

SUPPLEMENTAL AGREEMENT
BETWEEN

NEW YORK STATE EDUCATION DEPARTMENT
AND
THE U. S. NUCLEAR REGULATORY COMMISSION

THIS SUPPLEMENTAL AGREEMENT, effective the 24th day of May, 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 NEW YORK STATE EDUCATION DEPARTMENT (hereinafter referred to as the "Contractor"),

WITNESSETH THAT:

WHEREAS, the parties desire to modify Contract No. NRC-04-79-205 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 "July 31, 1982" is substituted for the date "July 31, 1981".
3. In Article III - Consideration, the sum "\$397,976.00" is substituted for the sum "\$179,976.00".

8106220532

IN WITNESS WHEREOF, the parties have executed this document.

UNITED STATES OF AMERICA

BY: 

Kellogg V. Horton, Chief
Research Contracts Branch
Division of Contracts
U. S. Nuclear Regulatory Commission

NEW YORK STATE EDUCATION DEPARTMENT

BY: 

Executive Deputy Commissioner for Educ.
(title)

I, _____, certify that I am the
(attester)

_____ of the Contractor named under this
(title)

document; that _____ who signed this
(signatory)

document on behalf of said Contractor was then _____

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: NEW YORK STATE EDUCATION DEPARTMENT

APPENDIX A

For the Contract period May 24, 1981 through July 31, 1982

Article A-I RESEARCH TO BE PERFORMED BY CONTRACTOR

- (a) The unclassified scope of work under this contract entitled, "West Valley Waste Burial and Storage Facilities" is as follows:

Geologic-Geohydrologic Investigations

Organize all existing geologic data, particularly from early construction related drilling, with drilling from this program, into a series of large scale geologic cross sections. Such cross sections will form the framework for geohydrologic studies and will be basic to fully understanding the stratigraphy of the site in its broader aspects.

A very specific geologic problem in the LLRWB area will be addressed in the proposed program. Work by the USGS has indicated the presence of a subsurface silty sand layer east of Trench 8 which extends eastward towards Frank's Creek. This silty sand layer has been interpreted to be the lateral equivalent of a sand layer encountered beneath Trench 8. Investigation by the USGS has indicated that the silty sand layer does not reach Frank's Creek. The extent of the silty sand layer should be thoroughly investigated and any uncertainties regarding its extent eliminated.

Five holes to bedrock will be drilled as part of the co-operative program with the USGS during the 1981 field season. These holes will be cored, the core samples fully described and geohydrologic tests carried out as indicated to be appropriate. One of these holes will be drilled immediately to the west, and another south of the NRCLRWB area with a third deep hole to the east. A fourth hole to bedrock will be drilled on the North Plateau at a location which will give an understanding of the stratigraphy north of the plant area. A fifth hole to bedrock is planned east of the LLRWB area in order to establish the stratigraphy of the thickest portion of glacial deposits in the pre-glacial valley of Buttermilk Creek.

This program will provide for radiochemical analysis of core and water samples from the holes to be drilled adjacent to the NRCLRWB area and from the hole to be drilled on the North Plateau. These analyses will be undertaken to establish whether or not radionuclides have migrated from the NRCLRWB area via ground-water pathways. All holes will be constructed so as to assure no loss of integrity of the burial till as an inhibitor to ground-water movement.

Hydrologic Investigations

The stream gaging, suspended sediment and sampling activities begun during 1980 will be carried forward over the 1981 contract period. Collection of precipitation data will be continued and a snowfall survey will be carried out by the USGS during the winter. A program for establishing ambient and, if present, unusual radionuclide levels in weekly composite samples from streams and entrained suspended sediments is to be provided for. Provision is also to be made for detecting the presence of radionuclides in up to seventy individual samples of stream samples and/or sediments. This program will permit the investigation of the relationships of radionuclide transport to stream flow. Two detailed radionuclide analyses will be performed in the event that higher-than-ambient levels of radioactivity are detected.

Geophysical Survey of Surficial Gravel Layer - North Plateau

This program, as part of the co-operative program with the USGS, includes a geophysical survey (resistivity and refraction seismic) of the North Plateau area. This geophysical survey will attempt to delineate the topography of the buried till surface below the ground-water bearing surficial gravel layer. The configuration of this surface must be known in order to understand the geohydrologic regime of the North Plateau.

Video Logging of NRCLRWB Area Excavation

Because of the obvious hazards involved no borings within the NRCLRWB area are planned in this program. The site operator, however, conducts periodic deep waste burial operations within the area. A geologic logging operation of one of these excavations will be undertaken utilizing a color television camera and video cassette recorder. This system furnishes a unique opportunity to gain a detailed visual examination and analysis of the stratigraphy within the NRCLRWB area proper.

Surface Pulsed Radar Experiment

This program, for field season 1981, includes logistical assistance in installing and recording the geologic aspects of a research trench for the field testing of the Geo-Centers, Inc., surface pulsed radar equipment at West Valley.

Geomorphic Study

A landslide has occurred immediately north of the LLRWB area. This program includes the establishment of a grid of movement monitoring stakes on, and adjacent to this landslide surface so that further movement may be quantified and studied in detail.

Research Products, 1981 Contract Year

While the 1981 contract year will be devoted primarily to data gathering, a progress report covering geohydrologic and hydrologic research activities for the contract year will be presented. A separate progress report on site geology including geologic cross sections and the results of investigations into the lateral extent of the sand lens in the vicinity of Trench 8 will be presented.

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

R. Fakundiny: 6% 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 \$ 105,286.00

(2) Equipment to be purchased or
fabricated by the Contractor \$ 2,400.00

<u>Under \$1000</u>	<u>Over \$1000</u>
Downhole Lighting	Color Video Camera
Camera Cable	Video Cassette Recorder

(3) Travel (i) Domestic \$ 19,000.00

(ii) Foreign \$ -0-

(4) Other direct costs including fringe benefits

(5) Indirect costs based on a predetermined rate of 10.19 percent applicable to salaries and wages.

- (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:

R. Fakundiny: 6% of his time for 12 months

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 \$218,000.00 ; 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 8-XXVIII. The estimated NRC Support Cost for the contract period stated in this Appendix A is \$218,000.00 .

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>218,000.00</u> |
| (c) The new funds being added in A-III(b) constitute the basis for advance payments provided under Article 8-X. | |