

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

<b>1. GRANT/AGREEMENT NO.</b> NRC-04-10-165	<b>2. MODIFICATION NO.</b> M002	<b>3. PERIOD OF PERFORMANCE</b> FROM: 09/30/2010 TO: 09/30/2013	<b>4. AUTHORITY</b> Pursuant to Section 31b and 141b of the Atomic Energy Act of 1954, as amended																		
<b>5. TYPE OF AWARD</b>  <input checked="" type="checkbox"/> GRANT <input type="checkbox"/> COOPERATIVE AGREEMENT	<b>6. ORGANIZATION TYPE</b> Public State Controlled Institution of Higher Education  DUNS: 003403953 NAICS: 611310	<b>7. RECIPIENT NAME, ADDRESS, and EMAIL ADDRESS</b> PENNSYLVANIA STATE UNIVERSITY, THE PENN STATE  408 OLD MAIN  UNIVERSITY PARK PA 168021505																			
<b>8. PROJECT TITLE:</b> Experiments for Development of TRACE with Interfacial Area Transport Models																					
<b>9. PROJECT WILL BE CONDUCTED PER GOVERNMENT'S/RECIPIENT'S PROPOSAL(S) DATED</b>  <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, ADDRESS and EMAIL ADDRESS</b> Dr. Seungjin Kim Assistant Professor, Pennsylvania State Univ. University Park, PA 16802; E-mail: <a href="mailto:Sxk86@psu.edu">Sxk86@psu.edu</a>																			
<b>12. NRC PROGRAM OFFICE (NAME and ADDRESS)</b> U.S. Nuclear Regulatory Commission Office of Nuclear Regulatory Research ATTN: Heather Dempsey, <a href="mailto:Heather.Dempsey@nrc.gov">Heather.Dempsey@nrc.gov</a> Mail Stop CSB C6-D20 Washington, DC 20555 301-251-7401 Kirk Tien, TA, <a href="mailto:Kirk.Tien@nrc.gov">Kirk.Tien@nrc.gov</a>	<b>13. ACCOUNTING and APPROPRIATION DATA</b> APPN. NO: 31X0200 B&R NO: 2013-60-11-6-174 JOB CODE: G6005 BOC NO: 4110 OFFICE ID NO: RES-13-016 FAMIS: GR00275	<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) Electronic ASAP.gov (See Remarks in Item #20 "Payment Information")																			
<b>15. NRC OBLIGATION FUNDS</b>  <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">THIS ACTION</td> <td style="text-align: right;">\$75,393.00</td> </tr> <tr> <td>PREVIOUS OBLIGATION</td> <td style="text-align: right;">\$149,595.00</td> </tr> <tr> <td><b>TOTAL</b></td> <td style="text-align: right;"><b>\$224,988.00</b></td> </tr> </table>		THIS ACTION	\$75,393.00	PREVIOUS OBLIGATION	\$149,595.00	<b>TOTAL</b>	<b>\$224,988.00</b>	<b>16. TOTAL FUNDING AGREEMENT</b>  <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">NRC</td> <td style="text-align: right;">\$224,988.00</td> <td style="width:40%; vertical-align: top;">This action provides funds for Fiscal Year FY13 in the amount of</td> <td style="text-align: right; vertical-align: top;">\$75,393.00</td> </tr> <tr> <td>RECIPIENT</td> <td style="text-align: right;">_____</td> <td></td> <td></td> </tr> <tr> <td><b>TOTAL</b></td> <td style="text-align: right;"><b>\$224,988.00</b></td> <td></td> <td></td> </tr> </table>		NRC	\$224,988.00	This action provides funds for Fiscal Year FY13 in the amount of	\$75,393.00	RECIPIENT	_____			<b>TOTAL</b>	<b>\$224,988.00</b>		
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<b>17. NRC ISSUING OFFICE (NAME, ADDRESS and EMAIL ADDRESS)</b>  U.S. Nuclear Regulatory Commission Div. of Contracts Attn: M'Lita Carr Mail Stop: TWB-01-B10M Washington, DC 20555 <a href="mailto:MLita.Carr@nrc.gov">MLita.Carr@nrc.gov</a>																					
<b>18.</b>  Signature Not Required	<b>19. NRC CONTRACTING OFFICER</b>  <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%; text-align: center;"><i>M'Lita Carr</i></td> <td style="width:40%; text-align: right;">11/20/2012</td> </tr> <tr> <td style="text-align: center;">(Signature)</td> <td style="text-align: right;">(Date)</td> </tr> <tr> <td>NAME (TYPED)</td> <td style="text-align: right;">M'Lita Carr</td> </tr> <tr> <td>TITLE</td> <td style="text-align: right;">Grants Officer</td> </tr> <tr> <td>TELEPHONE NO.</td> <td style="text-align: right;">301-492-3464</td> </tr> </table>			<i>M'Lita Carr</i>	11/20/2012	(Signature)	(Date)	NAME (TYPED)	M'Lita Carr	TITLE	Grants Officer	TELEPHONE NO.	301-492-3464								
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<b>20. PAYMENT INFORMATION</b>  Payment will be made through the Automated Standard Application for Payment (ASAP.gov) unless the recipient has failed to comply with the program objectives, award conditions, Federal reporting requirements or other conditions specified in 2 CFR 215 (OMB Circular A110).																					
<b>21. Attached is a copy of the "NRC General Provisions for Grants and Cooperative Agreements Awarded to Non-Government Recipients. 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>																					

TEMPLATE - ADM001

**SUNSI REVIEW COMPLETE**

**ADM002**

**DESCRIPTION OF MODIFICATION:**

The purpose of this modification M002 is:

1. Provide incremental funding in the amount of \$75,393.00;
2. Change the NRC Project Manager;
3. Revise Financial and Performance reporting requirements.

As a result of this modification:

1.
  - A. The obligated amount of the grant has increased by \$75,393.00 from \$149,595.00 to \$224,988.00 to fully fund the grant;
  - B. Block 12 of the US Nuclear Regulatory Commission, Notice of Grant Assistance Award, delete in its entirety and replace with the following:

"NRC PROGRAM OFFICE (NAME and ADDRESS)

U.S. Nuclear Regulatory Commission  
Office of Nuclear Regulatory Research  
Attn: Heather Dempsey, [Heather.Dempsey@nrc.gov](mailto:Heather.Dempsey@nrc.gov)  
Mail Stop: C5A24M  
Washington, DC 20555  
Kirk Tien, Technical Analyst, [Kirk.Tien@nrc.gov](mailto:Kirk.Tien@nrc.gov)"
2.
  - A. ATTACHMENT A – SCHEDULE, Section A.GENERAL item number 2 entitled "Total Obligated Amount", delete in its entirety and replace with the following:

"2. Total Obligated Amount: \$75,393.00"
  - B. ATTACHMENT A – SCHEDULE, Section A.GENERAL item number 5 entitled "NRC Project Officer", delete in its entirety and replace with the following:

"5. NRC Project Officer: Heather Dempsey, Kirk Tien, TA"
  - C. ATTACHMENT C – STANDARD TERMS AND CONDITIONS, entitled "Monitoring and Reporting § 215.50-53" section B – Federal Financial Reports is deleted in its entirety and replaced with the following:

**"b. Federal Financial Reports**  
The Grantee shall submit a "Federal Financial Report" (SF-425) on a quarterly basis for the periods ending March 31, June 30, September 30, and December 31, or any portion thereof, unless otherwise specified in a special award condition. Reports are due no later than 30 days following the end of each reporting period. A final SF-425 is due within 90 days after expiration of the award. The report should be submitted electronically to the following:

1. Grants FFR@NRC.gov (NOTE: There is an underscore between Grants and FFR);
2. RESGrants.Resource@NRC.gov ;
3. Technical Analyst; and
4. Grants Officer."

E. ATTACHMENT C – STANDARD TERMS AND CONDITIONS entitled "III. Programmatic Requirements" section Performance (Technical) Reports is deleted in its entirety and replaced with the following:

**"Performance (Technical) Reports**

a. The Grantee shall submit performance (technical) reports electronically to the NRC Project Officer and Grants Officer on a quarterly for the periods ending March 31, June 30, September 30, and December 31, or any portion thereof, unless otherwise specified in a special award condition. Reports are due no later than 30 days following the end of each reporting period. The report should be submitted electronically to the following:

1. Grants PPR@NRC.gov (NOTE: There is an underscore between Grants and PPR);
2. RESGrants.Resource@NRC.gov ;
3. Technical Analyst; and
4. Grants Officer.

b. Unless otherwise specified in the award provisions, performance (technical) reports shall contain brief information as prescribed in the applicable uniform administrative requirements 2 CFR §215.51 which are incorporated in the award.

c. The Office of Regulatory Research requires the submission of progress reports on the SF-RPPR on a quarterly basis for the periods ending March 31, June 30, September 30, and December 31, or any portion thereof, unless otherwise specified in a special award condition. Reports are due no later than 30 days following the end of each reporting period."

Base Period: September 30, 2010 – September 30, 2013 (unchanged)

Total Contract Amount: \$224,988.00 (unchanged)

Total Obligated Amount: \$224,988.00 (changed)

All terms and conditions remain the same.