

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

1. GRANT/AGREEMENT NO. NRC-HQ-12-G-27-0087	2. MODIFICATION NO.	3. PERIOD OF PERFORMANCE FROM: 09/28/2012 TO: 09/27/2015	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 Publics State Controlled Institute of Higher Ed DUNS: 073459083 NAICS: 611310	7. RECIPIENT NAME, ADDRESS, and EMAIL ADDRESS Fort Valley State University 1005 State University Dr Fort Valley, GA 31030 Email: carterm0@fvsu.edu																			
8. PROJECT TITLE: Establishing a Nuclear Science and Engineering Minor at Fort Valley State University																					
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 Dr. Masoud Naghedolfeize Department of Mathematics and Computer 1700 East Cold Spring Lane Fort Valley, GA 31030 Email: feizim@fvsu.edu ; Phone : (478)825-6612																			
12. NRC PROGRAM OFFICE (NAME and ADDRESS) NRC Attn: Tuwanda Smith, Esquire Office of Small Business & Civil Rights MS: O3H06 (301) 415-7394 11545 Rockville Pike Rockville, Maryland 20852 Email: Tuwanda.Smith@NRC.GOV	13. ACCOUNTING and APPROPRIATION DATA APPN. NO: 31X0200 B&R NO: 2012-7P-51-K-167 JOB CODE: L2284 BOC NO: 4110 OFFICE ID NO: SDB-12-058 FAMIS: GR0260	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 <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">THIS ACTION</td> <td style="border-bottom: 1px solid black; text-align: right;">\$80,000.00</td> </tr> <tr> <td>PREVIOUS OBLIGATION</td> <td style="border-bottom: 1px solid black; text-align: right;">\$0.00</td> </tr> <tr> <td>TOTAL</td> <td style="border-bottom: 1px solid black; text-align: right;">\$80,000.00</td> </tr> </table>		THIS ACTION	\$80,000.00	PREVIOUS OBLIGATION	\$0.00	TOTAL	\$80,000.00	16. TOTAL FUNDING AGREEMENT <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">NRC</td> <td style="border-bottom: 1px solid black; text-align: right;">\$258,300.00</td> <td style="width:40%; vertical-align: top;">This action provides funds for Fiscal Year 2012 in the amount of</td> <td style="border-bottom: 1px solid black; text-align: right;">\$80,000.00</td> </tr> <tr> <td>RECIPIENT</td> <td style="border-bottom: 1px solid black;"></td> <td></td> <td></td> </tr> <tr> <td>TOTAL</td> <td style="border-bottom: 1px solid black; text-align: right;">\$258,300.00</td> <td></td> <td></td> </tr> </table>		NRC	\$258,300.00	This action provides funds for Fiscal Year 2012 in the amount of	\$80,000.00	RECIPIENT				TOTAL	\$258,300.00		
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17. NRC ISSUING OFFICE (NAME, ADDRESS and EMAIL ADDRESS) U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Shashi Malhotra, Email: Shashi.malhotra@nrc.gov Mail Stop: TWB-01-B10M Rockville MD 20852																					
18. Signature Not Required	19. NRC CONTRACTING OFFICER <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> (Signature) </div> <div style="text-align: right;"> 09/13/12 (Date) </div> </div> <hr/> NAME (TYPED) <u>Sheila Bumpass</u> TITLE <u>Grants Officer</u> TELEPHONE NO. <u>301-492-3484</u>																				
20. PAYMENT INFORMATION Payment will be made through the Automated Standard Application for Payment (ASAP.gov) unless the recipient has failed to comply with the program objectives, award conditions, Federal reporting requirements or other conditions specified in 2 CFR 215 (OMB Circular A110).																					
21. Attached is a copy of the "NRC General Provisions for Grants and Cooperative Agreements Awarded to Non-Government Recipients. Acceptance of these terms and conditions is acknowledged when Federal funds are used on this project.																					
22. ORDER OF PRECEDENCE In the event of a conflict between the recipient's proposal and this award, the terms of the Award shall prevail.																					
23. By this award, the Recipient certifies that payment of any audit-related debt will not reduce the level of performance of any Federal Program.																					

TEMPLATE - ADM001

SUNSI REVIEW COMPLETE

ADM002

ATTACHMENT A - SCHEDULE

A.1 PURPOSE OF GRANT

The purpose of this Grant is to provide support to the "Fort Valley State University- Establishing a Nuclear Science and Engineering Minor at Fort Valley State University" as described in Attachment B entitled "Program Description."

A.2 PERIOD OF GRANT

1. The effective date of this Grant is September 28, 2012. The estimated completion date of this Grant is September 27, 2015.
2. Funds obligated hereunder are available for program expenditures for the estimated period: September 28, 2012– September 27, 2015.

A. GENERAL

1. Total Estimated NRC Amount: \$258,300.00
2. Total Obligated Amount: \$80,000.00
3. Cost-Sharing Amount: \$0.00
4. Activity Title: Establishing a Nuclear Science and Engineering Minor at Fort Valley State University
5. NRC Project Officer: Tuwanda Smith, Esquire
6. DUNS No.: 073459083

B. SPECIFIC

- RFPA No.: SDB-12-058
FAIMIS: GR0260
Job Code: L2284
BOC: 4110
B&R Number: 2012-7P-51-K-167
Appropriation #: 31X0200
Amount Obligated: \$80,000.00

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
Personnel	\$56,686.00	\$56,686.00	\$56,686.00
Fringe	\$ 7,754.00	\$ 7,754.00	\$ 7,754.00
Equipment	<u>\$ 7,663.00</u>	<u>\$ 7,663.00</u>	<u>\$ 7,663.00</u>
Total Direct Costs	\$ 72,103.00	\$72,103.00	\$ 72,103.00
Indirect	<u>\$ 13,997.00</u>	<u>\$13,997.00</u>	<u>\$ 13,997.00</u>
Total	\$ 86,100.00	\$86,100.00	\$ 86,100.00

A.4 AMOUNT OF AWARD AND PAYMENT PROCEDURES

1. The total estimated amount of this Award is \$258,300.00 for a three year period.
2. NRC hereby obligates the amount of \$80,000.00 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

B.1 Introduction

Fort Valley State University (FVSU) is a historically black institution with a strong commitment to bringing high quality education and public service programs to its students and community. For the past three years, the average enrollment at FVSU has been 3,800 students of which approximately 93.1% are African American. The campus spans over 1,375 acres and is the second largest campus in land area in the University System of Georgia. The university has 35 main buildings of traditional and modern architectural. The academic division of the University is organized into three Colleges, namely, Arts and Sciences, and Agriculture, Family Sciences, and Engineering, and Graduate and Special Programs.

Degrees are offered at the associate, baccalaureate, and master's levels in various disciplines as well as the Educational Specialist's degree. Administrative oversight to the graduate program is provided by the Graduate Students and Extended Education Office.

Programs in the physical sciences are offered in The College of Arts and Sciences. Among the physical science concentrations or major programs of study provided at FVSU are Mathematics, Computer Science, Physics, Geology, Pre-engineering, and Chemistry. These programs enroll nearly 50 percent of the total student population.

The Department of Mathematics and Computer Science offers three on-campus degree programs: a B.S. in Computer Science, a B.S. in Computer Information Systems, and a B.S. in Mathematics. In addition, the Department offers physics and basic engineering courses. The Department currently employs seventeen (17) full-time faculty members with diverse academic backgrounds including physics, nuclear engineering, and electrical engineering, and has an enrolment of over 265 majors. During the last ten years, the Department has realized a consistent yearly increase of 5% in student enrolment. It is expected that the growth rate will increase by at least another 5% during the next ten years because of projected workforce demands for computer science and mathematics graduates. In an effort to meet the demand for stronger and better prepared professionals, FVSU plans to establish graduate programs for each of its undergraduate major concentrations.

The Department of Mathematics and Computer Science consistently has demonstrated its strong commitment to provide quality education by offering new and up-to-date curricula using improved instruction which incorporates the integration of curriculum and Engineering. The department constantly seeks to provide students with modern computing facilities and a learning environment where students are challenged to think creatively and critically to achieve excellence in their fields of study. In addition to this teaching commitment, the department is determined to support competitive

research and development of the faculty, students and staff, to enhance and promote scholarly activities and to build the foundation for establishing graduate programs in a foreseeable future.

The department's track record of securing funding for projects aimed at developing new and innovative curricula, arranging funds for student competition trips, and establishing state-of-the-art computer laboratories is excellent. In addition to these efforts, the Department trains, educates, and provides services in mathematics education and computer technology to students, faculty, and staff of other departments in the university as well as to members of the local community in an effort to improve the overall quality of education both on and off campus. FVSU strongly committed to increasing the number of qualified students in advanced scientific and technological fields such as Nuclear Science and Engineering where an acute shortage of trained workforce in general and minority personnel in particular exists. To this end, the Department of Mathematics and Computer Sciences proposes to offer, in accordance with NRC requirements, a minor program in Nuclear Science and Engineering, which incorporates undergraduate research and outreach activities.

B.2 Project Objectives

The primary goal of this project is to develop an academic curriculum in Nuclear Science and Engineering at FVSU. To support and enhance this curriculum, the project will develop a program of undergraduate research. The project will also include student recruitment activities to enroll motivated STEM students at FVSU in the minor program.

The motivation for developing a Nuclear Science and Engineering program under the SBCR-FN-0511-MSIP02 announcement as stated in the objectives below comes from three sources. Currently, undergraduate students in Middle Georgia do not have sufficient academic opportunities to gain knowledge and training in nuclear energy sciences since no institution in this region offers a structured program in the field. In particular, minority students in Middle Georgia have even fewer opportunities to gain education in this field, since many students cannot afford the cost and/or meet the admission requirements of colleges and universities that have such programs. The need for educating more and diverse student groups in nuclear science and Engineering, either as future scientists or as members of a technological society, is an important issue that is well recognized by NRC, other institutions involved in this field, and more recently the president of the U.S.A. Through this minor program, FVSU will be able to engage science and engineering students in undergraduate research programs that will not only increase their knowledge in the field of nuclear engineering, but will also enhance overall student achievement in science, technology, engineering and mathematics (STEM).

The overall goals and attainable objectives of this proposal are:

Goal I: Design an academic curriculum for a minor program in nuclear science and Engineering

Objective 1: Develop two courses in nuclear science and Engineering with laboratory components, and enhance existing courses in nuclear radiation and health physics.

Objective 2: Develop a basic Nuclear Science and Engineering lab to support the curriculum.

Objective 3: Offer online courses related to this minor program by designing a Web site that will serve as a virtual center for the nuclear energy resources at FVSU

Goal II: Establish a basic undergraduate research program

Objective 4: Engage students in small-scale applied engineering and nuclear science projects on campus

Goal III: Recruit minority students in the fields of nuclear science and Engineering

Objective 5: Publicize the program on the project Web site as well as in local media in a bid to attract potential students to the minor program and increase the overall student enrollment at FVSU

The objectives of this proposal are directly linked to NRC Nuclear Science Enterprise objectives and FVSU mission and institutional planning priorities as shown in Table 1.

Objectives of Proposed Project	FVSU Institutional Priorities
Goal I: Design an academic curriculum for a minor program in Nuclear Science and Engineering (Objectives 1-3)	Priority I- Design and provide academic and non-academic programs at the university to meet the careers and life aspirations, interests and needs of changing diversified student body
Goal II: Conduct basic undergraduate research activities in STEM fields with emphasis on nuclear science and engineering. (Objective 4)	Priority XII- Engage in basic and applied research/inquiry to advance knowledge, seek new applications for existing knowledge, and develop innovative products based on research/inquiry efforts
Goal III: Recruit minority students in the fields of nuclear science and Engineering (Objective 5)	Priority VII – Increase enrollment and ensure that a higher percentage than the current enrollment comes from academically talented students while maintaining opportunities for the disadvantaged

The proposed program will not only support the academic infrastructure of FVSU, but will also provide an entirely new dimension to the institution. Since no institution currently offers a Nuclear Science and Engineering program in Middle Georgia, offering such a program at FVSU will attract a diverse group of students from all cultures and socio-economic groups, including minorities. Apart from increasing the ethnic, racial, and gender diversity at FVSU, it would also place our institution on the nation's scientific and professional expertise base in the field of nuclear science. Following their training in this field, FVSU graduates will become valuable resource models, with the professional competencies to satisfy a growing workforce demand. Particularly, the public announcement by President Obama concerning the construction of two new nuclear power plants in Georgia accentuates this need for skilled professionals in this field.

B.3 Methodology and Implementation

B.3.1 Curriculum Development

The curriculum in Nuclear Science and Engineering at FVSU will be structured around four courses that will feature progressively more advanced topics, and hands-on laboratory-based projects and experimental analysis. This structure complies with the "core", "major electives" and "free electives" course requirements in place for STEM majors at Fort Valley State University. Students in these majors are usually required to take a minimum of two core courses in lab-sciences, two major electives and two free electives. Thus, it is possible for students to obtain this minor without having to take **more than two courses** beyond their major requirements. Provided below are the *course outlines*:

Course One: Radiation and Life

This three-semester hour course is designed to introduce the basic concepts and methods of *health physics*. Students in this course will be provided with a descriptive overview of everyday exposure of people to ionizing and non-ionizing radiation. Topics include: exposure and biological damage, exposure protection guides, and shielding. The pre-requisite for this course will be PHYS 1112: Introductory Physics II.

Course Two: Physics of Ionizing Radiation

This junior level (three-semester hour) course is designed to introduce to students the fundamentals of atomic and nuclear structure, basic quantum mechanics, radioactivity and decay kinetics, charged particle interaction, Geiger-Muller counters, scintillation counters, neutron detectors, and fission chambers.

Course Three: Nuclear Science and Engineering I

This is the first course of a senior-level two-course sequence. The course contents will include an introduction to: energy sources, reactor use and classification, reactor design problems, safety consideration, atomic structures, decay of radioactive nuclei, nuclear reactions, and radiation detection. This course will be delivered through three hours of lecture and one two-hour laboratory session each week. The pre-requisite for this course will be MATH 1113: Pre-Calculus.

Course Four: Nuclear Science and Engineering II

This is the second course of the above sequence. The contents of this four-semester hour course will include topics in neutron interactions, steady state reactor core, transient reactor behavior and control, radiation damage and reactor materials problem, nuclear heat transfer, and nuclear reactor design. The course materials will be offered in the form of three lecture hours and a two-hour laboratory session per week.

The minor curriculum proposed above is comparable with that offered in various academic institutions in the country.

B.3.2 Nuclear Science and Engineering Laboratory

To support the curriculum of the proposed minor program, it will be necessary to establish a basic laboratory in nuclear science and Engineering. The last two courses of the minor program include laboratory components to reinforce the focus of each course and provide hands-on training--essential for understanding of key concepts. The lab experiments and projects will be also used to support undergraduate research activities as described in Goal II. This facility will be a component of the physics laboratory in the newly constructed science building at FVSU campus.

B.3.3 Project Website and Online courses

A Web site will be designed to include program information and other useful information related to Nuclear Science and Engineering including links to world-wide resources in this area.

The online equivalent of each of the first four courses will be developed after successfully offering these courses using traditional (face-to-face) format. The online courses will be developed under Desire-to-Learn platform and each course will contain lecture notes, homework assignments, self-test exercises, and a chat room.

B.3.4 Undergraduate Research Program

An undergraduate research component will be added to the proposed program to further enhance student learning of key concepts and provide an environment for collaborative learning and team work as well as strengthen students' problem solving, critical thinking, analytical, and computer skills. The research activities will also teach students time-management and project planning skills and expose them to the advanced technologies used in nuclear science and Engineering. The research component will also bolster student aptitude to pursue graduate studies and motivate them to become future scientists in this field.

The undergraduate research program in this field will be implemented by engaging students in the research activities of the proposal key personnel. These activities initially will be carried out on a small scale since this is a new academic program and the research facilities needed for the program may not be fully available (especially, during the first year of the project). In addition, the faculty involved in this program will need sufficient time to develop suitable undergraduate research projects that would be in support of the proposed program.

B.3.5 Recruitment Activities

The project also encompasses two main components designed to recruit students, particularly STEM majors, to the proposed program in the nuclear science and engineering. The first component includes aggressive recruitment of FVSU students enrolled in STEM majors by making presentations in orientation classes for lower-division undergraduate students, and by mentoring other interested students. The second component involves the preparation of recruitment materials to include printed materials and/or CD/DVDs that can be distributed to the FVSU library as well as the libraries of other institutions including colleges and high schools in Central Georgia. Detailed information about the program will be also posted on the Nuclear Science and Engineering Web site. Media exposure for the program will be solicited from area newspapers and community interest television programs in Central Georgia.

B.4 Project Impact

The course of study developed under this project is expected to increase the knowledge level of minority students in nuclear science and technology in the Middle Georgia area where currently no school offers an educational program in this field. Through this program, students will gain hands-on training via workshops, internships, and/or laboratory experiments. It is anticipated that at least 20 STEM students would take part in the minor program over the three-year period.

The current enrollment of students majoring in STEM fields at FVSU is about 981 which is approximately 30% of total student population of 3650. However, less than 5% of STEM students (mainly Biology) are involved in undergraduate research activities. Further, there are no students who are engaged in nuclear technology-education projects or are working as interns in this industry. The proposed project is the first step in addressing this situation. It is anticipated that at least 35-40 students will enroll yearly in courses III and IV. Through this project, it is expected at least 10 students from STEM fields other than Biology would get involved in undergraduate research activities annually.

Through this program, students would understand the importance of nuclear energy in improving technologies that directly impact life and some of the challenges associated with this field such as nuclear waste management. By exposing students to the Nuclear Science and Engineering curriculum, they will gain skills and knowledge relevant to today's job market and NRC related careers. The program will also foster an interest in science, mathematics, and Engineering. This will in

turn prepare students to take on the scientific challenges of the future and encourage them to pursue graduate studies in physics, mathematics, and engineering.

A nation's technological success is dependent, to a large extent, on a technically savvy work force, which in turn, is a product of a comprehensive educational system serving all members of society including its minorities. Currently in the United States, minorities are underrepresented in many technical fields including nuclear science and engineering. This project proposes to be one of several efforts being undertaken to remedy this situation.

B.5 Faculty Development

The key personnel, Dr. M. Naghedolfeizi and Dr. S. Arora, already hold advanced degrees in the fields of Nuclear Engineering and Experimental Atomic Physics; respectively. Nevertheless, professional development for faculty involved in this project is an important component for the overall success of this project. The goal is to update faculty knowledge and skills in the fields of Nuclear Science and Engineering by requiring the faculty to attend relevant workshops, seminars, and conferences. Faculty development will also include participation in research programs during the summer or at any other appropriate time. The participation of faculty in such programs will not adversely affect other objectives of the project to be carried out during the same time frame. Faculty involved in this project will also consult and collaborate with members of other institutions who are involved in similar programs, in order to benefit from their experience in implementing the project goals and objectives.

B.6 Project Evaluation

General evaluation process: The academic progress of STEM students participating in this program will be tracked during the course of this project. Evaluation of the project will be both formative and summative. At the formative level, the project will be evaluated by an internal advisory committee annually following periodic evaluation of procedures and results by project personnel. A number of steps will be taken to evaluate the effectiveness of individual components of the project as well as its overall impact. The internal advisory committee's evaluation will focus on the program's achievement of its main goals and objectives as a means to measure success.

Undergraduate evaluation questionnaires, designed to assess the value of student participation in the program, will focus on: 1) how many students participated in the program each year during the academic year, 2) how many students completed the summer research projects, and 3) how many students made presentations at scientific meetings. In addition, a follow-up evaluation procedure will be established in which former participants in summer and academic year research will be mailed or e-mailed annual questionnaires to determine their continuing interest in science and technology, their current academic and career activity, and their future plans.

Course reform and enhancement: At the end of each year, the courses offered in the minor will be evaluated (at the summative level) using a developed set of instruments. This will include an assessment of: 1) whether the instructional approaches have led to any changes in the students' impression of the new course as evidenced by students' performance, motivation to learn, grades, and recommendation of the course to others; 2) the increased number of students enrolled in these courses in each subsequent year; 3) how many students improved or increased their academic standing with an average grade point of "B" or better; and 4) the annual retention rate of students as a result of these courses.

Data will also be collected regarding: 1) the number of students accepted for graduate or professional NRC-related careers; and 2) the general statement on the impact of the proposed program on career decisions and job performance of participating students. The project will be evaluated at the end of each project year. In addition, a major project evaluation will be conducted at the end of third year.

Based on the final evaluation of this project, we will be strongly positioned to offer an Associate Degree in Nuclear Science and Engineering in near future.

B.7 Sustainability

The curriculum and technological facilities developed under this project will remain useful long after the funding source ends. They will continue to be utilized in training, teaching, and research programs for both students and faculty.

The project principal investigator and other key personnel will make significant efforts during the course of the project to develop and cultivate partnerships which will be self-sustaining after the project funding ends. These partnerships will include both academic institutions and industrial organizations. Building a partner-based approach to training and outreach will provide the additional resources important for program expansion and enhancement as well as better sustainability.

It should be emphasized that the proposed curriculum and other objectives of this project will be important components of the overall Engineering and curriculum used at Fort Valley State University. Thus, both faculty and staff will continue to be dedicated to the management, supervision, and administration of the project, providing the support and continuity needed to sustain the project initiatives beyond the funding time frame.

B.8 Project Management

A project office, to be formed specifically for this curriculum development project, will provide management and coordination, and will serve as the link to NRC. The project office will be headed by the Principal Investigator, Dr. Masoud Naghedolfeizi. The office will submit progress reports to NRC as described in NRC Project guidelines. The oversight committee, consisting of the Principal and Co-Principal Investigator and other key personnel, will design the proposed curriculum and set policies, guidelines and goals throughout the project. During the implementation of this project, the committee will consult with experts in academia as well as at NRC.

The installation, technical implementation, and operation of the nuclear science laboratory will be carried out by the Principal and Co-Principal Investigator. The inventory control and monitoring of progress will be carried out by the Office of the Dean of the College of Arts and Sciences and other administrative authorities.

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 CRF 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 2 CFR 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

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.
 - Allowable Costs – 2 CFR 215.27

b. Federal Financial Reports

The Grantee shall submit a "Federal Financial Report" (SF-425) on a semi-annual basis for the periods ending March 31 and September 30, 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 Small Business & Civil Rights (SBCR) 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.

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.
- 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, 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)).

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 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.
- 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.