

SUPPLEMENTAL AGREEMENT
BETWEEN
THE UNIVERSITY OF MICHIGAN
AND
THE U. S. NUCLEAR REGULATORY COMMISSION

8005180739

THIS SUPPLEMENTAL AGREEMENT, effective the 1st day of January , 1980, 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 THE UNIVERSITY OF MICHIGAN (hereinafter referred to as the "Contractor,")

WITNESSETH THAT:

WHEREAS, the parties desire to modify Contract No. NRC-04-75-182 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 "December 31, 1980" is substituted for the date "December 31, 1979".
3. In Article III - Consideration, the sum "\$959,921.00" is substituted for the sum "\$728,671.00".

IN WITNESS WHEREOF the parties have executed this document.

UNITED STATES OF AMERICA

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

Nuclear Regulatory Commission

THE UNIVERSITY OF MICHIGAN

BY: J.F. Brinkerhoff
J.F. Brinkerhoff, Vice President and
Chief Financial Officer
(title)

I, Paul J. Stemple, certify that I am the
(attester)

Manager, Contract Administration of the Contractor named
(title)

under this document; that J.F. Brinkerhoff
(signatory)

who signed this document on behalf of said Contractor was then

Vice President & Chief Financial Officer 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.

Paul J. Stemple

(SEAL)

CONTRACTOR: THE UNIVERSITY OF MICHIGAN

APPENDIX A

For the contract period January 1, 1980, through December 31, 1980.

Article A-I RESEARCH TO BE PERFORMED BY THE CONTRACTOR

(a) The unclassified scope of work under this contract entitled, "Improved Ultrasonic Nondestructive Testing of Pressure Vessels" is as follows:

Task I - Design, implement and evaluate a prototype of a real-time SAFT-UT imaging system for field implementation.

1. Analyze the scanning, processing and display segments carefully and identify the problem areas in each.
2. Compare each of the critical sections to determine the ones that are the most critical and need to be solved.
3. Write algorithms to verify that they are indeed the bottlenecks. For instance, to ascertain that processor and memory are not the real constraints, implement the algorithm on other processors and compare performance.
4. Implement the technique of partial apertures. Study its results and evaluate the use of this technique.
5. Write a report summarizing the findings and evaluate the results for future guidelines.

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

60% of his time for nine (9) months, plus two (2) summer 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 & Wages | \$104,315.00 |
| 2. Equipment to be purchased or fabricated by the Contractor: | \$ 750.00 |

<u>Over \$1,000.</u>	<u>Under \$1,000.</u>
-0-	Tube for Tektronix 4010 - \$750.00

- | | |
|--------------|-------------|
| 3. Travel: | |
| (i) Domestic | \$ 9,000.00 |
| (ii) Foreign | \$ -0- |

4. Other direct costs including fringe benefits.

5. Indirect costs based on a predetermined rate of 68.7% 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 \$231,250.00 ; 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 \$231,250.00 .

The estimated NRC Support Cost is funded as follows:

- | | |
|---|----------------------|
| (a) Estimated unexpended balance from prior period(s) | \$ <u>-0-</u> |
| (b) New funds for the current period | \$ <u>231,250.00</u> |
| (c) The new funds being added in A-III(b) constitute the basis for advance payments provided under Article B-X. | |