

OCT 8 1980

REQUEST FOR PROCUREMENT ACTION
RFPA NO. NRR-81-92

MEMORANDUM FOR: Dennis J. Dougherty, Chief
Technical Assistance Contracts Branch
Division of Contracts

FROM: Director, Division of Engineering

(This form is designed to accommodate varying kinds of procurement requests, including small purchases, sole source actions and competitive solicitations. Inapplicable items or those for which you have not developed information should be left blank. In such cases, project officer should contact Division of Contracts' personnel for appropriate guidance.)

Part I - Project Data

1. It is requested that the Division of Contracts take the following action:

- Issue a Request for Proposal (RFP)
- Issue a RFP to firms awarded Basic Ordering Agreement (type)
- Award a contract on the basis of our acceptance of a proposal from _____ in response to an RFP, RFP under a BOA or Interagency Agreement (IA)
- Award a Sole Source Contract to Dr. M. T. Davisson Name of Person or Firm
- Enter into an Interagency Agreement with: _____ Name of Agency

Execute a Modification to Contract No. _____ with _____ Name of Person or Firm

Award a contract on basis of our acceptance of an Unsolicited Proposal

2. Title of Project and brief description of work: _____

"Review of Selected Characteristics of Piles for Bailly Nuclear I". Provides assistance to DE Staff and COE Reviewers on selected, complex items in review of pile foundations; Provides expert witness testimony.

NOV 5 1980
DIVISION OF CONTRACTS

If a modification action is requested, briefly describe nature of action:

3. The level of effort required to perform this work is estimated at
0 year(s) and 2.5 month(s) over a 1 year
11 month period from the effective date of the contract; from
11/1/80 through 9/30/82.
month-day-year month-day-year

4. The expiration date for receipt of proposals is _____ days after
issuance of RFP.

5. A preproposal conference is is not contemplated.

6. No classified information is anticipated.

Classified information is anticipated. See NRC Form 187, attached.

7. The Technical Monitor for this requirement is Owen O. Thompson,
telephone number 492-8186; the Project Officer is George E. Lear,
telephone number 492-8085.

Part II - Funds

1. Estimated Cost: \$30,000 Current FY: (81) \$15,000
Second FY: (82) \$15,000 Third FY: _____

Funds Availability: This certifies that funds in the amount of
\$ * _____ are available for obligation in the current budget
or \$ 15,000 have been included in this year's budget

*Availability of funds will be certified at the time the proposal
is accepted

for the subject work and/or that estimated funds in the amount of \$ 15,000 have been included in next year's budget request for the work (if work is contemplated beyond this Fiscal Year).

B&R No.: 20-19-04-12 FIN No.: 87505

Appropriation Symbol: 31X0200201

Bernard L. Grenier *BLG* 4/7/8
Technical Assistance Program Manager
Signature of Certifying Officer

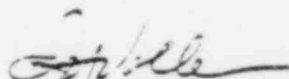
Part III - Duplication of Effort

1. I certify that, based on inquiries made with other NRC offices, no unnecessary duplication of effort will result from the conduct of the subject work (less than \$100,000.00).
2. Attached are the certifications executed by each of the members of the Contract Review Board (more than \$100,000.00).
3. Contract Review Board certification requests have been forwarded to Board members for concurrence and/or comments. Completed certifications will be forwarded.

Part IV - Attachments

- Statement of Work (Attachment No. 1)
- Evaluation criteria and their numerical weights (Attachment No.)
- List of firms to be invited to submit proposals in addition to general public notification (Attachment No.)

- Copy of letter designating Source Evaluation Panel members
(Attachment No. _____)
- Sole Source Justification, if applicable (Attachment No. _____)
- Unsolicited Proposal Justification, if applicable. Approval and execution of a contract with _____ on
Name of Proposer
the basis of an unsolicited proposal is recommended. (Attachment No. _____)
- Contract Review Board Certifications (Attachment No. _____)
- Special Requirements* (Attachment No. _____)



Richard H. Vollmer

Signature of Director

(Designating Official)

*This pertains to instructions concerning schedules, reports, data, Government-furnished equipment or other special requirements.

Copy of letter designating Source Evaluation Panel members
(Attachment No. _____)

Sole Source Justification, if applicable (Attachment No. 2)

Unsolicited Proposal Justification, if applicable. Approval and execution of a contract with _____ on
Name of Proposer
the basis of an unsolicited proposal is recommended. (Attachment No. _____)

Contract Review Board Certifications (Attachment No. _____)

Special Requirements* (Attachment No. _____)

Original signature of
Richard B. Vollmer
Signature of Director
(Designating Official)

DISTRIBUTION
Central File ✓
NRR r/f
NRR Contract File (B. Grenier)
Division r/f
Branch r/f

J. Leonard
J. Larkins RES
P. Ting STD
Concurees:

*This pertains to instructions concerning schedules, reports, data, Government-furnished equipment, or other special requirements.

OFFICE	HGEB:DE	HGEB:DE	HGEB:DE	NRR	ADR:GSE:DE	NRR	Q:DE:NRR
urname	O. Thompson	L. Hepler	G. Lear	C. Poslusny	N. Knight	B. Grenier	R. Vollmer
ite	10/3/80	10/10/80	10/12/80	10/6/80	10/12/80	10/17/80	10/3/80

Attachment 1
Statement of Work

Background

A construction permit (CP) for Bailly Nuclear 1 was issued in 1974. A CP extension is now required because construction is only about 1% complete and the 1974 CP has expired.

The plant was required to be supported on high-capacity, non-displacement piles. The applicant started driving 140 ft. long steel H-piles and experienced difficulties. Supplemental installation methods of predrilling and jetting were tried but these methods resulted in conditions unacceptable to the staff. Subsequently, the applicant has proposed to drive shorter piles. This proposal is being subjected to intensive review effort by the staff and its consultants, partly on account of technical problems associated with the review of pile foundations, but also on account of strong intervention.

The short pile review effort was undertaken by the staff with assistance from expert consultants (including Dr. M. T. Davisson). When the magnitude of the review became too large for the geotechnical engineering staff to handle, the Corps of Engineers (Detroit District) was contracted to provide primary review effort with the continuing assistance from the expert consultants. The review is proceeding in this format and OELD staff has advised the reviewers to prepare for ASLB hearings and Federal Appeal Court hearings on the acceptability of the short pile proposal and on the applicant's application for a CP extension.

Objective

The objective of this contract is to obtain the assistance of Dr. Davisson in the completion of the Bailly pile foundation review through the ASLB hearings, the Federal Appeal Court proceedings, and the actual pile installation work.

Work Requirements

Task 1

Estimated Completion Date

Estimated level of effort: FY 1981 5 man-days

30 days after award of contract.

Prepare a report identifying the significant issues reviewed by the contractor on the Bailly pile foundation from March 25, 1978 to October 31, 1980. The report shall summarize the contractor's evaluations, conclusions and recommendations made regarding these items, including the bases for these evaluations, conclusions and recommendations. The report shall summarize the calculations performed and shall identify the literature references and any other bases used in the evaluations. The report shall also contain a status of the items requiring further review. Task 1 shall be completed before Task 2 is started.

Task 2

Estimated Completion Date

Estimated level of effort: FY 1981 10 man-days Within 30 days of request
FY 1982 10 man-days

Evaluate the behavior of pile groups, the long term performance of the proposed foundation and its behavior under extreme environmental conditions, the QA/QC for the pile installation, and other items requiring further review. This assistance shall include attendance at meetings with the staff, other consultants, and the applicant, as directed by the project officer. Also, as necessary, perform analyses, and make visits to the site to observe the pile driving operations. Upon completion of significant milestones, as identified by the project officer, provide updates of the report submitted under task 1. It is estimated that four reports will be required. The content of these reports shall be as specified in task 1.

Task 3

Estimated level of effort: FY 1981 15 man-days As required to supplement
FY 1982 10 man-days previously prepared reports
and as needed to support
licensing activities.

Prepare written testimony and provide expert witnessing at the ACRS meetings, ASLB hearings and Federal Appeal Court proceedings, as required to fulfill licensing objectives.

Level of Effort and Period of Performance

The level of effort is estimated at 50 man-days over a two year period of performance.

Reporting Requirements

1. The report requested under task 1 shall be provided to the project officer with copies to J. P. Knight, L. Heller and O. Thompson of the Division of Engineering.
2. The updated reports requested under task 2 shall be provided to the project officer, with copies to J. P. Knight, L. Heller and O. Thompson.
3. The written testimony prepared under task 3 shall be submitted to the project officer with copies to L. Heller and O. Thompson.

Note: All data, calculations, graphs, plots, computer runs, etc, developed exclusively under this contract become the property of the NRC and will be delivered to the NRC by the contractor.

4. A business letter report shall be submitted along with the billing voucher to the project officer with copies to J. P. Knight, DE, and B. L. Grenier, NRR, and the contracting officer, DC. These reports will contain:
 - A summary of the efforts completed during the period;
 - The amount of funds expended for manpower, computer services and travel during the period and cumulative to date;
 - Any problems or delays encountered or anticipated.

Meetings and Travel

The contractor should plan and budget for the following meetings and travel:

- 2 one-day meetings in Bethesda
- 12 one-day visits to the Bailly Nuclear Plant Site in Porter County, Indiana
- 3 one-day ACRS meetings or ASLB hearings in Porter County, Indiana
- Three days at Federal Court proceedings in Washington, D.C.

NRC Furnished Materials

Licensee submittals required for review of the proposed pile foundation will be furnished under separate cover by the project officer.

ATTACHMENT 2

SOLE SOURCE JUSTIFICATION

Dr. M. T. Davisson

REVIEW OF SELECTED CHARACTERISTICS OF PILES AT BAILLY NUCLEAR I (POST-CP)

As a post - CP design change to the Bailly application, a short pile foundation is proposed to replace the long pile foundation. The main basis for the short pile design is a paper written in 1975 by Dr. Davisson. The best interpretation of Dr. Davisson's paper for application to the design of the Bailly piles can be supplied by Dr. Davisson because only he knows the limitations of the soil and pile conditions for which his information and research studies are valid. If another source (person) were asked to perform the work statement, he would have to confirm the validity of Dr. Davisson's paper before proceeding to the evaluation of the proposed pile foundation. Therefore, the use of Dr. Davisson as a sole source for this work is most efficient and in the interest of a best evidence determination.

In addition to Dr. Davisson's specialized capabilities as evidenced by his 1975 paper, he has written numerous other papers on piling and he is a nationally recognized expert in piling. For example, Dr. Davisson was selected as one of ten experts to panel the U.S. Department of Transportation Pile Prediction Symposium, 1980.

Dr. Davisson has previously provided consulting services to NRC under Contracts NRC-03-78-166 and NRC-03-79-157 wherein he provided expertise on complex areas of the short pile review effort.

The review of the short pile proposal is not complete, primarily because there are complex technical issues which can only be resolved during and after the driving of piles. Thus, the continued expert technical services of Dr. Davisson are needed for the review of these complex technical issues. Dr. Davisson's unique capabilities in this regard are discussed above.

In addition to Dr. Davisson's unique technical qualifications regarding the Bailly piles, he is also the most cost-effective NRC source for the required expertise because of his intimate knowledge of the project; Dr. Davisson has been associated with the Bailly project during essentially all of the staff review of the current short pile proposal.

The importance of Dr. Davisson's national reputation is also significant in the consideration of a sole source. In this regard, Dr. Davisson will provide a valuable contribution in the strongly contested licensing proceedings for the Bailly plant.

At this time the staff would be unable to proceed effectively in the licensing process without the services of Dr. Davisson because he is needed to:

- a) support in meetings, hearings and court proceedings his evaluations made during previous review efforts.
- b) provide review assistance for the complex technical issues yet to be resolved by the staff and for which he has unique technical capabilities.
- c) support in meetings, hearing and court proceedings his evaluations and recommendations to be made in the on-going review effort.