ORDER FOR SUPPLIES OR SERVICES										PAGE OF PAGES			
IMPORTANT: Mark all packages and papers with contract and/or order numbers.						BPA NO.							
1. DATE OF	ORDER	SEP 2 & 2005	2. CONTRAC	T NO. (If any) -00-003				6. SHIP 1	O:				
3. ORDER NO. MODIFICATION NO. 1. REQUISITION/REFERENCE NO. NTRC-03-00-003						a NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission Ofc. of Nuclear Reactor Regulation							
5. ISSUING OFFICE (Address correspondence to) U.S. Nuclear Regulatory Commission Division of Contracts						b.STREET ADDRESS Attn: Lawrence Ruth MailStop: OWF 10A1							
Contract Management Branch 2 R.G(axos)						c. CITY				d. STATE e. ZIP CODE			
Washington, DC 20555						Washington				DC 20555			
7. TO:						f. SHIP VIA							
	CONTRACTO	r Ystems Laboratori			8. TYPE OF O	2000							
b. COMPANY		ISTEMS HABORATOR											
							DELIVERY						
c. STREET ADDRESS 11140 ROCKVILLE PIKE STE 500						Please furnish the following on the terms and conditions specified on both sides of this order contained or				billing instructions on the reverse, this sk order is subject to instructions on this side only of this form and is eject to the terms and conditions			
d. CITY			delivery as indicated.						icis				
ROCKV	d. CITY e. STATE f. ZIP CODE ROCKVILLE MD 208522310												
	ING AND APP	PROPRIATION DATA 3 J-3238	10. REQUISITIONING OFFICE NRR										
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a. INSPECTIO	ON	b. ACCEP		SEE BELOW				N/A					
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				17	. SCHEDULE (See reve	rse for Rejections)	QUANTITY	,	UNIT			QUANTITY	
ITEM NO.			SUPPLIES O				ORDERED (C)	UNIT (D)	PRICE (E)	^	MOUNT	ACCEPTED	
(A)	(A) (B) ISSUANCE OF TASK ORDER NO. 033 UNDER NRC-03-00-003						(0)	(0)	(E)		(F)	(G)	
Title:Technical Support for TRACG Operating BWR Stabi						ity							
	Licensing Topical Report Review Period of Performance: Date of Award through 12/31/20												
						}						1	
	Estimated Reimbursable Costs: \$20,017 Fixed Fee: \$1,565 Total Cost Ceiling: \$21,582												
	Period of Performance - Date of Award through 12/31/2												
SEE ATTACHED PAGE 2 OF 2 FOR DESCRIPTION OF TASK ORDE						#033							
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		18. SHIPPING POINT		19. GRO	SS SHIPPING WEIGHT		20. INVOIC	E NO.		_ 			
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21. MAIL INVOICE TO:										4		TOTAL	
SEE BILLING INSTRUCTIONS Division of Contracts					mmission							(Cont. pages)	
	ON ERSE	b. STREET ADDRESS (or P	STREET ADDRESS (or P.O. Box) MailStop: T-7-I-2									17(I). GRAND	
		c. CITY d. STATE e. ZIP CODE								1		TOTAL	
		Washington				J 7	2055	5					
22. UNITED S	TATES OF AM	MERICA		(/	1 1	7) []	23. NAME (
BY (Signalure) Stephen Pool Contracting Officer													
					min	Mag.		TITLE: CONTRACT		NG OFFICER			
AUTHORIZED	FOR LOCAL	REPRODUCTION			•	. (PTIONAL FO	RM 347 (R	EV. 3/2005)	

TEMPLATE - ADMOOT

NRC-03-00-003 Task Order No. 033 Page 2 of 2

In accordance with Section G.5, <u>Task Order Procedures</u>, of contract number NRC-03-00-003. this definitizes Task Order No. 033. The effort shall be performed in accordance with the enclosed Statement of Work.

Task Order No. 033 shall be in effect from date of award through December 31, 2005, with a cost ceiling of \$21,582. The amount of \$20,017 represents the estimated reimbursable costs, and the amount of \$1,565 represents the fixed fee.

The following individual is considered to be essential to the successful performance for work hereunder: The Contractor agrees that such personnel shall not be removed from the effort under the task order without compliance with Contract Clause H.4, Key Personnel.

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

Your contacts during the course of this task order are:

Technical Matters:

Lawrence Ruth

Project Officer (301) 415-1211 Contractual Matters: Rachel Glaros

Contract Specialist

(301) 415-0115

Acceptance of Task Order No. 033 should be made by having an official, authorized to bind your organization, execute three copies of this document in the space provided and return two copies to the Contract Specialist. You should retain the third copy for your records.

ACCEPTED: Task Order No. 033

NAME

TITLE

DATE

STATEMENT OF WORK TASK ORDER No. 33 Under JCN J-3238

Title: Technical Support for TRACG Operating BWR Stability Licensing Topical Report

Review

Project Manager:

L. Ruth, 301-415-1211

Technical Monitor:

Tai L. Huang, 301-415-2867

TAC Number:

TBD

NRC Priority Number:

3 weeks

LEVEL OF EFFORT: CONTRACTOR:

ISL

BACKGROUND

General Electric submitted the TRACG Code for operating BWR stability analysis licensing topical report (LTR) for staff to review in March 2004. The LTR will provide a technical basis for the TRACG code application regarding the Detection and Suppress (DSS-CD) methodology. The capability of the TRACG code to calculate conservative regional and whole core power oscillation amplitude, frequency and MCPR is the necessary technical basis for the approval of DSS-CD. The approval of MELLLA+ operation over BRUNSWICK has to be done after the DSS-CD is approved.

OBJECTIVE

Expert support is needed to complete review on the remaining issues of the accuracy and the adequacy of TRACG 1-D and 3-D integration scheme and corresponding physics package for modeling density-wave type of two-phase flow oscillations.

TECHNICAL AND OTHER SPECIAL QUALIFICATIONS REQUIRED

At least one expert is to be provided who has the experience and the knowledge of TRAC-BF1/TRAC-BD1 1-D and 3-D integration scheme and the implicit or explicit coupled fluid flow and conduction solver. In addition, the expert shall have extensive knowledge of TRAC-BF1/TRAC-BD1 physics model.

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 work including assurance that all information contained in the technical cost proposals, including resumes, is accurate and truthful.

WORK REQUIREMENTS AND SCHEDULE

The expert support is expected to perform the detailed review of the TRACG TH integration scheme and physics package with an focus on its application for operating BWR instability. Also, this person is expected to review the LTR and provide Request for Additional Information (RAIs) and the Technical Evaluation Reports.

<u>Task</u>

Scheduled Completion

1. Complete a top-down review of the TRACG thermal-hydraulic and physics package. Identify major issues and issue first round of RAIs if necessary to conclude with high confidence about whether the TRACG code can conservatively calculate the power oscillation amplitude and MCPR. Also, review additional GE response to the staff questions.

Two weeks from initiation of work

2. Review and evaluate the responses provided by GNF-A

Two weeks from receipt of responses

3. Prepare a Technical Evaluation Report (TER)

a. Draft TER

Three weeks from receipt of responses

b. Incorporate NRC comments and prepare final TER

Two weeks from receipt of NRC's comments

LEVEL OF EFFORT

The level of effort is estimated at three professional staff weeks. Apportioned among the tasks as follows for planning purposes:

LEVEL OF EFFORT (WEEKS)
1.50
0.75
0.75
3.00

PERIOD OF PERFORMANCE

The period of performance shall be from date of task order award through December 31, 2005.

SPENDING PLAN

As part of the proposed work plan prior to each fiscal year, the contractor shall submit for NRC concurrence and acceptance a proposed spending plan for the fiscal year, broken down on a monthly basis. This spending plan should consider not only expenses costed in the performance of task work as specified in the SOW, but also other commitments (other contract work, vacation, etc.) which the contract anticipates in that fiscal year. In addition, the contractor shall propose a modified spending plan for NRC concurrence and acceptance any time there is a significant deviation (10% of the FY total) from the spending plan in effect.

MEETINGS AND TRAVEL

Monthly tele-conference will be held on an as-needed basis. One trip for one person of two days duration is expected between ISL (Albuquerque, NM) and NRC Headquarters, Rockville,

MD.

NRC-FURNISHED MATERIALS

Materials will be provided by the Technical Monitor as required to complete the effort.

OTHER APPLICABLE INFORMATION

The material to be used under this task order is Proprietary documentation, will be provided by the NRC in the form of CD-ROMs, and must be handled and protected consistent with the terms of the non-disclosure agreement of the contract.

LICENSE FEE RECOVERY

The work specified in this SOW is license fee recoverable.