



**ATTACHMENT A - SCHEDULE**

**A.1 PURPOSE OF GRANT**

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

**A.2 PERIOD OF GRANT**

1. The effective date of this Grant is May 1, 2010. The estimated completion date of this Grant is April 30, 2013.

2. Funds obligated hereunder are available for program expenditures for the estimated period: May 1, 2010 – April 30, 2013.

**A. GENERAL**

- 1. Total Estimated NRC Amount: \$300,000
- 2. Total Obligated Amount: \$300,000
- 3. Cost-Sharing Amount: \$150,000
- 4. Activity Title: Nuclear Engineering Faculty Development Project
- 5. NRC Project Officer: John Gutteridge
- 6. DUNS No.: 009095365

**B. SPECIFIC**

- RFPA No.: HR-10-934
- FFS: N/A
- Job Code: T8460
- BOC: 4110
- B&R Number: 0-8415-5C1115
- Appropriation #: 31X0200
- Amount Obligated: \$300,000

**A.3 BUDGET**

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

	Year 1	Year 2	Year 3
Direct Participant Cost	\$66,445.00	\$66,445.00	\$66,445.00
Indirect Cost	\$33,555.00	\$33,555.00	\$33,555.00
<b>NRC Yearly Total</b>	<b>\$100,000.00</b>	<b>\$100,000.00</b>	<b>\$100,000.00</b>

All travel must be in accordance with the The University of Utah Travel Regulations or the US Government Travel Policy absent Grantee's travel regulation.

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

1. The total estimated amount of this Award is \$300,000 for the three year period.

2. NRC hereby obligates the amount of \$300,000 for program expenditures during the period set forth above and in support of the Budget above. The Grantee will be given written notice by the Contracting Officer when additional funds will be added. NRC is not obligated to reimburse the Grantee for the expenditure of amounts in excess of the total obligated amount.

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

## **Attachment B – Program Description**

### **B.1 Project Narrative**

The College of Engineering and the University of Utah with the generous gift from the EnergySolutions, are supporting revitalization of Nuclear Engineering Program. The College has recently hired a senior faculty who serves as a Director of the UNEP, and who is also the PI of this proposal. With the goals of building multidisciplinary nuclear engineering program, expanding research activities and broadening the curriculum, the College of Engineering has opened one more faculty position. This grant, matched by the College of Engineering, will be used in full to support a new faculty at the assistant tenure track position starting Fall 2010. The award in total of \$300,000 to the Sponsor, matched with \$150,000 by the College of Engineering, for a period of three (3) years, will importantly benefit our program in allowing us to offer highly competitive start-up package.

Potential for Growing the Program. Nuclear Engineering program is a college wide program.

Its curriculum and the on-going research are both inclusive of students from various science and engineering disciplines advantageous in developing a workforce capable of supporting the design, construction, operation, and regulation of nuclear facilities and the safe handling of nuclear materials. UNEP belongs administratively to the Department for Civil and Environmental Engineering. It houses an NRC qualified 100 kW Modified Mark I TRIGA Reactor. The program offers graduate program and professional training for SRO (Senior Reactor Operator); a number of graduate students in last years went through the training receiving the license. This is one of our major advantages in preparing graduates for nuclear workforce; a hands-on experience and practical understanding of nuclear engineering field. UNEP also supports a radiochemistry laboratory, a radiation measurements laboratory, clean room facilities, optical microscopy laboratory, and extensive computational facilities. Collaborations exist with Los Alamos National Laboratory, Argonne National laboratory and Idaho National Laboratory, USDOE, the University of Utah School of Medicine; Chemical, Environmental, Civil, Biological, and Mechanical Engineering, as well as the Departments of Chemistry and Physics. Research opportunities exist in nearly all areas of nuclear engineering, including nuclear safety and forensics, power, storage and disposal, materials handling and reprocessing, nuclear medicine, and fundamental nuclear physics. The program is positioned for a major growth in size and stature.

Because of growing interest in nuclear engineering among students in the State of Utah, UNEP will establish Nuclear Engineering Minor, representing the only undergraduate degree in the State of Utah. Over the past few years, students have been enhancing their graduate education through coursework and educational opportunities. A number of faculty at the College of Engineering expanded their research into nuclear engineering related disciplines, increasing involvement of students in selecting the nuclear engineering for their masters or doctoral degrees. In last year we observed increased interest among engineering students in many disciplines at the College of Engineering in taking the classes provided at UNEP, but also in

training courses for operating the TRIGA reactor. Students usually come to UNEP "fascinated with the opportunity to learn at hand what the nuclear reactor is and how to operate it"! This uniqueness in training the students from juniors to graduates is also an attractive opportunity for a young faculty to develop, innovative research and courses, involving students with hands-on experience.

Potential for New Faculty. From recently, our nuclear engineering program has started showing visible growth in research as well as in number of graduate and undergraduate students, helping build productive, positive and inspiring environment. With new faculty hired in 2010, our program will be able to contribute more in preparing outstanding graduates for careers in nuclear power sector and government regulatory agencies. Faculty development program at UNEP is lately restructured to enhance recruitment and retention of high quality individuals, and support the mentor practices assuring a high quality environment is sustainable in helping young faculty build their successful carriers. UNEP faculty development program emphasizes the following:

- Support for excellence: we are determined to select an excellent candidate with the experience in writing good proposals, attracting graduates, developing new and attractive courses, publishing great papers
- Support for success: our Program and the College are determined in providing positive environment and resources to help faculty move successfully through tenure and promotion
- Support for mentoring: Director of the program is focused at developing a competitive and sustainable nuclear engineering program in a nation; her mentoring is focused at helping new faculty create an impact in his/her research and be placed at a trajectory for leadership in nuclear engineering field

## **B.2 Description of the Selection Process**

Our selection process is based on practices identified nationally to be effective, practical and fair, to assure best-qualified applicant will be selected:

- Composition of Search Committee: Committee is already established taking into account diversity in respect to academic status, gender, minority and professional background. The Chair of the Search Committee is the UNEP Director; her background is in nuclear engineering and her research spans over few disciplines of primary interest to NRC. Other members are: reactor supervisor with the background in nuclear engineering; assistant professor with the background in environmental engineering (she is a new addition to the Department of Civil and Environmental Engineering with an interest in bridging her research with nuclear, and she is a Native American); an associate professor from the Department of Chemical Engineering, and a professor from the Department of Mechanical Engineering. All members have different perspectives and expertise, and demonstrated commitment to diversity.
- Initial Search Committee meeting: The Committee Chair will introduce to Committee members the hiring strategies addressing selection criteria pertinent to UNEP goals, and procedures for screening and interviewing candidates, and for keeping records.
- Creating short list of candidates: Every Committee member will evaluate the candidates individually, complete the Candidate Evaluation Sheet (suggested by the Committee Chair and accepted by the Committee), and prepare the short list taking into account selection criteria. The

short lists will be compared during the meeting to create a final short list taking the top candidates across different criteria (teaching, research potential, mentoring potential, publication record).

- Interviews: The campus visit will be organized by the Committee; candidates will be asked to give a seminar to faculty and students emphasizing their research and teaching records and a seminar to Committee and Departments Chairs emphasizing the plan for research and teaching in UNEP. Candidates will have opportunity to meet different faculty they identify prior to their visit to our campus for open discussion regarding their research interests and potential collaborative plans. Candidates will have meetings with students' representatives, ANS Chapter and Alpha Nu Sigma Society.

- Final discussion: The Committee Chair will collect all feedbacks from candidate's visit, and present to the Committee. Committee will make a final decision and the candidate(s) name(s) will be sent to the Dean.

### **B.3 Management Structure and Capability for Administering Faculty Development Program**

Capability. UNEP is well positioned and supported to have a successful faculty development program. Administratively, UNEP is supported jointly by the Departments for Civil and Environmental Engineering, and Chemical Engineering. The research infrastructure is available for a new faculty; with the new building to house the Department for Civil and Environmental Engineering to be completed by the end of 2010, we will have new office space for UNEP faculty in addition to the existing office space by the reactor laboratories; in addition, we have available laboratory space for new faculty who may immediately start with the experimental research having unlimited access to our existing facilities. The teaching infrastructure is available for new faculty; new teaching technologies are available at the UNEP for advanced and modernized class work.

Management. New faculty will have a choice to select the home Department; he/she will directly work with the UNEP Director and with UNEP faculty, but will be encouraged to develop rich collaborations with faculty in other departments. The financial aspect of this award will be fully managed by the UNEP Director and the Business Office in the Department for Civil and Environmental Engineering.

### **B.4 Evaluation Plan**

The evaluation plan is to assess and measure success of our faculty development program by evaluating progress of our new hired faculty toward his/her tenure and promotion, and by measuring the progress of our nuclear engineering program (because the addition of new faculty should and must visibly contribute in strengthening our program).

Matrix for evaluating success of our faculty development program. The best measure of the success of our faculty development program will be a successful promotion of our newly hired faculty. Furthermore, a number of graduate students advised by new faculty, overall increase of undergrads and grads in taking the SRO training (as our new faculty will become an SRO in a second year of his/her appointment), new courses developed by new faculty that attracted new students into a program, as well as an increase in research expenditures and number of publications.

Matrix for evaluating success of faculty member. This matrix is based on policies and procedures of the College of Engineering related to retention, promotion and tenure of regular faculty. Faculty being considered for promotion and/or tenure is evaluated in the following three areas; faculty performance in each area is assessed based upon the quality and impact, as well as the number of accomplishments:

- **Teaching:** Classroom teaching effectiveness is documented through: peer and student evaluations; development of new courses, improvement of existing courses, and introduction of innovative teaching techniques; advising of undergraduate student projects; publication of textbooks or other teaching materials; and teaching awards. Research-related teaching contributions are evaluated based upon quality and impact of research undertaken by the students, number of graduate students advised, and quality and number of publications authored jointly by faculty and students. Other evidence of teaching contributions to be considered will include external funding for curriculum development, and general impact of the faculty work on educational issues.
- **Research and Scholarship:** Tenure or advancement in rank requires that the candidate contribute significantly and distinctly to the development and dissemination of new knowledge through research and publication of research results. The following are the criteria to evaluate the faculty performance: publication of original research papers in refereed technical journals and conference proceedings (prestige of the journals and conferences and the quality, as well as number of publications is evaluated); publication of research monographs, book chapters, and book reviews; presentations at conferences, workshops, colloquia or seminars; research grants and contracts obtained, and research expenditures due to faculty research; patents issued and software licensed or otherwise distributed; impact of consulting related to faculty expertise. For tenure and promotion, external letters of evaluation from recognized authorities in the area of faculty expertise will play a major role in helping assess the quality and impact of the research and scholarship, and his/her overall professional reputation.
- **Professional Service:** Faculty for tenure or advancement in rank are expected to contribute significantly to departmental, college and/or university affairs through involvement in faculty governance, committee service, and other assignments. Participation is also expected in professional service beyond the university, such as involvement in professional society activities, editorial boards, conference committees, advisory committees, and reviewing of proposals and publications. Community and government service activities are also considered. In addition faculty effectiveness, leadership and reliability in these roles is considered.

The College of Engineering is committed to excellence in each of the areas of evaluation; the sum of all contributions that faculty showed in teaching, research and service, points toward promotion or tenure, given the faculty showed to be an outstanding scholar, with substantial contributions in each of these areas. The required levels of performance in each area, below which an engineering faculty member at the University of Utah cannot be tenured or promoted, despite successes in other areas, are: must be an effective teacher; must have established a research program that attracts and supports an acceptable number of top-caliber PhD students, generates an acceptable number of quality scholarly publications, and shows evidence of sustainable funding; and must be a willing and responsible participant in the program, department, college and university service assignments, and must be active in external professional service.

Matrix for evaluating success of nuclear engineering program. Every year we will release the UNEP News Letter summarizing the following: number of students enrolled in our Minor,

number of students enrolled in our graduate program, number of MS and number of PhD students graduated, number of students (undergrads and grads) enrolled in and number of them completed the SRO training, number of fellowships and scholarships awarded, number of new funded research projects, research expenditures, number of journal publications, attendances in national and international conferences, invited seminars, number of patents, awards in research and teaching, community and government services and other activities. Trends in each of these categories will indicate a measure of success of our program and be used to evaluate its sustainability.

## **B.5 Institutional Support and Sustainability**

**Institutional Support.** The University of Utah has received a generous gift from EnergySolutions to build and revitalize the capabilities of both, our nuclear engineering research and educational mission, and in moving aggressively forward to build and achieve leadership in the State of Utah and the Nation. The gift was used for an endowed chair professorship and a new Director of the program (hired in 2009) with fully budgeted start-up fund. The University in addition has committed to additional faculty position and we are now in a process of hiring a junior tenure-track faculty as an Assistant Professor. Our plan is to select an exceptional candidate who will start tenure in Fall of 2010; with the funding from this NRC award used for the start-up costs matched by the College of Engineering as explained previously, we expect to offer a superior and highly attractive start-up fund for a junior faculty. The President and the Dean are in full support of our program and they expect to see it grow into a strong and influential nuclear engineering program; in addition they are in full support for establishing mechanisms to attract best candidate for our new faculty position. The Dean closely collaborates with the program Director in defining the road map, mission and vision to assure the goals for successful and leading nuclear engineering program are met. The Chairs of the departments at the College of Engineering, College of Science and College of Health, fully recognize the importance of nuclear engineering discipline; they show full commitment in supporting our program to grow strong (some examples are: offering new courses in our program in collaboration with UNEP faculty; expanding their own research into nuclear engineering field and attracting graduate students to join nuclear engineering program; in writing joined proposals with UNEP faculty).

**Sustainability.** Our nuclear engineering program is unique in offering numerous opportunities for faculty from different departments to collaborate with us, and to use our various facilities. Current UNEP faculty are involved in a number of nuclear engineering research topics, reactor physics, reactor modeling and benchmarking, reactor material engineering and science, irradiation experiments, nuclear material detections, health physics, nuclear forensics and safeguards. We are developing collaboration with faculty from different departments and colleges at the University assuring we are responding to the expectations in bringing high research funding and graduating important number of students. The strong endorsement university-wide for our research and educational programs are truly existent; for example, just recently the University Committee has accepted the proposal for undergraduate Minor in Nuclear Engineering to be offered in 2010: the Minor is multidisciplinary, opened to majority of Colleges at the University, and structured to encourage a broad participation of students from various disciplines. Our laboratories are open to faculty from various departments and colleges to pursue, develop and start new research (for example radiobiology), or to create new courses (such as radiochemistry). We offer training for students to obtain the NRC approved licenses for operating our TRIGA reactor; this proves recently to be strong strategy in sustaining recruitment into our graduate program and the incoming Minor. Furthermore, we recently established a long-term collaboration with Rapiscan Laboratories; except the joint research opportunities, we

obtained the summer internship positions for our graduate students. These fellowships will certainly build the foundation for sustainable influx of graduates into our revitalized nuclear engineering program. The Semnani Foundation offers scholarships for undergraduates and was recently communicated to students interested to join the nuclear engineering program; this assures further sustainability of our program. New faculty therefore will have plenty of opportunities to develop a synergism with other departments and colleges through research and education collaborations, and be able to recruit and retain students in the program.

### **B.6 Leveraged/Matching Funds**

The College of Engineering is matching \$100,000 from the NRC with \$50,000, for all three years. The commitment letter from the Dean of the College of Engineering is supplied.

### **B.7 Quality of Faculty**

Our goal is to attract a successful candidate with a PhD in nuclear engineering or related science or engineering field who will have the outstanding credentials for competitive research and teaching. We are looking for a candidate who should have demonstrated research and commitment to educating the next generation of nuclear engineers, who therefore has certain experience in writing proposals and managing funded projects, who has a good publishing record and who can attract students into our program. It is very important for our nuclear engineering program that this new faculty is flexible in building future trust areas and be able to work with students who do not have necessarily undergraduate background in nuclear engineering, but who are so excited to learn and so determined to complete graduate degrees in nuclear engineering and thus enter the nuclear force.

Our University is fully committed to affirmative action and to its policies of nondiscrimination and equal opportunity in all programs, activities and employment with regard to race, color, national origin, sex, age, status as a person with a disability, religion, sexual orientation and status as a veteran or disabled veteran. The University seeks to provide equal access to its programs, services and activities for people with disabilities. The University values candidates who have experience working in settings with students from diverse backgrounds, and possess a strong commitment to improving access to higher education for historically underrepresented students. In addition, the University is supporting and showing visible successes in recruiting and retaining the number of women for leading positions within the University Administration (for example, Director of Nuclear Engineering Program, VP for Research, Chair of Chemical Engineering, are all recently elected women).

## **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 these URLs to the Office of Management and Budget Cost Circulars are included for reference:

A-21 (now 2CFR 220): <http://www.whitehouse.gov/omb/circulars/a021/print/a021.html>  
 A-87 (now 2CFR 225): <http://www.whitehouse.gov/omb/circulars/a087/print/a087-all.html>  
 A-122 (now 2 CFR 230): <http://www.whitehouse.gov/omb/circulars/a122/print/a122.html>  
 A-102, SF 424: <http://www.whitehouse.gov/omb/circulars/a102/print/a102.html>  
 Form 990: <http://www.irs.gov/pub/irs-pdf/i990-ez.pdf>

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.

By drawing funds from the Automated Standard Application for Payment system (ASAP), the recipient agrees to the terms and conditions of an award.

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 Part 180 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](http://www.whitehouse.gov/omb/circulars/a133_compliance/08/08toc.aspx) >

### **2. Award Package**

#### **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.

### **§ 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 215.180 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 VII 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 VII, 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 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 must 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, termination of the award, 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](http://www.fas.org/irp/offdocs/eo/eo-13224.htm).

#### **Procurement Standards, § 215.40**

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 is an appropriate charge to this award and prior authorization for specific trips are not required, as long as the trip is identified in the Grantee's original program description and original budget. All other travel, domestic or international, must not increase the total estimated award amount. Trips that have not been identified in the approved budget require the written prior approval of the Grants Officer.

Travel will be in accordance with the US Government Travel 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).

Travel costs to the grant must be consistent with provisions as established in Appendix A to 2 CFR 220 (J.53)

### **Property Management Standards**

Property standards of this award shall follow provisions as established in 2 CFR 215.30.

**Equipment** procedures shall follow provision established in 2 CFR 215.34.

### **Procurement Standards**

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

### **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 title and retain ownership 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** of this award shall follow provisions as established in 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 a review committee consisting of a minimum of three persons.
- 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.

**Monitoring and Reporting § 215.51**

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.
- Budget Revision – 2 CFR 215.25
  - In accordance with 2 CFR 215.25(e), the NRC waives the prior approval requirement for items identified in sub-part (e)(1-4).
  - The Grantee is not authorized to rebudget between direct costs and indirect costs without written approval of the Grants Officer.
  - Allowable Costs – 2 CFR 215.27

**b. Federal Financial Reports**

Effective October 1, 2008, NRC transitioned from the SF-269, SF-269A, SF-272, and SF-272A to the Federal Financial Report (SF-425) as required by OMB:

[http://www.whitehouse.gov/omb/fedreg/2008/081308\\_ffr.pdf](http://www.whitehouse.gov/omb/fedreg/2008/081308_ffr.pdf)

[http://www.whitehouse.gov/omb/grants/standard\\_forms/ffr.pdf](http://www.whitehouse.gov/omb/grants/standard_forms/ffr.pdf)

[http://www.whitehouse.gov/omb/grants/standard\\_forms/ffr\\_instructions.pdf](http://www.whitehouse.gov/omb/grants/standard_forms/ffr_instructions.pdf)

The Grantee shall submit a "Federal Financial Report" (SF-425) on a quarterly basis for the periods ending 3/31, 6/30, 9/30 and 12/31, 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 shall be submitted within 90 days after expiration of the award.

### **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 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."