

SUPPLEMENTAL AGREEMENT
BETWEEN
THE UNIVERSITY OF THE STATE OF NEW YORK
AND
THE U. S. NUCLEAR REGULATORY COMMISSION

THIS SUPPLEMENTAL AGREEMENT, effective the 15th day of February, 1979, 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 THE STATE OF NEW YORK (hereinafter referred to as the "Contractor"),

WITNESSETH THAT:

WHEREAS, the parties desire to modify Contract No. NRC-04-77-169 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 "February 14, 1980" is substituted for the date "May 31, 1979."
3. In Article III - Consideration, the sum "\$322,206.00" is substituted for the sum "\$147,206.00."

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IN WITNESS WHEREOF, the parties have executed this document.

UNITED STATES OF AMERICA

BY: 

Kellogg W. Morton, Chief
Research Contracts Branch
(title)

Nuclear Regulatory Commission

UNIVERSITY OF THE STATE OF NEW YORK

BY: 

Gordon M. Ambach
Commissioner of Education
(title)

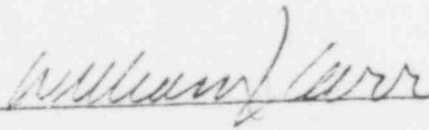
I, William Carr, certify that I am the
(attester)

Secretary of the Contractor named
(title)

under this document; that Gordon M. Ambach
(signatory)

who signed this document on behalf of said Contractor was then
Commissioner of Education 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: THE UNIVERSITY OF THE STATE OF NEW YORK

APPENDIX A

For the Contract period February 15, 1979 through February 14, 1980

Article A-I RESEARCH TO BE PERFORMED BY CONTRACTOR

- (a) The unclassified scope of work under this contract, entitled "Geologic Study of the Low-Level Radioactive Waste Burial Site, West Valley, New York," is as follows:

The work is the final phase currently planned of a multipart study to determine the geologic and hydrologic characteristics of the West Valley, New York site relative to storage of low-level radioactive waste in trenches. The studies include evaluation of the potential for migration of radionuclides to offsite areas.

The objectives of the final phase are:

1. to complete the data base from which conclusions can be drawn,
2. to test and substantiate or modify preliminary conclusions that have been established,
3. to evaluate the effectiveness of recent trench cap repairs by comparison of the present situation relative to geologic, hydrologic and geomorphic processes at the site with the information obtained before the trench caps were repaired.

Specific areas of investigation include:

1. completion of the study of the geohydrologic conditions,
2. completion of the study of surface water conditions,
3. a final collection and set of confirmatory analyses of source term in the trenches and of contamination around the trench area perimeter.

Project Design and Development

The New York State Geological Survey (NYSGS) will on the basis of previously obtained information and time available for the 1979 field study season develop a detailed plan, negotiate subcontracts as necessary, make work assignments, and coordinate overall efforts under the program. Elements of the plan will be provided to NRC staff as they are developed.

Geohydrology Study - Solute Migration in the Subsurface

Analyze core samples already collected beneath trenches containing waste for radionuclides in sections of the core appropriate for estimating downward movement of radionuclides in the unweathered till.

Surface Water Program

Institute a surface water and sediment collection and analysis program for the 1979 season that takes advantage of site changes that occurred in conjunction with trench cap repairs. Refine the program with the objective of distinguishing between waste burial-related radionuclides and other sources of radionuclides. Include appropriate soil sampling and analysis for specific radionuclides for comparison with the set of soil samples collected before trench cap repairs.

The study will include an analysis that gives an estimate of the water balance at the site. The radionuclide analyses will include HTO, Sr-90, high resolution gamma spectrum analyses, analyses for certain long-lived radionuclides and uranium and transuranium elements as appropriate. The specific analyses to be performed will be determined in consultation with NRC staff following initial HTO and gamma spectrum analyses. Selected samples will be provided to NRC staff for interlaboratory comparisons.

Source Term Study - Definition of Trench Water and Soil Characteristics

Trench water samples will be collected anoxically from newly driven well points in the trenches. The specific number of new well points is to be determined as the sampling proceeds and preliminary analyses are made. Anoxic water and sediment fractions will be obtained for analysis of radionuclides where possible.

Collect and analyze approximately 10 soil samples to assess the effects of trench cap repairs. Collect soil samples from the south trenches which have never overflowed to provide a baseline in the event of a future overflow.

The radionuclide analyses will be as described above under the Surface Water Program.

Engineering Properties of Soils

Collect approximately ten near-surface soil samples on, around, and near trenches and on slopes bordering the low-level site. Perform a set of standard engineering tests on the samples.

Apply results to analysis of slumping rates around the low-level waste site.

Site Closing and Report Preparation

Upon completion of the field studies NYSGS will be prepared to return areas used for the NRC-sponsored studies to their pre-study conditions where required. This may include removal of well pipes and grouting of wells, removal of surface water gauging stations and return of site to original contour, and closing of any remaining test pits. Approximately \$4000 dollars may be kept in reserve for closing activities that are deferred beyond the time of completing the final report.

A final report that analyzes and interprets the data and makes appropriate projections where warranted will be submitted to NRC within six months following completion of the field work and laboratory analyses. The final report will include an executive summary.

Interim draft reports will be submitted as each element of the study reaches a logical end point.

A letter report [briefly] describing the progress of the studies, including results of radionuclide analyses will be submitted monthly.

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

Robert H. Fakunding - 8% of his time for 12 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	\$ <u>48,906.00</u>
(2) Equipment to be purchased or fabricated by the Contractor	\$ <u>-0-</u>
(3) Travel	
(i) Domestic	\$ <u>4,500.00</u>
(ii) Foreign	\$ <u>-0-</u>
(4) Other direct costs including fringe benefits	
(5) Indirect costs based on a predetermined rate of 05 percent applicable to total direct costs	

- (b) Items, if any, significant to the performance of this contract, but excluded from computation of Support Cost and from consideration in proportioning costs: TO BE CONTRIBUTED BY CONTRACTOR

Use charges in the amount of \$3,580.00 for Education Department facilities.
Research Associate - 15% of his time for 12 months

- (c) Time or effort of Principal Investigator(s) including direct costs and fringe benefits contributed by Contractor but excluded from computation of Support Cost and from consideration in proportioning costs:

R. H. Fakundiny - 8% of his time for 12 months

Article A-III

The total estimated cost of items under A-II(a) above for the contract period stated in this Appendix A is \$175,000.00; 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 \$175,000.00.

The estimated NRC Support Cost is funded as follows:

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|---|----------------------|
| (a) Estimated unexpended balance from prior period(s) | \$ <u> 0 </u> |
| (b) New funds for the current period | \$ <u>175,000.00</u> |
| (c) The new funds being added in A-III(b) constitute the basis for advance payments provided under Article B-X. | |