

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT NO. (If applicable)

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2. AMENDMENT/MODIFICATION NO.

Six (6)

3. EFFECTIVE DATE

5/30/85

4. REQUISITION/PURCHASE REQ. NO.

RES-81-195-04 RFPA dtd 11/9/84

5. PROJECT NO. (If applicable)

6. ISSUED BY

CODE

7. ADMINISTERED BY (If other than Item 6)

CODE

U.S. Nuclear Regulatory Commission
Division of Contracts
Washington, DC 20555

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)

The University of Michigan
ATTN: DRDA, 244 W. Engineering Bldg.
550 E. University
Ann Arbor, MI 48109-1092

9A. AMENDMENT OF SOLICITATION NO.

9B. DATED (SEE ITEM 11)

10A. MODIFICATION OF CONTRACT/ORDER NO.

X

NRC-04-81-195-04

10B. DATED (SEE ITEM 13)

9/30/81

CODE

FACILITY CODE

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)

B&R No. 601950 FIN 88080 Amount: \$113,182

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

V) 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).

C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

X 41 U.S.C. 252(c)(10)

D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☒ is required to sign this document and return 2 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 exercise the second one-year option. Therefore, the parties mutually agree to the following changes:

A. Article I - Statement of Work, is revised to incorporate the enclosed statement of work (Attachment 1).

B. Article II - Period of Performance, is revised as follows:

The performance of work described in Article I above shall commence on September 30, 1985 and continue through September 30, 1986.

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NRC-04-81-195 PDR

The document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force

15A. NAME AND TITLE OF SIGNER (Type or print)

C. W. Matthews, Controller

16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)

Paul J. Edgeworth

15B. CONTRACTOR/OFFEROR

C. W. Matthews
(Signature of person authorized to sign)

15C. DATE SIGNED

MAY 08 1985

16B. UNITED STATES OF AMERICA

Paul J. Edgeworth
(Signature of Contracting Officer)

16C. DATE SIGNED

5/30/85

C. Article III - Consideration and Payment, is revised to read as follows:

A. Estimated Cost and Obligation

1. It is estimated that the total cost to the Government for full performance of this contract will be \$543,104.00.
2. Total funds currently available for payment and allotted to this contract are \$543,104.00.
3. It is estimated that the amount currently allotted will cover performance of contractor effort through September 30, 1986.

D. As a result of this modification, the contract total is increased by \$113,182.00 from \$429,922.00 to \$543,104.00

E. Article VIII - Travel Reimbursement, is revised to add the following subparagraph:

"8. All contractor travel must have the prior approval of the NRC Project Officer."

F. The B&R No. as stated in Block No. 12, Accounting and Appropriation Data is revised as follows:

Delete: B&R No. 60-19-02-10
Insert: B&R No. 601950

Work Statement

The work statement for the extension of contract NRC-04-81-195-04 is essentially the same as that in the original proposal and consists of two principal parts: routine tasks and basic research.

The most important part of our contribution is in the collection and interpretation of the seismograph network data. Routine tasks include station repair and upkeep, changing paper records and magnetic tapes, storage of interesting events in digital format using the PDP-11 system, and analysis of this data. Local events will be promptly located using the array data and data from regional stations. Origin times, epicentral locations and depths will be calculated and the Project Officer notified by telephone and letter. In addition local events will be thoroughly studied to determine focal mechanisms, identify aftershock trends, etc. when possible. These studies will include information relating the events to proposed faults and LANDSAT lineations, as well as to noticeable trends in recent and historic events. The analysis will continue to include identification and extracting data for all regional and teleseismic events. The teleseismic arrival times are sent to the National Earthquake Information Service for use in event location and tabulated for later use in P-wave residual studies.

In addition to the routine upkeep and data management of the Ohio/Eastern Indiana Network, research efforts will be continued to help define completely and accurately the tectonic structure of the region. In the coming year we would like to concentrate our research efforts in the refinement of the velocity structure and tectonic framework of the region. The studies which we feel will yield the most information in this area are the continued interpretation of travel time data and the P-wave residuals.

Work Scheduling and Management

The Eastern Indiana/Ohio Network is fully operational and complies entirely with the desired specifications under Task D. Routine work, which includes all data collection and maintenance of the instrumentation, has been established through past experience and is performed as needed. Many of the routine tasks (such as record and tape changing) must be performed daily and thus require no further scheduling. Prompt reporting of local and near-regional earthquake parameters is also a high priority task and accomplished as required, although clearly it cannot be scheduled. Our goal is to upgrade continuously the routine procedures and to increase the efficiency at which we operate.

All proposed studies are continuous research projects which depend on the acquisition of newly recorded data. At the end of each fiscal year the research projects along with the collected data are described and evaluated in detail and plans made for their continuation. In this way the annual report comprises the major milestones of the project in addition to providing schedule controls.

The University of Michigan provides accounting and cost management through the Division of Research Development and Administration, Financial Operations and Business Operations. This office provides assistance to the project director in business matters pertaining to their project, interprets and monitors grant and contract regulations, and establishes account numbers and support costs for federal audit.

The principal investigator is responsible for the technical operation of the project, and is monitored and advised by the Financial Operations and Business Operations Office on the rate of expenditure.

The principal investigator is also the project manager, directly supervising the graduate research assistant and the electronics technician. The undergraduate assistants performing routine tasks are supervised by the graduate research assistant.

Manpower Availability

Major personnel working on this project will be: ..

Dr. Henry N. Pollack, Principal Investigator, presently director of
U-M Seismological Observatory

Douglas H. Christensen (BS, MS in Geophysics), Graduate Research
Assistant

The undergraduates performing routine work may not necessarily be the
same individuals from year to year.

Additional personnel available for scientific consultation:

Dr. Larry J. Ruff

Dr. Thorne Lay

Dr. Rob Van der Voo

CV's for Profesor Pollack and Mr. Christensen are attached.