Modification No. 8 Supplemental Agreement to Contract No. NRC-04-76-192

SUPPLEMENTAL AGREEMENT BETWEEN

UNIVERSITY OF MICHIGAN AND THE U. S. NUCLEAR REGULATORY COMMISSION

THIS SUPPLEMENTAL AGREEMENT, effective the 15th day of June , 1980, by and between the UNITED STATES OF AMERICA (hereinafter referred to as the "Government"), as represented by the UNITED STATES NUCLEAR REGULATORY COMMIS-SION (hereinafter referred to as the "Commission"), and the University of Michigan

(hereinafter referred to as the "Contractor"),

WITNESSETH THAT:

WHEREAS, the parties desire to modify Contract No. NRC-04-76-192 as hereinafter provided, and this supplemental agreement is authorized by law, including the Energy Reorganization Act of 1974, as amended, and the Atomic Energy Act of 1954, as amended.

NOW, THEREFORE, said contract is hereby modified as follows:

- Appendix A, attached to this supplemental agreement and made a part hereof, provides for the research to be performed by the Contractor during the contract period specified therein.
- 2. In Article II The Period of Performance, the date " June 30, 1981 " is substituted for the date " June 30, 1980 ".
- In Article III Consideration, the sum "\$513,100.00" is substituted for the sum "\$403,100.00".

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IN WITNESS WHEREOF, the parties have executed this document.

UNITED STATES OF AMERICA BY: Kellogg V. Morton Contracting Officer (title)

Nuclear Regulatory Commission

UNIVERSITY OF MICHIGAN Ce Mattews BY:

C. W. Matthews, Controller

(title)

IN WITNESS WHEREOF, I have hereunto affixed my hand and the seal of said Contractor.

Paul J. Stemple

(SEAL)

Supplemental Agreement to Contract No. NRC-04-76-192

CONTRACTOR: UNIVERSITY OF MICHIGAN

APPENDIX A

For the Contract period July 1, 1980 . through June 30, 1981

Article A-I RESEARCH TO BE PERFORMED BY CONTRACTOR

- (a) The unclassified scope of work under this contract, entitled, "Geophysical Investigations of the Anna, Ohio Earthquake Zone," is as follows:
 - The contractor will continue operation of the nine telemetered seismograph stations in the vicinity of Anna, Ohio. In all subsequent documentation this array will be referred to as the Anna Ohio Subnetwork (AOS). No alteration of these nine field installations is anticipated for this fiscal year.
 - 2. The contractor will install four new regional stations in central Indiana (one of the stations may be in western Ohio). An informal letter showing the new sites will be sent to the Project Officer for concurrence. No new equipment is necessary for the new field installations for the central multiplexing site.
 - 3. The contractor will install an improved recording system at the Seismological Observatory in Ann Arbor to record in more compact form the AOS and north-central regional network data. This will improve the frequency response of the network and reduce the data storage space requirements.
 - 4. The contractor will maintain seven seismoscopes installed in public buildings in the Anna, Ohio region. These instruments have been provided at no cost to the contractor or the Nuclear Regulatory Commission by the Earthquake Engineering Branch of the U. S. Geological Survey and are registered in their records. These instruments require three maintenance trips per year.
 - 5. The contractor will continue seismological and geophysical research with data from the AOS and north-central regional network to assess the seismic hazard from earthquakes in Ohio and Indiana.
 - 6. A simple map (page size) of the current seismicity shall be included in the guarterly technical reports.
- (b) The Principal Investigator expects to devote the following approximate amount(s) of time to the contract work:

F. J. Mauk - 100% of his time for two months

| ARTICLE A-II WAYS | AND MEANS OF PERFORMANCE | Supplemental Agreement to Contract No. NRC-04-76-192 Appendix A Page 2 |
|---------------------------|---|--|
| (a) Items for which | support will be provided as indicat | ted in A-III, below |
| (1) Salaries a | nd Wages | \$ 37,670.00 |
| | to be purchased or I by the Contractor | \$ 15,555.00 |
| | 0.00 101 \$15,000.00 De recorder | |
| <pre>(3) Travel (i)</pre> | Domestic | \$ 5,610.00 |
| (ii) | Foreign | \$ -0 |

- (4) Other direct costs including fringe benefits
- (5) Indirect costs based on a predetermined rate of 68.7 percent applicable to salaries, wages and benefits.
- (b) Items, if any, significant to the performance of this contract, but excluded from computation of Support Cost and from consideration in proportioning costs: NONE
- (c) Time or effort of Principal Investigator(s) including indirect costs and fringe benefits contributed by Contractor but excluded from computation of Support Cost and from consideration in proportioning costs: NONE

Article A-III

The total estimated cost of items under A-II(a) above for the contract period stated in this Appendix A is \$ 110,000.00; the Commission will pay 100 percent of the actual costs of these items incurred during the contract period stated in this Appendix A, subject to the provisions of Article III and Article B-XXVIII. The estimated NRC Support Cost for the contract period stated in this Appendix A is \$110,000.00.

The estimated NRC Support Cost is funded as follows:

(a) Estimated unexpended balance from prior period(s)

\$ - 0 -• 110.000.00

- (b) New funds for the current period
- (c) The new funds being added in A-III(b) constitute the basis for advance payments provided under Article B-X.