AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1 CONTRACT ID CODE		PAGE OF PAGES
2. AMENDMENT/MODIFICATION NO. 19	3. EFFECTIVE DATE	4: REQUISITION/PURCHASE RE	Q. NO.	5. PROJECT NO.	(If applicable)
U.S. Nuclear Regulatory Commission Division of Contracts and Property Mgt. Attn: T-7-I-2 Contract Management Branch Washington DC 20555		7. ADMINISTERED BY (If other	than item 6)	CODE	
8 NAME AND ADDRESS OF CONTRACTOR (No., street, county, State	e and ZIP Code)		(X) 9A. AMENDMENT	OF SOLICITATION N	Ю.
Risk Engineering, Inc. ATTN: Dr. Robin McGuire 4155 Darley Avenue, Suite A Boulder, CO 80303				E ITEM 11) KON OF CONTRACT/C RC-04-96-037	DRDER NO.
			108. DATED (SI	EE ITEM 13)	
CODE 44 THIS ITE	FACILITY CODE M ONLY APPLIES TO	AMENDMENTS OF	X 04-04-19		
13. THIS ITEM AP	PLIES ONLY TO MOI THE CONTRACT/OR	t Obligated: \$30,696.00 DIFICATIONS OF CO DER NO. AS DESCR	IBED IN ITEM 1	4.	
B THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FACT THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO THE AUTHORITY OF THE SUPPLEMENTAL AGREEMENT IS ENTERED IN	AR 43.103(b).	CHANGES (such as changes in	paying office, appropriation	Jate, etc.)	
D OTHER (Specify type of modification and authority) Cha	anges - Cost Reimburseme	ent - Alternate V (Apr. 198	14)		
	s required to sign this docum		_ copies to the issuir	ng office.	
(see page 2)	CF section headings, including solicita	no realized subject marker where the			
Except as provided herein, all terms and conditions of the document reference in the second state of the document reference in the second seco	enced in Item 9A or 10A, as heretofore	changed, remains unchanged and in 16A. NAME AND TITLE OF CONT Mary Marce, Contra	RACTING OFFICER (T	ype or print)	
15B. CONTRACTOR/OSEEROR (Signature of person authorized to sign)	15C DATE SIGNED 01/02/2001	16B UNITED STATES OF AMER	a or Contracting Officer)		18C. DATE SIGNED

Contract No. NRC-04-96-037 Modification No. 19 Page 2 of 3

The purpose of this modification is to (1) incorporate the within-scope work to the contract as referenced in the Statement of Work (ATTACHMENT 1) from the contractor's proposal dated 12/6/00, (2) increase the contract ceiling amount by \$30,696 from \$1,299,556 to \$1,330,252, (3) increase the obligated amount by \$30,696 from \$1,299,556 to \$1,330,252, and (4) extend the period of performance of the contract through 3/31/2001. Accordingly, the contract is hereby modified as follows:

- 1. Section B.3, CONSIDERATION AND OBLIGATION--COST PLUS FIXED FEE (JUNE 1988) ALTERNATE I (JUNE 1991), paragraphs a, b, and c are deleted in their entirety and the following paragraphs are substituted in lieu thereof:
 - "a. The total estimated cost to the Government for full performance of this contract is \$1,330,252, of which the sum of \$1,323,878 represents the estimated reimbursable costs, and of which \$6,374 represents the fixed fee.
 - b. The amount currently obligated by the Government with respect to this contract is \$1,330,252.
 - c. It is estimated that the amount currently allotted will cover performance through 3/31/2001."
- 2. Section F.6, DURATION OF CONTRACT PERIOD, is deleted in its entirety and the following paragraph is substituted in lieu thereof:

"This contract shall commence on 4/4/96 and will expire on 3/31/2001."

All other terms and conditions under this contract remain unchanged.

Contract No. NRC-04-96-037 Modification No. 19 Page 3 of 3

A summary of obligations for this contract, from award date through the date of this action, is given below:

Total FY 96 Obligation Amount: \$ 275,000.00
Total FY 97 Obligation Amount: \$ 260,000.00
Total FY 98 Obligation Amount: \$ 250,000.00
Total FY 99 Obligation Amount: \$ 274,056.00
Total FY 2000 Obligation Amount: \$ 240,500.00
Total FY 2001 Obligation Amount: \$ 30,696.00

Cumulative Total of NRC Obligations: \$1,330,252.00

This modification obligates NRC FY 2001 funds in the amount of \$30,696.

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

1 BACKGROUND

A meeting of the technical team (Risk Engineering, Inc., et al) with the peer review panel was held on August 3 - 4, 2000, in Oakland, California. The purpose of the meeting was to discuss the trial application of the methodology to a Western U.S. (WUS) site. The peer review panel expressed general agreement with the results obtained from the trial application, and the subsequent clarifications and refinements that had been made to the draft methodology (technical bases) report. The peer review panel did note that the draft applications report does not contain a discussion of the assumptions made by the technical team to achieve uniform hazard spectra on soil, and to develop uniform reliability spectra from the uniform hazard spectra.

This was the last scheduled meeting of the peer review panel. The NRC staff believes that the development of the methodology and its trial application to the WUS site have benefitted from the comments and recommendations made by the peer review panel. Therefore, an additional meeting of the peer review panel is being added to review and comment on material that was not included in the earlier draft report.

2 CONTRACT OBJECTIVES

The goal of this procurement is to (1) collect an earthquake strong motion time history database for use in developing response spectra and analyses, (2) develop recommendations for seismic design response spectra to be used for nuclear power plants considering engineering characteristics and different site and geographical conditions, and (3) develop recommendations for minimum power spectral density (or equivalent) requirements for the proposed spectral shapes. These results will be included as technical input by the NRC staff in its revision of Regulatory Guide 1.60, "Design Response Spectra for Seismic Design of Nuclear Power Plants."

3 SCOPE OF WORK

3.1 Additional Meeting of the Peer Review Panel

Schedule an additional peer review panel meeting (2 days) in Oakland, CA, to discuss (1) the trial application of the methodology to a Central and Eastern U.S. (CEUS) site; (2) the documentation of the assumptions made by the technical team to achieve uniform hazard spectra on soil, and to develop uniform reliability spectra from the uniform hazard spectra; and (3) the "generic procedure" similar to the steps that appear as the regulatory position in a regulatory guide (e.g., Regulatory Guide 1.165). An alternative location is acceptable if it is cost-effective; for instance, several of the peer review panel members are meeting on another topic/project.

4 PERIOD OF PERFORMANCE

The period of performance will be from the start of the modification through January 31, 2001. The contract period of performance is extended to March 31, 2001, to allow time to address issues associated with the publication of the final report.

5 SCHEDULE

The final report (electronic and "camera ready") on the trial application of the methodology to two sites should be submitted to the NRC by March 23, 2001.