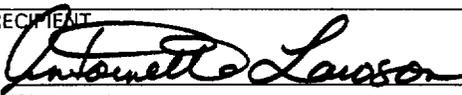


**U.S. NUCLEAR REGULATORY COMMISSION  
NOTICE OF GRANT/ASSISTANCE AWARD**

<b>1. GRANT/AGREEMENT NO.</b> NRC-04-98-056	<b>2. MODIFICATION NO.</b> 9	<b>3. PERIOD OF PERFORMANCE</b> FROM: 8/24/98 TO: 6/30/2002	<b>4. AUTHORITY</b> Pursuant to Section 31a and 141b of the Atomic Energy Act of 1954, as amended												
<b>5. TYPE OF AWARD</b> <input type="checkbox"/> GRANT <input checked="" type="checkbox"/> COOPERATIVE AGREEMENT	<b>6. ORGANIZATION TYPE</b>	<b>7. RECIPIENT NAME AND ADDRESS</b> University of Maryland Office of Research Administration and Advancement, 2100 Lee Bldg. College Park, MD 20742													
<b>8. PROJECT TITLE:</b> Probabilistic Assessment and Applications: Task 5: High Resolution Experimental Measurement of Turbulent Mixing															
<b>9. PROJECT WILL BE CONDUCTED PER GOVERNMENT'S/RECIPIENT'S PROPOSAL(S) DATED</b> 9/14/2000  <b>AND APPENDIX A-PROJECT GRANT PROVISIONS</b>	<b>10. TECHNICAL REPORTS ARE REQUIRED</b> <input checked="" type="checkbox"/> PROGRESS AND FINAL <input type="checkbox"/> FINAL ONLY <input type="checkbox"/> OTHER (Conference Proceedings)	<b>11. PRINCIPAL INVESTIGATOR(S) NAME AND ADDRESS</b> University of Maryland Materials and Nuclear Engineering Dept. Attn: Prof. Mohammad Modarres 2100 Marie Mount Hall College Park, MD 20742													
<b>12. NRC PROGRAM OFFICE (NAME &amp; ADDRESS)</b> U.S. Nuclear Regulatory Commission Office of Nuclear Regulatory Research Attn: Roy Woods Washington, DC 20555 301-415-6622	<b>13. ACCOUNTING &amp; APPROPRIATION DATA</b> APPN. NO: 31X0200 B&R NO: 16015110110 JOB CODE: K6007 BOC NO: 4110 OFFICE ID NO: RES-C01-338	<b>14. METHOD OF PAYMENT</b> <input type="checkbox"/> ADVANCE BY TREASURY CHECK <input type="checkbox"/> REIMBURSEMENT BY TREASURY CHECK <input type="checkbox"/> LETTER OF CREDIT <input checked="" type="checkbox"/> OTHER (SPECIFY) ACH (See Attach. 30 in Appendix A - "Electronic Payment")													
<b>15. NRC OBLIGATION FUNDS</b>  <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">THIS ACTION</td> <td style="width:50%; text-align: right;">\$168,305.00</td> </tr> <tr> <td>PREVIOUS OBLIGATION</td> <td style="text-align: right;">\$919,819.00</td> </tr> <tr> <td><b>TOTAL</b></td> <td style="text-align: right;"><b>\$1,088,124.00</b></td> </tr> </table>		THIS ACTION	\$168,305.00	PREVIOUS OBLIGATION	\$919,819.00	<b>TOTAL</b>	<b>\$1,088,124.00</b>	<b>16. TOTAL FUNDING AGREEMENT</b>  <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">NRC</td> <td style="width:50%; text-align: right;">1,335,190</td> </tr> <tr> <td>RECIPIENT</td> <td style="text-align: right;">0</td> </tr> <tr> <td><b>TOTAL</b></td> <td style="text-align: right;"><b>1,335,190</b></td> </tr> </table> <p style="font-size: small;">This action provides funds for Fiscal Year 2001 in the amount of 168,305</p>		NRC	1,335,190	RECIPIENT	0	<b>TOTAL</b>	<b>1,335,190</b>
THIS ACTION	\$168,305.00														
PREVIOUS OBLIGATION	\$919,819.00														
<b>TOTAL</b>	<b>\$1,088,124.00</b>														
NRC	1,335,190														
RECIPIENT	0														
<b>TOTAL</b>	<b>1,335,190</b>														
<b>17. NRC ISSUING OFFICE (NAME AND ADDRESS)</b>  U.S. Nuclear Regulatory Commission Division of Contracts and Property Mgt. Attn: T-7-I-2 Contract Management Branch No. 1 Washington DC 20555															
<b>18. RECIPIENT</b>  (Signature) Antoinette Lawson, Associate Director NAME (TYPED) Research Administration & Advancement University of Maryland College Park, MD 20742 TELEPHONE NO. Phone: 301-405-6269 Fax: 301-314-9569		<b>19. NRC CONTRACTING OFFICER</b>  (Signature) Mary H. Mace NAME (TYPED) Mary H. Mace TITLE Contracting Officer TELEPHONE NO. 301-415-7314													
<b>20. PAYMENT INFORMATION</b>  Payment will be made within thirty (30) days after receipt of the billing unless the bill is improper or the recipient has failed to comply with the program objectives, award conditions, Federal reporting requirements or other conditions specified in OMB Circular A-110.  Payment will be made by: <span style="float: right;">Vouchers should be submitted in an original and three (3) copies on form 270 to:</span>  <table style="width:100%;"> <tr> <td style="width:50%; vertical-align: top;">           U.S. Nuclear Regulatory Commission            Office of the Chief Financial Officer            Attn: GOV/COM Acctng. Section T-9H4             Washington DC 20555         </td> <td style="width:50%; vertical-align: top; text-align: center;">           address in block 17         </td> </tr> </table>				U.S. Nuclear Regulatory Commission Office of the Chief Financial Officer Attn: GOV/COM Acctng. Section T-9H4  Washington DC 20555	address in block 17										
U.S. Nuclear Regulatory Commission Office of the Chief Financial Officer Attn: GOV/COM Acctng. Section T-9H4  Washington DC 20555	address in block 17														
<b>21. Attached is a copy of the "NRC General Provisions for Grants and Cooperative Agreements Awarded to Institutions of Higher Education and Other Nonprofit Organizations". Acceptance of these terms and conditions is acknowledged when Federal funds are used on this project.</b>															
<b>22. ORDER OF PRECEDENCE</b> In the event of a conflict between the recipient's proposal and this award, the terms of the Award shall prevail.															
<b>23. By this award, the Recipient certifies that payment of any audit-related debt will not reduce the level of performance of any Federal Program</b>															

U.S. NUCLEAR REGULATORY COMMISSION  
COOPERATIVE AGREEMENT  
NRC-04-98-056  
MODIFICATION NO. 9 (CONTINUATION SHEET)

The purpose of this modification is to: (1) incorporate Task 5 in accordance with the contractor's proposal dated September 14, 2000, which is incorporated herein by reference; (2) increase the ceiling amount by \$307,009 from \$1,028,181 to \$1,335,190; (3) increase the amount of funds obligated by \$168,305 from \$919,819 to \$1,088,124; (4) extend the period of performance from June 30, 2002 to February 9, 2003; (5) to correct Modification No. 8 dated November 29, 2000; and (6) extend the period of performance of Task 3. Accordingly, the cooperative agreement is modified as follows:

1. Incorporate Task 5 in accordance with the contractor's proposal dated September 14, 2000 and increase the total ceiling amount by \$307,009 from \$1,028,181 to \$1,335,190. The increase in the ceiling amount is broken down as follows:

**Task 5**

Year 1 - \$168,305 - February 10, 2001 - February 9, 2002  
Year 2 - \$127,704 - February 10, 2002 - February 9, 2003

2. Increase the total amount obligated by \$168,305 from 919,819 to \$1,088,124.
3. Extend the period of performance up to a two year period starting February 10, 2001 to allow Task 5 to run for a two year period. The expiration date for this agreement is hereby changed to February 9, 2003.
4. To correct Modification No. 8 dated 11/29/00, funding breakdown to read as follows:  
Task 1 and 2 the amount should be \$149,820 and Task 4, the amount should be \$60,644.
5. Extend the period of performance under Task 3 to July 31, 2001.

All other terms and conditions of this agreement remain unchanged.