

PDR P1-37



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

FEB 08 1994

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

Dear Mr. Komoriya:

Subject: Task Order No. 23, YAEC-1854P, "Core Thermal Limit Protection
Function Setpoint Methodology for Seabrook," under Contract
NRC-03-90-027

In accordance with Section G.6, "Task Order Procedures," of the subject
contract, this letter definitizes Task Order 23. This effort shall be
performed in accordance with the enclosed Statement of Work and the
contractor's proposal dated December 17, 1993, incorporated herein by
reference.

Task Order 23 shall be in effect from the dated of this letter through
May 31, 1994 with a cost ceiling of \$24,956.00. The amount of \$22,770.00
represents the total estimated reimbursable costs and the amount of \$2,186.00
represents the fixed fee.

Accounting data for Task Order 23 is as follows:

B&R No.:	4201915050
JOB No.:	L13184
APPN No.:	31X0200.420
RFPA No.:	20 94 061A
Obligates	\$24,956.00

The following individuals are considered to be essential to the successful
performance of the work hereunder: Hideko Komoriya and Paul Abramson.

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

Your contacts during the course of this task order are:

Technical Matters:	Brian Thomas (301) 504-1210
Contractual Matters:	Sharlene McCubbin (301) 492-7764

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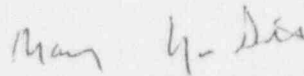
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Acceptance of this task order should be made by executing three copies of this document in the space provided and returning two copies to the Contract Administrator. You should retain the third copy for your records.

Should you have any questions regarding this matter, please contact Sharlene McCubbin, Contract Administrator, on (301) 492-7764.

Sincerely,



Mary Lynn Scott, Contracting Officer
Contract Administration Branch No. 1
Division of Contracts and
Property Management
Office of Administration

Enclosures:
As Stated

ACCEPTED: Task Order 23



NAME

President
TITLE

February 14, 1994
DATE

STATEMENT OF WORK

JCN L-1318. Task Order No. 23

TITLE: YAEC-1854P, "Core Thermal Limit Protection Function Setpoint Methodology for Seabrook."

B&R NO.: 420-19-15-05

FIN NO.: L-1318

PROJECT MANAGER: Brian Thomas (504-1210)

TECHNICAL MONITOR: Lambros Lois (504-3233)

EST'D LEVEL OF EFFORT: About 6 professional staff weeks

PROJ'D COMPLETION DATE: Four months from work initiation date

CONTRACTOR: International Technical Services, Inc.

TAC NO.: M85493

NRR PRIORITY NO.: 2

REFERENCES: YAEC-1854P, "Core Thermal Limit Protection Function Setpoint Methodology for Seabrook Station" October, 1992.

1. BACKGROUND

The referenced Topical Report describes the methodology used by the Yankee Atomic Electric Company to determine setpoints for the core thermal design limit protection functions i.e. OPΔT and OTΔT trip setpoints and axial flux difference LCO band. The calculational methodology presented in YAEC-1854P is an extension of the NRC approved set point methodology for the Maine Yankee Nuclear Power Station. The proposed methodology employs the following computer codes: CASMO-3/SIMULATE-3/TABLES-3 for reactor physics calculations, VIPRE-01 for subchannel thermal hydraulics and CHIK-KIN for transient analyses.

2. OBJECTIVE

The objective of this technical assistance 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 referenced above.

3. TECHNICAL AND OTHER SPECIAL QUALIFICATIONS REQUIRED

Contractor expertise in steady state and thermal hydraulic transient analyses is required. This includes the experience and ability to apply and interpret empirical data. The contractor must evaluate assumptions regarding thermal hydraulic steady state and transient behavior, its physical and analytical justification and comparison to experimental test data or corresponding results of analytical determinations.

It is the responsibility of the contractor to assign technical staff, employees, subcontractors, or specialists who have the required educational background, experience, or combination thereof to meet both the technical and regulatory objectives of the work specified in this SOW. The NRC will rely on representations made by the contractor concerning the qualifications of the personnel assigned to this task order including assurance that all information contained in the technical and cost proposals, including resumes, is accurate and truthful.

4. WORK REQUIREMENTS

The contractor will review the reference topical report with respect to setpoint methodology and thermal design limit protection. In the review, the contractor will consider the intended use of the methodology and recommend if any restrictions or limitations should be placed on its application.

The contractor will formulate an appropriate set of questions (if necessary) to be answered by YAEC and will review the responses. Upon completion of the review, the contractor will provide a technical evaluation report (TER) with their recommendations regarding the acceptability of the topical report including any limitations which may be required.

The work to be performed is delineated in the following subtasks and associated completion dates:

Subtask 1. Initial Review and Preparation of Questions.
Projected completion: 3 weeks after work initiation

The contractor will perform an initial review of the submitted topical report to establish the adequacy of the submitted information regarding the extension

of the Maine Yankee setpoint methodology to Seabrook. Potential limitations resulting from this extension and use of the above computer codes with the approved version of the methodology should be considered. The contractor shall prepare (if necessary) a set of questions to be answered by the licensee to clarify and supplement the information in the topical report. The questions should be as specific as possible, focus on areas of safety significance and be as complete as possible to avoid the necessity of further questions.

Subtask 2. Final Review.
 Projected Completion: 3 weeks after completion of subtask 1
 or receipt of responses to first round of questions.

The contractor will review thoroughly the topical report and all supplemental information (if any) and if necessary generate an additional request for information to complete the review. Such questions should be minimal and will be considered deliverable for this subtask if provided. The review may include licensee-contractor-staff technical discussions to be arranged by the Technical Monitor, in order to clarify any technical issues. As a result of this final review the contractor will provide a draft technical evaluation report (TER) which will be the deliverable documentation for this subtask. The TER shall document the review effort, findings, conclusions and recommendations regarding the acceptability of the topical report and limitations if any. Licensee proprietary information shall not be included in the draft TER. The draft TER will be sent to the NRC Technical Monitor for review and comment.

Subtask 3. Final TER
 Projected Completion: 3 weeks after completion of
 subtask 2.

Upon receipt of comments from the NRC Technical Monitor, the contractor shall prepare a final TER which addresses the Technical Monitor's comments. Licensee proprietary information shall not be included in the final TER, which should be written in accordance with NRC manual Chapter 3202, "Publication of Unclassified Regulatory and Technical Reports Prepared by NRC Contractors. For the TER the contractor will submit an original and four copies to the NRC Project Manager.

4. LEVEL OF EFFORT

The level of effort is 6 staff-weeks over a three month period.
 The total task effort is about 2 weeks for each of subtasks 1, 2 and 3.

5. PERIOD OF PERFORMANCE

The period of performance is projected to be 3 months from initiation of work.

6. DELIVERABLES

6.1 Review Questions

As described in subtasks 1 and 2 above

6.2 Verbal Status Reports.

The contractor will verbally report to the Technical Monitor, the progress of each subtask at least biweekly and prior to completing the subtask.

6.3 Draft TER

As described in subtask 2 above.

6.4 Final TER

As described in subtask 3 above.

6.5 Monthly business letter report covering the previous month's progress is to be submitted to the NRC project manager with a copy to the Technical Monitor, in accordance with the basic contract.

7. MEETINGS AND TRAVEL

One, one-person one-day trip to the Rockville NRC Headquarters should be planned and budgeted. If used it will be at a mutually agreed date between the NRC Technical Monitor and the contractor.

8. NRC FURNISHED MATERIAL

The NRC will provide a copy of the referenced documentation to facilitate successful completion at this project.