

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

1. GRANT/AGREEMENT NO. NRC-HQ-11-G-38-0061		2. MODIFICATION NO.		3. PERIOD OF PERFORMANCE FROM: 8/4/2011 TO: 8/3/2014		4. AUTHORITY Pursuant to Section 31b and 141b of the Atomic Energy Act of 1954, as amended	
5. TYPE OF AWARD <input checked="" type="checkbox"/> GRANT <input type="checkbox"/> COOPERATIVE AGREEMENT		6. ORGANIZATION TYPE Public State-Controlled Institution of Higher ED DUNS: 041544081 NAICS:611310		7. RECIPIENT NAME, ADDRESS, and EMAIL ADDRESS The Board of Trustees of the University of Illinois 1901 S. First St., Suite A Champaign, IL 61820-7406			
8. PROJECT TITLE: University of Illinois Nuclear Engineering Faculty Development Program							
9. PROJECT WILL BE CONDUCTED PER GOVERNMENT'S/RECIPIENT'S PROPOSAL(S) DATED See Program Description 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 The Board of Trustees of the University of Illinois Attn: James F. Stubbins Division Director, Department of Nuclear Plasma and Radiological Engineering Email: jstubbins@illinois.edu Tel: 217-333-2295			
12. NRC PROGRAM OFFICE (NAME and ADDRESS) NRC Attn: Nancy Hebron-Isreal Office of Human Resources MS: GW5E03 (301) 492-2231 11545 Rockville Pike Rockville, Maryland 20852 Email: Nancy.Hebron-Isreal@nrc.gov		13. ACCOUNTING and APPROPRIATION DATA APPN. NO: 31X0200 B&R NO: 2011-84-51-K-164 JOB CODE: T8460 BOC NO: 4110 OFFICE ID NO: RFPA: HR-11-149 FAIMS 6 R019		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>\$450,000.00</u> PREVIOUS OBLIGATION _____ TOTAL <u>\$450,000.00</u>		16. TOTAL FUNDING AGREEMENT NRC <u>\$450,000.00</u> RECIPIENT <u>\$150,000.00</u> TOTAL <u>\$600,000.00</u> This action provides funds for Fiscal Year in the amount of <u>See Page Two</u>					
17. NRC ISSUING OFFICE (NAME, ADDRESS and EMAIL ADDRESS) U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Mark Lohrmann Email: Mark.Lohrmann@NRC.GOV Mail Stop: TWB-01-B10M Rockville MD 20852							
18. Signature Not Required				19. NRC CONTRACTING OFFICER <div style="text-align: right;"><u>Sheila Bumpass</u> <u>8/4/2011</u> (Signature) (Date) NAME (TYPED) <u>Sheila Bumpass</u> TITLE <u>Contracting Officer</u> TELEPHONE NO. <u>301-492-3484</u></div>			
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

AUG 09 2011

ADM002

ATTACHMENT A - SCHEDULE

A.1 PURPOSE OF GRANT

The purpose of this Grant is to provide support to the "University of Illinois Nuclear Engineering Faculty Development Program" as described in Attachment B entitled "Program Description."

A.2 PERIOD OF GRANT

1. The effective date of this Grant is August 4, 2011. The estimated completion date of this Grant is August 3, 2014.
2. Funds obligated hereunder are available for program expenditures for the estimated period: August 4, 2011 – August 3, 2014.

A. GENERAL

1. Total Estimated NRC Amount: \$450,000
2. Total Obligated Amount: \$450,000
3. Cost-Sharing Amount: \$150,000
4. Activity Title: University of Illinois Nuclear Engineering Faculty Development Program
5. NRC Project Officer: Nancy Hebron-Isreal
6. DUNS No.: 041544081

B. SPECIFIC

- RFPA No.: HR-11-149
FFS: N/A
Job Code: T8460
BOC: 4110
B&R Number: 2011-84-51-K-164
Appropriation #: 31X0200
Amount Obligated: \$450,000

A.3 BUDGET

Revisions to the budget shall be made in accordance with Revision of Grant Budget in accordance with 2 CFR 215.25.

	Year 1	Year 2	Year 3	Total
Direct Cost	\$125,771.00	\$125,771.00	\$125,770.00	
Indirect Cost	<u>\$24,229.00</u>	<u>\$24,229.00</u>	<u>\$24,230.00</u>	
Subtotal	\$150,000.00	\$150,000.00	\$150,000.00	
Yearly Total	\$150,000.00	\$150,000.00	\$150,000.00	\$450,000.00
Cost Share				<u>\$150,000.00</u>
				\$600,000.00

A.4 AMOUNT OF AWARD AND PAYMENT PROCEDURES

1. The total estimated amount of this Award is \$600,000.00 for the three-year period of which NRC will contribute \$450,000.00 and University of Illinois will contribute \$150,000.00. Cost share must conform to the provision in 2 Code of Federal Regulation 215.

2. NRC hereby obligates the amount of \$450,000 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 Contracting 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

Program Summary

This program is designed to attract, develop and successfully promote one current junior faculty member and at least one new junior faculty member in Nuclear Engineering at the University of Illinois at Urbana-Champaign. This will be accomplished by using resources available from the NRC and major matching resources and commitments from the Department of Nuclear, Plasma and Radiological Engineering and other administrative units at the University of Illinois. The support and resources will permit the junior faculty members to each establish a strong foundation in teaching, research and professional service in the nuclear engineering discipline. The financial resources from the NRC will be used for (a) faculty release time and summer salary support, (b) acquisition of critical research and teaching equipment and facilities, and (c) travel and conference attendance. Matching support provided by the Department and the University will be used for (a) graduate students to work with the faculty research and teaching efforts and (b) research facilities and lab remodeling support. In addition, the Department will provide other considerations to support the development of the junior faculty members, including mentoring, performance evaluation, teaching support, and research support. These resources will provide the necessary foundation for the successful development of junior faculty members in nuclear engineering at the University of Illinois.

University of Illinois Nuclear Engineering Faculty Development Program

I. Objectives and Impact

The objective of this program is to provide resources and support to enhance the teaching and research productivity of one current junior faculty member, and to provide similar resources and support for one additional new faculty member. The support will directly influence the ability of these beginning faculty members to develop a successful career in nuclear engineering education.

II. Background

The Department of Nuclear, Plasma and Radiological Engineering (NPRE) at the University of Illinois at Urbana-Champaign (UIUC) has a long history, now more than 50 years, of excellence in education, research and service in the field of Nuclear Engineering. Student enrollment and the vitality of the teaching and research efforts in NPRE have continued to expand. Our undergraduate student enrollment grew by 64 last year and by another 45 this year, to our highest number in the history of the program, 170. Grad student numbers are also at the highest level in recent years at 72. The most important factor in maintaining a high quality nuclear engineering program is the faculty. To maintain the vitality of our faculty, it is important to attract, develop and promote new, junior faculty members.

We are in the process of expanding our faculty. The College of Engineering has made a commitment that the NRPE faculty will expand to fifteen in the next several years. Hiring of new faculty has gained additional impetus due to the recent incentives given by the University to the senior faculty to retire. One of our senior faculty members has retired as of August of 2010, and another one will retire in August 2011. These retirements are contingent upon additional lines being made available to replace these faculty members. Hence, despite budget woes, our department will be hiring at least two new faculty members in the next year. In addition, we hired a new junior faculty member in the recent past. Ads for one position have already appeared and at least two junior candidates have been identified. They will be invited for interview in the Fall 2010 semester. In order to succeed in attracting and supporting the most promising junior faculty members, we need to provide them with the environment and resources to develop into world-class educators, as measured by their impact on the students they teach and develop, and their research and service in the nuclear discipline.

To meet the longer term goals, we have developed a strategic plan which includes enhancing the reactor physics, radiation transport and radiation measurement and health physics areas in this faculty expansion effort. Support from this junior faculty development program is critical for making this transition successful. Support and nurturing of new faculty members are the single most important investments that we can make.

III. Current Activities and Progress

The NPPE Department has recently made a critical hire in the area of radiation detection and measurement, a field central to the nuclear engineering and radiation sciences and applications disciplines. This faculty member is in the process of developing a strong experimental research program and is highly dedicated to teaching in his area of expertise. The support from the NPPE Faculty Development Program will underpin the development of his teaching and research capabilities.

As mentioned above, we have an additional open position in the area of reactor physics and radiation transport. Interviews will take place in the Fall semester of 2010. This will help meet our short-term teaching and research goals in nuclear engineering. According to our prioritized hiring plan, this will be followed by the addition of a faculty member in the thermal-hydraulics area. The NRC program will, in addition to direct support to the faculty member(s), also allow for the acquisition of critical radiation detection and measurement facilities to provide important instructional coverage in the coursework for our growing numbers of nuclear engineering students.

IV. Faculty Selection Process

A committee of 4-5 people, that often also includes a student, is formed by the department head in consultation with the dean of the engineering college. For new faculty members, standard procedure of down selecting 3-4 strongest from the pool of applicants, and then inviting them for on-campus seminar and meetings is followed. Based on input from the departmental faculty and in consultation with the department head, an ordered list is generated, and offers are made.

Recent and future faculty to receive support under this program will be selected based on their dedication to the nuclear engineering field of study: full-time Assistant Professor level faculty members in nuclear engineering. The normal selection and hiring process is very

competitive at Illinois, and new candidates must meet general standards across the highly ranked College of Engineering. This process ensures high standards for background, experience and quality of the hires. This is also important since later promotion expectations are uniform across all engineering departments and made based on College and Campus criteria. Illinois has a policy that every new faculty member who is hired has a possible promotion and tenure spot (we do not over-hire faculty and then down-select).

V. Proposed Faculty Development Program.

Success in attracting and developing the best junior faculty members in NPRE is based primarily on providing the right resources so that the individual can establish a strong teaching and research record. In broad terms, the early measures of success are that the faculty member "shows promise of becoming a world leader in his or her discipline." Resources from this program will provide the necessary resource base to support the individual to meet this measure of success.

In the case of each new hire, we must provide the necessary resources and mentoring so that the new faculty gets off to the best start possible. This also includes choosing the best fit for teaching assignments and teaching loads, and help with identifying appropriate graduate students with whom to work. We do everything we can to insure that they are successful. The specific use of the NRC resources are shown below.

The financial resources provided under the NRC program will be used to directly support the development of the junior faculty member(s). The resources will be used for the following:

- (1) Faculty summer support and release time,
- (2) Acquisition of critical research and teaching equipment and facilities, and
- (3) Conference attendance, travel, and publication expenses

University matching financial support will be used for

- (4) Salary for graduate assistants helping in the development of new courses or research opportunities
- (5) Facilities and remodeling costs for teaching and research lab development

These resources will provide the foundation necessary for the success of two junior faculty members in nuclear engineering.

An overall plan for the places requiring resources and support are shown in Table 1. Also shown is how the NRC funds and the matching support from the Department and Campus will be allocated to the Faculty Development Program.

Area	Major Components	NRC Support Items	NPPE and University Support Items
Teaching	Instruction and Course Development	Faculty Release Time for Course Development	TA Support, Teaching Development Workshops & Appropriate Course Assignments
	Graduate Research Student Development	--	Support for 1 Grad Research Assistant Each Year for Each Faculty Participant
Research	Laboratory and Research Facilities and Fees	Lab Equipment and Use Funds	Appropriate Laboratory Space and Support
	Conferences and Travel	Travel and Registration Funds	--
	Proposal Development, Mentoring and Administrative Support	Faculty Release Time for Proposal Development and Initiation of New Research	NPPE provides mentoring and administrative support for contract financial development and oversight
	Graduate Research Student Development	--	Support for 1 Grad Research Assistant Each Year for Each Faculty Participant (see above)
Service	Conferences	Travel and Registration Fees	Release Time when necessary
	Editorial	Release Time for Reviews, etc.	Release Time where necessary
Mentoring	Guidance in developing successful teaching, research and professional service activities	--	By senior faculty in NPPE: including annual performance reviews, support in development of research plans and projects course development support, student support

VI. Current Example of Faculty Development Plans

As part of our strategic goals, the NPRE is in the process of establishing a strong concentration in the area of radiation measurement and health physics. The department has recently recruited, Dr. Ling-Jian Meng. The NRC funds will provide the much needed resources to ensure that this new faculty member will excel in both research and teaching. The NRC resources will be used to: (a) support critical and fundamental research that will have long lasting

scientific impact, but are more challenging to find support through regular research grants from DOE, NSF and NNSA etc; (b) carry out preliminary studies for promoting novel concepts and ideas in research; and (c) develop new courses in this concentration area that incorporate state-of-art research efforts and their applications in broad areas, such as homeland security, environmental protection and health physics. A detailed plan on utilizing the NRC support is given below. Note that the following development program was designed primarily around the research interests of Dr. Meng who is an assistant professor in the department. Given the background and objective outlined above, the development plan for a second junior faculty member would follow a similar path, but with details subject to future adjustments.

1. Develop a Strong Research Concentration on Radiation Measurement

The potential NRC support will be used to develop a strong research program on radiation detection and measurements, which coincides with Dr. Meng's current research area. This program will be focused on the development of novel radiation detectors and nuclear imaging instrumentations for nuclear safeguard, environmental protection, astrophysics and biomedical applications. One of the emphases of his work is the development of gamma ray detectors that combine room-temperature semiconductor materials with advanced readout electronics. This NRC support could provide crucial resources for the study of several fundamental issues that could further consolidate these developments.

- One of the key factors hampering the performance of semiconductor detectors is the defects that are present in various detector materials. Illinois has a world-class facility, the Material Research Lab (MRL), that is equipped with state-of-art equipments for characterizing material properties. Funds from this program would be used to support detailed analysis of various detector materials at MRL and to study the correlation between material defects and detector performance.
- Dr. Meng's and his group is actively working on multi-channel readout systems based on large-scale application-specific integrated circuitries (ASICs). This NRC support would be used to purchase much-needed testing equipment and release time to perform such measurements.
- Given the recent advances in detector technologies, radiation sensors often provide information that is resident in multi-dimensional domain. For example, the ERPC detectors, currently under development in Dr. Meng's lab, could provide the temporal, spatial and spectral information for each detected events. The NRC faculty development grant could be used to support pilot studies for combining advanced detection hardware and dedicated statistical data processing methods for nuclear safeguard applications.

2. Develop a Nuclear Imaging Facility on UI Campus

- The University of Illinois has a long and rich history in imaging science, technology, and application. Faculty strengths in MRI, ultrasound bioeffects and imaging, CT algorithms, and optics are numerous. However, research and applications related to nuclear imaging
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have long been missing from the campus. In 2009, the Beckman Institute at the University of Illinois launched a Strategic Initiative on Imaging, directed at reaching across campus to build and recognize a campus community around imaging. Nuclear imaging techniques have been recognized as one of the major components for the initiative. The campus has recently received the Major Research Instruments (MRI) grant of around \$1.7 M from NSF to acquire a commercial SPECT/PET/CT system. The acquisition of the commercial PET/SPECT/CT system could be viewed as the first step towards the development of a comprehensive nuclear imaging facility that accommodates state-of-art commercial imaging systems, cutting-edge application areas and advanced research projects to address basic aspects of nuclear imaging.

- The department of NPPE is uniquely positioned for pushing on this initiative. Dr. Meng has served as a member of the Strategic Advisory Group for the BI Initiative for Imaging and also as one of the Co-PIs for the above-mentioned NSF grant. As part of the NPPE faculty development plan, the junior faculty members will be actively involved in the development of this facility. The NRC support will be used (a) to support research work on inter-disciplinary projects that combine our expertise in the department of NPPE with other research areas, (b) to develop nuclear imaging instruments tailored to various existing applications and (c) to support pilot studies that help to establish new research areas related to nuclear imaging.

3. Develop New Courses in Radiation Measurement and Health Physics

The potential NRC support will also be used to develop a core course on radiation detection and measurement, which would fill in a critical gap in our current curriculum. The new course will be based on the classic textbook, "Radiation Detection and Measurements", but incorporating recent advances and emerging research directions in this area. The proposed course will be integrated around several applications areas, such as nuclear security, environmental monitoring and health physics. We would like to use the NRC support to recruit teaching assistants to help in this development and to procure lab equipments for use in related course modules.

VII. Future Plans for New Faculty Development

We have a current faculty search for a faculty member in the reactor physics, reactor design and performance area. The NRC support will also be used to develop and strengthen this area in our program. Interviews for this position are starting this Fall semester. There is a direct impact on research due to the expansive computing capabilities on our campus and the large number of advanced, graduate courses in the computational science area.

The faculty member should be able to develop and sustain a world-class research program in the area. We are developing additional in-kind support for this effort in collaboration with national labs.

This will have a further impact on our teaching efforts. We have a substantial course structure in reactor physics (NPPE 247, 455, 555, 556 and 560 – the last three are graduate only courses). This support will allow us to continue to offer these courses on a more regular schedule to support the increasing numbers of graduate student and research in this field.

VIII. Program Management and Administration: Selection, Hiring, and Mentoring

The NPRE Department Head, as the chief administrator of the nuclear engineering program, will oversee and administer this program. The Head is directly responsible for the hiring, development and promotion processes, and is the closest, most direct line of interaction with the new faculty members. The Head also has access to departmental resources including financial and other support staff, assignment of research space, assignment of teaching responsibilities, annual (or more frequent) faculty reviews, etc. This provides direct and reliable interactions between the program administrator (the NPRE Department Head) and the Junior Faculty Members.

For attracting and selecting new faculty, the Department Head works with the Dean of the College of Engineering to identify faculty openings and to select members of the search committee. The Head also works directly with the search committee to identify and screen possible candidates. [The faculty work as a whole to develop strategic plans about faculty replacement and growth areas, which are then reflected in the position descriptions and the search parameters.]

Once the new faculty member is hired, the Head works closely with him or her to support the development of a major research, teaching and service effort. The main issues are resource development and allocations, and commitments with graduate students, faculty development time and help with acquiring research facilities.

In our particular case, new faculty members join directly into the departmental operations and decision making processes as an equal partner. The entire NPRE faculty, including junior faculty, meet at least every other week to discuss departmental issues and initiatives. Junior faculty members are a vital part of this process which gives them direct insight and a vote in department issues and the directions. In addition, the Department Head is available at any time for consultation and support. This direct line of oversight and support by the Department, and direct line of input by the new faculty member ensures a successful outcome. Other administrative services are made available to the new faculty member. Particularly useful are the departmental business office for proposal development, equipment ordering, student appointments, and other business-related tasks. There are also teaching development services available, and almost all new faculties spend at least one semester developing teaching skills.

Program financial administration will be handled directly through the NPRE Department Business Office. This allows us to have direct control of the financial expenditures, and up-to date access to critical financial information.

IX. Evaluating the Effectiveness of the Project

The success in attracting and developing the best junior faculty members in NPRE is based primarily on providing the right resources so that the faculty member can succeed and meet the requirements for promotion to Associate Professor with (indefinite) tenure. In broad terms, these measures are that the faculty member "shows promise of becoming a world leader in his or her discipline." The more practical measures of this success are that the faculty member should demonstrate extraordinary capabilities in teaching, research and service to the discipline. The impact of each of these areas on junior faculty success is discussed in turn below.

Evaluation of teaching effectiveness

- Excellence in classroom instruction is measured through direct feedback from the students from course evaluation forms and peer faculty evaluation of teaching, including an evaluation of teaching and instructional materials that the faculty member has developed.
- The development of new courses and instructional capabilities, as described above, is judged by the impact these have on our instructional capabilities and enrollments.
- The development of graduate research students to the level where they can think independently and produce significant results from their research activities. It is important in faculty recruitment, retention and promotion that graduate student development is involved. To meet this need, NPPE and the University will provide the necessary resources for at least one graduate research assistant per year for each junior faculty participant in this program.

Evaluation of research effectiveness

- The impact of technical research paper, reports and presentations: This requires that the faculty member develop his or her research capabilities quickly, including funding support, in order to produce publishable research results with real impact. It is not sufficient to merely develop the capabilities to do research; it is necessary to produce noteworthy results. As mentioned above, it is necessary to include graduate research students in the research work— the development of excellent new research student is also seen as part of the success of university research programs.
- Universities most often judge the "promise" of junior faculty by having distinguished external reviewers judge the progress of the faculty member at the time of promotion. This judgment is made primarily on research impact, though other qualities (e.g. excellence in teaching and service) could be noted. This further demonstrates the need for the junior faculty member to develop a research program quickly, involve graduate students, get results, and publicize the impact. The resources from this program should provide the faculty member with the means to accomplish each of these goals.

Evaluation of service effectiveness

- Judged by involvement in professional societies, review and editing of papers for professional journals, and service on national and international review and advisory committees. These activities are also a major outlet for the faculty member to present research results. They also provide a major opportunity for "networking" with other experts in the field. These activities often also take time away from other responsibilities, but remain an important part of the professional development process. The ability to travel to professional conferences as well as some faculty release time to work on professional reviews and committees is critical to support these activities.
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Methodologies for measuring the effectiveness of the development program

- Development program's effectiveness in developing faculty member's skills in teaching are measured very systematically based on rigorous statistical measures extracted from student feedback by the teaching evaluation office of the university.
- Development program's effectiveness in developing faculty member's research skills are measured using her/his publication record, as well as by comparing citations of those publications with peers in the engineering college.

Performance Assessment

- Direct feedback to the faculty member comes from mandatory annual performance reviews. For new faculty, there is also a mandatory "third year review" which is written by the Department Head and reviewed by the Dean of Engineering and the College of Engineering Promotion and Tenure Committee. In addition, the department Promotion and Tenure Committee annually reviews each Assistant and Associate Professor to note progress toward promotion and areas of effort which need to be strengthened.
- The overall judgment of the success of this program is the ability to attract, support and retain excellent junior faculty members. Thus, the real test of success is the promotion of junior, Assistant Professors to Associate Professor with tenure. This is also the overall goal of this program and our faculty hiring strategy in general.
- The evaluation of the effectiveness of this program, on a semiannual basis, will be provided to the NRC in a progress report. The evaluation will consist of activities and accomplishments during the reporting period for the faculty member(s) involved in the program.

X. Matching Support from the Department and College

To provide further help for the junior faculty to establish a substantial research and teaching effort at the University of Illinois, the Department of Nuclear, Plasma and Radiological Engineering will provide support for a Graduate Research Assistant to work with the junior faculty. This matching support covers full 11 month salary and tuition cost per year through the period of the NRC support. This support is necessary to allow the faculty member to build a research group and to demonstrate the importance of teaching through developing graduate researchers. This is an important aspect of the promotion and tenure process. Matching funds from Illinois will be used for this.

In addition to the Graduate Research Assistant support, the College of Engineering and the Department of Nuclear, Plasma and Radiological Engineering will provide laboratory remodeling and facilities development support for this program. This will permit the new faculty member(s) to work in first-rate laboratory facilities.

Attachment C – Standard Terms and Conditions

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

Preface

This award is based on the application submitted to, and as approved by, the Nuclear Regulatory Commission (NRC) under the authorization 42 USC 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 following:

- Grant program legislation and program regulation cited in this Notice of Grant Award.
- 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 215 Uniform Administrative Requirements For Grants And Agreements With Institutions Of Higher Education, Hospitals, And Other Non-Profit Organizations (OMB Circulars), as applicable.

To assist with finding additional guidance for selected items of cost as required in 2 CFR 220, 2 CFR 225, and 2 CFR 230 this URL to the Office of Management and Budget Cost Circulars is included for reference to:

A-21 (now 2 CFR 220)

A-87 (now 2 CFR 225)

A-122 (now 2 CFR 230)

A-102:

http://www.whitehouse.gov/omb/circulars_index-ffm

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 (EOs), Office of Management and Budget (OMB) Circulars, the Nuclear Regulatory Commission's (NRC) 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 215

a. All provisions of 2 CFR Part 215 and all Standard Provisions attached to this grant/cooperative agreement are applicable to the Grantee and to sub-recipients which meet the definition of "Grantee" in Part 215, unless a section specifically excludes a sub-recipient from coverage. The Grantee 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 C of 2 CFR 215 and include this term in lower-tier (subaward) covered transactions.

b. Grantees must comply with monitoring procedures and audit requirements in accordance with OMB Circular A-133. <

http://www.whitehouse.gov/omb/circulars/a133_compliance/08/08toc.aspx >

2. Award Package

§ 215.41 Grantee responsibilities.

The Grantee is obligated to conduct such project oversight as may be appropriate, to manage the funds with prudence, and to comply with the provisions outlined in 2 CFR 215.41. Within this framework, the Principal Investigator (PI) named on the award face page, Block 11, 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, Block 16., and is subject to a refund of unexpended funds to NRC.

The standards contained in this section do not relieve the Grantee of the contractual responsibilities arising under its contract(s). The Grantee is the responsible authority, without recourse to the NRC, regarding the settlement and satisfaction of all contractual and administrative issues arising out of procurements entered into in support of an award or other agreement. This includes disputes, claims, protests of award, source evaluation or other matters of a contractual nature. Matters concerning violation of statute are to be referred to such Federal, State or local authority as may have proper jurisdiction.

Subgrants

Appendix A to Part 215—Contract Provisions

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 Grantee to NRC. See 2 CFR 215 and 215.41.

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.)

No U.S. citizen or legal resident shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity funded by this award on the basis of race, color, national origin, age, religion, handicap, or sex. The Grantee agrees to comply with the non-discrimination requirements below:

Title VI of the Civil Rights Act of 1964 (42 USC §§ 2000d et seq)

Title IX of the Education Amendments of 1972 (20 USC §§ 1681 et seq)

Section 504 of the Rehabilitation Act of 1973, as amended (29 USC § 794)

The Age Discrimination Act of 1975, as amended (42 USC §§ 6101 et seq)

The Americans with Disabilities Act of 1990 (42 USC §§ 12101 et seq)

Parts II and III of EO 11246 as amended by EO 11375 and 12086.

EO 13166, "Improving Access to Services for Persons with Limited English Proficiency."

Any other applicable non-discrimination law(s).

Generally, Title VI of the Civil Rights Act of 1964, 42 USC § 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 VI, 42 USC § 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 Grantee 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 of, and obtained from, the NRC Grants Officer in advance of the change or obligation of funds. All requests for NRC prior approval should be made, in writing (which includes submission by e-mail), to the designated Grants Specialist and Program Office no later than 30 days before the proposed change. The request must be signed by both the PI and 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 Grantee will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

The Grantee shall comply with provisions of 31 USC § 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 Grantee receiving in excess of \$100,000 in Federal funding shall submit a completed Standard Form (SF) LLL, "Disclosure of Lobbying Activities," regarding 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. The Grantee must submit the SF-LLL, including those received from sub-recipients, contractors, and subcontractors, to the Grants Officer.

§ 215.13 Debarment And Suspension.

The Grantee 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 your 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); and

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

b. The Grantee agrees that, unless authorized by the Grants Officer, it will not knowingly enter into any subgrant or contracts under this grant/cooperative agreement with a person or entity that is included on the Excluded Parties List System (<http://epls.arnet.gov>).

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

'Debarment, Suspension, Ineligibility, and Voluntary Exclusion

The Grantee 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 in 2 CFR Part 180.'

Drug-Free Workplace

The Grantee 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 USC 702.

Implementation of E.O. 13224 -- Executive Order On Terrorist Financing

The Grantee 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 Grantee 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.

Award Grantees must comply with Executive Order 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: www.fas.org/irp/offdocs/eo/eo-13224.htm.

Procurement Standards. § 215.40-48

Sections 215.41 through 215.48 set forth standards for use by Grantees 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 shall be imposed by the Federal awarding agencies upon Grantees, unless specifically required by Federal statute or executive order or approved by OMB.

Travel

Travel must be in accordance with the Grantee's Travel Regulations or the US Government Travel Policy and Regulations at: www.gsa.gov/federaltravelregulation and the per diem rates set forth at: www.gsa.gov/perdiem, absent Grantee's travel regulation. Travel costs for the grant must be consistent with provisions as established in Appendix A to 2 CFR 220 (J.53). All other travel, domestic or international, must not increase the total estimated award amount.

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 Grantee'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.

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 Grantee's policies and practices. Travel by first-class travel is not authorized unless prior approval is obtained 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 Grantee shall comply with the provisions of the Fly American Act (49 USC 40118) as implemented through 41 CFR 301-10.131 through 301-10.143.

Property and Equipment Management Standards

Property and equipment standards of this award shall follow provisions as established in 2 CFR 215.30-37.

Procurement Standards

Procurement standards of this award shall follow provisions as established in 2 CFR 215.40-48

Intangible and Intellectual Property

Intangible and intellectual property of this award shall generally follow provisions established in 2 CFR 215.36.

Inventions Report - The Bayh-Dole Act (P.L. 96-517) affords Grantees 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 Grantee 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 Grantee report all subject inventions to the awarding agency (NRC) as well as include an acknowledgement of federal support in any patents. NRC participates in the trans-government Interagency Edison system (<http://www.iedison.gov>) and expects NRC funding Grantees to use this system to comply with Bayh-Dole and related intellectual property reporting requirements. The system allows for Grantees to submit reports electronically via the Internet. In addition, the invention must be reported in continuation applications (competing or non-competing).

Patent Notification Procedures- Pursuant to EO 12889, NRC is required to notify the owner of any valid patent covering technology whenever the NRC or its financial assistance Grantees, 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. To ensure proper notification, if the Grantee uses or has used patented technology under this award without license or permission from the owner, the Grantee must notify the Grants Officer. This notice does not necessarily mean 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 are determined by 2 CFR 215.36. Such works may include data, databases or software. The Grantee 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 Grantee 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 Grantee employees may be copyrighted but only the part authored by the Grantee is protected because, under 17 USC § 105, works produced by Government employees are not copyrightable in the United States. On occasion, NRC may ask the Grantee 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 USC § 105.

Records Retention and Access Requirements for records of the Grantee shall follow established provisions in 2 CFR 215.53.

Organizational Prior Approval System

In order to carry out its responsibilities for monitoring project performance and for adhering to award terms and conditions, each Grantee organization shall have a system to ensure that appropriate authorized officials provide necessary organizational reviews and approvals in advance of any action that would result in either the performance or modification of an NRC supported activity where prior approvals are required, including the obligation or expenditure of funds where the governing cost principles either prescribe conditions or require approvals.

The Grantee shall designate an appropriate official or officials to review and approve the actions requiring NRC prior approval. Preferably, the authorized official(s) should be the same official(s) who sign(s) or countersign(s) those types of requests that require prior approval by NRC. The authorized organization official(s) shall not be the principal investigator or any official having direct responsibility for the actual conduct of the project, or a subordinate of such individual.

Conflict Of Interest Standards for this award shall follow OCOI requirements set forth in Section 170A of the Atomic Energy Act of 1954, as amended, and provisions set forth at 2 CFR 215.42 Codes of Conduct.

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 Grantee'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 Administration, who shall appoint an intra-agency Appeal Board to review a grantee 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 Grantee 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.

Termination and Enforcement. Termination of this award by default or by mutual consent shall follow provisions as established in 2 CFR 215.60-62.

Monitoring and Reporting § 215.50-53

a. Grantee Financial Management systems must comply with the established provisions in 2 CFR 215.21

- Payment – 2 CFR 215.22
- Cost Share – 2 CFR 215.23
- Program Income – 2 CFR 215.24
 - Earned program income, if any, shall be added to funds committed to the project by the NRC and Grantee and used to further eligible project or program objectives or deducted from the total project cost allowable cost as directed by the Grants Officer or the terms and conditions of award.
- Budget Revision – 2 CFR 215.25
 - The Grantee is required to report deviations from the approved budget and program descriptions in accordance with 2 CFR 215.25, and request prior written approval from the Program Officer and the Grants Officer.
 - The Grantee is not authorized to rebudget between direct costs and indirect costs without written approval of the Grants Officer.
 - The Grantee is authorized to transfer funds among direct cost categories up to a cumulative 10 percent of the total approved budget. The Grantee 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.

- o Allowable Costs – 2 CFR 215.27

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:

Grants_FFR@NRC.GOV. **(NOTE: There is an underscore between Grants and FFR).**

Period of Availability of Funds 2 CFR § 215.28

a. Where a funding period is specified, a Grantee may charge to the grant only allowable costs resulting from obligations incurred during the funding period and any pre-award costs authorized by the NRC.

b. Unless otherwise authorized in 2 CFR 215.25(e)(2) or a special award condition, any extension of the award period can only be authorized by the Grants Officer in writing. Verbal or written assurances of funding from other than the Grants Officer shall not constitute authority to obligate funds for programmatic activities beyond the expiration date.

c. The NRC has no obligation to provide any additional prospective or incremental funding. Any modification of the award to increase funding and to extend the period of performance is at the sole discretion of the NRC.

d. Requests for extensions to the period of performance should be sent to the Grants Officer at least 30 days prior to the grant/cooperative agreement expiration date. Any request for extension after the expiration date may not be honored.

Automated Standard Application For Payments (ASAP) Procedures

Unless otherwise provided for in the award document, payments under this award will be made using the Department of Treasury's Automated Standard Application for Payment (ASAP) system < <http://www.fms.treas.gov/asap/> >. Under the ASAP system, payments are made through preauthorized electronic funds transfers, in accordance with the requirements of the Debt Collection Improvement Act of 1996. In order to receive payments under ASAP, Grantees 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 will be required to make withdrawals under ASAP: (1) ASAP account number – the award number found on the cover sheet of the award; (2) Agency Location Code (ALC) – 31000001; and Region Code. Grantees enrolled in the ASAP system do not need to submit a "Request for Advance or Reimbursement" (SF-270), for payments relating to their award.

Audit Requirements

Organization-wide or program-specific audits shall be performed in accordance with the Single Audit Act Amendments of 1996, as implemented by OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations."

<http://www.whitehouse.gov/omb/circulars/a133/a133.html> Grantees are subject to the provisions of OMB Circular A-133 if they expend \$500,000 or more in a year in Federal awards.

The Form SF-SAC and the Single Audit Reporting packages for fiscal periods ending on or after January 1, 2008 must be submitted online.

1. Create your 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
5. Click "Submit."

Organizations expending less than \$500,000 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

Performance (Technical) Reports

a. The Grantee shall submit performance (technical) reports electronically to the NRC Project Officer and Grants Officer on a semi-annual basis unless otherwise authorized by the Grants Officer. Performance reports should be sent to the Program Officer at the email address indicated in Block 12 of the Notice of Award, and to Grants Officer at:

Grants_PPR.Resource@NRC.GOV. **(NOTE: There is an underscore between Grants and PPR).**

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 Human Resources requires the submission of the semi-annual progress report on the SF-PPR, SF-PPR-B, and the SF-PPR-E forms. The submission for the six month period ending March 31st is due by April 30th, or any portion thereof. The submission for the six month period ending September 30th is due by October 31st or any portion thereof.

d. 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 FY 2010 HR grant awards, in addition to the customary performance progress report requested on the SF-PPR, SF-PPR-B, and SF-PPR-E forms, HR requires the following metrics to be reported on by the awardees as follows:

Curriculum Development Awards

1. Overall number of new courses developed in NRC designated STEM areas;
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2. Number of students enrolled in new STEM courses;
3. Number of these enrolled students retained in STEM major.

Unsatisfactory Performance

Failure to perform the work in accordance with the terms of the award and maintain at least a satisfactory performance rating or equivalent evaluation may result in designation of the Grantee as high risk and assignment of special award conditions or other further action as specified in the standard term and condition entitled "Termination."

Failure to comply with any or all of the provisions of the award may have a negative impact on future funding by NRC and may be considered grounds for any or all of the following actions: establishment of an accounts receivable, withholding of payments under any NRC award, changing the method of payment from advance to reimbursement only, or the imposition of other special award conditions, suspension of any NRC active awards, and termination of any NRC award.

Other Federal Awards With Similar Programmatic Activities

The Grantee shall immediately provide written notification to the NRC Project Officer and the Grants Officer in the event that, subsequent to receipt of the NRC award, other financial assistance is received to support or fund any portion of the program description incorporated into the NRC award. NRC will not pay for costs that are funded by other sources.

Prohibition Against Assignment By The Grantee

The Grantee shall not transfer, pledge, mortgage, or otherwise assign the award, or any interest therein, or any claim arising thereunder, to any party or parties, banks, trust companies, or other financing or financial institutions without the express written approval of the Grants Officer.

Site Visits

The NRC, through authorized representatives, has the right, at all reasonable times, to make site visits to review project accomplishments and management control systems and to provide such technical assistance as may be required. If any site visit is made by the NRC on the premises of the Grantee or contractor under an award, the Grantee shall provide and shall require his/her contractors to provide all reasonable facilities and assistance for the safety and convenience of the Government representative in the performance of their duties. All site visits and evaluations shall be performed in such a manner as will not unduly delay the work.

IV. Miscellaneous Requirements

Criminal and Prohibited Activities

- a. The Program Fraud Civil Remedies Act (31 USC §§ 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.)
 - b. False statements (18 USC § 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.
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- c. False Claims Act (31 USC 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.
- d. Copeland "Anti-Kickback" Act (18 USC § 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

Grantees are hereby notified that they are encouraged, to the greatest extent practicable, to purchase American-made equipment and products with funding provided under this award.

Increasing Seat Belt Use in the United States

Pursuant to EO 13043, Grantees should 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

Pursuant to EO 13513, Grantees should 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 generally barred from accepting funds from a Grantee 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 Grantee'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 Grantees or applicants regardless of the source.

Minority Serving Institutions (MSIs) Initiative

Pursuant to EOs 13256, 13230, and 13270, 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 Grantees 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 Grantee 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 Grantee organization shall investigate the allegation and submit its findings to the Grants Officer. The NRC may accept the Grantee's findings or proceed with its own investigation. The Grants Officer shall inform the Grantee 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 Grantee 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 Grantee 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 [Grantee 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 grantee or any subgrantee, 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." (22 U.S.C. § 7104(g)).

Award Term

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 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 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.ccr.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, 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.
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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.
