



JUN 15 1992

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

Dear Colonel Friedenwald:

Subject: Interagency Agreement (IA) No. NRC-03-82-107 Work Order No. One

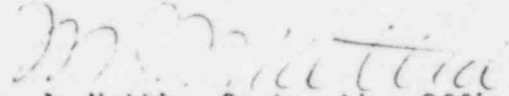
When signed by the Corps of Engineers (COE), this Work Order No. One (1) becomes effective under Article II entitled "Procedures for Placing Work Orders under this Agreement" of the subject IA. The COE shall acknowledge receipt of this Work Order No. One (1) immediately returning to the Nuclear Regulatory Commission (NRC) a copy of this letter signed below.

The COE shall perform the effort specified in Article I of the IA entitled "Statement of Work." See Attachment A for described requirements under this Task Order. The level of effort is estimated at 0.15 staff-years over a 5-month period of performance.

Total charges under this Work Order No. One (1) are estimated at \$15,000,000 pending receipt of a proposal from the COE and subject to negotiation of the proposed costs. The COE shall notify the Contracting Officer within 30 calendar days after receipt of this Work Order. Said notification shall contain the COE's estimate for performance of the requirement(s) under subject Work Order. Notwithstanding said notification, the COE shall commence performance of the statement of work as indicated herein. The Contracting Officer shall ratify the original NRC estimate or adopt the COE's cost proposal or a combination of the two and revise or confirm the Work Order accordingly.

This authorization does not amend any terms or conditions of the agreement.

Sincerely,



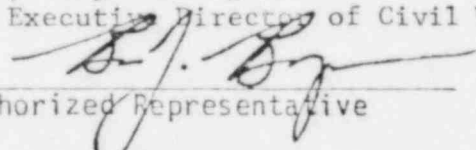
Mary Jo Mattia, Contracting Officer
Technical Assistance Contracts Branch
Division of Contracts

Accepted - - -

- Agree
- Disagree
- Notification will be submitted by

Date
BRIAN J. BRANAGAN
Colonel, Corps of Engineers
Acting Executive Director of Civil Works

By:



Authorized Representative

13 July 82

Effective Date

Project Manager: L. Heller, FTS 492-8141

Background and Objective

A number of nuclear power plants, some in the Eastern part of the United States, use earthen dams or embankments to impound water for operational safe-shutdown purposes. Many of these impoundments have induced some significant seismic activities. For example, at the Summer Nuclear Power Station, series of reservoir induced seismicities have been observed since 1978 with the maximum acceleration as high as 0.34g. A practical understanding of such earthquake induced motions is necessary to an evaluation of dam performance, functionality and safety. Until recently, there have been no known strong motion records of earth dam motion caused by near-field Eastern earthquakes.

On January 12, 1982, a Richter Magnitude 4.8 earthquake occurred in New Hampshire. Strong-motion records on a Corps of Engineer dam at Franklin Falls were obtained. This dam is only 8 km. from the earthquake epicenter.

To support nuclear power plant licensing decisions on the Summer Nuclear Power Plant, the Geotechnical Engineering Section, HGEB/DE/NRR, needs a prompt interpretation of the unique strong motion records obtained at the Corps Franklin Falls dam. This interpretation is required for the HGEB evaluation of the integrity of the dam at the Summer Nuclear Power Plant Site. The following work requirements will provide the needed information.

Work Requirements

Estimated Completion Date

- | | |
|--|---|
| (1) Read and digitize strong motion records (9 components) of the 1/18/82 earthquake. Provide a brief letter report of peak accelerations on the dam and dam geometry, and local site soil/rock conditions that may have influenced the strong motion records. | One (1) month after effective date of agreement. |
| (2) Process strong motion records (9 components) and compute Response Spectra for each component for acceleration, velocity, and displacement. Damping values should be 1, 2, 5 and 10 percent of critical for these spectra. | Three (3) months after effective date of agreement. |
| (3) Provide a letter report to NRC summarizing the results of (1) and (2) above. | Five (5) months after effective date of agreement. |

LEVEL OF EFFORT AND PERIOD OF PERFORMANCE

The level of effort is estimated at 0.15 staff-years over a 5-month period.

REPORTING REQUIREMENTS

1. Upon completion of each task as delineated in the work requirements, submit a letter report of significant findings and results to the Project Officer and the Technical Monitor.
2. Upon completion of the task work order, provide a letter report summarizing findings and results to the Project Officer and the Technical Monitor.
3. The business letter report should be submitted on a monthly basis as delineated in the Interagency Agreement.

MEETINGS AND TRAVEL

It is estimated that the Corps of Engineer personnel will be required to attend one review meeting in Bethesda, MD lasting two days.

NRC Furnished Materials

Documents needed for review may include Safety Analysis Reports, Safety Evaluation Reports, Memoranda and other project related studies available to the staff. These documents 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.