



## ATTACHMENT A - SCHEDULE

### A.1 PURPOSE OF GRANT

The purpose of this Grant is to provide support to the "Missouri University of Science & Technology Undergraduate Scholarships in Nuclear Engineering at Missouri S&T" 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, 2011.
2. Funds obligated hereunder are available for program expenditures for the estimated period: May 1, 2010 – April 30, 2011.

### A. GENERAL

- |                                |   |
|--------------------------------|---|
| 1. Total Estimated NRC Amount: | \$100,000.00  |
| 2. Total Obligated Amount:     | \$100,000.00  |
| 3. Cost-Sharing Amount:        | \$0   |
| 4. Activity Title:             | Support to the Undergraduate Scholarships in Nuclear Engineering at Missouri S&T. |
| 5. NRC Project Officer:        | John Gutteridge   |
| 6. DUNS No.:                   | 804883767   |

### B. SPECIFIC

- |                   |               |
|-------------------|---------------|
| RFPA No.:         | HR-10-945     |
| FFS:              | N/A           |
| Job Code:         | T8460         |
| BOC:              | 4110          |
| B&R Number:       | 0-8415-5C1115 |
| Appropriation #:  | 31X0200       |
| Amount Obligated: | \$100,000.00  |

### 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
Direct Participant Cost	\$100,000.00
Indirect Cost	\$0.00
<b>Yearly Total</b>	<b>\$100,000.00</b>

All travel must be in accordance with the Missouri University of Science & Technology 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 \$100,000 for a one year period.

2. NRC hereby obligates the amount of \$100,000 for program expenditures during the period set forth above and in support of the Budget above. The Grantee will be given written notice by the Contracting Officer when additional funds will be added. NRC is not obligated to reimburse the Grantee for the expenditure of amounts in excess of the total obligated amount.

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

## **Attachment B – Program Description**

### **PROGRAM DESCRIPTION**

#### *The U.S. Nuclear Regulatory Commission*

Undergraduate Scholarships in Nuclear Engineering at Missouri S&T (2010-2011)

#### **B. Project Description**

The Nuclear Engineering (NE) undergraduate program at Missouri University of Science & Technology-Rolla (Missouri S&T) has been ABET accredited since 1960. The undergraduate curriculum is designed to prepare students for careers in the commercial nuclear industry, national laboratories, and the nation's defense and federal agencies. The NE program at Missouri S&T has grown rapidly during the last five years and currently has five full-time tenured/tenure-track faculty members and one half-time teaching faculty member, all with Ph.D. in nuclear engineering. We are currently in the process of hiring a full-time tenured Professor of Nuclear Engineering beginning Fall 2010.

NE program at Missouri S&T has all the critical facilities to train and educate our students. The facilities include a 200 kW swimming pool-type Nuclear Reactor (MSTR) which offers the operational flexibility of multiple start-ups and shut-downs in a day. This provides a unique opportunity to train our students in reactor operations at MSTR. A number of our students acquire NRC Reactor Operator and Senior Reactor Operator licenses each year.

#### **B-1. Proposed Scholarship Program**

The proposed scholarship program will select the best 30 students from a pool of over 100 undergraduates at the Sophomore, Junior, and Senior levels. Almost all of our undergraduate students are full-time students. The selected students for the NRC Scholarships will have a minimum GPA of 3.0/4.0. Juniors and Seniors will receive \$4000 each per year to partially defray the cost of tuition and fees. When combined with scholarships provided by Missouri S&T to Juniors and Seniors with high GPAs (>3.25/4), most awardees will receive adequate scholarships to cover all fees at Missouri S&T. Sophomores will be awarded scholarships in the amount of \$2000 per year to help their retention in the nuclear engineering program. Estimated cost of attending Missouri S&T is attached (Attachment B-1). Each selected student will be required to adhere to a prescribed set of classes as shown in Attachment B-2.

We have had a partnership agreement with Lincoln University, a Minority serving institution and one of the Historically Black College and Universities (HBCU), since April 2006. So far, we have graduated 2 minority students with a B.S. in Nuclear Engineering. We will continue this partnership of recruiting high quality minority students at Lincoln who will join S&T's B.S. NE program after receiving their Associate's degree at Lincoln. While the students are at Lincoln, S&T NE faculty will teach two preparatory NE classes by existing distance learning facilities to Lincoln students. S&T faculty will also travel to Lincoln (1 hr away by car)

and give seminars on general NE topics of interest for recruiting purposes. S&T will provide up to 5 scholarships to qualified Lincoln students at the Sophomore level (\$2,000 per student per year) who are taking sophomore level NE courses offered by distance learning by our program.

## **B-2. Recruitment Activities and Marketing Strategies**

Our marketing strategies and recruitment activities have been in place for the last ten years, and are the primary reason for our substantial increase in undergraduate enrollment. Our marketing strategies include Nuclear Engineering Summer Camp for High School (HS) students, an Introduction to Engineering Summer Camp for HS students, and visits of about 200 Freshman students to NE department each year. Other strategies include inviting HS students and their parents to tour the Nuclear Reactor on campus (MSTR – Missouri S&T Reactor) during the entire year (more than 2000 visitors each year).

The NE Summer Camps are intensive and highly successful. More than 20% of Freshman students with NE preference have attended one of the NE Summer Camps. The NE Summer Camp is advertised by multiple media including our webpage, mailings to 820 Missouri high Schools, 250 High Schools to neighboring states, and regional American Nuclear Societies. 50 students with High School GPA > 3.5 are accepted in one of the two one-week long summer camps. Each summer camp includes activities in the campus Nuclear Reactor (MSTR), a tour of the Callaway Nuclear Power Plant, hands-on reactor operations, design, as well as radiation measurements experiments for each participant.

Introduction to Engineering summer camps on campus for high school students also serve as one of our marketing strategies. If a student chooses Nuclear Engineering as one of their two choices, she/he spends one afternoon in the reactor laboratory and gets an experience of operating the nuclear reactor. The student also spends 3 hours learning about radiation measurements and environmental radioactivity. The students get to learn how nuclear engineers could be critical to national independence from foreign oil and how nuclear energy produces large amounts of clean electrical power.

The marketing strategies are augmented by on-campus recruiting and retention strategies. NE preference students in freshman engineering class are required to take a one credit hour class (NE 25), Nuclear Technology Applications. NE 25 covers all aspects of the nuclear energy, including electrical power generation, naval propulsion, space nuclear power and application of radio-isotopes in industry and medicine. Scholarships, in addition to the financial aid from Missouri S&T, are offered to those who take NE 25 in order to recruit them into the Nuclear Engineering program.

There are two additional on-campus recruiting strategies. The first strategy involves inviting all freshman students to seminars by invited speakers from the nuclear industry. The seminar speakers provide information to the attendees regarding the opportunities available and the severe shortage of nuclear engineers now and in the near future. The second strategy involves inviting interested freshman students to NE department visits, tour of the Nuclear Reactor on campus and a presentation by a faculty member on the benefits of becoming a nuclear engineer.

In addition to the above strategies, new students and their families are invited to the one day Preview, Registration, and Orientation program (PRO) designed for first year students. At PRO sessions the student learns about student life, gets the need-to-know facts about Missouri S&T, meets her/his college advisor, takes mathematics placement exams, and prepares her/his course selections. On PRO days, members of Women In Nuclear (WIN) and the student branch

of American Nuclear Society (ANS) help attract and socialize with students who may be interested in studying nuclear engineering at S&T. New students are encouraged to become members of both WIN and ANS.

Schedule of Tuition, Fees and Other Costs of Students Participating in the Program Missouri S&T provides juniors and seniors with S&T GPA > 3.25 various scholarships which may add up to \$7,750 for Missouri-residents and \$11,750 for non-residents per academic year. This support from Missouri S&T will continue to be provided to the students accepted in this NRC scholarship program as long as the total of Missouri S&T aid NRC support does not exceed the total cost of attending Missouri S&T. (Attachment B-1 shows pertinent fees.)

### **B-3. Selection process**

The following criteria would be followed for selecting students into the program.

1. Cumulative GPA > 3.0/4.0, full-time student status.
2. GPA in NE courses (> 3.0/4.0)
3. Financial need
4. Participation of women, minorities and students with disabilities will be encouraged. The scholarship committee will strive to be inclusive of underrepresented groups in nuclear engineering. (Each scholar's information is obtained from the Registrar's database).

The NRC Scholarship opportunities will be announced to rising Sophomores, Juniors, and Seniors by multiple emails before the Fall 2010 semester starts. To increase the participation of women, minorities and students with disabilities, separate emails will be sent in addition to the ones targeted to all students. After verifying their GPA, information about their financial need will be ascertained from the Office of Student Financial Aid at Missouri S&T. Those students having the highest GPA and financial need will be interviewed to determine their desire to pursue careers in the nuclear-related industry. A total of thirty students will be selected for the scholarship award.

The selection of students will be conducted by an Undergraduate Scholarship Committee consisting of the following faculty:

- Dr. Arvind Kumar, PI and Professor of Nuclear Engineering, Chairman of the Committee
  - Dr. Harvest Collier, Vice-Provost for Undergraduate Studies (an African-American)
  - Dr. Christa Weisbrook, Lecturer, engineering Management (female member)
  - Dr. Carlos Castano, Assistant Professor of Nuclear Engineering (Hispanic member)
- All of these members have agreed to serve on the committee.

### **Management and Administrative Structure**

The scholarship program will be managed by Dr. Arvind Kumar, PI. Dr. Kumar has substantial experience in managing the NE undergraduate scholarships at Missouri S&T. For the last 16 years, funding for scholarships came from Industry Matching Grants from US DOE and private gifts. During the last 2 years, funding for undergraduate scholarships were provided by US-NRC.

Dr. Kumar will be assisted by a scholarship committee of 3 additional faculty members (Dr. Harvest Collier-African American; Dr. Christa Weisbrook-female member; and Dr. Carlos Castano- Hispanic member) and the Office of Student Financial Assistance (OSFA) at Missouri S&T. The OSFA will assist the scholarship committee by providing information on the financial need and the S&T provided financial aid to each student who will be considered for the NRC scholarship.

#### **B-4. Evaluation Plan on Project Effectiveness**

The evaluation plan to determine the effectiveness of the project in attracting, preparing, and retaining individuals in nuclear careers will be as follows: Using our selection process, described earlier, only those students with an unwavering desire to pursue nuclear careers will be selected. Specifically, this will be determined by the scholarship committee in a personal interview with each applicant before a student is selected in the program. After the student is admitted into the program the project manager, Dr. Kumar, will certify to the scholarship committee that every student meets each of the following three significant criteria.

1. CGPA>3.0 Every student will be required to maintain a cumulative GPA of at least 3.
2. Every student must have a GPA of at least 3.0 in all nuclear engineering courses.
3. Each student will follow her/his class schedule for the student's level (Sophomore, Junior, or Senior). The Nuclear Engineering Curriculum (2009 Catalog) is attached.

At the beginning of each semester, at Mid-term, and at the end of each semester, the program chair, Dr. Kumar will check the records to ascertain compliance with the above three criteria. Missouri S&T does provide mid-term grades, as determined by course instructors, to the NE program chair, Dr. Kumar. A low grade in a course may trigger corrective actions by the student's advisor, as described earlier. Any non-compliance will result in the student being disqualified to receive the NRC scholarship assistance.

#### **Mentoring and Advisor Assistance**

Each selected student will be advised by a NE faculty member on course selections, substitutions and waivers for courses when appropriate. A number of good students come to our program with advanced credits. The advisor will evaluate these credits and determine whether the course meets S&T's standards and therefore, should be waived. The advisor also will provide advice on the choices of electives available to the student, particularly those courses that meet the student's professional goals. The advisor will act as a mentor and assist the student in finding appropriate summer employment opportunities. While determining the most suitable place of employment the advisor will use his knowledge and contacts to guide the student toward an employer who will meet the professional goals of the student.

Throughout each academic semester, all scholarship recipients will be specifically tracked by an Academic Alert System to identify the issues that each student may be adversely affected by. The campus Academic Alert System is a web-based application that supports communication among instructors, advisors, and students. The purpose of the Academic Alert System is to improve the overall academic success of students by improving communication among students, instructors and advisors; reducing the time required for students to be informed of their academic status; and informing students of actions necessary by them in order to meet the academic requirements in their courses. The student's advisor receives reports from the academic alert system initiated by the student's instructors by email. The advisor communicates with advisees who receive academic alerts. The advisor follows up with advisees on suggested corrective action(s) and communicates with instructors to ensure that the student's issues are addressed and the alert is closed.

The corrective actions may include counseling by the campus counseling center and participation in On-Track and LEAD sessions, as described below.

On-Track to academic success (<http://advising.mst.edu/ontrack.html> ) is a program designed to help students get motivated, learn time management and study skills, and focus on other common problems. The students are grouped with an On-Track peer mentor who helps

the student address problems specific to the student and his situation. The student should also be able to make lots of friends and connections that will help him/her to manage time doing homework and studying more effectively.

The Learning Enhancement Across Disciplines (LEAD) Program (<http://lead.mst.edu>) offers learning forums for students who wish to increase their understanding, improve their skills, and validate their mastery of concepts and content in a wide variety of foundational courses to achieve their full potential. LEAD program is a campus-based program for the benefit of all students. Student-oriented Learning Centers are staffed by discipline-based faculty and accomplished undergraduate peer learning assistants who guide students in the learning process within an atmosphere of cooperative engagement and teamwork. Drop-in peer tutoring is also provided for students who are more responsive to individualized, small-group learning environments.

In addition to the Academic Alert System, the advisor also receives mid-term grades from the Registrar's office for each student. These mid-term reports may be used by the advisor to initiate counseling or other corrective actions to remedy the student's difficulties with certain courses, as described above.

#### **B-5. Institutional Support and Plans for sustainability**

The Nuclear Engineering (NE) Program and the Nuclear Reactor facility have had consistent support from the university administration for the last 50 years. The sustainability of the NRC scholarship is assured based on the success we are having with the current two-year NRC scholarship grant which helped graduate more than 30 students with GPA>3.5. The proposed NRC grant for 2010-2012 is also expected to help graduate 30 high quality students with a B.S. in NE from Missouri S&T.

Similar to our current NRC scholarship program, Missouri S&T is committed to providing the recipients of NRC scholarships all of the scholarships that were available to the students before they were selected for the NRC scholarship. (Missouri S&T guarantees the same level of financial aid for 4 years as the student receives during her/his first year as long as the student maintains a GPA>3.25.) When combined with Missouri S&T financial aid, the NRC scholarships for most high quality students (GPA>3.25) would equal full tuition and fees totaling \$9,762 per academic year to Missouri-residents and \$20,854 per academic year to Missouri non-residents (Juniors & Seniors). In the event, that the financial help exceeds tuitions and fees the NRC scholarship award will be reduced and the excess money will be used to help other qualified students. The NRC scholarships will be added to the recipient's S&T financial aid to assist in attracting and retaining well qualified students in the NE program at S&T.

Institutional support for our NE program is unwavering. Although the university has a hiring freeze at this time, the NE program was allowed to hire a tenure-track Assistant Professor this year as a replacement for a faculty member who moved to another university last year. We have also been authorized to advertise for a senior faculty position (tenured Professor of Nuclear Engineering). The hiring freeze exceptions were granted due to high student enrollments in our program.

#### **B-7. Leveraged funding from Exelon Nuclear Corporation**

The NRC funding will be leveraged by part of a cash gift of \$50,000 per year from Exelon Nuclear Corporation. Exelon has provided this support for the last 2 years in support of

our NRC university programs (undergraduate scholarships and graduate traineeships, undergraduate and graduate research, faculty development and research equipment). A letter from Exelon awarding \$50,000 to S&T's NE Program for the 2009-10 academic year is attached (Attachment B-4) and details on how Exelon money was used in 2008-09 is attached as well.

**B-8. Service agreement** - Similar to our current NRC scholarship grant, Missouri S&T will require a service agreement to be signed by every scholarship recipient (Appendix B-5).

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

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:

### **Scholarship Awards**

1. Measuring the number and percentage of students who receive an NRC scholarship and complete a STEM (as delineated in the NRC grant announcements) major or program of study;
2. Measuring the number and percentage of STEM graduates who stay in STEM by attending a STEM or STEM-related graduate program (4-year institution NRC recipients only);
3. The number and percentage of STEM graduates who take a job in a STEM or STEM-related field;
4. The number and percentage of students who participate in scientific activities or research experiences in industry, government, or the not-for-profit sector;
5. The number and percentage of students who present research findings at scientific meetings or student science exchange events;
6. The number of students who participate in interdisciplinary research or educational experiences; and
7. The number of students who engage in research experiences in an academic, government, or non-for-profit industry.

### **Service Agreement**

A signed service agreement and resume are required for all student recipients of scholarships or fellowships funded by the US Nuclear Regulatory Commission. The Service Agreement is attached to the Terms and Conditions.

**§ 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 semi-annual basis for the periods ending March 31 and September 30, or any portion thereof, unless otherwise specified in a special award condition. Reports are due no later than 30 days following the end of each reporting period. A final SF-425 shall be submitted within 90 days after expiration of the award.

### **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 shall 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 shall 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 as specified in the special award conditions in the same frequency as the Federal Financial Report unless otherwise authorized by the Grants Officer.



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>. The submission for the six month period ending September 30<sup>th</sup> is due by October 31<sup>st</sup>.

### **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."

## 2010 Scholarship and Fellowship Program Service Agreement

1. This service agreement is required for all student recipients of scholarships or fellowships (hereinafter referred to as the "recipient") funded by the U.S. Nuclear Regulatory Commission (NRC) through the University of \_\_\_\_\_.
2. This agreement confirms the recipient's obligations to maintain satisfactory academic progress and serve 6 months in nuclear-related employment for each year of academic support. The employment may be with NRC, other Federal agencies, State agencies, Department of Energy laboratories, nuclear-related industry, or academia in the recipients' sponsored fields of study.
3. The scholarship recipient must: (check here  if scholarship)
  - a. remain matriculated in the degree program for the field of study for which the scholarship was approved,
  - b. maintain satisfactory academic progress in the recipient's field of study, as demonstrated by maintaining a 3.0 Grade Point Average both overall and within the recipient's major, and
  - c. maintain a course load of at least 12 credit hours per semester as a full-time student in good standing.
4. The fellowship recipient must: (check here  if fellowship)
  - a. maintain a 3.3 GPA overall and within a field of study
  - b. maintain a course load of at least 12 credit hours per semester **or** be classified as a full time student
  - c. remain matriculated in a graduate degree program in a nuclear related area, preferably in the fields of Nuclear Engineering, Health Physics, and Radiochemistry.
5. If a recipient fails to maintain satisfactory academic progress, the scholarship or fellowship will be terminated and the recipient could be obligated to repay the NRC the full amount of the scholarship/fellowship.
6. If a recipient receives any subsequent scholarship(s) or fellowship(s) through this program, the service obligation periods will be consecutive.
7. At the discretion of the NRC, the service obligation period may be delayed to allow the recipient to continue a subsequent degree program immediately following that sponsored under this program. For example, a recipient who receives a fellowship to earn a Master's degree, may request and be permitted to delay fulfilling their service obligation until after they complete a subsequent terminal degree program. Any such requests must be made to the NRC before a student enrolls in a subsequent degree program. If a student enrolls in a subsequent degree program before or without NRC approval, and the NRC does

not subsequently approve the request, the NRC will not be held liable for any expenses incurred to dis-enroll, or for failure to otherwise meet the terms of this service obligation. Recipients only incur a service obligation for funded periods of study.

8. If the student receives no employment offers or does not accept any of the offers received, the student is not relieved of the service obligation, unless, pursuant to this service agreement, the student applies for and receives a waiver from the NRC. Implicit in the waiver request is data or explanation by the student that efforts to secure employment in a nuclear-related field were undertaken. This can be in the form of job searches, referrals, etc. Absent a waiver from the NRC, rejection of one or more job offers could trigger the service agreement obligation.
9. If a recipient voluntarily leaves the employment during a period of obligated post-academic service, the recipient may immediately become liable to the U.S. Government for repayment of the entire amount of the assistance provided under the scholarship or fellowship, for which the service obligation has not been fulfilled.
10. The recipient employed by NRC understands that his or her last pay check and any lump sum payment for annual leave and other payment due on separation will be applied toward any unfulfilled service obligation without further notice. If the recipient's last pay check and any lump sum payment do not satisfy the debt, the recipient may pay the balance of the debt in full or set up a repayment plan.
11. By accepting this scholarship/fellowship, I agree to provide the NRC with current contact information (address, telephone, email), and employment information, subject to the provisions of the Privacy Act, for as long as I remain under obligated service. This information will be used solely for the purposes of verifying appropriate nuclear related employment in compliance with the service obligation requirements of this service agreement. In accordance with the Privacy Act, providing this information is voluntary; however, failure to do so may result in removal from the scholarship/fellowship program and/or repayment of all scholarship/grant money received. Contact information should be reported to: [eduscholar@nrc.gov](mailto:eduscholar@nrc.gov).
12. By signing this agreement, the recipient certifies that he or she has read this agreement and agrees to all of the obligations it entails.

\_\_\_\_\_  
Scholarship or Fellowship Recipient

\_\_\_\_\_  
Date

\_\_\_\_\_  
University Program Coordinator

\_\_\_\_\_  
Date

\_\_\_\_\_  
NRC Office of Human Resources

\_\_\_\_\_  
Date