

SUPPLEMENTAL AGREEMENT  
BETWEEN  
TEXAS TECH UNIVERSITY  
AND  
THE U. S. NUCLEAR REGULATORY COMMISSION

THIS SUPPLEMENTAL AGREEMENT, effective the 1st day of April, 1981, by and between the UNITED STATES OF AMERICA (hereinafter referred to as the "Government"), as represented by the UNITED STATES NUCLEAR REGULATORY COMMISSION (hereinafter referred to as the "Commission"), and TEXAS TECH UNIVERSITY

(hereinafter referred to as the "Contractor"),

WITNESSETH THAT:

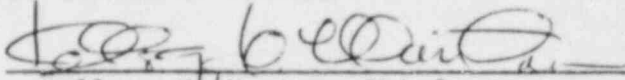
WHEREAS, the parties desire to modify Contract No. NRC-04-76-345 as hereinafter provided, and this supplemental agreement is authorized by law, including the Energy Reorganization Act of 1974, as amended, and the Atomic Energy Act of 1954, as amended.

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

1. 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, 1982" is substituted for the date "March 31, 1981".
3. In Article III - Consideration, the sum "\$413,393.00" is substituted for the sum "\$324,393.00".

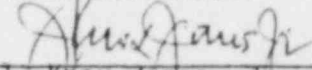
IN WITNESS WHEREOF, the parties have executed this document.

UNITED STATES OF AMERICA

BY:   
Kellogg V. Morton, Chief  
Research Contracts Branch  
(title)

Nuclear Regulatory Commission

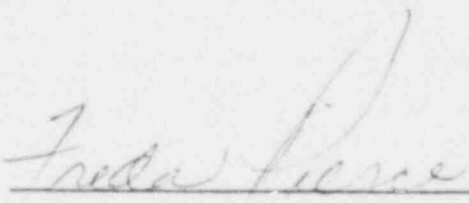
TEXAS TECH/UNIVERSITY

BY:   
J. Knox Jones, Jr.  
Vice President for Research  
(title)

I, Freda Pierce, certify that I am the  
(attester)  
Secretary, Board of Regents of the Contractor named  
(title)  
under this document; that J. Knox Jones, Jr.  
(signatory)

who signed this document on behalf of said Contractor was then  
Vice President for Research of said Contractor; that  
this document was duly signed for and on behalf of said Contractor by  
authority of its governing body and is within the scope of its legal  
powers.

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



(SEAL)

CONTRACTOR: TEXAS TECH UNIVERSITY

APPENDIX A

For the Contract period April 1, 1981 through June 30, 1982

Article A-I RESEARCH TO BE PERFORMED BY CONTRACTOR

(a) The unclassified scope of work under this contract entitled, "Assessment of Tornado Risks and Analysis of Near Ground Tornadoic Wind Fields" is as follows:

1. Coordinating with the University of Chicago, continue collection of data on tornado damage, including a study of the performance of engineered structures, estimates of tornadoic wind speeds based on damage to engineered structures, and the identification and documentation of significant tornado-generated missiles.
2. Develop the effects of population density, land use and terrain characteristics on tornado reporting efficiency. Apply the correction factors to new and updated tornado data sets being prepared by the University of Chicago and the National Severe Storms Forecast Center. Upon completion, make a rational methodology for expanding the limited tornado data sets that currently exists to include estimates of unreported tornadoes that may have occurred during the reporting period.
3. Refine regionalization of the tornado hazard for the contiguous U. S. including site specific assessments as appropriate.

(b) The Principal Investigator expects to devote the following approximate amount(s) of time to the contract work:

Dr. James R. McDonald: 100% of his time for 3.75 man months

ARTICLE A-II WAYS AND MEANS OF PERFORMANCE

(a) Items for which support will be provided as indicated in A-III, below

- |   |              |
|---|--------------|
| (1) Salaries and Wages  | \$ 47,800.00 |
| (2) Equipment to be purchased or fabricated by the Contractor | \$ -0-       |

- (3) Travel
- |              |             |
|--------------|-------------|
| (i) Domestic | \$ 6,000.00 |
| (ii) Foreign | \$ -0-      |
- (4) Other direct costs
- (5) Indirect costs based on a predetermined rate of 27 percent applicable to direct cost (less any equipment)

(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 ESTIMATED NRC SUPPORT COST

The total estimated cost of items under A-II(a) above for the contract period stated in this Appendix A is \$39,000.00; 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 \$39,000.00.

The estimated NRC Support Cost is funded as follows:

- |   |              |
|---|--------------|
| (a) Estimated unexpended balance from prior period(s) | \$ -0-       |
| (b) New funds for the current period                  | \$ 39,000.00 |
- (c) The new funds being added in A-III(b) constitute the basis for advance payments provided under Article B-X.