U.S. NUCLEAR REGULATORY COMMISSION

| · · · · · · · · · · · · · · · · · · · | | E OF GRANT/AS | | | |
|---|--------------------------------|---|-------------------------------|---|--|
| 1. GRANT/AGREEMENT NO NRC-38-07-506 | 2. MODIFICATION 0004 | 0.7 = 100 | D OF PERFORMA 9/01/2007 TO | NCE 0: 08/31/2011 4. AUTHORITY Pursuant to Section 31b and 141b of the Atomic Energy Act of 1954, as amended | |
| 5. TYPE OF AWARD | 6. ORGANIZATION | N TYPE | 7 RECIPIE | ENT NAME, ADDRESS, and EMAIL ADDRESS | |
| X GRANT | o. or to the | | REGENTS O | F THE UNIVERSITY OF CALIFORNIA, THE Y OF CALIFORNIA, BERKELEY | |
| A GRANT | DUNS: 124726725 | | | | |
| COOPERATIVE AGREEMENT State Controlled Institution | | | | 2150 SHATTUCK AVE RM 313 | |
| | | ed Higher Educat. | BERKELEY | CA 947045940 s_gov@lists.berkeley.edy | |
| 8. PROJECT TITLE: | | | | | |
| Scientific and Regulatory Ba | sis for Enviror | nmental Protectio | n in Nuclear F | Tuel Cycle | |
| 9. PROJECT WILL BE CONDUCTED | | | | PAL INVESTIGATOR(S) NAME, ADDRESS and EMAIL ADDRESS | |
| PER GOVERNMENT'S/RECIPIENT'S | X PROGRESS AND FINAL | | | Dr. Joonhong Ahn, 510-642-5107 Department of Nuclear Engineering University of California, Berkeley 2150 Shattuck Avenue, Suite 313 | |
| PROPOSAL(S) DATED | | | | | |
| 01/21/2009 | FINAL ONLY | | | | |
| AND APPENDIX A-PROJECT | OTHER (Conference Proceedings) | | | CA 94704-5940 | |
| GRANT PROVISIONS | DDDECC) 42 ACC | OUNTING and ADDDO | | erkeley.edu | |
| 12. NRC PROGRAM OFFICE (NAME and AL US Nuclear Regulatory Commission | APPN. N | | | | |
| Office of Human Resources B&R NO: | | | -5C1116 | ADVANCE BY TREASURY CHECK | |
| Attn: Randi Neff, 301-492-2301 | Neff, 301-492-2301 | | -JCIII0 | REIMBURSEMENT BY TREASURY CHECK | |
| Mail Stop: W5-A6 Washington DC 20555 | | | LETTER OF CREDIT | | |
| Randi.Neff@nrc.gov | BOC NO | | | - | |
| | OFFICE | ID NO: HR-07- | 506-004 | X OTHER (SPECIFY) Electronic ASAP.gov (See Remarks in Item #20 "Payment Information") | |
| 15. NRC OBLIGATION FUNDS | GATION FUNDS 16. TOTAL FUNDIN | | ING AGREEMENT | , http:// | |
| THIS ACTION \$ 0.0 NRC | | NRC \$91, | 450.00 | This action provides funds for Fiscal Year in the amount of See Page 2 | |
| PREVIOUS OBLIGATION | \$91,450.00 RECIPIENT 0 | | | | |
| | | | . : | _ | |
| TOTAL \$91,450.00 TOTAL \$91,450.00 | | | | | |
| U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Erika Eam Mail Stop: TWB-01-B10M Washington, DC 20555 | | | | | |
| 18. | | | 19. NRC CONTRA | ACTING OFFICER/ | |
| Acceptance of or objections to the Terms and Conditions of Award must be Emailed to the NRC Issuing Office (Block #17) within three (3) business days following the Award issue date. NRC considers lack of response as acceptance by the grantee of the terms and conditions of award. | | | (Signatur NAME (TYPED) | Theela punyan 6/30/2010 | |
| | | | TITLE | Contracting Officer | |
| | | | TELEPHONE NO | 301-492-3484 | |
| | | *************************************** | TELEPHONE NO | | |
| 20. PAYMENT INFORMATION | | | | | |
| 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). | | | | | |
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| 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. | | | | | |
| 22. ORDER OF PRECEDENCE | | | | | |
| In the event of a conflict between the recipient's proposal and this award, the terms of the Award shall prevail. | | | | | |
| 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. | | | | | |

DNOO

The purpose of this no cost modification is to extend the period of performance of this Cooperative Agreement. Specific changes are as follows:

US Nuclear Regulatory Commission, Notice of Grant/Assistance Award form, Block 3, Period of Performance, <u>delete</u> in its entirety and <u>replace</u> with the following, "Period of Performance FROM 09/01/2007 TO 08/31/2011".

All other terms and conditions will remain the same.