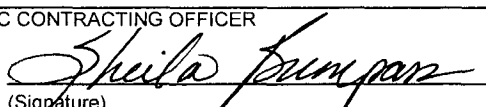


**U.S. NUCLEAR REGULATORY COMMISSION
NOTICE OF GRANT/ASSISTANCE AWARD**

1. GRANT/AGREEMENT NO. NRC-04-09-144	2. MODIFICATION NO. M005	3. PERIOD OF PERFORMANCE FROM: 06/26/09 TO: 12/31/2011	4. AUTHORITY Pursuant to Section 31b and 141b of the Atomic Energy Act of 1954, as amended
5. TYPE OF AWARD <input type="checkbox"/> GRANT <input checked="" type="checkbox"/> COOPERATIVE AGREEMENT	6. ORGANIZATION TYPE DUNS: 062511126 NAICS: 611210	7. RECIPIENT NAME, ADDRESS, and EMAIL ADDRESS ELECTRIC POWER RESEARCH INSTITUTE, INC. 3420 HILLVIEW AVE PALO ALTO CA 943041338	
8. PROJECT TITLE: Central and Eastern United States (CEUS) Seismic Hazard Update Project			
9. PROJECT WILL BE CONDUCTED PER GOVERNMENT'S/RECIPIENT'S PROPOSAL(S) DATED 08/25/2010 AND APPENDIX A-PROJECT GRANT PROVISIONS	10. TECHNICAL REPORTS ARE REQUIRED <input checked="" type="checkbox"/> PROGRESS AND FINAL <input type="checkbox"/> FINAL ONLY <input type="checkbox"/> OTHER (Conference Proceedings)	11. PRINCIPAL INVESTIGATOR(S) NAME, ADDRESS and EMAIL ADDRESS Electrical Power Research Institute (EPR) Attention: Richard Reid 3420 Hillview Avenue Palto Alto CA 94304-1338 rreid@epri.com	
12. NRC PROGRAM OFFICE (NAME and ADDRESS) US Nuclear Regulatory Commission Office of Research Attention: Robin Barnes Mailstop: CSB C6-D20 Washington DC 20555 301-251-7645	13. ACCOUNTING and APPROPRIATION DATA APPN. NO: 31X0200.160 B&R NO: 2011-60-17-6-16 JOB CODE: K6877 BOC NO: 4110 OFFICE ID NO: RES-11-154 FAMIS: GR0013		14. METHOD OF PAYMENT <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")
15. NRC OBLIGATION FUNDS THIS ACTION <u>\$86,996.00</u> PREVIOUS OBLIGATION <u>\$731,845.11</u> TOTAL <u>\$818,841.11</u>		16. TOTAL FUNDING AGREEMENT NRC <u>\$1,120,765.11</u> RECIPIENT <u>\$0.00</u> TOTAL <u>\$1,120,765.11</u> This action provides funds for Fiscal Year 2011 in the amount of \$86,996.00	
17. NRC ISSUING OFFICE (NAME, ADDRESS and EMAIL ADDRESS) U.S. Nuclear Regulatory Commission Div. of Contracts Attn: M Lita R. Carr, 301-492-3464 Mail Stop: TWB-01-B10M Washington, DC 20555			
18. 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.		19. NRC CONTRACTING OFFICER <div style="text-align: right;"> 4/28/2011 (Signature) _____ (Date) _____</div> NAME (TYPED) <u>Sheila Bumpass</u> TITLE <u>Contracting Officer</u> TELEPHONE NO. <u>301-492-3484</u>	
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).			
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.			

TEMPLATE - ADM001

SUNSI REVIEW COMPLETE

ADM002

DESCRIPTION OF MODIFICATION:

The purpose of this modification M005 is:

1. Increase the Cooperative Agreement ceiling by \$388,920.00;
2. Provide incremental funding in the amount of \$86,996.00;
3. Change the Project Manager;
4. Add Financial and Performance reporting requirements
5. Augment the Program Description.

As a result of this modification:

1. The total amount awarded for the Cooperative Agreement has increased by \$388,920.00 to cover the within scope change thus increasing the total award amount from \$731,845.11 to \$1,120,765.11;
2. The obligated amount has increased by \$86,996.00 from \$731,845.11 to \$818,841.11;
3. Robert Roche-Rivera has been replaced by Robin Barnes as the RES Project Manager;
4. In section b. entitled "Federal Financial Reports" under Monitoring and Reporting deleted and replace with the following:

"b. Federal Financial Reports

Effective October 1, 2009, NRC transitioned from the SF-269, SF-269A, SF-272, and SF-272A to the Federal Financial Report (SF-425) as required by OMB:

Federal Register Notice: http://www.whitehouse.gov/omb/fedreg/2008/081308_ffr.pdf

Federal Financial Report Form (SF-425): http://www.whitehouse.gov/omb/grants_forms/

The Recipient shall submit a Federal Financial Report (SF-425) on a quarterly basis, for the periods ending 3/31, 6/30, 9/30 and 12/31. Reports are due within 30 calendar days following the end of each reporting period. The reports must be emailed to Grants_FFR@nrc.gov. "

5. In section III. Programmatic Requirements section entitled "Performance (Technical) Reports" add the following:

"c. The required performance (technical) reports must be emailed to Grants_PPR@nrc.gov."

6. The attached program description has been added in its entirety.

Base Period: June 26, 2009 – December 31, 2011(unchanged)

Assistance Award Ceiling: \$1,120,765.11 (changed)

Total Obligated Amount: \$ 818,841.11 (changed)

All other terms and conditions remain the same.

EPRI Proposal to NRC for CEUS SSC Project (NRC-04-09-144)

Introduction:

As a result of the complexity and size of the draft report for the Central and Eastern United States (CEUS) Seismic Source Characterization (SSC) Project, about 250 substantive comments were provided by the Participatory Peer Review Panel (PPRP) which all must be addressed. Unlike a typical SSHAC project, the report was also subject to review by various sponsors (NRC/NRO, DOE, utilities) and other organizations (USGS, DNFSB) which yielded many other substantive comments. Consequently, the schedule for making the final report available for NRC review is now estimated to be in the 4th Quarter 2011. A revised CEUS SSC schedule dated December 2, 2010 has been distributed to the CEUS SSC Project Team, including the PPRP. Adjustments to this detailed schedule will be made in February 2011, following the Technical Integration (TI) Team Meeting and the Stakeholder Briefing. Additional budget is being pursued from the other sponsors (EPRI and DOE) to cover the remaining activities required to successfully complete this project.

Increased Level of Effort Required to Produce Final Deliverable:

Task 9 - Perform Preliminary Hazard Calculations and Sensitivity Analyses

Task 9.2 - Additional hazard calculations and comment responses from hazard analyst

Additional seismic hazard calculations will be performed using "final" seismicity parameter input files. In addition, sensitivity analysis will be shown for the following logic tree branches, assuming that each branch has a weight of 1.0, calculated at the 7 demonstration sites:

- Mmax Zones vs. Seismotectonic Zones for background sources only (at all 7 demonstration sites)
- Given the Mmax Zones branch:
 - (a) Sensitivity to "No" vs. "Yes" separation of Mesozoic extended (at the Central Illinois and Chattanooga demonstration sites)
 - (b) Given "Yes" branch representing separation of Mesozoic extended, sensitivity to "wide" vs. "narrow" (at the Chattanooga demonstration site)

Results in the form of hazard plots showing the above sensitivities and documentation will be included in the final project report, for peak ground acceleration, 10 Hz spectral acceleration, and 1 Hz spectral acceleration (this will be consistent with other sensitivity plots in the final project report). This task will also support the hazard analyst's responses to the PPRP comments.

Task 15- Brief NRC, DOE, and DNFSB on CEUS SSC Study

Task 15.3 - Support NRC Review and Acceptance

Task 15 provide a minimum level of support required for the key TI Team Members to work with NRC staff to understand the revisions to the Project Report, respond to RAIs or other questions, finalize the report in light of comments provided. These tasks will ensure the required technical support is on hand to support the NRC review when needed.

Task 16: Participatory Peer Review Panel (PPRP)

Task 16.2 - Additional PPRP Support to Complete Project

As a result of the extended project schedule, the contracted members on the PPRP will require additional support for the following activities:

- Review and feedback to Technical Integration (TI) Team on issues relating to magnitude conversion and earthquake catalog
- Participate in 2-day TI Team Working Meeting and follow-on, 2-day Stakeholder Briefing
- Interact with PPRP and Project Management and begin review of completed sections of revised CEUS SSC report
- Participate in 2-day Project Briefing to review updated hazard calculations (from Task 1 above)
- Review remainder of CEUS SSC Report Manuscript and Comment Resolution Tables
- Participate in 2-day Closure Briefing for PPRP and Sponsors
- Interact with PPRP and produce Review Comment Report following Closure Briefing
- Produce PPRP Final Letter Report

Cost: (See SF-424A)

Contractor	Scope/Task (correlate to Project Plan)	Cost (w/out OH)
REI (Fugro Consultants)	Task 9.2 - Additional hazard calculations and comment responses from hazard analyst	
REI (Fugro Consultants)	Task 15.3: Support NRC Review and Acceptance	
WLA (Fugro William Lettis)	Task 15.3: Support NRC Review and Acceptance	
Kevin Coppersmith	Task 15.3: Support NRC Review and Acceptance	
AMEC Geomatrix	Task 15.3: Support NRC Review and Acceptance	
Walter Arabaz	Task 16.2: Additional PPRP Support to Complete Project	
Carl Stepp	Task 16.2: Additional PPRP Support to Complete Project	
William Hinze	Task 16.2: Additional PPRP Support to Complete Project	
Total Contractor Budget w/out OH:		
Total Funding Requested:		