UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 1, 2016

Peter Hosemann, Ph.D.
The Regents of the University
Of California
C/O Sponsored Projects Office
2150 Shattuck Avenue, Suite 300
Berkeley, CA 94704

VIA Electronic Mail
peterh@berkeley.edu

SUBJECT: GRANT NO: NRC-HQ-84-16-G-0032

Dear Dr. Hosemann:

Pursuant to the authority contained in the Federal Grant and Cooperative Agreement Act of 1977, as amended, and the Atomic Energy Act of 1954, as amended, the Nuclear Regulatory Commission (NRC) hereby awards to The Regents of the University Of California (hereinafter referred to as the "Grantee" or "Recipient"), the sum of $400,000.00 to provide support for "Training the Next Generation of Nuclear Engineers: Graduate Fellowships at the University of California, Berkeley" entitled "Program Description."

This award is effective July 1, 2016 and shall apply to expenditures made by the Recipient furtherance of program objectives during the period beginning with the effective date of July 1, 2016 and ending June 30, 2020.

This award is made to the Recipient on condition that the funds will be administered in accordance with the terms and conditions as set forth in Attachment A (the Schedule); Attachment B (the Program Description); and Attachment C (the Standard Provisions); all of which have been agreed to by your organization.

Based on the pre-award compliance review conducted by NRC's Small Business and Civil Rights Office (SBCR), your institution is placed in a periodic status pending resolution of concerns raised during the review. Within 60 days, SBCR will conduct a periodic review to ensure compliance with applicable Civil Rights statutes. Your cooperation with SBCR is essential. The continued eligibility of Federal financial assistance is conditioned upon compliance with anti-discrimination regulations.

Please ensure individuals selected as beneficiaries of support under this grant meet the legal requirements consistent with Supreme Court Decisions including *Fisher, Gratz, and Grutter.*

Please sign the enclosed grant to acknowledge your receipt of the award, and return as a pdf file to Ms. M'Lita Carr by email at MLita.Carr@nrc.gov.

Sincerely yours,

Erika Eam

Erika Eam
Grants Officer
Resources & Grants Team
Acquisition Management Division

Attachments:
Attachment A – Schedule
Attachment B – Program Description
Attachment C – Standard Terms and Condition

TEMPLATE - ADM001
SUNSI REVIEW COMPLETE
AUG 16 2016
ADM002

Grant and Cooperative Agreement

CHOOSE ONE:
- [ ] COOPERATIVE AGREEMENT
- [x] GRANT

CHOOSE ONE: [x] EDUCATION [ ] FACILITIES [ ] RESEARCH [ ] SDCR [ ] TRAINING

1. GRANT/COOPERATIVE AGREEMENT NUMBER	2. SUPPLEMENT NUMBER	3. EFFECTIVE DATE	4. COMPLETION DATE
NRC-HQ-84-16-G-0032		07/01/2016	

5. ISSUED TO
NAME/ADDRESS OF RECIPIENT (No., Street, City/County, State, Zip)
UNIVERSITY OF CALIFORNIA, BERKELEY
2150 Shattuck Ave Rm 313
BERKELEY CA 947045940

6. ISSUED BY U.S. NRC - HQ
Mailing Address: Acquisition Management Division
Mail Stop: TWFN-5E03
Washington DC 20555-0001

7. TAXPAYER IDENTIFICATION NO. (TIN)

8. COMMERCIAL & GOVERNMENT ENTITY (CAGE) NO.

9. PRINCIPAL INVESTIGATOR/ORGANIZATION'S PROJECT OR PROGRAM MGR. (*Name & Phone*)
Dr. Peter Hosemann
peterh@berkeley.edu; 510-717-5752

10. RESEARCH, PROJECT OR PROGRAM TITLE
Training the Next Generation of Nuclear Engineers: Graduate Fellowships at the University of California, Berkeley

11. PURPOSE
See Schedule

12. PERIOD OF PERFORMANCE (*Approximately*)
07/01/2016 through 06/30/2020

13A.	AWARD HISTORY	13B.	FUNDING HISTORY
PREVIOUS	$0.00	PREVIOUS	$0.00
THIS ACTION	$400,000.00	THIS ACTION	$400,000.00
CASH SHARE	$0.00	TOTAL	$400,000.00
NON-CASH SHARE	$0.00		
RECIPIENT SHARE	$0.00		
TOTAL	$400,000.00		

14. ACCOUNTING AND APPROPRIATION DATA
2016-X0200-IUPMRU-84-84D002-52-S-164-T8458-4110

PURCHASE REQUEST NO.	JOB ORDER NO.	AMOUNT	STATUS
OCHCO-16-0179			

15. POINTS OF CONTACT

	NAME	MAIL STOP	TELEPHONE	E-MAIL ADDRESS
TECHNICAL OFFICER	NANCY V. HEBRON-ISREAL	3WFN/3AF12	30-287-0718	Nancy.Hebron-Isreal@nrc.gov
NEGOTIATOR				
ADMINISTRATOR	M'LITA R. CARR		(301) 415-6869	MLITA.CARR@nrc.gov
PAYMENTS				

16. THIS AWARD IS MADE UNDER THE AUTHORITY OF :
PURSUANT TO SECTION 31B AND 141B OF THE ATOMIC ENGERGY ACT OF 1954, AS AMENDED.

17. APPLICABLE STATEMENT(S), IF CHECKED:
- [ ] NO CHANGE IS MADE TO EXISTING PROVISIONS
- [ ] FDP TERMS AND CONDITIONS AND THE AGENCY-SPECIFIC REQUIREMENTS APPLY TO THIS GRANT

18. APPLICABLE ENCLOSURE(S), IF CHECKED:
- [ ] PROVISIONS
- [ ] SPECIAL CONDITIONS
- [ ] REQUIRED PUBLICATIONS AND REPORTS

UNITED STATES OF AMERICA		COOPERATIVE AGREEMENT RECIPIENT	
CONTRACTING/GRANT OFFICER M'LITA R. CARR	DATE 06/30/2016	AUTHORIZED REPRESENTATIVE Noam PINES 2016.08.11 17:36:13 07'00' Noam Pines, Associate Director	DATE 8/11/16

Grant and Cooperative Agreement

ITEM NO. (A)	ITEM OR SERVICE (Include Specifications and Special Instructions) (B)	QUANTITY (C)	UNIT (D)	ESTIMATED COST UNIT PRICE (E)	ESTIMATED COST AMOUNT (F)
	CFDA Number: 77.008 DUNS Number: 124726725 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 200. Payment: ASAP GRANT FUNDS REIMBURSEMENT SYS US TREASURY Period of Performance: 07/01/2016 to 06/30/2020				

Attachment A - Schedule

A.1 PURPOSE OF GRANT

The purpose of this Grant is to provide support to the "Training the Next Generation of Nuclear Engineers: Graduate Fellowships at the University of California, Berkeley" as described in Attachment B entitled "Program Description."

A.2 PERIOD OF GRANT

1. The effective date of this Grant is 07/01/2016. The estimated completion date of this Grant is 06/30/2020.

2. Funds obligated hereunder are available for program expenditures for the estimated period: 07/01/2016 – 06/30/2020.

A. GENERAL

1. Total Estimated NRC Amount:	$400,000.00
2. Total Obligated Amount:	$400,000.00
3. Cost-Sharing Amount:	$000,000.00
4. Activity Title:	Training the Next Generation of Nuclear Engineers: Graduate Fellowships at the University of California, Berkeley
5. NRC Project Officer:	Nancy Hebron-Isreal
6. DUNS No.:	124726725

A.3 BUDGET

Revisions to the budget shall be made in accordance with Revision of Grant Budget in accordance with 2 CFR 200.

	Year 1	**Year 2**	**Year 3**	**Year 4**
Other (stipend)	$100,000.00	$100,000.00	$100,000.00	$100,000.00
Total Direct Cost	$100,000.00	$100,000.00	$100,000.00	$100,000.00
Indirect Cost	$0.00	$0.00	$0.00	$0.00
Total Cost	$100,000.00	$100,000.00	$100,000.00	$100,000.00

A.4 AMOUNT OF AWARD AND PAYMENT PROCEDURES

1. The total estimated amount of this Award is $400,000.00 for the four year period.

2. NRC hereby obligates the amount of $400,000.00 for program expenditures during the period set forth above and in support of the Budget above. The Grantee will be given written notice by the Grants Officer when additional funds will be added. NRC is not obligated to reimburse the Grantee for the expenditure of amounts in excess of the total obligated amount.

3. Payment shall be made to the Grantee in accordance with procedures set forth in the Automated Standard Application For Payments (ASAP) Procedures set forth below.

Attachment B – Program Description

Introduction

The Department of Nuclear Engineering at the University of California, Berkeley (UCB-NE) offers undergraduate and graduate programs in nuclear science and engineering and plays a major role in the development of a workforce capable of supporting the design, construction, operation, and regulation of nuclear facilities, and the safe handling of nuclear materials. The Undergraduate Program offers comprehensive ABET-accredited nuclear engineering programs, and is consistently ranked among the top in the Nation. The Graduate Program has also been very strong and has consistently ranked among the top nuclear engineering programs in the Nation. UCB-NE is the only NE department in California. In the past decade, the numbers of applications, admissions, and enrollments for the graduate NE program have increased significantly. The quality of the applicant pool has also improved significantly over the last several years, particularly the pool of domestic applicants. UCB-NE is working on extending its graduate program, increasing the number of faculty (two new faculty members are PIs of this proposal) and students. This fellowship program will be instrumental to increase student admission and to attract high-talent students.

Current Graduate Programs at UC Berkeley Department of Nuclear Engineering
UC Berkeley is a public university founded in 1968 with the purpose to "contribute even more than California's gold to the glory and happiness of advancing generations." Today, UCB serves a student body of approximately 27,000 undergraduate students and 10,500 graduate students enrolled in 170 academic departments and programs. UCB is noted for the academic distinction of its faculty—including seven Nobel Prizes, the quality and scope of its research activities, and the variety and vitality of student activities. It is ranked by its academic peers as one of the best graduate institutions in the United States. Thomas Pigford established UCB-NE in 1958 at the suggestion of Edward Teller and Glenn Seaborg. UCB-NE offers one of the best educational programs in the Nation and worldwide. Our objective is to be the pre-eminent provider of nuclear engineering education at the undergraduate, graduate, and post-graduate levels and to perform world-class research across all nuclear engineering disciplines, utilizing the resources available within the University and through our unique national laboratory partnerships. Our scientific and technical research competency ensures continual enhancement of our educational ability and serves the University of California, the U.S. Department of Energy, the U.S. Nuclear Regulatory Commission, and the Nation (industry, national laboratories, universities). In 2015-16, 42 degrees were awarded (21 Bachelor's, 15 Master's, 1 M.Eng. and 6 Doctoral degrees), a 50% increase compared with the 24 degrees awarded in 2003-04 (see Figure 1). Over the last ten years the number of students enrolled in the undergraduate program has increased from about 50 to about 80. In the same period the number of students in the graduate program has also increased by about 50% (see Figure 2) to today 76. UCB implements a centralized control on the number of graduate students that can be offered admission (not actual number of admits) every year. In recognition of the success of our program the Graduate Division increased our allocation for 2015-2016 by about 50%. The NRC fellowship program will be instrumental to create a strategy that will generate sustainable support to the growth of the NE Graduate Program.

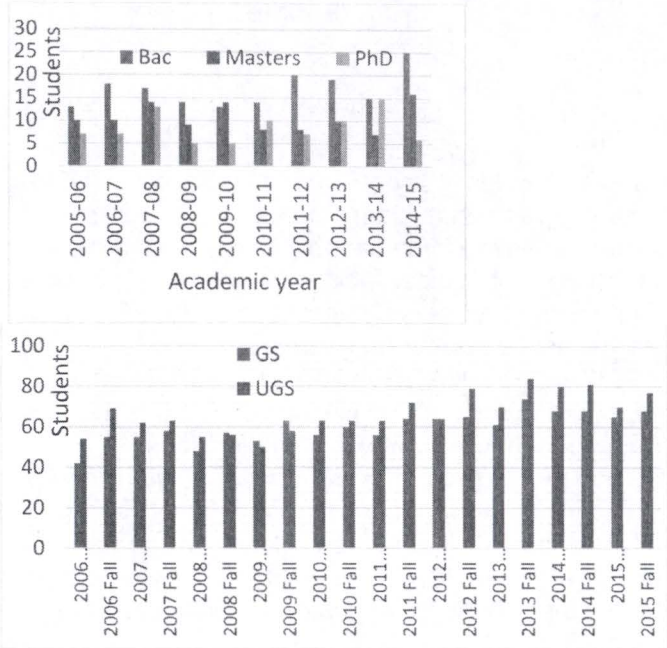

Figure 1. Nuclear Engineering degrees awarded by UCB-NE over a 15-year period a) Enrollments at UCB-NE since 2005 b)

The program is designed to prepare students for a career in industry, the national laboratories, or in state or federal regulatory agencies. The Department offers three distinct Masters degrees—two types of Master of Science degrees (20 course units plus M.S. thesis or 24 course units plus M.S. project/presentation) and a Master of Engineering degree (40 course units plus an M.Eng. project); and a Ph.D. degree—doctoral students complete a minimum of six courses in Nuclear Engineering and four to six courses in minor fields. UCB-NE in collaboration with the Radiation Oncology Department at the University of California, San Francisco also established a Medical Physics Certificate Program that is expected to be rolled out no later than Fall 2016. Faculty and students have energetically promoted nuclear education through outreach programs such as the annual NE American Nuclear Society Science Teachers workshop, attended by 30 high-school teachers from across California and a day of demonstrations for ATOMS ("Adventures through open Minds Science") Club members—80 elementary school children and their parents. In addition the Envision Academy highschool has been hosted the last 4 years on the UCB campus with more than 100 high school freshman students and introduced to Nuclear Engineering. UCB-NE faculty has been on the forefront in providing scientific unbiased information about the Fukushima accident through active monitoring of air, water, flora, and fauna along the US west coast (see Berkeley Radwatch website http://radwatch.berkeley.edu and Kelp Watch website http://kelpwatch.berkeley.edu). For this effort UCB-NE received American Nuclear Society Presidential Citation. Our Department remains at the far front in creating awareness and public education about nuclear energy with a resilience institute and dosimeter network program that will be launched in 2015.Areas of instruction and research from which graduate students select a specialty include:

- Applied nuclear physics
- Advanced fission reactor concepts
- Nuclear materials and chemistry

- Reactor engineering
- Nuclear thermal hydraulics
- Fuel cycles and radioactive waste
- Bionuclear and radiological physics
- Risk, safety and systems analysis
-

The facilities that support the research include the following:

- Advanced nuclear engineering computational laboratory
- Computational laboratory for multi-scale modeling of radiation damage
- Nuclear materials laboratory
- Thermal hydraulics laboratory
- Nuclear waste computational research laboratory
- Applied nuclear physics laboratory
- McClellan Nuclear Research Center
-

The University of California (UC) has been managing 3 national laboratories for over 50 years: Los Alamos National Laboratory (LANL), Lawrence Livermore National Laboratory (LLNL), and Lawrence Berkeley National Laboratory (LBNL). The UC is still a part of the consortia that manage LANL and LLNL, after the recent change in the Labs management. The NE Department has been in a unique position over many years to establish and maintain excellent collaborations with all three national laboratories, which allowed both faculty and graduate students to have access to a broad range of advanced experimental facilities and the Labs' researchers. The Department provides 100% funding for graduate students through fellowship, teaching and research positions in the Department and at the nearby national labs. The Nuclear Engineering Department currently has 81 declared undergraduate majors and 68 graduate students. NE students have increased interaction with industry contacts through internships, meetings with colloquium visitors and monthly dinner meetings with industry representatives. The NE faculty has organized numerous workshops, seminars and summer schools, with the participants from industry, academia, national laboratories, and the government (DOE, NRC). The NE Department has strong international collaborations, allowing graduate students exposure to researchers from international universities, institutes, and industry.

Proposed Graduate Fellowship Program at UCB-NE

The Nuclear Engineering Department at the University of California, Berkeley proposes a graduate fellowship program in Nuclear Engineering named *Training the Next Generation of Nuclear Engineers* in support of outstanding graduate students interested in nuclear science and engineering and a career in the nuclear power industry. Fellowship recipients will sign a service agreement to serve six (6) months in nuclear-related employment for each full or partial year of academic support. The employment may be with the NRC, other federal agencies, State agencies, Department of Energy laboratories, nuclear-related industry, or academia in the recipients' sponsored fields of study.

The UCB-NE graduate fellowship program will contribute to further extend our graduate program providing support for two Ph.D. students during three years of the 4-year doctoral program and two M.S. students during one year of the 2-year masters program. The fellowship will cover the tuition and fees and stipend for 3 years for each Ph.D. student and 1 year for each M.S. student (the first year of fees include non-resident tuition).

Proposed Selection Process
The Department will establish a scholarship selection and oversight committee. This committee will be composed of Profs. Hosemann, Fratoni and Slaybaugh, and the Department financial administrator. The committee will develop criteria and policies for selection of the students based on and consistent with the principles and procedures of UCB and its financial aid program. All students with GPA's above 3.3 (on a scale of 4.0) in or entering the graduate program will be eligible for these fellowships and will be invited to fill out a web-based scholarship form. The committee will then interview in person or over the phone the top candidates. Fellowship applicants will be ranked using the following criteria:

a) Undergraduate GPA,
b) Graduate GPA, when applicable,
c) Financial need,
d) Contribution to the diversity of the Department,
e) Letter of recommendation from faculty sponsor, and
f) Clarity of goals and promise of achievement within the Nuclear Industry.

Management and Administrative Structure
Fellowships will be administered by this committee, which will organize nominations, applications and selection of appropriate candidates for support. The recruitment and selection process will use the proven techniques from the NE Department and the recruitment and retention program in the College of Engineering, housed in Engineering Student Services (ESS). ESS has programs for increasing the diversity of our student population (formerly the Center for Underrepresented Engineering Students). A strong, concerted effort will be made to recruit women; minorities who are underrepresented (URM) in science, technology, engineering, and mathematics (STEM); and first generation students into the program.

The Department of Nuclear Engineering will manage the proposed fellowship program. The Department has experience managing grants in excess of a million dollars per grant annually and this new program will not be a burden on the Department administrative staff. Profs. Hosemann, Fratoni and Slaybaugh will administer the program in coordination with the Chair of the Nuclear Engineering Department (Prof K. van Bibber). All students at UCB-NE, graduate and undergraduate, are assigned a faculty adviser who meets with them every semester to discuss their degree progress and monitor their academic work. In addition, the NE Department has a head Graduate Student Adviser (Prof Hosemann), who has an overall responsibility to monitor quality of the graduate admission process and student progress during their graduate studies. Each graduate student is required to join one of the research groups in the NE Department and attend weekly research group seminars and weekly departmental colloquia. The selection committee members will be the assigned faculty advisers for the fellowship recipients, in addition to their research advisor, and will monitor their progress. The students will be required to maintain 3.3 GPA or higher in their major field and overall, and to maintain a course load of at least 12 credit hours per semester. Support after each year will be contingent upon continued academic progress in Nuclear Engineering.

Evaluation Plan
The committee members will be in charge of evaluating the effectiveness of the project in attracting, preparing and retaining individuals in nuclear careers. The evaluation criteria are:

- Time required until graduation for fellowship recipient compared to Department average
- Number of publications in archival journals and major field conference proceedings
- Length of post-graduation career in nuclear
- Amount of funds received to sustain the fellowship program beyond current funds

The committee members will also track students' post-graduate careers, keeping in touch through the Department's extensive Alumni communication network.

Cost Sharing and Additional Support
In support of the proposed fellowship program, Prof. Hosemann and graduate students' advisors will use $101,018 of discretionary funds to share the cost of supporting graduate student's cost, providing the funds necessary in excess of the individual allocation permitted by NRC. *Table 1* contains the predicted tuition and fees schedule. Preference will be given to project with limited seed funds that show high potential to attract more funds in the future. This way we expect to create a sustainable program that will extend far beyond the NRC support.
The award will be used exclusively to support students. Resources to administer the award will be provided by the PI and UCB-NE.

Table 1: Cost schedule expected over next 4 academic years (AY) for 2 graduate students

Category	AY 16-17	AY 17-18	AY 18-19	AY 19-20
Stipend, Tuition, Fees, and Benefits	$75,683	$76,131	$76,602	$77,071
Indirect Cost	$24,314	$23,858	$23,398	$22,926
Total	$99,996	$99,989	$100,000	$99,998
Total Cost share (Direct + Indirect)	$14,468	$21,327	$28,667	$36,555

State and regional strategic plan
This fellowship program will not formally be part of a State or regional strategic plan, but it will strive to leverage our existing recruitment infrastructure and the Nuclear Science and Security Consortium's (NSSC) relationship with Minority Serving Institutions to enhance opportunities for women and minorities who are underrepresented in STEM as well as first generation students. This leveraging is somewhat unique to Berkeley and has strong potential to grow into a stable pipeline for diverse nuclear engineering talent. The NSSC was established at UCB in 2011 upon receiving a $25 million award from the National Nuclear Security Administration (NNSA) with the charge to lead a multi-institution consortium that supports the nation's nuclear non-proliferation mission through the training and education of experts in the nuclear security field. UCB is the coordinating partner, but major efforts also take place at Michigan State University, Washington University in St. Louis, the University of Nevada-Las Vegas, and the Davis, Irvine, and San Diego UC campuses as well as four DOE National Laboratories. A wider network includes five Historically Black Colleges and Universities and Hispanic-Serving Institutions. The close collaboration of NSSC with minority serving institutions will be instrumental to recruit minority students into the proposed fellowship program.

Concluding Remarks
The Nuclear Engineering Department at the University of California, Berkeley proposes a graduate fellowship program in Nuclear Engineering named ***Training the Next Generation of Nuclear Engineers*** in support of outstanding graduate students

interested in nuclear science and engineering and a career in the nuclear power industry. Under this program two Ph.D. students will receive a fellowship to cover tuition and fees and stipend for 3 years for each student and two M.S. students will receive a fellowship to cover tuition and fees and stipend for 1 year for each student. In order to achieve full cost coverage, cost-sharing will provide the funds necessary in excess of the individual limit award set by this funding opportunity. This program will utilize the existing opportunities and systems; therefore, we are confident that we can establish an effective system for recruitment, selection, monitoring/mentoring, and feedback.

Summary of Results from Past Nuclear Regulatory Commission Funding

UCB-NE received a Nuclear Regulatory Commission graduate fellowship award in Fall 2014 and Fall 2015. A selection committee was formed. The committee established selection criteria, released a fellowship opportunity call, and selected the top three applicants. Fellowships were awarded starting from Spring 2015 to four first-year graduate students.

Milos Atz was funded for one semester on this fellowship and is conducting fuel cycle research with Professor Ahn. He was subsequently awarded a National Science Foundation fellowship which made the NRC fellowship available to another student and strongly leverages the NRC fellowship. Mr. Atz is performing extremely well and would like to work at a national laboratory upon graduation. Eric Harvey was funded for one semester on this fellowship and choose to transfer to our Master of Engineering program due to his immediate interest in working in the nuclear industry. Mr. Harvey will work in the nuclear industrial sector upon graduation. Andrew Voyles a high perfomring student, has been funded for one year and is performing innovative research in the area of nuclear physics applied to waste processing; he intends to work at a national laboratory. Josh Rehak successfully completed his first semester on the fellowship. Mr. Rehak is exceeding expectations and is working with INL on a MOOSE application. Alejandra Jolodosky is a fifth year graduate student that recently advanced to candidacy. She is working on the development of novel ternary alloys for inertial confinement fusion blankets and the neutronics optimization of such systems. Joey Kable is a first year graduate student and he is funded in spring 2016 through this program. He currently works on SiC/SiC composite material as LWR cladding alternative. His initial results are submitted to the ICAPP conference and will be published in the resulting ANS publication. His intentions are to continue working in the area of nuclear power and nuclear materials.

Attachment C – Standard Terms and Conditions

The Nuclear Regulatory Commission's
Standard Terms and Conditions for U.S. Nongovernmental Recipients

Preface

This award is based on the application submitted to, and as approved by, the Nuclear Regulatory Commission (NRC) under the authorization 42 U.S.C. § 2051(b), pursuant to section 31b and 141b of the Atomic Energy Act of 1954, as amended, and is subject to the terms and conditions incorporated either directly or by reference in the grant or cooperative agreement. The following also apply:

- Restrictions on the expenditure of Federal funds in appropriation acts, to the extent those restrictions are pertinent to the award.

- Code of Federal Regulations/Regulatory Requirements – 2 CFR Part 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards.

Any inconsistency or conflict in terms and conditions specified in the award will be resolved according to the following order of precedence: public laws, regulations, applicable notices published in the Federal Register, Executive Orders (E.O.), Office of Management and Budget (OMB) Circulars, the NRC's Mandatory Standard Provisions, special award conditions, and standard award conditions.

Certifications and Representations: These terms incorporate the certifications and representations required by statute, executive order, or regulation that were submitted with the SF424B application through GRANTS.GOV.

I. Mandatory General Requirements
The order of these requirements does not make one requirement more important than any other requirement.

1. Applicability of 2 CFR Part 200
All provisions of 2 CFR Part 200 and all Standard Provisions attached to this grant/cooperative agreement are applicable to the Recipient and to sub-recipients which meet the definition of "Recipient" in 2 Part §200.86, unless a section specifically excludes a sub-recipient from coverage. The Recipient and any sub-recipients must, in addition to the assurances made as part of the application, comply and require each of its sub-awardees employed in the completion of the project to comply with Subpart D of 2 CFR Part 200 and include this term in lower-tier (sub-award) covered transactions.

Recipients must comply with monitoring procedures and audit requirements in accordance with 2 CFR Part 200, Subpart F—AUDIT REQUIREMENTS.

2. Award Package
The Recipient is obligated to conduct project oversight as may be appropriate, to manage the funds with prudence, and to comply with the provisions outlined in 2 CFR Part 200. Within this framework, the Principal Investigator (PI) named on the award face page, is responsible for the scientific or technical direction of the project and for preparation of the project performance reports. This award is funded on a cost-reimbursement basis, not to exceed the amount awarded as indicated on the face page, and is subject to a refund of unexpended grant funds to the NRC.
The non-Federal entity alone must be responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements related to its grant award. These issues include, but are not limited to, source evaluation, protests, disputes, and claims. These standards do not relieve the non-Federal entity of any financial or fiduciary responsibilities or obligations arising under its grant, including sub-contracts and sub-awards, or any other contractual or financial obligation. The Federal awarding agency will not substitute its judgment for that of the non-Federal entity unless the matter is primarily a Federal concern. Violations of law will be referred to the local, State, or Federal authority having proper jurisdiction. See 2 CFR § 200.318(k), General Procurement Standards.

Subawards

Appendix II to Part 200 Contract Provisions for Non-Federal Entity Contracts Under Federal Awards

Sub-recipients, sub-awardees, and contractors have no relationship with NRC under the terms of this grant/cooperative agreement. All required NRC approvals must be directed through the Recipient to NRC. See 2 CFR § 200.318.

Nondiscrimination
This provision is applicable when work under the grant/cooperative agreement is performed in the U.S. or when employees are recruited in the U.S.

The Recipient agrees to comply with the non-discrimination requirements below:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. §§ 2000d et seq.), which prohibits discrimination on the grounds of race, color, or national origin in any program or activity receiving federal financial assistance.
- Title IX of the Education Amendments of 1972 (20 U.S.C. §§ 1681 et seq.), which prohibits discrimination on the basis of sex in any education program or activity receiving federal financial assistance.
- Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of disability in any program or activity receiving federal financial assistance.
- The Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101 et seq.), which prohibits discrimination on the basis of age in any program receiving federal financial assistance.
- The Americans with Disabilities Act of 1990 (42 U.S.C. §§ 12101 et seq.), which prohibits recipients from discriminating on the basis of disability in employment (Title I); State and local government services (Title II); and places of public accommodation and commercial facilities (Title III).
- Parts II and III of E.O. 11246, as amended by E.O.11375, 11478, 12086, 12107, 13279, 13665, and 13672, which prohibits federal contractors and federally assisted construction contractors and subcontractors, who do over $10,000 in Government business in one year, from discriminating in employment decisions on the basis of race, color, religion, sex, or national origin and requires that government contractors take affirmative action to ensure that equal opportunity is provided in all aspects of their employment.
- E.O.13166, "Improving Access to Services for Persons with Limited English Proficiency," which clarifies that national origin discrimination under Title VI includes discrimination on the basis of limited English proficiency (LEP) and requires that the recipient take reasonable steps to ensure that LEP persons have meaningful access to programs and activities.
- Any other applicable non-discrimination law(s).

Generally, Title VII of the Civil Rights Act of 1964, 42 U.S.C. § 2000e et seq, provides that it shall be an unlawful employment practice for an employer to discharge any individual or otherwise to discriminate against an individual with respect to compensation, terms, conditions, or privileges of employment because of such individual's race, color, religion, sex, or national origin. However, Title VII, 42 U.S.C. § 2000e-1(a), expressly exempts from the prohibition against discrimination on the basis of religion, a religious corporation, association, educational institution, or society with respect to the employment of individuals of a particular religion to perform work

connected with the carrying on by such corporation, association, educational institution, or society of its activities.

Modifications/Prior Approval
NRC's prior written approval may be required before a Recipient makes certain budget modifications or undertakes particular activities. If NRC approval is required for changes in the grant or cooperative agreement, it must be requested and obtained from the NRC Grants Officer in advance of the change or obligation of funds. All requests for NRC prior approval, including requests for extensions to the period of performance, must be made, in writing (which includes submission by e-mail), to the designated Grants Officer at least 30 days before the proposed change. The request must be signed by the authorized organizational official. Failure to obtain prior approval, when required, from the NRC Grants Officer, may result in the disallowance of costs, or other enforcement action within NRC's authority.

Lobbying Restrictions
The Recipient will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§ 1501-1508 and 7324-7328) which limits the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

The Recipient will comply with provisions of 31 U.S.C § 1352. This provision generally prohibits the use of Federal funds for lobbying in the Executive or Legislative Branches of the Federal Government in connection with the award, and requires disclosure of the use of non-Federal funds for lobbying.

The Recipient shall submit a completed "Certification Regarding Lobbying" form, regardless of dollar value.

If applicable, the Recipient receiving in excess of $100,000.00 in Federal funding shall submit a completed Standard Form (SF-LLL), "Disclosure of Lobbying Activities" for any persons engaged in lobbying activities, as discussed at 31 U.S. Code § 1352 – Limitation on use of appropriated funds to influence certain Federal contracting and financial transactions. The form concerns the use of non-Federal funds for lobbying within 30 days following the end of the calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed. If the Recipient must submit the SF-LLL, including those received from sub-recipients, contractors, and subcontractors, to the Grants Officer.

Debarment And Suspension – (See 2 CFR Part 180; 2 CFR § 200.205; 2 CFR § 200.113; and 2 CFR Part 200, Appendix II.)

The Recipient agrees to notify the Grants Officer immediately upon learning that it or any of its principals:

(1) Are presently excluded or disqualified from covered transactions by any Federal department or agency;

(2) Have been convicted within the preceding three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction;

violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, making false claims, or obstruction of justice; commission of any other offense indicating a lack of business integrity or business honesty that seriously and directly affects the recipient's present responsibility;

(3) Are presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b); or

(4) Have had one or more public transactions (Federal, State, or local) terminated for cause or default within the preceding three years.

(5) The Recipient agrees that, unless authorized by the Grants Officer, it will not knowingly enter into any subaward or contracts under this grant/cooperative agreement with a person or entity that is not included on the System for Award Management (SAM) (https://www.sam.gov).

The Recipient further agrees to include the following provision in any subaward or contracts entered into under this award:

Debarment, Suspension, Ineligibility, and Voluntary Exclusion

The Recipient certifies that neither it nor its principals is presently excluded or disqualified from participation in this transaction by any Federal department or agency. The policies and procedures applicable to debarment, suspension, and ineligibility under NRC-financed transactions are set forth 2 CFR Part 180 and 2 CFR Part 200.

Drug-Free Workplace
The Recipient must be in compliance with The Federal Drug Free Workplace Act of 1988. The policies and procedures applicable to violations of these requirements are set forth in 41 U.S.C. §§ 8101-8106.

Implementation of E.O.13224 – Executive Order on Terrorist Financing
The Recipient is reminded that U.S. Executive Orders and U.S. law prohibits transactions with, and the provision of resources and support to, individuals and organizations associated with terrorism. It is the legal responsibility of the Recipient to ensure compliance with these Executive Orders and laws. This provision must be included in all contracts/sub-awards issued under this grant/cooperative agreement.

The Recipient must comply with E.O. 13224, Blocking Property and Prohibiting Transactions with Persons who Commit, Threaten to Commit, or Support Terrorism. Information about this Executive Order can be found at:
Implementation of Executive Order 13224 Blocking Property and Prohibiting Transactions With Persons Who Commit, Threaten To Commit, or Support Terrorism amended by E.O. 13268, 13284, and 13372.

Procurement Standards - 2 CFR §§ 200.318-200.326
Sections 200.318 - 200.326 set forth standards for use by Recipients in establishing procedures for the procurement of supplies and other expendable property, equipment, real property and other services with Federal funds. These standards are furnished to ensure that such materials and services are obtained in an effective manner and in

compliance with the provisions of applicable Federal statutes and executive orders. No additional procurement standards or requirements will be imposed by the Federal awarding agencies upon Recipients, unless specifically required by Federal statute, executive order, or approved by OMB.

Travel and Transportation
Travel must be in accordance with the Recipient's Travel Regulations or the U.S. Government Travel Policy and Regulations at: http://www.gsa.gov/portal/category/21222 and the per diem rates set forth at: http://www.gsa.gov/portal/content/104877, absent Recipient's travel regulations. Travel and transportation costs for the grant must be consistent with provisions as established in 2 CFR § 200.473-474.

All other travel, domestic or international, must not increase the total estimated award amount for the grant.

Domestic Travel:
Domestic travel is an appropriate charge to this award and prior authorization for specific trips are not required, if the trip is identified in the Recipient's approved program description and approved budget. Domestic trips not stated in the approved budget require the written prior approval of the Grants Officer, and must not increase the total estimated award amount for the grant.

All common carrier travel reimbursable hereunder shall be via the least expensive class rates consistent with achieving the objective of the travel and in accordance with the Recipient's policies and practices. Travel by first-class travel is not authorized unless prior approval is obtained, in writing, from the Grants Officer.

International Travel:
International travel requires **PRIOR** written approval by the Project Officer and the Grants Officer, even if the international travel is stated in the approved program description and the approved budget.

The Recipient will comply with the provisions of the Fly America Act (49 U.S.C 40118), as implemented at 41 CFR §§ 301-10.131 through 301-10.143.

Property Standards
Property standards of this award shall follow provisions as established 2 CFR §§ 200.310-200.316.

Intangible Property
Intangible and intellectual property of this award shall generally follow provisions established in 2 CFR § 200.315.

Inventions Report - The Bayh-Dole Act (P.L. 96-517) affords Recipients the right to elect and retain title to inventions they develop with funding under an NRC grant award ("subject inventions"). In accepting an award, the Recipient agrees to comply with applicable NRC policies, the Bayh-Dole Act, and its Government-wide implementing regulations found at Title 37, Code of Federal Regulations (CFR) Part 401. A significant part of the regulations require that the Recipient report all subject inventions to the awarding agency (NRC) as well as include an acknowledgement of federal support in any patents.

Patent Notification Procedures - If the NRC or its Recipients, without making a patent search, knows (or has demonstrable reasonable grounds to know) that technology covered by a valid United States patent has been or will be used without a license from the owner, E.O.12889 requires NRC to notify the owner. If the Recipient uses or has used patented technology under this award without license or permission from the owner, the Recipient must notify the Grants Officer. This notice does not imply that the Government authorizes and consents to any copyright or patent infringement occurring under the financial assistance.

Data, Databases, and Software - The rights to any work produced or purchased under a NRC federal financial assistance award, such as data, databases or software are determined by Subpart D of 2 CFR Part 200. The Recipient owns any work produced or purchased under a NRC federal financial assistance award subject to NRC's right to obtain, reproduce, publish or otherwise use the work or authorize others to receive, reproduce, publish or otherwise use the data for Government purposes.

Copyright - The Recipient may copyright any work produced under a NRC federal financial assistance award subject to NRC's royalty-free nonexclusive and irrevocable right to reproduce, publish or otherwise use the work or authorize others to do so for Government purposes. Works jointly authored by NRC and Recipient employees may be copyrighted, but only the part authored by the Recipient is protected because, under 17 U.S.C. § 105, works produced by Government employees are not copyrightable in the United States. On occasion, NRC may ask the Recipient to transfer to NRC its copyright in a particular work when NRC is undertaking the primary dissemination of the work. Ownership of copyright by the Government through assignment is permitted under 17 U.S.C. § 105.

Record Retention and Access

Recipient shall follow established provisions in 2 CFR §§ 200.333-337.

Conflict Of Interest

Conflict of Interest standards for this award will follow the Organizational Conflict of Interest (OCOI) requirements set forth in Section 170A of the Atomic Energy Act of 1954, as amended, and provisions set forth at 2 CFR § 200.112, Conflict of Interest.

Dispute Review Procedures

a. Any request for review of a notice of termination or other adverse decision should be addressed to the Grants Officer. It must be postmarked or transmitted electronically no later than 30 days after the postmarked date of such termination or adverse decision from the Grants Officer.

b. The request for review must contain a full statement of the Recipient's position and the pertinent facts and reasons in support of such position.

c. The Grants Officer will promptly acknowledge receipt of the request for review and shall forward it to the Director, Office of Acquisition Management Division, unless otherwise delegated, who shall appoint an intra-agency Appeal Board to review a recipient appeal of an agency action, if required, which will consist of the program office director, the Deputy Director of Office of Administration, and the Office of General Counsel.

d. Pending resolution of the request for review, the NRC may withhold or defer payments under the award during the review proceedings.

e. The review committee will request the Grants Officer who issued the notice of termination or adverse action to provide copies of all relevant background materials and documents. The committee may, at its discretion, invite representatives of the Recipient and the NRC program office to discuss pertinent issues and to submit such additional information as it deems appropriate. The chairman of the review committee will insure that all review activities or proceedings are adequately documented.

f. Based on its review, the committee will prepare its recommendation to the Director, Office of Administration, who will advise the parties concerned of his/her decision.

Remedies for Noncompliance
Termination of this award will follow provisions as established and described above in "Dispute Review Process" in 2 CFR §§ 200.338-342.

Performance and Financial Monitoring and Reporting - 2 CFR §§ 200.327-329

Recipient Financial Management systems must comply with the provisions in 2 CFR § 200.302.

- Payment – 2 CFR § 200.305
- Cost Share or Matching – 2 CFR § 200.306
  - Recipients are to be careful with providing excessive cost share or match since at the end of the grant, if the identified match has not been provided, then a portion of the federal share may be required to be returned to the Government.
- Program Income – 2 CFR § 200.307
  - Earned program income, if any, will be added to funds committed to the project by the NRC and Recipient and used to further eligible project or program objectives or be deducted from the total project cost for the grant, as directed by the Grants Officer or indicated in the terms and conditions of the award.

- Revision of Budget and Program Plans – 2 CFR § 200.308
  - The Recipient is required to report deviations from the approved budget and program descriptions in accordance with – 2 CFR § 200.308(b) and request prior written approval from the Project Officer and the Grants Officer.
  - The Recipient is not authorized to re-budget between direct costs and indirect costs without written prior approval of the Grants Officer.
  - The Recipient is authorized to transfer funds among direct cost categories up to a cumulative 10 percent of the total approved budget. The Recipient is not allowed to transfer funds if the transfer would cause any Federal appropriation to be used for purposes other than those consistent with the original intent of the appropriation.
  - Allowable Costs – 2 CFR §§ 200.403

- See section 2 CFR §§ 200.330-332 for Subrecipient Monitoring and Management.

FEDERAL FINANCIAL REPORTS

Federal Financial Reports (SF-425) are semi-annually, for the periods ending March 31 and September 30. Reports are due within 30 calendar days following the end of the reporting period and must be emailed to the Project Officer at the email addressed indicated in the Notice of Award, and to the Grants Officer at: Grants_FFR.Resource@nrc.gov. *(NOTE: There is an underscore between Grants and FFR in the email address.)* The SF-425 form and instructions are available at the following URL: http://www.whitehouse.gov/omb/grants_forms/.

PERFORMANCE PROGRESS REPORTS

The performance (technical) reports indicated below are subject to 2 CFR §200.328.

Scholarship and Fellowship Programs
Performance Progress reports must be submitted annually, for the period ending September 30, or any portion thereof, regardless of the award date. Reports are due within 30 days following the end of each reporting period and must be emailed to the Project Officer at the email addressed indicated in the Notice of Award, and to the Grants Officer at: Grants_PPR.Resource@nrc.gov. *(NOTE: There is an underscore between Grants and PPR in the email address.)*

Final Reports - The Recipient is required to submit final reports, both Financial (SF-425) and Performance (SF-PPR, SF-PPR-B, SF-PPR-E) within 90 days of the grant expiration. In addition to these reports, a final SF-428, Tangible property report, is also required, if applicable. The final PPR (for Scholarship, Fellowship, and Trade School and Community College Scholarship awards) must include the names of all students with up to date contact information (mailing address, telephone/cell phone, email address). The reports must be emailed to the Project Officer at the email addressed indicated in the Notice of Award, and to the Grants Officer at: Grants_FFR.Resource@nrc.gov and Grants_PPR.Resource@nrc.gov. *(NOTE: There is an underscore between Grants and FFR and Grants and PPR in the email addresses.)*

Period of Performance – 2 CFR § 200.309
The recipient may charge to the Federal award only allowable costs incurred during the period of performance and any costs incurred before the NRC or pass-through entity made the Federal award that was authorized by the NRC or pass through entity.

Unless otherwise authorized in 2 CFR Part 200 or by special award condition, any extension of the award period can only be authorized by the Grants Officer in writing. Assurances of funding from other than the Grants Officer shall not constitute authority to obligate funds for programmatic activities beyond the expiration date.

The NRC Grant Officer may authorize a no cost extension of the period of performance. The recipient must submit a no cost extension request no less than 30 days prior to the award end date. Any request for a no cost extension after the grant has expired will not be approved. However, the NRC has no obligation to provide any additional prospective or incremental funding. Any modification of the award to increase funding and/or to extend the period of performance is at the sole discretion of the NRC.

Automated Standard Application For Payments (ASAP) Procedures
Unless otherwise stated, Recipient payments are made using the Department of Treasury's Automated Standard Application for Payment (ASAP) system, ASAP.gov, through preauthorized electronic funds transfers. To receive payments, Recipients are required to enroll with the Department of Treasury, Financial Management Service, and Regional Financial Centers, which allows them to use the on-line method of withdrawing funds from their ASAP established accounts. The following information is required to make ASAP withdrawals: (1) ASAP account number – the award number found on the cover sheet of the award; (2) Agency Location Code (ALC) – 31000001; and Region Code. Recipients enrolled in the ASAP system do not need to submit a "Request for Advance or Reimbursement" (SF-270).

II. Audit Requirements

Audits
Organization-wide or program-specific audits are performed in accordance with the Single Audit Act of 1996, as amended, and as implemented by 2 CFR Part 200, Subpart F—AUDIT REQUIREMENTS. Recipients are subject to the provisions of this subpart if they expend $750,000 or more in a year in Federal awards. See 2 CFR 2 CFR § 200.501.

The Form SF-SAC and the Single Audit Reporting packages for fiscal periods ending on or after January 1, 2008 are submitted online, as follows:

1. Create the recipient's online report ID at: http://harvester.census.gov/fac/collect/ddeindex.html;
2. Complete the Form SF-SAC;
3. Upload the Single Audit;
4. Certify the Submission; and
5. Click "Submit."

Organizations expending less than $750,000 a year are not required to have an annual audit for that year but must make their grant-related records available to NRC or other designated officials for review or audit.

III. Programmatic Requirements
The recipient is responsible for providing documentation to the NRC that tracks each student's progress in achievement of the academic program for which federal funds were provided. This includes: (1) ensuring the service agreement is signed by the student prior to providing support; (2) providing the NRC with student contact information upon student entry into the program, upon completion or withdrawal from the program, and upon request by the NRC; and (3) monitoring the student's fulfillment of the service agreement for the duration of the award. The NRC shall be notified immediately if a student is not fulfilling the academic program or the service agreement.

Grant Performance Metrics
The Office of Management and Budget requires all Federal Agencies providing funding for educational scholarships and fellowships as well as other educational related funding to report on specific metrics. These metrics are part of the Academic Competitiveness Council's (ACC) 2007 report and specifically relates to Science, Technology, Engineering, and Mathematics (STEM) curricula.

As part of the OMB requirements indicated above (for metric reporting), the recipient shall address the following questions and submit responses with the required progress reports:

Fellowship Metrics:

1. How many graduate students have been sponsored by NRC funding?
    a. Response is the number of students, for this reporting period and cumulative to the grant.

2. How many students, supported by NRC funding, have received M.S. or equivalent degrees?
    a. Response is the number of students, for this reporting period and cumulative to the grant.

3. How many students, supported by NRC funding, have received Ph.D. or equivalent degrees?
    a. Response is the number of students, for this reporting period and cumulative to the grant.

4. How many students, supported by NRC funding, have accepted a job and are employed in the nuclear industry?
    a. Response is the number of students, for this reporting period and cumulative to the grant.

5. How many items have students produced, for example, Professional Journal articles, publications, patents, or conference reports?
    a. Response is the type and number of items, for this reporting period and cumulative to the grant.

As part of the PPR, include the following information for each student support under this award:

1. Student Name
2. Years of Support
3. Cumulative Support in Dollars
4. Estimated Graduation Date
5. Status
6. Up to date student contact information (mailing address, telephone/cell phone, email address) for students no longer participating in the program, i.e. transferred programs, graduated, withdrew, etc.
7. Up to date student contract information, for all students at time of grant expiration, i.e. Final PPR.

Examples of status could be:
"Employed in Nuclear Industry", if so, where;
"Looking for employment", if so, how long;
"Deferred due to continuing education", if so, what degree;
"Employed by Non-Nuclear", if so, where; and
"Dropped out of program"

<u>Unsatisfactory Performance</u>

Failure to perform the work in accordance with the terms of the award and maintain at least a satisfactory performance rating may result in designation of the Recipient as high risk and the assignment of special award conditions. Further action may be required as specified in the standard term and condition entitled "Remedies for Noncompliance."

Failure to comply with the award provisions may result in a negative impact on future NRC funding. In addition, the Grants Officer may withhold payments; change the method of payment from advance to reimbursement; impose special award conditions; suspend or terminate the grant.

Other Federal Awards With Similar Programmatic Activities
The Recipient will immediately notify the Project Officer and the Grants Officer in writing if after award, other financial assistance is received to support or fund any portion of the program description stated in the NRC award. NRC will not pay for costs that are funded by other sources.

Prohibition Against Assignment By The Recipient
The Recipient will not transfer, pledge, mortgage, or otherwise assign the award, or any interest to the award, or any claim arising under the award, to any party, banks, trust companies, or other financing or financial institutions without the written approval of the Grants Officer.

Site Visits
The NRC, through authorized representatives, has the right to make site visits to review project accomplishments and management control systems and to provide technical assistance as required. If any site visit is made by the NRC on the premises of the Recipient or contractor under an award, the Recipient shall provide and shall require his/her contractors to provide reasonable access to all facilities and provide necessary assistance for the safety and convenience of the Government representative in the performance of his/her official duties.

IV. Additional Requirements

Criminal and Prohibited Activities
The Program Fraud Civil Remedies Act (31 U.S.C. §§ 3801-3812), provides for the imposition of civil penalties against persons who make false, fictitious, or fraudulent claims to the Federal government for money (including money representing grant/cooperative agreements, loans, or other benefits).

False statements (18 U.S.C. § 287), provides that whoever makes or presents any false, fictitious, or fraudulent statements, representations, or claims against the United States shall be subject to imprisonment of not more than five years and shall be subject to a fine in the amount provided by 18 USC §287.

False Claims Act (31 U.S.C. § 3729 et seq.), provides that suits under this Act can be brought by the government, or a person on behalf of the government, for false claims under federal assistance programs.

Copeland "Anti-Kickback" Act (18 U.S.C. § 874), prohibits a person or organization engaged in a federally supported project from enticing an employee working on the project from giving up a part of his compensation under an employment contract.

American-Made Equipment and Products
Recipients are encouraged to purchase American-made equipment and products with funding provided under this award.

Increasing Seat Belt Use in the United States
E.O. 13043, amended by E.O. 13652, requires Recipients to encourage employees and contractors to enforce on-the-job seat belt policies and programs when operating company-owned, rented or personally-owned vehicle.

Federal Leadership of Reducing Text Messaging While Driving
E.O. 13513 requires Recipients to encourage employees, sub-awardees, and contractors to adopt and enforce policies that ban text messaging while driving company-owned, rented vehicles or privately owned vehicles when on official Government business or when performing any work for or on behalf of the Federal Government.

Federal Employee Expenses
Federal agencies are barred from accepting funds from a Recipient to pay transportation, travel, or other expenses for any Federal employee unless specifically approved in the terms of the award. Use of award funds (Federal or non-Federal) or the Recipient's provision of in-kind goods or services, for the purposes of transportation, travel, or any other expenses for any Federal employee may raise appropriation augmentation issues. In addition, NRC policy prohibits the acceptance of gifts, including travel payments for Federal employees, from Recipients or applicants regardless of the source.

Minority Serving Institutions (MSIs) Initiative
Pursuant to E.O.s 13230 and 13270, amended by E.O. 13316 and 13385, 13532, 13592, 13555, 13515, and 13621, NRC is strongly committed to broadening the participation of MSIs in its financial assistance program. NRC's goals include achieving full participation of MSIs in order to advance the development of human potential, strengthen the Nation's capacity to provide high-quality education, and increase opportunities for MSIs to participate in and benefit from Federal financial assistance programs. NRC encourages all applicants and Recipients to include meaningful participations of MSIs. Institutions eligible to be considered MSIs are listed on the Department of Education website: http://www.ed.gov/about/offices/list/ocr/edlite-minorityinst.html

Research Misconduct
Scientific or research misconduct refers to the fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results. It does not include honest errors or differences of opinions. The Recipient organization has the primary responsibility to investigate allegations and provide reports to the Federal Government. Funds expended on an activity that is determined to be invalid or unreliable because of scientific misconduct may result in a disallowance of costs for which the institution may be liable for repayment to the awarding agency. The Office of Science and Technology Policy at the White House published in the Federal Register on December 6, 2000, a final policy that addressed research misconduct. The policy was developed by the National Science and Technology Council (65 FR 76260). The NRC requires that any allegation be submitted to the Grants Officer, who will also notify the OIG of such allegation. Generally, the Recipient organization shall investigate the allegation and submit its findings to the Grants Officer. The NRC may accept the

Recipient's findings or proceed with its own investigation. The Grants Officer shall inform the Recipient of the NRC's final determination.

Publications, Videos, and Acknowledgment of Sponsorship

Publication of the results or findings of a research project in appropriate professional journals and production of video or other media is encouraged as an important method of recording and reporting scientific information. It is also a constructive means to expand access to federally funded research. The Recipient is required to submit a copy to the NRC and when releasing information related to a funded project include a statement that the project or effort undertaken was or is sponsored by the NRC. The Recipient is also responsible for assuring that every publication of material (including Internet sites and videos) based on or developed under an award, except scientific articles or papers appearing in scientific, technical or professional journals, contains the following disclaimer:

> "This **[report/video]** was prepared by **[Recipient name]** under award **[number]** from **[name of operating unit]**, Nuclear Regulatory Commission. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the view of the **[name of operating unit]** or the US Nuclear Regulatory Commission."

Trafficking In Victims Protection Act Of 2000 (as amended by the Trafficking Victims Protection Reauthorization Act of 2003)

Section 106(g) of the Trafficking In Victims Protection Act Of 2000 (as amended as amended, directs on a government-wide basis that:

> "...any grant, contract, or cooperative agreement provided or entered into by a Federal department or agency under which funds are to be provided to a private entity, in whole or in part, shall include a condition that authorizes the department or agency to terminate the grant, contract, or cooperative agreement, without penalty, if the recipient or any subrecipient, or the contractor or any subcontractor (i) engages in severe forms of trafficking in persons or has procured a commercial sex act during the period of time that the grant, contract, or cooperative agreement is in effect, or (ii) uses forced labor in the performance of the grant, contract, or cooperative agreement." (See 22 U.S.C. §7104(g).)

EXECUTIVE COMPENSATION REPORTING

2 CFR § 170.220 directs agencies to include the following text to each grant award to a non-federal entity if the total funding is $25,000 or more in Federal funding.

Reporting Subawards and Executive Compensation.

a. *Reporting of first-tier subawards.*

1. *Applicability.* Unless you are exempt as provided in paragraph d. of this award term, you must report each action that obligates $25,000.00 or more in Federal funds that does not include Recovery funds (as defined in section 1512(a)(2) of the American Recovery and Reinvestment Act of 2009, Pub. L. 111–5) for a subaward to an entity (see definitions in paragraph e. of this award term).

2. *Where and when to report:*

i. You must report each obligating action described in paragraph a.1. of this award term to *http://www.fsrs.gov*.

ii. For subaward information, report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on November 7, 2010, the obligation must be reported by no later than December 31, 2010.)

3. *What to report.* You must report the information about each obligating action that the submission instructions posted at *http://www.fsrs.gov* specify.

b. *Reporting Total Compensation of Recipient Executives.*

1. *Applicability and what to report.* You must report total compensation for each of your five most highly compensated executives for the preceding completed fiscal year, if—

i. the total Federal funding authorized to date under this award is $25,000.00 or more;

ii. in the preceding fiscal year, you received—

(A) 80 percent or more of your annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR § 170.320 (and subawards); and

(B) $25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR § 170.320 (and subawards); and

iii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at *http://www.sec.gov/answers/execomp.htm*.)

2. *Where and when to report.* You must report executive total compensation described in paragraph b.1. of this award term:

i. As part of your registration profile at *http://www.sam.gov* .

ii. By the end of the month following the month in which this award is made, and annually thereafter.

c. *Reporting of Total Compensation of Subrecipient Executives.*

1. *Applicability and what to report.* Unless you are exempt as provided in paragraph d. of this award term, for each first-tier subrecipient under this award, you shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if—

i. in the subrecipient's preceding fiscal year, the subrecipient received—

(A) 80 percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR § 170.320 (and subawards); and

(B) $25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and subawards); and

ii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at *http://www.sec.gov/answers/execomp.htm*.)

2. *Where and when to report.* You must report subrecipient executive total compensation described in paragraph c.1. of this award term:

i. To the recipient.

ii. By the end of the month following the month during which you make the subaward. For example, if a subaward is obligated on any date during the month of October of a given year (*i.e.,* between October 1 and 31), you must report any required compensation information of the subrecipient by November 30 of that year.

d. *Exemptions*

If, in the previous tax year, you had gross income, from all sources, under $300,000.00, you are exempt from the requirements to report:

i. Subawards,

and

ii. The total compensation of the five most highly compensated executives of any subrecipient.

e. *Definitions.* For purposes of this award term:

1. *Entity* means all of the following, as defined in 2 CFR Part 25:

i. A Governmental organization, which is a State, local government, or Indian tribe;

ii. A foreign public entity;

iii. A domestic or foreign nonprofit organization;

iv. A domestic or foreign for-profit organization;

v. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

2. *Executive* means officers, managing partners, or any other employees in management positions.

3. *Subaward:*

i. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.

ii. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see Sec. __ .210 of the attachment to OMB Circular A–133, "Audits of States, Local Governments, and Non-Profit Organizations)

iii. A subaward may be provided through any legal agreement, including an agreement that you or a subrecipient considers a contract.

4. *Subrecipient* means an entity that:

i. Receives a subaward from you (the recipient) under this award; and

ii. Is accountable to you for the use of the Federal funds provided by the subaward.

5. *Total compensation* means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR § 229.402(c)(2)):

i. *Salary and bonus.*

ii. *Awards of stock, stock options, and stock appreciation rights.* Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.

iii. *Earnings for services under non-equity incentive plans.* This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.

iv. *Change in pension value.* This is the change in present value of defined benefit and actuarial pension plans.

v. *Above-market earnings on deferred compensation which is not tax-qualified.*

vi. Other compensation, if the aggregate value of all such other compensation (e.g., severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds $10,000.00.