

**AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT**

1. CONTRACT ID CODE \_\_\_\_\_ PAGE 1 OF PAGES 4

2. AMENDMENT/MODIFICATION NO. 016	3. EFFECTIVE DATE See 15c below.	4. REQUISITION/PURCHASE REQ. NO. 01-0290 dtd 8/15/02	5. PROJECT NO. (If applicable)
6. ISSUED BY U.S. Nuclear Regulatory Commission Division of Contracts Attn: T-7-I-2 Contract Management Center #1 Washington DC 20555-0001	CODE _____	7. ADMINISTERED BY (If other than Item 6) U.S. Nuclear Regulatory Commission Div of Contracts and Property Mgmt Two White Flint North - MS T-7-I-2 Washington, DC 20555-0001	CODE _____

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)  EER Systems, Inc. 3750 Centerview Drive Chantilly, VA 20151  POC: Joanne B. Newman (703) 708-1400	CODE _____ FACILITY CODE _____	(X)	9A. AMENDMENT OF SOLICITATION NO.
			9B. DATED (SEE ITEM 11)
			10A. MODIFICATION OF CONTRACT/ORDER NO. GS00T98ALD0017 DR-01-0290
		X	10B. DATED (SEE ITEM 13) 09-28-2001

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers  is extended,  is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:  
 (a) By completing Items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment of each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required) N/A

**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

(X)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) Bilateral, 52.212-4 Contract Terms and Conditions - Commercial Items (4/98) and mutual consent of the parties.

**E. IMPORTANT:** Contractor  is not,  is required to sign this document and return 2 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)  
  
See the attached continuation pages with one attachment.

TIN: 54-1349668, DUNS#:17-715-3319

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) Joanne B. Newman Vice President of Contracts	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Donald A. King Contracting Officer
15B. CONTRACTOR/OFFEROR Joanne B. Newman (Signature of person authorized to sign)	15C. DATE SIGNED 11/15/02
16B. UNITED STATES OF AMERICA BY Donald A. King (Signature of Contracting Officer)	16C. DATE SIGNED 11-06-2002

The purpose of this modification is to:

(1) incorporate the requirement to tune and optimize performance of the NRC external web server. As a result, Schedule A-1 YEAR 2 (BASE) of the Task Order is revised to reflect the increases in effort associated with the work shown in Attachment 1 to this modification and EER Systems's proposals dated 9/16/2002 (Web Server Tuning Support) with revisions dated 10/23/2002;

(2) revise Subsection B.8 CONSIDERATION AND OBLIGATION, by increasing the total estimated task order amount by \$29,960.00 from \$27,049,750.62 to \$27,079,710.62. This increase is associated with incorporating the requirement to tune and optimize performance of the NRC external web server;

(3) revise Subsection C.3.6 General Performance Requirements, by adding paragraph C.3.6.16 - Web Server Tuning. This paragraph will add the requirement to tune and optimize performance of the NRC external web server.

(4) revise Section F - Deliveries or Performance by adding Subsection F.9 Delivery Schedule and Milestone Dates (Web Server Tuning).

Accordingly, the following section of the task order is hereby modified:

1. Schedule A-1 YEAR 2 (BASE) is revised by increasing effort associated with the requirement to tune and optimize performance of the NRC external web server. [See attachment number 1 to this modification revised Schedule A-1 Year 2 (Base).]
2. Under Subsection B.8 CONSIDERATION AND OBLIGATION, the first sentence of paragraph (a) is deleted entirely and the following is substituted in-lieu thereof:  
  
"(a) The total estimated amount of this task order (ceiling) for the products/services ordered, delivered, and accepted under this task order is \$27,079,710.62."
3. Under Subsection C.3.6 General Performance Requirements, paragraph C.3.6.16 - Web Server Tuning, is incorporated as show below:

#### **"C.3.6.16 Web Server Tuning**

EER Systems shall:

(1) baseline the performance of the NRC.gov application (i.e., the number of concurrent users that can be supported with less than five seconds response time), to determine when performance starts to degrade, and to maximize the performance via "tuning".

(2) pinpoint NRC network throughput problems associated with the NRC.gov application.

(3) provide a tool to view "real time" performance statistics and graphs of infrastructure component use (in a Browser) including: Network traffic, Web Server, CPU, Application Server and Database.

(4) be able to repeat each performance test in a controlled and repeatable environment via a series of at least six, 3-hour "tuning" sessions with participation of NRC staff using proven performance management methodology.

(5) participate in a Meeting/Conference call with NRC staff within 10 days of award of the modification. Topics to be discussed are:

- a. methodology and tuning tools;
- b. NRC.gov architecture;
- c. Confirm research and analysis of tuned system;
- d. Confirm objectives, roles and responsibilities;
- e. Finalize project plan and timeline;
- f. Identify resources necessary for scripting and tuning;
- g. Discuss tuning tool hardware requirements.

(6) Setup and Script Development - EER shall review the NRC's external web server and associated network and develop scripts used to benchmark and tune the system. EER shall develop up to 10 business process scripts for benchmarking performance. Additional scripts for exercising infrastructure components shall also be developed as needed. NRC staff will assist the specialist in collecting and developing sample data which can be used for execution of the tuning sessions.

(7) Tuning Sessions - EER shall lead tuning sessions which shall include:

- a. Initial Benchmarking. The first tuning session shall capture a benchmark of the system's performance and business process scripts shall be modeled and executed.

b. Managed Tuning Sessions. Individual system components shall be exercised using generated traffic. The system shall be analyzed and the production system debugged. Tuning sessions shall include scripting, analysis and report generation. Bottlenecks shall be identified. EER shall employ tools to identify specific bottlenecks. NRC staff will assist in implementing system/application changes to effect tuning.

c. Final Benchmarking - The new benchmark shall be captured using a scenario identical to the initial benchmarking run.

(End of clause)

4. Under Section Deliveries or Performance, paragraph F.9 is incorporated as show below:

**"F.9 Delivery Schedule and Milestone Dates (Web Server Tuning)**

The delivery schedule and milestones dates are indicated below:

1. Within twenty (20) days of the kick-off meeting/conference call deliver a Project Plan and time line;
2. For each tuning session, deliver a formal analysis and report of system response times and behavior. The report shall include procedures used, respective results, performance bottlenecks discovered, and recommended changes for mitigating bottlenecks;
3. Within 6 months of this task order modification, deliver a final report summarizing all recommended changes, those implemented, performance improvements and results compared to initial bench marking results.
4. Within 6 months of this task order modification, deliver the scripts created for each business process.
5. The Project shall be completed within 6 months of this Task Order modification.

(End of clause)

A summary of obligations under this task order, from date of the award through this modification, is given below:

Total FY 01 obligations	\$ 627,000.00
Total FY 02 obligations	\$ 9,974,407.71
Cumulative Total of NRC Obligations	\$10,601,407.71

This modification does not obligate any FY'03 funds.  
All other terms and conditions remain unchanged.

Nuclear Regulatory Commission

Task Order # DR--01-0290

**Schedule A -1 YEAR 2 (BASE)**

PERIOD OF PERFORMANCE: 09/28/2002 TO 09/27/2003

CLIN	DESCRIPTION	QTY.	UNIT	Unit PRICE	TOTAL PRICE
	FIRM FIXED PRICE (CLIN 0001 through 0002)				
	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	EST. TOTAL PRICE
	FIRM FIXED UNIT PRICE (CLIN 0003 through 0009)				
0003B	Task 3: Year 2 Operations Total				
0003BA	Insurance Coverage (H.2.4)		Lot		\$1,025
0003BB	IT Infrastructure Operations		mos.		\$5,921,712
0003BC	IT Development/Integration (FirmFixed Unit Price - Labor Hour)				
	Sr. Systems Architect (Function: Systems Architecture and Engineering) - One		hrs		\$180,960
	Sr. Systems Engineer (Function: Infrastructure Development) One		hrs		\$172,644
	LAN Systems Analyst (NT) (Function: Infrastructure) -One		hrs		\$124,800
	LAN Systems Analyst (Novell) (Function: Infrastructure) -One		hrs		\$99,840
	Network Analyst (Function: Infrastructure) - One		hrs		\$133,128
	UNIX System Analyst (Function: Infrastructure) - One		hrs		\$143,520
	LAN Systems Analyst (NT/Novell) (Function: Server) - One		hrs		\$133,128
	UNIX Systems Analyst (Function: Server) - One		hrs		\$143,520
	LAN Systems Analyst (NT) (Function: Workstation) - One		hrs		\$128,964
	LAN Systems Analyst (NT) (Function: Workstation) - One		hrs		\$128,964
	LAN Systems Analyst (NT) (Function: Workstation) - One		hrs		\$128,964
	Senior Security Analyst (Consultant) (Function: Security) - One		hrs		\$84,432.40
	Security Analyst (Function: Security) - One		hrs		\$158,088
	Security Analyst (Function: Security) - One		hrs		\$93,632.00
	Sr. Systems Engineer (Function: Application Integration) - One		hrs		\$158,088
	Sr. Systems Engineer (Function: Consolidated Test Facility) -One		hrs		\$124,800
	LAN Administrator (Function: Consolidated Test Facility) -One		hrs		\$66,564

CLIN	DESCRIPTION	QTY.	UNIT	Unit PRICE	TOTAL PRICE
0003BD	Firm Fixed Unit Price-Labor Hour LAN Administrator (Function: Regional -(5)				
	LAN Administrator (Function: Regional - One		hrs		\$76,968
	LAN Administrator (Function: Regional - One		hrs		\$76,968
	LAN Administrator (Function: Regional - One		hrs		\$76,968
	LAN Administrator (Function: Regional - One		hrs		\$76,968
	LAN Administrator (Function: Regional - One		hrs		\$76,968
003BE	Firm Fixed Unit Price-Labor Hour LAN Administrator (Function: High Perf. Comp. Env.)(4)				
	LAN Administrator (Function: High Perf. Comp. Env. -One		hrs		\$76,968
	LAN Administrator (Function: High Perf. Comp. Env. -One		hrs		\$76,968
	LAN Administrator (Function: High Perf. Comp. Env. -One		hrs		\$76,968
	LAN Administrator (Function: High Perf. Comp. Env. -One		hrs		\$76,968
0003BF	Firm Fixed Unit Price-Labor Hour ADAMS LAN Administrator (Function:ADAMS (1) & (5) -Optional)				
	ADAMS LAN Administrator (Function:ADAMS -One		hrs		\$76,968
	ADAMS LAN Administrator (Function:ADAMS - Optional) -One		hrs		\$76,968
	ADAMS LAN Administrator (Function:ADAMS - Optional) -One		hrs		\$76,968
	ADAMS LAN Administrator (Function:ADAMS - Optional) -One		hrs		\$76,968
	ADAMS LAN Administrator (Function:ADAMS - Optional) -One		hrs		\$76,968
	ADAMS LAN Administrator (Function:ADAMS - Optional) -One		hrs		\$76,968
0003BG	COTS Catalogue Services				NSP
0003BH	Project Plan and Execution of first tuning Session (Web Server Tuning)		Lot		\$7,490
0003BI	Third (3rd) Tuning Session Completed (Web Server Tuning)		Lot		\$7,490
0003BJ	Fifth (5 <sup>th</sup> ) Tuning Session Completed (Web Server Tuning)		Lot		\$7,490
0003BK	Final Report (Web Server Tuning)		Lot		\$7,490
	Total CLIN 0003B				\$9,311,253.40