travel must be approved in advance by the NRC on NRC Form 445 and must be in compliance with FAR 52.247-63 Preference for U.S. Flag Air Carriers. Foreign travel approval must be communicated in writing through the contracting officer.

SECTION D - PACKAGING AND MARKING

D.1 PACKAGING AND MARKING (MAR 1987)

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 Interstate Commerce Commission Regulations, Uniform Freight Classification Rules, or regulations of other carriers as applicable to the mode of transportation. On the front of the package, the Contractor shall clearly identify the contract number under which the product is being provided.

SECTION E - INSPECTION AND ACCEPTANCE

E.1 52.252-2 CLAUSES INCORPORATED BY REFERENCE (JUN 1988)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available.

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

NUMBER	TITLE	DATE
52.246-9	INSPECTION OF RESEARCH AND DEVELOPMENT (SHORT FORM)	APR 1984
52.246-16	RESPONSIBILITY FOR SUPPLIES	APR 1984

[End of Clause]

E.2 PLACE OF INSPECTION AND ACCEPTANCE (MAR 1987)

Inspection and acceptance of the deliverable items to be furnished hereunder shall be made by the Project Officer at the destination.

SECTION F - DELIVERIES OR PERFORMANCE

52.252-2 CLAUSES INCORPORATED BY REFERENCE (JUN 1988) F.1

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available.

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

NUMBER

TITLE

DATE

52.212-13 STOP-WORK ORDER

AUG 1989

[End of Clause]

PLACE OF DELIVERY -- REPORTS (JUN 1988) F. 2

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

(a) Project Officer (3 copies)

U.S. Nuclear Regulatory Commission ATTN: Jacob Philip, M/S T 9B3 Division of Regulatory Applications Office of Nuclear Regulatory Research Washington, D.C. 20555

(b) Contracting Officer (1 copy)

[End of Clause]

DURATION OF CONTRACT PERIOD (MAR 1987) F. 3

This contract shall commence on 7/10/95 and will expire on 1/10/96.

[End of Clause]

REPORTS, DOCUMENTATION, AND OTHER DELIVERABLE END ITEMS F.4

Three copies of the letter reports, shall be submitted to the NRC Project Officer and one copy to the Contracting Officer, within 60 days, and 120 days, respectively, from the effective date of the contract.

F.4 (Continued)

- b. A draft final report which includes the results of the work performed under this contract, shall be submitted to the NRC Project Officer 30 days prior to contract expiration.
- c. The NRC Project Officer will review the draft report and provide the contractor with his/her comments within two weeks from receipt of the draft report.
- d. The contractor shall make any necessary changes and submit the final report to the NRC Project Officer in one camera-ready copy and three hard copies by contract expiration. The final report shall be prepared in accordance with Handbook 3.8 (see Section J for List of Attachments).
- e. The contractor shall also submit his/her Phase II proposal in one original and four copies, along with the final report, by contract expiration.

- (3) Review all contractor invoices/vouchers requesting payment for products/services provided under the contract and make recommendations for approval, disapproval, or suspension.
- (c) The project officer may not make changes to the express terms and conditions of this contract.

[End of Clause]

G.2 NRCAR 2052.215-82 TRAVEL REIMBURSEMENT - ALTERNATE 1 (JAN 1993)

(a) The contractor is encouraged to use Government contract airlines, AMTRAK rail services, and discount hotel/motel properties in order to reduce the cost of travel under this contract. The contracting officer shall, upon request, provide each traveler with a letter of identification which is required in order to participate in this program. The Federal Travel Directory (FTD) identifies carriers, contract fares, schedules, payment conditions, and hotel/motel properties which offer their services and rates to Government contractor

Section G

G.2 (Continued)

personnel traveling on official business under this contract. The FTD, which is issued monthly, may be purchased from the U.S. Government Printing Office, Washington, DC 20402.

- (b) The contractor will be reimbursed for reasonable travel costs incurred directly and specifically in the performance of this contract. The cost limitations for travel costs are determined in accordance with the specific travel regulations cited in FAR 31.205-46, as are in effect on the date of the trip. 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 OME Circular A-21, Cost Principles for Educational Institutions.
- (c) When the Government changes the Federal Travel Regulations, or other applicable regulations, it is the responsibility of the contractor to notify the contracting officer in accordance with the Limitations of Cost clause of this contract if the contractor will be unable to make all of the approved trips and remain within the cost and fee limitations of this contract due to the changes.

(End of Clause)

G.3 USE OF AUTOMATED CLEARING HOUSE (ACH) ELECTRONIC PAYMENT

It is the policy of the Nuclear Regulatory Commission to pay Government vendors by the Automated Clearing House (ACH) electronic funds transfer payment system in lieu of a U.S. Treasury check. The electronic system is known as Vendor Express. Payment shall be made in accordance with FAR 52.232-28, entitled "Electronic Funds Transfer Payment Methods".

To receive payment by Vendor express, the contractor shall complete the "Company Information" portion of the Form SF 3881, entitled "Payment Information Form - ACH Vendor Payment System" found in Section J. The contractor shall take the form to the ACH Coordinator at the financial institution that maintains its company's bank account. The contractor shall discuss with the ACH Coordinator how the payment identification information (addendum record) will be passed to them once the payment is received by the financial institution. The contractor must ensure that the addendum record will not be stripped from the payment. The ACH Coordinator will fill out the "Financial Institution Information"

G.3 (Continued)

portion of the form and return it to the Office of the Controller at the following address: Nuclear Regulatory Commission, Division of Accounting and Finance, Mailstop T-9-E-2, Washington, DC 20555, ATTN: ACH/Vendor Express. Once the Office of the Controller has processed the contractor's sign-up form, the contractor will begin to receive payments electronically via Vendor Express/ACH.

If the offeror/bidder has questions concerning ACH/Vendor Express, he/she may call the Commercial Payments staff at (301) 415-7520.

[End of Clause]

G.4 INVOICE REQUIREMENTS

Invoices shall be submitted in an original and 3 copies to:

U.S. Nuclear Regulatory Commission Division of Contracts M/S T 712 Washington, D.C. 20555

To constitute a proper invoice, the invoice must include the following information and/or attached documentation:

- 1. Name of the business concern and invoice date.
- Contract number or other authorization for delivery of property or services.
- Description price and quantity of property and services actually delivered or rendered.
- Shipping and payment terms.
- 5. Name (where applicable), title, phone number, and complete mailing address of responsible official to who payment is to be sent.
- Other substantiating documentation or information as required by the contract.

G.5 PAYMENT

a. Two payments in the amount of \$16,000.00 each will be made to the contractor after receipt and acceptance of each of the two letter progress reports as required in Section F. Payment shall not be made prior to receipt of said progress reports.

G.5 (Continued)

- b. Final payment in the amount of \$17,976.00 will be made to the contractor after receipt and acceptance of the final report as required in Section F.
- c. All contractor invoices shall identify the contract number and the quarterly letter progress report for which payment is claimed.
- d. If this contract provides for a discount, the contractor shall indicate the contractor's discount terms on the face of the invoice.

Page 13 of 18

NRC-04-95-057 Section H

H.1 (Continued)

price or fixed fee may be equitably adjusted downward to compensate the Government for any resultant delay, loss, or damage.

[End of Clause]

H.2 NRCAR 2052.235-70 PUBLICATION OF RESEARCH RESULTS (JAN 1993)

- (a) The principal investigator(s)/contractor shall comply with the provisions of NRC Handbook 3.8 (formerly MC 3202) and NRC Manual Chapter 3206 regarding publication in refereed scientific and engineering journals or dissemination to the public of any information, oral or written, concerning the work performed under this contract. Failure to comply with this clause shall be grounds for termination of this contract.
- (b) The principal investigator(s)/contractor may publish the results of this work in refereed scientific and engineering journals or in open literature and present papers at public or association meetings at interim stages of work, in addition to submitting to NRC the final reports and other deliverables required under this contract. However, such publication and papers shall focus on advances in science and technology and minimize conclusions and/or recommendations which may have regulatory implications.
- (c) Prior to any such publication, the contractor shall submit the proposed publication to the NRC Contracting Officer and Project Officer for review and approval.

[End of Clause]

H.3 NRCAR 2052.235-72 SAFETY, HEALTH, AND FIRE PROTECTION (JAN 1993)

The contractor shall take all reasonable precautions in the performance of the work under this contract to protect the health and safety of its employees and of members of the public, including NRC employees and contractor personnel, and to minimize danger from all hazards to life and property and shall comply with all applicable health, safety, and fire protection regulations and requirements (including reporting requirements) of the Commission and the Department of Labor. In the event that the contractor fails to comply with these regulations or requirements, the contracting officer may, without prejudice to any other legal or contractual rights of the Commission, issue an order stopping all or any part of the work; thereafter, a start order for resumption of work may be issued at the discretion of the contracting officer. The contractor shall make no claim for an extension of time or for compensation or damages by reason of, or in connection with, this type of work stoppage.

H.3 (Continued)

[End of Clause]

H.4 GOVERNMENT FURNISHED EQUIPMENT/PROPERTY - NONE PROVIDED (JUN 1988)

The Government will not provide any equipment/property under this contract.

PART II - CONTRACT CLAUSES

SECTION I - CONTRACT CLAUSES

I.1 52.252-2 CLAUSES INCORPORATED BY REFERENCE (JUN 1988)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available.

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

NUMBER	TITLE	DATE	3	
		ann	1001	
52.202-1	DEFINITIONS OFFICIALS NOT TO BENEFIT	SEP	1991	
		APR	1984	
52.203-3			1984	
52.203-5	COVENANT AGAINST CONTINGENT FEES	APR	1984	
52.203-7	ANTI-KICKBACK PROCEDURES PRICE OR FEE ADJUSTMENT FOR	OCT	1988	
52.203-10	PRICE OR FEE ADJUSTMENT FOR	SEP	1990	
	ILLEGAL OR IMPROPER ACTIVITY			
52.209-6	PROTECTING THE GOVERNMENT'S	NOV	1992	
	INTEREST WHEN SUBCONTRACTING WITH			
	CONTRACTORS DEBARRED, SUSPENDED,			
	OR PROPOSED FOR DEBARMENT			
52.215-1	OR PROPOSED FOR DEBARMENT EXAMINATION OF RECORDS BY	FEB	1993	
~~.~~	COMPTROLLER GENERAL			
52.215-2	COMPTROLLER GENERAL AUDIT - NEGOTIATION INTEGRITY OF UNIT PRICES ORDER OF PRECEDENCE	FEB	1993	
52 215-26	INTEGRITY OF UNIT PRICES	APR	1991	
52 215-33	ORDER OF PRECEDENCE	JAN	1986	
52 219-6	NOTICE OF TOTAL SMALL BUSINESS	APR	1984	
52.215	SET-ASIDE			
52 219-8	UTILIZATION OF SMALL BUSINESS	FFB	1990	
26.219-0	CONCERNS AND SMALL	1 2020	2000	
	DISADVANTAGED BUSINESS CONCERNS			
50 010 10	UTILIZATION OF WOMEN-OWNED	ALIC	1986	
52.219-13	SMALL BUSINESSES	MUG	1300	
EO 010 14	LIMITATIONS ON SUBCONTRACTING	TAST	1001	
	THE PARTY OF TARGE OF TARGET	2 20.00	4004	
52.220-3	AREA CONCERNS CONVICT LABOR EQUAL OPPORTUNITY AFFIRMATIVE ACTION FOR SPECIAL	APR	1904	
	AREA CONCERNS	3.00	1004	
52.222-3	CONVICT LABOR	APR	1984	
52.222-26	EQUAL OPPORTUNITY	APR	1984	
52.222-35	AFFIRMATIVE ACTION FOR SPECIAL	APR	1984	
	DISABLED AND VIETNAM			
	ERA VETERANS			
52.222-36	AFFIRMATIVE ACTION FOR	APR	1984	
	HANDICAPPED WORKERS			

I.1 (Continued)

NUMBER	TITLE	DAT	E	
	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA	JAN	1988	
		JIII.	1990	
52.225-11	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES			
	AUTHORIZATION AND CONSENT Alternate I (APR 1984)	APR	1984	
52.227-2		APR	1984	
	PATENT RIGHTS - RETENTION BY THE CONTRACTOR (SHORT FORM)	JUN	1989	
	RIGHTS IN DATA - SBIR PROGRAM	MAR	1994	
52.229-3	FEDERAL, STATE, AND LOCAL TAXES	JAN	1991	
	FEDERAL, STATE, AND LOCAL TAXES TAXES - CONTRACTS PERFORMED IN U.S. POSSESSIONS	APR	1984	
	OR PUERTO RICO			
	PAYMENTS UNDER FIXED-PRICE RESEARCH AND DEVELOPMENT CONTRACTS	APR	1984	
52.232-8	DISCOUNTS FOR PROMPT PAYMENT	APR	1989	
52.232-17	INTEREST	JAN	1991	
52.232-23	ASSIGNMENT OF CLAIMS	JAN	1986	
52.232-25	PROMPT PAYMENT	MAR	1994	
52.232-28	ELECTRONIC FUNDS TRANSFER	APR	1989	
52.233-1	PAYMENT METHODS DISPUTES PROTEST AFTER AWARD BANKRUPTCY CHANGES - FIXED-PRICE	MAR	1994	
52.233-3	PROTEST AFTER AWARD	AUG	1989	
52.242-13	BANKRUPTCY	APR	1991	
52.243-1	CHANGES - FIXED-PRICE	AUG	1987	
	Alternate V (APR 1984)			
52.244-5	COMPETITION IN SUBCONTRACTING	APR	1984	
52.249-1	TERMINATION FOR CONVENIENCE OF	APR	1984	
	THE GOVERNMENT (FIXED-PRICE) (SHORT FORM)			
	DEFAULT (FIXED-PRICE RESEARCH AND DEVELOPMENT)	APR	1984	
	COMPUTER GENERATED FORMS	JAN	1991	

PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS SECTION J - LIST OF ATTACHMENTS

J.1 ATTACHMENTS (MAR 1987)

Attachment Number	Title
01	Billing Instructions
02	NRC Handbook 3.8
03	Publishing Documents in NUREG Series, NUREG-0650, Revision 1
04	Payment Information Form - ACH Vendor Payment System