

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

FEB 5 1981

R.L. Friedenwald, Colonel
U.S. Department of the Army
Corps of Engineers
Executive Director of Civil Works
DAW-CWE-S
Washington, DC 20314

Dear Colonel Robertson:

Subject: Interagency Agreement No. NRC-03-31-121 Entitled "Geotechnical Engineering Reviews of Operator Reactor Plants"

Pursuant to the authority contained in the Economy Act of 1932, as amended, 31 USC 686, the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Army Corps of Engineers (COE) desire to enter into a cooperative agreement whereby COE will provide support in geotechnical engineering for non-reactor facilities.

Accordingly, the above Parties hereto mutually agree to the following terms of this agreement:

I. Period of Performance

The period of performance shall be from the effective date of the agreement through nineteen (19) months thereafter.

II. Statement of Work

Work performed under this agreement shall be in accordance with Attachment I which is attached and made a part hereof.

III. Estimated Cost & Obligation of Funds

- A. The estimated cost of the work to be performed under this agreement is \$81,496.00.
- B. The amount presently obligated for the performance of work under this agreement is \$41,000.00.
- C. Funds obligated to this agreement are chargeable to the following appropriation data:

B&R Symbol: 20-19-01-12 FIN No. B-6882

- D. Additional obligation of funds will be made for Fiscal Year 1982, subject to availability of funds, by unilateral modification to this agreement, until obligations for the period of Agreement reach \$81,496.00.

8108050/78

IV. Billing Instructions

COE, to receive reimbursement for costs incurred, shall submit invoices in accordance with Attachment II, Billing Instructions for NRC Cost-Type Contracts, which is attached and made a part hereof.

V. Advanced Notification

It is estimated that the total cost to the NRC for the performance of this contract will not exceed the estimated cost set forth in ARTICLE III and COE agrees to use its best efforts to perform the work specified in ARTICLE II and all obligations under this contract within such estimated costs. If, at any time, COE has reason to believe that the costs which it expects to incur in the performance of this contract in the next succeeding 60 days, when added to all costs previously incurred, will exceed 75 percent of the estimated cost then set forth in ARTICLE III, or if, at any time, COE has reason to believe that the total cost to the NRC for the performance of this contract will be greater or substantially less than the then estimated cost hereof, COE shall notify the Contracting Officer in writing to that effect, giving the revised estimate of such total cost for the performance of this contract.

VI. Project Officer

The following individual will represent the Government as the Project Officer for this contract:

George Lear -- (301) 492-8085

The Project Officer is responsible for: (1) Monitoring the Contractor's technical progress, including the surveillance and assessment of performance and recommending to the Contracting Officer changes in requirements; (2) interpreting the statement of work; (3) performing technical evaluation as required; (4) performing technical inspections and acceptances required by this contract; and (5) assisting the Contractor in the resolution of technical problems encountered during performance. Within the preview of this authority, the representative is authorized to approve payment vouchers for supplies/services required under the contract. The Contracting Officer is responsible for directing or negotiating any changes in terms, conditions, or amounts cited in the contract.

For guidance from the Project Officer to the Contractor to be valid, it must: (1) be consistent with the description of work set forth in this contract; (2) not constitute new assignment of work or change to the expressed terms, conditions, or specifications incorporated into this contract; (3) not constitute a basis for an extension to the period of performance or contract delivery schedule; (4) not constitute a basis for any increase in the contract price.

If the Contractor receives guidance from the Project Officer which the Contractor feels is not valid under the criteria cited above, the Contractor shall immediately notify the Project Officer. If the two are not able to resolve the question within 5 days, the Contractor shall notify the Contracting Officer.

ARTICLE VII TECHNICAL DIRECTION

- A. Performance of the work under this contract shall be subject to the technical direction of the MRC Project Officer named in Article VIII of this contract. The term "Technical Direction" is defined to include the following:
1. Technical direction to the contractor which shifts work emphasis between areas of work or tasks, requires pursuit of certain lines of inquiry, fills in details or otherwise serves to accomplish the contractual scope of work.
 2. Providing assistance to the Contractor in the preparation of drawings, specifications or technical portions of the work description.
 3. Review and where required by the contract, approval of technical reports, drawings, specifications and technical information to be delivered by the Contractor to the Government under the contract.
- B. Technical direction must be within the general scope of work stated in the contract. The Project Officer does not have the authority to and may not issue any technical direction which:
1. Constitutes an assignment of additional work outside the general scope of the contract.
 2. Constitutes a change as defined in the clause of the General Provisions, entitled "Changes."
 3. In any way causes an increase or decrease in the total estimated contract cost, the fixed fee, if any, or the time required for contract performance.
 4. Changes any of the expressed terms, conditions or specifications of the contract.
- C. ALL TECHNICAL DIRECTIONS SHALL BE ISSUED IN WRITING BY THE PROJECT OFFICER OR SHALL BE CONFIRMED BY SUCH PERSON IN WRITING WITHIN TEN (10) WORKING DAYS AFTER VERBAL ISSUANCE. A copy of said written direction shall be submitted to the Contracting Officer.

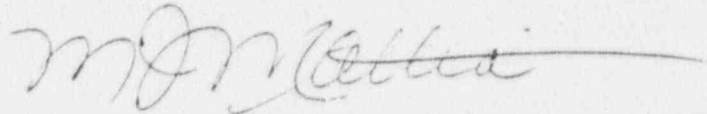
The Contractor shall proceed promptly with the performance of technical directions duly issued by the Project Officer in the manner prescribed by this article and within such person's authority under the provisions of this article.

VIII. NRC Contacts

Contracts Contact: The NRC contact is Allen F. Glagola, telephone number (301) 427-4480. Mr. Glagola will handle all contractual/administrative actions.

If this agreement is acceptable to COE, please so indicate by signing in the space below and returning two (2) signed copies to me. The third signed copy is for your records.

Sincerely,

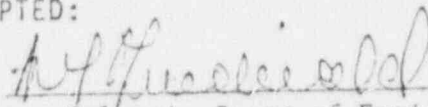


Mary Jo Mattia, Acting Chief
Technical Assistance Contracts Branch
Division of Contracts
Office of Administration

U.S. DEPARTMENT OF THE ARMY

ACCEPTED:

BY:



Colonel, Corps of Engineers

TITLE:

Executive Director of Civil Works

DATE:

12 FEB 81

Geotechnical Engineering Reviews of Operating Reactor Plants

Purpose of Program

Licensees operating nuclear facilities are often required to assess the significance of new geotechnical engineering information which becomes available during operation of the facility. These studies, frequently relating to a recognition of additional geotechnical information needs or new earthquake data are undertaken to assess the capability of plant foundations at the site and are usually extensive. The results of these studies are submitted for staff review. On completion of this review the staff develops a Safety Evaluation Report (SER) containing its findings on the issues. Subsequently, the staff often appears before the Advisory Committee on Reactor Safeguards and at Safety hearings.

The advice of the U. S. Army Corps of Engineers is needed because of the need for specialized expertise in certain disciplines or specialized analytical expertise which is not available in the NRC staff.

Task 1 - Beaver Valley I

Estimated Manpower: FY 80 = 0.4 my FY 81: 0.4 my

Background

During an I&E inspection of the foundation excavation for the Beaver Valley II plant, areas of soft soils were observed. Further developments and investigation revealed that extensive pockets of sands existed beneath the power block area which would benefit from efforts to densify them. The licensee elected to densify these foundation sands by driving pressure injected footings in this area.

Because of the discovery of sand zones at Beaver Valley 2, the staff asked that an investigation of foundation beneath the adjacent plant, Beaver Valley 1, be conducted. Based on these investigations and analyses, the licensee decided to shut down Beaver Valley 1, whenever river elevations exceed a specified value, indicative of soil liquefaction potential under earthquake excitation. The plant was shut down once due to high water levels. The licensee now claims that the river elevation limitation is not necessary and has submitted reports in support of this claim.

The Corps of Engineers personnel have participated in the review of Beaver Valley 2, so they would be in a position to continue their evaluation of the adjacent Beaver Valley 1 foundation.

Work Requirements

1. Review geotechnical engineering reports provided by the licensee
2. Conduct site visits in order to assess local foundation conditions.
3. Provide review letter reports containing evaluations of the geotechnical features of the soils and foundation questions, recommendations for additional licensee work to support their position, and recommendations for staff positions
4. Review the licensee plans for remedial foundation treatment
5. Provide review letter reports containing evaluations of the geotechnical features of the remedial foundation treatment.

Estimated Completion Date

Three (3) months after the effective date of agreement.

Three (3) months after the effective date of agreement.

Four (4) months after the effective date of agreement.

Thirteen (13) months after the effective date of agreement.

Nineteen (19) months after the effective date of agreement.

Meetings and Travel

It is estimated that Corps of Engineers personnel will be required to attend two review meetings at NRC office in Bethesda and two visits to the plant site.

Reporting Requirements

1. Upon completion of each task or site visit the Corps will submit a letter report which satisfies the work requirements.
2. A business letter report containing resource expenditure information shall be submitted within one month after the completion of each task.
3. A business letter report shall be submitted one month before the end of each fiscal year containing the following:
 - a. a listing of resource expenditure by task, and
 - b. a summary of completed efforts.

COE shall distribute the aforementioned reports as follows:

- | | |
|----------|---|
| 1 copy | Mr. Dennis J. Dougherty, Contracting Officer U.S. Nuclear Regulatory Commission Division of Contracts Washington, DC 20555 |
| 1 copy | Mr. B.L. Grenier, Director U.S. Nuclear Regulatory Commission Division of Systems Safety Washington, DC 20555 |
| 2 copies | Mr. George E. Lear, Project Officer U.S. Nuclear Regulatory Commission Division of Site Safety and Environmental Analysis Washington, DC 20555 |
| 1 copy | Mr. Richard Vollmer, Director U.S. Nuclear Regulatory Commission Division of Engineering Washington, DC 20555 |

NRC Furnished Materials

Documents needed for review will be forwarded to the Corps of Engineers under separate cover. Some of this material may contain proprietary information, as marked, and must be kept in confidence.