к		U.S. NUCI NOTICE								
1. GRANT/AGREEMENT NO.	2. MODI	FICATION NO				RFORMAN		4. AUTHORIT	Y	
NRC-04-98-056	22			FROM:	0	TO:				a and 141b of the
5. TYPE OF AWARD	6. ORG/	NIZATION T	YPE	8/24/9	8	7. RECIPI	/31/2004 ENT NAME AND	ADDRESS	Y ACT OF 1	1954, as amended
							ersity of Mar rtment of Mat		uclear	
							gineering, Bu ege Park, MD			
8. PROJECT TITLE: Probabilistic Assessment and	Applic	ations								
9. PROJECT WILL BE CONDUCTED	10. TEC	HNICAL REPO	ORTS AF	RE REQU	IRED	11. PRINC	IPAL INVESTIG	ATOR(S) NAM	E AND A	DDRESS
PER GOVERNMENT'S/RECIPIENT'S	X PROGRESS AND FINAL						University of Maryland Materials & Nuclear Engineering Dept.			
PROPOSAL(S) DATED				ATTN			: Prof. Mohammand Modarres Marie Mount Hall			
AND APPENDIX A-PROJECT GRANT PROVISIONS	то []	IER (Confere	nce Proc	eedings)			Marie Mount H ge Park, MD		lege Pa	L
12. NRC PROGRAM OFFICE (NAME ADDR		13. ACCOUN		PPROPF	RIATION	DATA	14. METHOD OI	FPAYMENT		
U.S. Nuclear Regulatory Commissio Office of Nuclear Regulatory Rese		APPN. NO:		31X020				BY TREASUR	Y CHECK	<b>c</b>
ATTN: Roy Woods Washington, DC 20555		BB NO: JOB CODE:		360151 K6007	10203			EMENT BY TR	REASUR	Y CHECK
301-415-6622		BOC NO:		4110				CREDIT		
		OFFICE ID N	NO:	RES-CO	3-081		X OTHER (SP			- 1- (D
15. NRC OBLIGATION FUNDS			16. TOT	AL FUND	ING AGF	REEMENT	(See Attach. 30 i	<u>In Appendix A ·</u>	- "Electro	nic Payment)
THIS ACTION\$85,	014.00	_	NRC	\$1,1	887,740	<u>.00</u>	This action pr in the amount	rovides funds fe t of \$85,0	or Fiscal 014.00	Year 03
PREVIOUS OBLIGATION\$1,802,	740.00	·	RECIPIE	NT <u>0</u>				• •		
TOTAL \$1,887,	740.00	<b>-</b> .	TOTAL	\$1,6	387,740	.00	· ·			· · · ·
U.S. Nuclear Regulatory Commi Division of Contracts Attn: T-7-I-2 Contract Management Center 2 Washington DC 20555	ssion					CONTROM				
Untoinel authorizing	egez.		9/10	<u>3/03</u> ate)	19. 11	P	<u>pu</u>			9/3/03
NAME (TYPED) Besearch Adminis	tration 8	Advancemen	rt .	•	NAME (	(Signature) TYPED)	Mary H. Mace	2		(Date) -
University of Mary TITLE Phone 301-405-63					TITLE		Contracting	Officer		
email prea@unic	l.edu	<u></u>					301-415-7314			-
TELEPHONE NO		<u> </u>			ELEP	HONE NO.				•
Payment will be made within thirty (30) days a objectives, award conditions, Federal reporting Payment will be made by:			<b>conditio</b>	ns specifi	ed in OM	B Circular /				
U.S. Nuclear Regulatory Commi Office of the Chief Financial Attn: GOV/COM Acctng. Section Washington, DC 20555	Office	er								
21. Attached is a copy of the "NRC General P	rovisions	for Grants and	d Cooper	ative Agr	ements /	Awarded to	Institutions of Hig	gher Education	and Oth	er
Nonprofit Organizations". Acceptance of these	e terms a	nd conditions	is acknow	wiedged v	when Fed	eral funds a	are used on this p	oroject.		
22. ORDER OF PRECEDENCE	·		ومعلو المسمر			ebell	.:0			
In the event of a conflict between the recipient						·		v Endomi Dec -		<u>.</u>
23. By this award, the Recipient certifies that p	aymonic	any audit-fe	Haleu Uel	A WIN ROL			SHUMMAILE UI di	JI OUCIAI FIOG	nani	





## U.S. NUCLEAR REGULATORY COMMISSION COOPERATIVE AGREEMENT NO. NRC-04-98-056 MODIFICATION NO. 22

The purpose of this modification is to: (1) modify the statement of work for Task 4 in accordance with the contractor's proposal dated July 2, 2003, which is hereby incorporated by reference; (2) increase the ceiling and obligated amounts by \$85,014.00; and (3) extend the period of performance under Task 4 by one month to December 31, 2003. Accordingly, the cooperative agreement is modified as follows:

- 1. The Statement of Work for Task 4 entitled "Thermal Hydraulics Uncertainty Evaluation and Propagation," is modified to extend the task to include Calvert Cliffs, as a fourth plant in the application. As a result, the ceiling and obligated amounts are hereby increased by \$85,014.00 from \$1,802,740.00 to \$1,887,754.00.
- 2. The period of performance under Task 4 is extended from December 31, 2000 through December 31, 2003.

All other terms and conditions of this cooperative agreement remain unchanged.

		TICE OF G	RANT/ASSIST	ANCE AV	VARD 7	×
I. GRANT/AGREEMENT NO.	2. MODI		3. PERIOD OFP			4. AUTHORITY
NRC-04-98-056	22		FROM: 8/24/98	TO 08	: /31/2004	Pursuant to Section 31a and 141b of the Atomic Energy Act of 1954, as amended
S. TYPE OF AWARD	6. ORGA	NIZATION TYPE			ENT NAME A	ND ADDRESS
GRANT				Depa	irtment of	Materials & Nuclear
					gineering, lege Park,	Building 090 ND 20742
					wyv feiti	······································
B. PROJECT TITLE:						
Probabilistic Assessment an	nd Applic	ations				
. PROJECT WILL BE CONDUCTED	10. TECH	INICAL REPORTS A	RE REQUIRED	11. PRIN	CIPAL INVEST	IGATOR(6) NAME AND ADDRESS
PER GOVERNMENT'S/RECIPIENT'S		GRESS AND FINAL			aryland Loss Facineesing Deeb	
PHOPOSAL(S) DATED		LONLY				lear Engineering Dept. hammand Modarree
ND APPENDIX A-PROJECT		ER (Conference Proc	eadings)		Marie Moun	
RANT PROVISIONS						0 20742 College Pa
2. NAC PROGRAM OFFICE (NAME ADD U.S. Nuclear Regulatory Commissi		13. ACCOUNTING J APPN. NO:	APPROPRIATION	DATA		OF PAYMENT
Diffice of Nuclear Regulatory Commission Diffice of Nuclear Regulatory Res		APPN. NO: BE NO:	36015110203			E BY TREASURY CHECK
ATTN: Roy Woods		JOB CODE:	X6007			RSEMENT BY TREASURY CHECK
Washington, DC 20555 301-415-6622		BOC NO:	4110	:		OF CREDIT
		OFFICE ID NO:	RES-C03-081		THER	
5. NRC OBLIGATION FUNDS		IL TOT	AL FUNDING AG	SEEMENT	(See Attach. S	30 in Appendix A - "Electronic Payment")
	•		# 1,88'	1,754.	00	
HIS ACTION\$85	,014.00	_ NRC	\$1,847,74		This action	provides funds for Fiscal Year 03
		· ·			in the amo	
REVIOUS OBLIGATION\$1,802	,740.00	RECIPIE				Approved by "pensink" ch R. Webber 9/8/03
HEVIOUS OBLIGATION	14.75h		N 61.887	7540	ນ ້	A VILLIN 9/0/02
OTAL	.740.00	TOTAL	<u>SL 887 740</u>	-00		niverber init
7. NRC ISSUING OFFICE (NAME AND AD	OBECCI					
U.S. Nuclear Regulatory Comm Division of Contracts Attn: T-7-I-2 Contract Management Center 2 Washington DC 20555					• • •	
B. RECIPIENT			19. NR	CONTRAC	TING OFFIC	R
(Signature)			ate)	(Signature)		(Date)
WE (TYPED)				TYPED)	Mary H. Ma	C0
TLE			ППСЕ		Contractin	g Officer
					301-415-73	14
			ITELEPI	IONE NO.		
. PAYMENT INFORMATION						
ayment will be made within thirly (30) days :	after receipt	of the billing unless 1	he bill is improper	or the rectol	ent has falled I	o comply with the program
Jectives, award conditions, Federal reportin						. F. A M. A. A. A. M. A. M.
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lyment will be made by:		v	ouchers should be	submitted i	n an onginal a	nd three (3) copies on form 270 to:
U.S. Nuclear Regulatory Commi	Lasion					
Office of the Chief Financial	l Officer					
	1 <b>T-9</b> H <b>4</b>					
Attn: GOV/COM Accing. Section						
Attn: GOV/COM Accing. Section Washington, DC 20555						
Attn: GOV/COM Accing. Section Washington, DC 20555 Attached is a copy of the "NRC General P						
Attn: GOV/COM Acctng. Section Washington, DC 20555 Attached is a copy of the "NRC General P nprofit Organizations". Acceptance of thes						
Attn: GOV/COM Accing. Section Washington, DC 20555 Attached is a copy of the "NRC General P nprofit Organizations". Acceptance of these ORDER OF PRECEDENCE	e terms and	conditions is acknow	ledged when Fede	oral funds an	e used on this	
Attn: GOV/COM Acctng. Section Washington, DC 20555 Attached is a copy of the "NRC General P nprofit Organizations". Acceptance of thes	e terms and 's proposal	conditions is acknow and this award, the te	ledged when Fede	shall prevail.	e used on this	project.