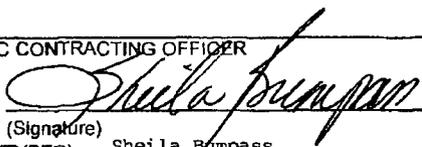
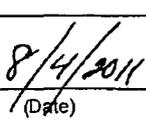


**U.S. NUCLEAR REGULATORY COMMISSION  
NOTICE OF GRANT/ASSISTANCE AWARD**

1. GRANT/AGREEMENT NO. NRC-HQ-11-G-38-0040	2. MODIFICATION NO.	3. PERIOD OF PERFORMANCE FROM: 8/04/2011 TO: 8/03/2014	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: 956072490  NAICS: 611310	7. RECIPIENT NAME, ADDRESS, and EMAIL ADDRESS University of Massachusetts Lowell One University Avenue Lowell, MA 01854	
8. PROJECT TITLE: Faculty Development in Nuclear Science and Engineering at University of Massachusetts Lowell			
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. Erno Sajo University of Massachusetts Lowell One University Avenue Lowell, MA 01854 Email: Erno_Sajo@uml.edu Phone: (978) 934-3288	
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	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: RFP: HR-11-151 FAMIS: GR0081	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                    \$450,000.00  PREVIOUS OBLIGATION        _____  TOTAL                            \$450,000.00	16. TOTAL FUNDING AGREEMENT  NRC                            \$450,000.00  RECIPIENT                    \$757,938.00  TOTAL                            \$1,207,938.00  This action provides funds for Fiscal Year in the amount of See Page TWD		
17. NRC ISSUING OFFICE (NAME, ADDRESS and EMAIL ADDRESS)  U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Mark Lohmann email: Mark.Lohmann@NRC.GOV Mail Stop: TWB-01-B10M Rockville MD 20852			
18.  Signature Not Required	19. NRC CONTRACTING OFFICER   (Signature) _____ NAME (TYPED)                    Sheila Bumpass  TITLE                                Contracting Officer  TELEPHONE NO.                    301-492-3484   (Date)		
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 "Faculty Development in Nuclear Science and Engineering at University of Massachusetts Lowell" 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: \$450,000.00
2. Total Obligated Amount: \$450,000.00
3. Cost-Sharing Amount: \$757,938.00
4. Activity Title: Faculty Development in Nuclear Science and Engineering at University of Massachusetts Lowell
5. NRC Project Officer: Nancy Hebron-Isreal
6. DUNS No.: 956072490

#### B. SPECIFIC

- RFPA No.: HR-11-151  
FAMIS: GR0081  
Job Code: T8460  
BOC: 4110  
B&R Number: 2011-84-51-K-164  
Appropriation #: 31X0200  
Amount Obligated: \$450,000.00

### 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
Direct Participant Cost	\$112,848.00	\$112,848.00	\$112,848.00
Indirect Cost	<u>\$ 37,152.00</u>	<u>\$ 37,152.00</u>	<u>\$ 37,152.00</u>
Yearly Total	\$150,000.00	\$150,000.00	\$150,000.00

### A.4 AMOUNT OF AWARD AND PAYMENT PROCEDURES

1. The total estimated amount of this Award is \$450,000.00 for the three year period.

2. NRC hereby obligates the amount of \$450,000.00 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 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 DESCRIPTION**

#### **B1. Background and Introduction**

This proposal for Faculty Development support leverages two new faculty positions in Radiological Sciences (RS) and Nuclear Engineering (NE), funded entirely from UML budget. UML is in the process of significantly strengthening its Nuclear Science and Engineering Education Program, which is focused primarily on Health Physics and Nuclear Engineering, but also extends to other related multidisciplinary fields, such as Medical Physics and Radiochemistry. This proposal requests support to provide startup-funds for two new faculty hires.

Nuclear Science and Engineering educational programs have been offered at the University of Massachusetts Lowell and its predecessor institutions for over 45 years. Starting in the 1960's with the construction of the Pinanski Building Nuclear Center, which houses a nuclear reactor (1 MW), a Van De Graaf Accelerator (5.5 Mev), and associated laboratories and classrooms, at what was then Lowell Technological Institute, there was a hiring initiative in nuclear physics, radiological science and nuclear engineering, and academic programs in these areas were initiated. These programs have subsequently granted degrees to hundreds of nuclear science and engineering students who have gone on to work in nuclear related industry and in academia. Faculty specialized in radiochemistry, low energy nuclear physics, health physics, and nuclear engineering. Besides physics, there were separate academic departments in nuclear engineering and radiological sciences and over 20 tenure track positions were allocated to nuclear science and engineering. However, declining prospects, particularly in nuclear energy, led to an institutional decision to not replace retiring faculty and to downsize these departments into programs in existing university departments. Today the Radiological Sciences Program is part of the Department of Physics and Applied Physics and the Nuclear Engineering Program is housed in the Department of Chemical Engineering. There are 3 full time faculty in radiological sciences, including one which was just hired in January 2010, and three full time faculty in nuclear engineering where no new faculty have been hired in over twenty years. This situation is about to change.

In the last couple of years there has been renewed interest in nuclear science and engineering at UML. Student enrollment has doubled, and today there are about 100 undergraduate and graduate students enrolled in the nuclear engineering and radiological science programs. In recognition of the worldwide-renewed interest in this field, and in realizing that the university already had unique facilities, the UML administration formed a task force to address prospects in nuclear science and engineering. Their report identified opportunities in academic programs, research, and service, focusing on such areas as nuclear forensics, health physics, advanced reactors, nuclear materials, medical physics, and radiation detection. A clear conclusion is that in order to participate in these areas we need new faculty. This is what has led to the hiring initiative and to this proposal for Faculty Development.

In recognition of the significant need for future graduates in nuclear science and engineering, UML has recently initiated a cluster-hiring program in which new faculty members are to be added to the Nuclear Engineering and Radiological Science Program. One of these positions in the RS Program has been recently filled with the PI of this proposal. In addition, two new faculty are to be hired in 2011, one each in nuclear engineering and radiological sciences. This will effectively double the size of the Radiological Science Program, and will significantly strengthen the Nuclear Engineering Program. It will permit the development of new courses, a unification our nuclear curricula, and the introduction of new research areas reflecting the changed needs and new initiatives in the nuclear industry and at UML, while leveraging existing strengths. Further, this will bring the size of the involved faculty to a critical mass that will allow UML to pursue national accreditation of the academic programs offered under Radiological Sciences and to maintain accreditation of the Nuclear Engineering program.

Our efforts are substantially aided by direct financial and in-kind commitments from UML. Letters of current support and commitment for the future are collected in Section G. Our faculty development plan to sustain our Nuclear Science and Engineering Programs in the long term requires two steps. The first step is to immediately direct resources by UML towards the hiring of two new faculty members. This will provide the basic manpower necessary to offer and maintain the current academic offerings in Health Physics, Nuclear Engineering, and their allied sciences. To ensure the longevity of the program, however, the new faculty will need to establish their research program. This leads to the next step, through this proposal, to provide a start-up package which will help enable the new faculty to be successful.

## **B2. Faculty Development Program for two new faculty**

This proposal requests support from the NRC Faculty Development Program towards the recruitment and retention of two new tenure-track faculty members in Radiological Sciences and Nuclear Engineering who will teach courses, mentor and guide students, and establish active research programs. The tenure of these individuals will reside in the Department of Physics and Applied Physics, and in the Department of Chemical Engineering, respectively.

The proposed new faculty will complement existing expertise in these Departments, in both research and teaching. In order to sustain and enhance the undergraduate and graduate curricula, the new faculty hires must not only be qualified to teach the necessary courses but will also be expected to develop additional courses reflecting their specific focus of study. The new faculty will also be expected to develop vigorous research. Our ultimate goal is to make the current nuclear science and engineering academic programs more cohesive and unified and the attendant research programs more robust leading to national accreditation and recognition.

The important factors that need to be addressed for successful recruitment and retention of faculty are salary, startup package, space, program reputation, infrastructure, research environment, and mentoring support. In addition to these institution-related factors, it is also important that the area of research interest and specialization of the new faculty be in line with current and future trends in their field. This is necessary to establish long-term viable research programs.

### **B.2.1 Research Environment and Targeted Areas of Specialization**

#### *B.2.1.a Radiological Science*

Major research programs at the Department of Physics and Applied Physics include High Energy Physics, Materials Science, Health Physics, Medical Physics, Nuclear Physics, and Quantum Physics. The total number of faculty is currently 17, with three in Radiological Sciences. The addition of the two new faculty (one already hired) will bring the total faculty in Radiological Sciences to 4, which will represent a focal point in the Department. The quality of the Health Physics academic program, which is part of Radiological Sciences, is internationally

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known. Current research interests in this group have concentrated on internal dosimetry, detector development, radiation biology, and aerosol transport.

In order to establish a more viable and full-featured Radiological Science Program that offers HP and related degrees, one more faculty is needed (apart from the one recently hired) with expertise that reflects current trends in the industry and in the RS community, while complementing existing faculty capabilities. We envision that the new faculty will be in the field of external radiation dosimetry, radiation biology, medical health physics, computational methods for radiation transport, and/or reactor health physics. Research that makes use of the radiation produced by the UML research reactor is particularly desirable.

#### *B.2.1.b Nuclear Engineering*

Nuclear engineering is one of several undergraduate focus areas in the Department of Chemical Engineering. There are 11 faculty members in the department and although three of them have degrees in nuclear engineering only 2 remain professionally active, and all are involved in teaching courses to support the basic chemical engineering curriculum. Nuclear engineering students comprise about 25% of the undergraduate population of the Department. Current nuclear engineering research is centered on the UML research reactor. Modeling tools are used to characterize the reactor physics and thermohydraulic performance of the reactor under forced flow and natural circulation. Investigations into utilizing the reactor for radioisotope production, characterization of new nuclear materials, qualification of components for space application, and performance of materials in high irradiation fields have also been performed.

In addition to UML's commitment for one new faculty in Nuclear Engineering, the administration is suggesting that yet another faculty position may be available in the future. New faculty are needed with expertise that reflects current trends in the field and to help in offering a broader selection of courses while complementing existing faculty capabilities and utilizing existing facilities such as the research reactor. This faculty will also enhance the offering of basic nuclear courses and bring more specialized courses that reflect current trends and needs, which are not now part of the curriculum. It would be desirable for the new faculty to make use of the research reactor in teaching and in research.

#### **B.2.2 Infrastructure to Support Research and Teaching**

The University of Massachusetts Lowell has substantial infrastructure for supporting instruction and research in Nuclear Science and Engineering, concentrated in the Pinanski Building. This building houses the UML Radiation Laboratory, which consists of a 1 MW research reactor, a 100 kCi Co-60 gamma irradiator, and a 5.5 MV CN Van de Graaff accelerator. Also included in the building are numerous wet laboratories rated for radiochemistry and radiation biology, a radiation detector laboratory, aerosol detection and counting instrumentation, particle dynamics analyzer, faculty and staff offices, Radiological Science Resource room and library, and a seminar and classroom.

The research reactor is an open-pool design, using low-enriched uranium fuel with graphite reflector. In-core and ex-core experimental facilities can provide neutrons with selected energies ranging from the fission spectrum to primarily thermal energies, or primarily fast energies. Among other capabilities, a large, fast neutron irradiator has been installed adjacent to the reactor core, designed to produce a fast neutron flux of approximately  $10^{11}$  n/cm<sup>2</sup>-s, with very low thermal neutron contamination.

Several Co-60 gamma irradiation facilities also are located within the reactor pool, configurable to achieve dose-rates ranging over several orders of magnitude. This facility can support studies in radiobiology, radiochemistry and other allied sciences.

The Van de Graaff generator can create pulsed fast neutrons via the  ${}^7\text{Li}(p,n){}^7\text{Be}$  reaction, using a  $\sim 10\text{-}\mu\text{A}$  pulsed proton beam incident on a  ${}^7\text{Li}$  target. A post-acceleration Mobley bunching system is capable of producing proton beam bursts as short as 250 ps. A time-of-flight spectrometer has been used for neutron scattering and cross-section studies, and the laboratory has the requisite hardware and infrastructure for fast neutron spectrometry.

#### B.2.3. Research and Career Development at UML

UML provides additional opportunities for development of the research and teaching careers of junior faculty. The University holds grant writing workshops, and it administers several small grant programs specifically designed for junior faculty to aid the development of their research careers. The Faculty Development Center builds faculty excellence across the university by integrating teaching, research, and service through collaboration that promotes a scholarly approach to evaluation and assessment, innovation in curriculum and instruction, the use of academic technologies, and faculty recognition. Several times a year the Center offers institutes that address these topics as well as how to prepare for a tenure application.

The University has a structured junior faculty-mentoring program administered by the host department. Upon entry of the new faculty, a mentoring committee is established, consisting of three senior faculty, one of which is in the same research and/or academic group as the junior faculty. In the present case, the new faculty will be part of the Radiological Science Program or Nuclear Engineering Program. One of the PI's of this proposal or another full professor will serve as a member in the mentoring committee. The rest of the committee comes from other groups in the host Department. The Committee regularly reviews (usually twice a year) the progress of the junior faculty in terms of teaching, research and service accomplishments. Strength, weakness, and opportunities are assessed and the new faculty is advised accordingly.

#### B.2.4. Space for new faculty

Office space for the new hires will be provided by the Department of Physics and Applied Physics and the Department of Chemical Engineering. Laboratory space will be provided in the Radiation Laboratory as appropriate, or elsewhere.

#### B.2.5. Startup Package for Research Program Development

A key element for the successful establishment of junior faculty research is an adequate start-up package. While the faculty lines will be funded by UML, start-up funds are requested in this proposal. Faculty may use these funds to purchase research equipment and supplies, hire post-doctoral researchers to increase their scholarly productivity via collaboration, and support MS and PhD level students to work on various aspects related to their research. In addition, they are encouraged to attend national conferences and visit funding agencies. We are requesting \$225,000 for each faculty to be hired, including indirect cost.

#### B.2.6. Salary

A competitive starting salary is proposed for the new hires guided by recent statistics of median salaries of academic RS and NE faculty with a PhD degree, as published by the Health Physics Society and the American Nuclear Society, and as recommended by our advisory board. With the recent nationwide effort to strengthen nuclear education, it is possible that a higher salary may be necessary to attract qualified candidates. The UML administration is prepared to making up differences in order to meet the demands of highly qualified faculty candidates.

### B3. Selection of New Faculty

The new faculty hiring selection process will begin by forming a search committee for each of the two positions. A senior faculty member from the Radiological Science Program and the Nuclear Engineering Program, likely one of the co-PI's of this proposal, will chair the search

committee. It will have four more faculty as members, including the Chairs of the host department, and a representative of the External Advisory Board.

The positions will be advertised in professional journals, newsletters and on-line services relevant to the radiation science and nuclear engineering disciplines (e.g., HPS online-bulletin, ANS placement service). In addition, the advertisements will be sent to all Physics Departments or Programs with Radiological Science focus and Nuclear Engineering Departments with active PhD Programs listed in the HPS and ANS Educational Program booklets, national laboratories employing doctoral-level scientists and researchers (e.g. INL, ORNL, LANL) and nuclear industry R&D divisions. Each member of the search committee will also use personal contacts to seek referrals of qualified candidates. The advertising schedule will be September to December, 2010, so that the new hires will be able to start in the 2011 academic year. Selection criteria will include a doctoral degree in the general areas of Radiation Sciences, Nuclear Engineering or related field. A proven record or ability to teach the required courses, mentor students, and develop a viable research program will be paramount. Other preferences or specialization will be as outlined in section B.2.1.

#### **B4. Management Structure and Administration of the Program**

The Radiological Science Program is within the department of Physics and Applied Physics. The Nuclear Engineering Program resides in the Department of Chemical Engineering. The two new faculty's tenure will be in these respective departments. Beyond the normal academic and departmental administrative structure, administration of the Program will be effected through the Nuclear Science and Engineering Committee, which will be formed as a collaboration of the Radiological Science and Nuclear Engineering Program Committees. This committee will be chaired by the PI of this proposal.

An External Advisory Committee will be established, with industry representatives and academic peers as invited members to provide feedback and insight. This committee's role is to advise the program with respect to the curriculum, internships, and co-ops, new faculty research areas, new faculty recruitment and accreditation. This committee will also designate representatives to departmental committees as pertains to student and faculty recruitment (search committee), mentoring, and evaluation.

These committees will work collaboratively to govern the academic programs, define future directions, respond to changing environments and challenges, satisfy reporting requirement to the NRC, measure the project's impact in research accomplishments and in attracting, preparing, and retaining students, evaluate and ratify the selection of students for scholarships and fellowships, and monitor the students' progress through the program.

#### **B5. Program Evaluation**

Program evaluation, as defined here, is the assessment of the effectiveness of the NRC-sponsored project in attracting, preparing, and retaining individuals in educational careers. A major component of this is the evaluation of the educational program and that of the progress of newly recruited faculty. In doing so, we will rely on, and augment where necessary, existing evaluation mechanisms, as detailed below.

The Radiological Science and Nuclear Engineering Program curricula, part of a unified nuclear curriculum, and faculty research directions will evolve continually. Therefore, they need a commensurate evaluation schedule to incorporate new courses or change existing courses to emphasize new and emergent directions. Continuous evaluation and re-assessment process is mandated by the ABET, which is the accrediting agency for both the Health Physics and Nuclear Engineering programs. As our ultimate goal is to maintain accreditation in both areas, we will adhere to the processes set forth by ABET. Although ABET accreditation is the responsibility of the individual Radiological Science Program and Nuclear Engineering Program

coordinators, it will be the responsibility of the Nuclear Science and Engineering Committee whose role in the administration is detailed in Section B.4 to perform the evaluation of this faculty development grant.

There are two primary ways by which both the Physics Department and the Chemical Engineering Department evaluate its faculty: student evaluations and faculty review.

Student feedback is important for improving teaching quality and effectiveness, and in order to provide feedback to faculty members so that they can improve their classroom performance and methods. UML requires that students have the opportunity to complete course and faculty evaluation forms at the end of each course. Completed forms are returned by the student to the college dean via the department office. The class ratings are returned to the department and instructors early the following semester.

With respect to junior faculty, the Department Chair or his representative attends a number of their classes, with their consent, and provides feedback and suggestions as part of the regular mentoring process regarding teaching. The intent of this mechanism is to mentor rather than evaluate young faculty. Further details on junior faculty mentoring are given in Section B.2.3.

Also, there is an established formal evaluation process of each faculty member in which the faculty member's performance in teaching, research and service is assessed and evaluated. To this effect each faculty member provides a written record of assignments and accomplishments and the chair's written evaluation becomes part of the permanent record. The evaluation is finalized through an interview during which the performance, interests and future goals of the faculty member are discussed and during which suggestions are made from both parties. In the case of junior faculty members this also plays the role of a regular mentoring session. The evaluations are forwarded to the Dean's office.

The overall effectiveness of the Faculty Development Program will be evaluated by using the following metrics:

- Success in recruiting new faculty according to the stated timetable (in section B3)

- Faculty productivity measured by peer reviewed publications and grant activity

- Faculty effectiveness in teaching

- Success in recruiting students into the program

- Graduation rate of students

- Success of the new faculty in the tenure process according to the regular academic standards of the university.

#### **B6. Additional Support and Leveraging**

The main vehicle for leveraging in this project is the cash and in-kind contribution by UML in providing the necessary two faculty lines in Radiological Sciences and in Nuclear Engineering. As shown in Section G, the UML administration has committed to hiring two new faculty members in these programs. Sustainability can be achieved only by permanent faculty lines and commensurate start-up funds to support the new incoming faculty while they establish their independently funded research.

### **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](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/a133.html>  
[http://www.whitehouse.gov/omb/circulars/a133\\_compliance/08/08toc.aspx](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.amet.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](http://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](http://www.gsa.gov/federaltravelregulation) and the per diem rates set forth at: [www.gsa.gov/perdiem](http://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.
  - 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](mailto: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 31<sup>st</sup> is due by April 30<sup>th</sup>, or any portion thereof. The submission for the six month period ending September 30<sup>th</sup> is due by October 31<sup>st</sup> 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:

#### **Faculty Development Awards**

1. Number of new faculty hired and currently eligible faculty supported in NRC designated STEM areas.

#### **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 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.

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.