	AMENDMENT OF SOLICITATION/MODIF	ICATION OF CONTRAC	СТ	BPA NO.	-	1. CONTRACT ID CODE	PAGE 1	OF PAGES		
2.	AMENDMENT/MODIFICATION NO. M010	3. EFFECTIVE DATE 07/11/2005	•	QUISITION/PURCHASE REC	. NO.	NO. RES-C05-386 5. PROJECT NO. (If applicable)				
6.	ISSUED BY CODE	3100	7. AD	7. ADMINISTERED BY (If other than Item 6)			3100			
	U.S. Nuclear Regulatory Commission Division of Contracts Two White Flint North - MS T-7-I-2 Contract Management Branch 2 Washington, DC 20555			U.S. Nuclear Regulatory Commission Division of Contracts Two White Flint North - MS T-7-I-2 Washington, DC 20555						
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)			<u>.</u>			9A. AMENDMENT OF SOLICITATION NO.				
OREGON STATE UNIVERSITY						9B. DATED (SEE ITEM 11)	- <u></u>			
306 KERR ADMINISTRATION						10A. MODIFICATION OF CONTRACT NRC-04-03-049	ORDER NO.			
_	CORVALLIS OR 973312147					10B. DATED (SEE ITEM 13)				
<u>c</u>	DDE 053599908	FACILITY CODE				03-19-2003				
) 0 1 1 1	Differs must acknowledge receipt of this amendment prival a) By completing Items 8 and 15, and returning	copies of the amendment ich includes a reference to the DESIGNATED FOR THE RE e of this amendment you desire	nt; (b) solic CEIP re to c	By acknowledging re itation and amendmer T OF OFFERS PRIOI change an offer alread	ceipt ( it num 7 TO ` y sub	of this amendment on each or bers. FAILURE OF YOUR A THE HOUR AND DATE SPEC mitted, such change may be i	ppy of the C- CIFIED MAY nade			
12	560 FF!	015111205 ¥6852 S: RES-C05-386	OBI	52A 3X0200. JIGATE: \$78,000	.00					
•		LIES ONLY TO MODIF				•				
0		THE CONTRACT/ORDE		ويتقاقد بهينا الفناصية ويست						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR		NGES	(such as changes in pa	ying offi	ice, appropriation date, etc.)				
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSU	JANT TO AUTHORITY OF:					-			
×		teral B.3 and mutual agree	emen	t between the p	arti	es				
E	IMPORTANT: Contractor is not, X is	required to sign this documen	it and	return two	copies	s to the issuing office.		<u></u>		
14.	DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UC)	F section headings, including solicitation/	contrac	t subject matter where leasibl	B.)					

SEE ATTACHED PAGES 2 AND 3 FOR DESCRIPTION OF MODIFICATION

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.

TEMPLATE - ADMOD

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15A NAME AND TITLE OF SIGNER (Type or print) CLEM LaCAVA Aust Contract Auministrator		16A. NAME AND TITLE OF CONTRACTING OFFICER Stephen M. Pool Contracting Officer	(Турвог	
15B. CONTRACTOR OFFEROR (Signalure of person authorized to sign)	15C. DATE SIGNED	16B. UNITED Straffes OF ANERICA	Frof	18C. DATE SIGNED 7/11/05
			s	TANDARD FORM SO (REV. 10-83)

SISP REVIEW COMPLETE



NRC-04-03-049 Modification No. 10 Page 2 of 3

The purpose of this modification is to: (1) exercise Optional Task 4, revising the scope of the task and reducing the number of tests; (2) increase the contract by \$277,325.00 for Task 4, thereby increasing the total amount of the contract by \$277,325.00, from \$1,233,832.00 to \$1,511,157.00 and increasing the obligated amount by \$78,000.00 from \$844,954.00 to \$922,954.00. The Contractor's 6/8/05 proposal is hereby incorporated by reference. Accordingly, the contract is modified as follows:

1. Item 15G of Standard Form 26 is deleted entirely and replaced with the following:

"TOTAL AMOUNT OF CONTRACT: \$1,511,157.00."

2. Section B.3, CONSIDERATION AND OBLIGATION- COST REIMBURSEMENT (JUNE 1988) ALTERNATE I (JUNE 1988), is deleted entirely and replaced with the following:

"(a) Incremental funds in the amount of \$78,000.00 are being obligated at this time. The total amount presently obligated by the Government with respect to this contract is \$922,954.00.

(b) The total estimated cost to the Government for full performance of the base period is \$644,954.00.

(c) The total estimated cost to the Government for full performance of Optional Task 2 is \$389,710.00 for 10 tests, with an estimated level of effort of 48 man-months. Modification No. 8 exercised Optional Task 2 for the performance of 2 tests with an estimated level of effort of 10 man-months. If the Government has a need for one, or all, of the 8 remaining tests, a unilateral modification to the contract will be issued.

(d) The total estimated cost to the Government for full performance of Optional Task 3 is \$430,000.00 with a period of performance of 12 months.

(e) The total estimated cost to the Government for full performance of Optional Task 4 is \$277,325.00 with a period of performance through June 18, 2006, the current contract expiration date. If the next option under the contract is exercised the period of performance of this task may require an extension. Modification No. 10 exercises this optional task.

(f) The total estimated cost to the Government for full performance of Optional Task 5 is \$199,168.00 for 5 tests, with a period of performance of 6 months. Modification No. 8 exercised Optional Task 5 for the performance of 1 test with an estimated level of effort of 5 man-months. If the Government has a need for one, or all, of the 4 remaining tests, a unilateral modification to the contract will be issued.

(g) The total estimated cost to the Government for full performance of Optional Task 6 is \$499,985.00 with a period of performance of 12 months."

NRC-04-03-049 Modification No. 8 Page 3 of 3

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As a result of this modification, the contract ceiling amount is increased to \$1,511,157.00. All other terms and conditions of this contract remain unchanged.

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

Total FY03 obligation amount:	\$344,971.00
Total FY04 obligation amount:	\$299,983.00
Total FY05 obligation amount:	\$278,000.00
Total NRC obligations:	\$844,954.00

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This modification obligates FY05 funds in the amount of \$78,000.00

# MODIFICATION NO. 10 TO NRC-04-03-049 STATEMENT OF WORK

### Modified Scope of Work:

The NRC has an urgent need for acquiring data on reflux condensation of steam in steam generators. The contractor shall complete the modified optional Task 4, designated as Task 4A below, in lieu of three tests specified in the current contract, namely, one test on countercurrent flow limit (CCFL) in the pressurizer surge line and two tests on entrainment and de-entrainment of liquid in the upper plenum.

### Task 4A. Steam Generator Heat Transfer/Condensation Tests

The contractor shall prepare a test matrix for 3 steam generator reflux condensation tests based on NRC input and conduct the three tests to investigate reflux condensation in steam generators. Prior to conducting a test, the contractor shall provide detailed test conditions and test procedures for review by the NRC. In addition, the test data shall be qualified, before submittal to the NRC, to identify the unreliable data channels.

## Estimated Level of Effort: 20 man-months

### **Deliverable and Reporting Requirements:**

1. The contractor shall submit, within two months after contract modification, a test matrix and a test procedure for 3 steam generator reflux condensation tests which are formulated based on NRC input.

2. The contractor shall provide a test data report within 3 months after each test. When three tests are completed, the contractor shall provide a report discussing the results of all three tests within 6 months after completion of testing.

3. The contractor shall submit qualified test data in a format specified by the NRC data bank within 3 months after each test.

4. The contractor shall update the facility description report to describe the facility configuration used for the steam generator condensation tests. The measurement uncertainty and data qualification shall also be discussed in the facility description report. An updated facility description report shall be submitted to the NRC within nine months after contract modification.

5. The contractor shall submit a final test data analysis report within nine months after contract modification.

### **Travel Requirements:**

The contractor shall make one trip to the NRC as directed by the NRC.