



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

FEB 04 1991

International Technical Services, Inc.
ATTN: Dr. Hideko Komoriya
420 Lexington Avenue
New York, New York 10170

Dear Dr. Komoriya:

Subject: Contract No. NRC-03-90-027, Task Order No. 10 Entitled "Review of Comanche Peak Core Thermal Hydraulic Methodology Using VIPRE-01" (FIN L-1318)

You are hereby authorized to commence work on the subject Task Order with an established ceiling of \$28,004.00.

In accordance with Section G.5, Task Order Procedures, of the subject contract, this letter definitizes Task Order No. 10. This effort shall be performed in accordance with the enclosed Statement of Work and the Contractor's proposal dated January 24, 1991, incorporated herein by reference.

The period of performance for Task Order No. 10 is February 4, 1991 through October 31, 1991. The total cost ceiling is \$28,004.00. The amount of \$25,551.00 represents the total reimbursable costs and the amount of \$2,453.00 represents the fixed fee.

Accounting data for Task Order No. 10 is as follows:

B&R No.:	120-19-15-02-0
FIN No.:	L-1318-1
Appropriation No.:	31X0200.201
Obligate Amount:	\$28,004.00

The following individuals are considered by the Government to be essential to the successful performance of the work hereunder:

Hideko Komoriya
Paul Abramson

The contractor agrees that such personnel shall not be removed from the effort under this task order without compliance with Contract Clause H.1 - Key Personnel.

The issuance of this task order does not amend any terms or conditions of the subject contract.

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PDR CONTR
NRC-03-90-027 PDR

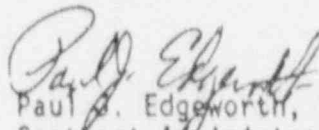
Dr. Hideko Komoriya

Contract No. NRC-03-90-027
Task Order No. 10
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Acceptance of Task Order No. 10 should be made by executing three copies of this document in the space provided and returning two copies to the Contract Administrator. You should retain the third copy for your records.

Should you have any questions regarding this matter, please feel free to contact Ms. Brenda DuBose, Contract Management Assistant, on (301) 492-7442.

Sincerely,



Paul G. Edgeworth, Contracting Officer
Contract Administration Branch No. 1
Division of Contracts and
Property Management
Office of Administration

Enclosure:
As stated

ACCEPTED: Task Order No. 10

H. Komoriya
NAME

President
TITLE

2/22/91
DATE

STATEMENT OF WORK

January 16, 1991

Title: Review of Comanche Peak Core
Thermal Hydraulic Methodology
Using VIPRE-01

FIN: L-1318

B&R Number: 15 02

Project Manager: Amira Gill (FTS 492-1212)

Lead Engineer: Frank Orr (FTS 492-1815)

Estimated Level of Effort: 7.5 person-weeks

Projected Completion Date: October 31, 1991

Contractor: International Technical Services

TAC Nos.: 77936

1. BACKGROUND

In support of the Texas Utility (TU) program for development and use of a fuel reload methodology for Comanche Peak Unit 1, Cycle 3 operation, the licensee has submitted among other reports, Topical Report RXE-89-002, "VIPRE-01 Core Thermal-Hydraulic Analysis Methods for Comanche Peak Steam Electric Station Licensing Applications."

2. OBJECTIVE

The objective of this technical assistance program is to obtain expert technical services from the contractor to assist the staff in the review and determination of the acceptability of the topical report RXE-89-002.

3. WORK REQUIREMENTS

The contractor will review Topical Report RXE-89-002 and provide recommendations with bases on their acceptability for Comanche Peak Unit 1 licensing application.

The contractor will review Texas Utility report RXE-89-002, which describes the core thermal hydraulic analysis method using the VIPRE-01 code for Comanche Peak reload application. The review will include the core model using VIPRE, sensitivity studies, and restrictions in VIPRE SER.

Expertise in core thermal hydraulics is required for this review. The contractor will provide questions for TU response, and a TER recommending acceptability of the report.

January 16, 1991

Subtasks (and Projected Completion Dates)Subtask 1 Initial Review
(March 20, 1991)

The contractor will perform an initial review of RXE-89-002. In performing the review, the contractor should ensure that the models comply with the restrictions imposed on the codes and methodologies according to their intended use. In the review of thermal-hydraulic applications intended for the models described in the topical reports, the contractor should pay particular attention to the calculation of safety limits, the determination of maximum allowable peaking limits, use of statistical core design methodology for the treatment of uncertainties of important parameters, and mixed core analysis for the determination of DNBR penalties, if applicable. The contractor should also review the adequacy of the usage interface between the code described in RXE-89-002 and the DNB correlation developed for use with it by the utility to assure acceptable results according to applicable regulatory criteria.

Subtask 2 Review Questions
(April 30, 1991)

Based on the initial review of Subtask 1 for the topical report, the contractor will generate a set of questions on the topical report to be sent to the licensee. The questions should be specific and serve to clarify or obtain information on areas not fully discussed in the submittal. The questions should be as complete as possible to avoid necessity of further questions. Preliminary discussions with the NRC Lead Engineer are encouraged.

Subtask 3 Final Review
(July 31, 1991)

The contractor will thoroughly review the topical report and the licensee responses to questions. If necessary, additional questions may be generated to clarify the licensee responses which are still not satisfactory. The review may also involve discussions with the licensee, at the arrangement of the respective NRC Lead Engineer, to clarify all technical issues involved in the submittals.

Subtask 4 Draft TER
(September 30, 1991)

Based on the results of the above subtasks, the contractor shall prepare a draft technical evaluation report (TER) for the topical report. The TERs shall document the review effort, findings, conclusions and recommendations on the acceptability of the topical reports for referencing in Comanche Peak reload analyses. Care should be taken to avoid the inclusion of the licensee's proprietary information in the Draft TER. The draft TER shall be prepared and sent to the respective NRC Lead Engineer for review and comment.

January 16, 1991

Subtask 5Final TER
(October 31, 1991)

Upon receipt of comments from the respective NRC Lead Engineer, the contractor shall prepare a final TER incorporating the Lead Engineer's comments. The TER should be in accordance with NRC Manual Chapter 3202, "Publication of Unclassified Regulatory and Technical Reports Prepared by NRC Contractor." For the TER, the contractor will submit one reproducible and four reproduced copies of the final report to the NRC Project Manager.

4. LEVEL OF EFFORT AND PERIOD OF PERFORMANCE

The level of effort is estimated to be 7.5 person-weeks including ADP costs over a 10 month period. The period of performance is 2/04/91 through 10/31/91.

5. REPORTING REQUIREMENTS

(a) Final TER

Upon completion of the project, the contractor will submit a TER for the topical report reviewed to the NRC Project Manager as discussed in Section 3, Subtask 5 of this document.

(b) Monthly Business Letter Report

A monthly business letter report is to be submitted by the 15th of the month to the NRC Project Manager. The report will contain the following:

- A listing of any efforts completed during the period, including milestones reached.
- The amount of funds expended for manpower and computer services, both during the period and cumulative to date.
- Any problems or delays encountered or anticipated.
- A summary of the progress to date, and
- Plans for the next reporting period.

6. MEETING AND TRAVEL

One trip of one or two people to the NRC headquarters in Rockville, Maryland should be planned and budgeted for a meeting to resolve open issues. If used, this meeting will be of one or two days duration. Dates will be mutually agreed upon between the NRC Project Manager and the contractor.

7. NRC FURNISHED MATERIALS

The NRC will provide all necessary materials to facilitate successful completion of this project. This will include topical report RXE-89-002.