

ATTACHMENT A - SCHEDULE

A.1 PURPOSE OF GRANT

The purpose of this Grant is to provide support to the "Nuclear Sector Technician Education and Placement Project" as described in Attachment B entitled "Program Description."

A.2 PERIOD OF GRANT

1. The effective date of this Grant is July 1, 2010. The estimated completion date of this Grant is June 30, 2012.

2. Funds obligated hereunder are available for program expenditures for the estimated period: July 1, 2010 – June 30, 2012.

A. GENERAL

1. Total Estimated NRC Amount:	\$150,000
2. Total Obligated Amount:	\$150,000
3. Cost-Sharing Amount:	\$0
4. Activity Title:	Nuclear Sector Technician Education and Placement Project
5. NRC Project Officer:	Randi Neff
6. DUNS No.:	940020381

B. SPECIFIC

RFPA No.:	HR-10-968
FFS:	N/A
Job Code:	T8453
BOC:	4110
B&R Number:	0-8415-5C1116
Appropriation #:	31X0200
Amount Obligated:	\$150,000

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
Direct Participant Cost	\$79,925.00	\$50,075.00
Indirect Cost	<u>\$10,000.00</u>	<u>\$10,000.00</u>
Yearly Total	<u>\$89,925.00</u>	<u>\$60,075.00</u>

All travel must be in accordance with the Aiken Technical College 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 \$150,000 for two (2) year period.

2. NRC hereby obligates the amount of \$150,000 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

Nuclear Sector Technician Education and Placement Project

Aiken Technical College (ATC) is addressing the current documented regional workforce needs for Radiation Protection Technicians (RPT), with 165 students enrolled in certificate and associate degree programs. To prepare students for both commercial and DOE workplace settings, the curriculum for the degree program must adhere to both the National Academy for Nuclear Training's ACAD 08-006 Uniform Curriculum Standards (INPO-ACAD) and the DOE's Savannah River Site (DOESRS) Radiological Inspector Training and Qualification requirements (PROGQRCO PDES 0001 11 Rev. 11). A TC is the only college in the southeast affiliated with DOE's Savannah River Site and the Nuclear Energy Institute's Uniform Curriculum project, and the college is a member of the radiation protection curriculum consortium led by the University of Missouri. These affiliations have given ATC clear guidance in setting the goals, requirements, and resource needs of our RPT program.

The University of Missouri curriculum consortium has developed seven core courses for RPT education and training. ATC has adapted four of these courses to meet both the INPO-ACAD standards and DOE-SRS qualifications. The College proposes to complete the development of two additional courses and to equip a laboratory that supports scenario-driven instruction in the capstone RPT course. Upon completion of the final two courses and the lab scenario, ATC proposes to cross-walk the RPT program objectives, goals, and courses to both ACAD standards and SRS qualifications. The completed cross-walk will present a gap analysis and relational database of INPO-ACAD standards, RPT program outcomes, and DOE-SRS qualifications standards.

The shortage of RPTs is national in scope and has been well documented by the Nuclear Energy Institute, the Health Physics Society, and the RADCON Working Group of the DOE Energy Facilities Contractors Group. Demand for radiation protection technicians is already at 130% of supply. One half of the current nuclear workforce will retire over the next 10 years, just as nuclear energy production is re-emerging as vital economic sector in need of workers. Without direct intervention to increase the radiation protection technician workforce, demand will outpace supply by 160% in five years and by 200% in 10 years.

Aiken Technical College has taken the lead in defining technician needs in our region. ATC led the region for 20 years, from the mid 1970's to the mid 1990's, providing highly skilled workers for the nuclear industry. With the renaissance of the nuclear industry, ATC is reassuming this role. In partnership with the SC Council on Competitiveness and the Southern Growth Policy Board, ATC hosted a statewide forum in 2007 to assess the needs of the State's energy cluster. Forum participants reiterated the potential for significantly higher earnings for technicians in the energy sector,

including nuclear energy, and the higher-than-average job growth projections for this sector. Further, the outcomes of that forum made it apparent that a shortage of RPTs could be a limiting factor in the region's economic growth.

The Savannah River Site Community Reuse Organization (SRSCRO) is charged by the Department of Energy to address the five-county region's chief economic-development concern: the availability of a skilled technical workforce to support the pending nuclear renaissance. In 2009, the SRSCRO commissioned a nuclear workforce survey to estimate the local nuclear worker demand in the next decade. The survey found a pending demand for 10,000 skilled workers in the five-county region, including 273 RPT workers to conduct routine and special radiation surveys, collect and analyze radiation system samples, and conduct routine decontamination activities. The SRSCRO study recognized that in the larger region, with 16 current nuclear-power units and eight new units proposed, the demand for RPT workers will be much larger.

Identify innovative instructional approaches or techniques to enhance student learning, including distance, educational, and experiential learning. Aiken Technical College is collaborating with regional nuclear installations to refine an associate degree program for RPT workers that will meet current and future workforce needs, adhering to standards for both NRC- and DOE-regulated facilities. This broad training will educate workers for current and emerging jobs, and give them the flexibility to work in defense-related industry as well as commercial power facilities. The training combines enhanced lectures, scenario-based problem solving, and extensive hands-on laboratory exercises with leading-edge, industry-standard equipment. Our strategy is as follows:

- **Continue the expansion of an existing RADCON certificate program and the Associate of Applied Science degree program for Radiation Protection Technicians.** ATC adapted four of seven courses in nuclear technology that were developed through a University of Missouri partnership funded by the Department of Labor, with two of the courses being fully refined for our program. We continue the development and refinement of the remaining courses in the program. To date, ATC has developed three additional courses that were identified by the program's advisory committee as necessary for the program. These courses were not part of the seven course sequence provided by the University of Missouri consortium. Funding is requested to complete ATC's development of two courses, including the capstone course to include lab scenario-driven activities that adhere to DOE-SRS and INPO-ACAD requirements.
- **Outfit existing laboratory space** with the requisite equipment to augment the program's industry-standard equipment for scenario-driven instruction. Funding is requested for this equipment (ie., computers, software, and lab items). The laboratory is a crucial component of the capstone course. The vision for the capstone course includes the use of the Nuclear Utilities Fundamentals (NUF) examination as an assessment of our students. We propose development of scenario-driven activities similar to both the commercial nuclear and DOE-SRS complex training facilities. This endeavor should shorten the training time needed by graduates and allow them to meet many training qualifications faster.
- **Develop and deliver a complete curriculum package** inclusive of outlines, learning objectives, lecture notes, recorded presentations, laboratory exercises, supporting graphics, module summaries, case studies, assessment materials, glossary and reading lists, acronyms, and bibliographies for the two courses.

- **Perform a complete gap analysis** on the final RPT program against INPO-ACAD and DOE-SRS requirements. Once complete, ATC will address the programmatic gaps by modifying program course selection, course learning outcomes and curriculum to address these gaps. This activity will culminate in a RPT program that adheres to both INPO-ACAD and DOE-SRS requirements.
- **Create relational database** that maps all program learning outcomes, INPO-ACAD standards, and DOE-SRS qualifications. The database created as a result of a complete gap analysis of program learning outcomes mapped to the related INPO-ACAD standards and DOE-SRS requirements will provide ATC, our graduates and employers, the NRC, and the DOE with information needed to determine employee training needs specific to each site. As graduates move from site to site, the prospective employer or the graduate has documentation as to the specific training needs. In addition, this relational database will also allow the NRC and the DOE to cross-walk the specific INPO-ACAD standard with the related DOE-SRS requirement for training of RPTs.

Timeline

Month	Activity
2	<ul style="list-style-type: none"> • Hire part-time faculty members for course development • Hire part-time instructional designer • Complete the lab design <ul style="list-style-type: none"> ○ Mock-up area design ○ Counting room design
4-8	<ul style="list-style-type: none"> • Complete development of a RPT vision, mission, goals/objectives, and student learning outcomes that are benchmarked against the established INPO-ACAD and DOE-SRS standards.
6	<ul style="list-style-type: none"> • Develop requirements for the two courses: RPT243 Radiological Safety & Response and RPT253 Radiation Protection Determine Textbook assignments Ensure the each course description, course credits, delivery format (lecture/lab) matches course requirements Define ties to GAP analysis Ensure course prerequisites are set properly Course equipment identified and requisitioned Course software identified and requisitioned
8-12	<ul style="list-style-type: none"> • Complete development of course syllabi (course materials, calculator, safety equipment, etc) for the two courses following established templates with proper student learning outcomes identified. The

8-12	<p>student learning outcomes should tie directly to the applicable INPO-ACAD or DOE-SRS standards.</p> <ul style="list-style-type: none"> • Develop content parameters for each of the two courses to include: <ul style="list-style-type: none"> ○ Lecture topics ○ Reading ○ Assignments ○ Assessments ○ Lab topics
12-24 12-24	<ul style="list-style-type: none"> a Lesson plans and lab procedures • Complete development of a lesson-plan template for the two courses to be utilized in the RPT courses to include lecture periods and lab experiences that adhere to the credit weight of course and distribution of lecture/lab, a documented outline, lab formatting template, and PowerPoint template. • Conduct a gap analysis between the completed curriculum, INPO-ACAD standards, and the DOE-SRS criteria. • Modify curriculum, as necessary, to address any gaps in program. • Established a cross-walk between the student learning outcomes to both INPO-ACAD and DOE-SRS established standards.
Post-grant period	<p>Track job placement and work performance of graduates.</p> <p>Track student preparedness and success on the Nuclear Utilities Fundamental examination and corresponding DOE Core Radiological Control Technician exam.</p>

Enhancement of institutional infrastructure. The proposed project will make it possible to train RPT workers to immediately step into high-demand, high-salary positions in the leading regional industries. In addition to a sound academic grounding in health physics, the proposed capstone component will give students hands-on experience with the equipment they will use in industry and provide experience in tackling a workplace challenge and analyzing real-world data. These activities are critical to the preparedness of RPT students for industry requirements and will align with the online-scenario development already completed by the University of Missouri.

ATC has enjoyed an extensive public-private partnership to ensure that training is aligned with energy-sector employer needs. This partnership has led to \$587,000 in leveraged

resources available to the college through in-kind staff, loaned executives, laboratory housing, donated equipment, private contributions, and company-sponsored scholarships. This existing support is a sound base on which to build the RPT program.

Academic focus. The proposed project focuses on nuclear safety in the area of Radiation Protection Technology, also known as Health Physics, Radiological Control, or RADCON. With the completion of (a) the curriculum package for the two courses; (b) the scenario-driven lab facility, (c) the complete gap analysis and corresponding relational database correlating INPO-ACAD standards, (d) the RPT program and course learning outcomes, and (e) adherence to DOE-SRS requirements, ATC's RPT program will be positioned to graduate students who exhibit the skills necessary for both DOE complex and NRC-licensed facilities employment. Employers will have reduced training time since their on-the-job training will need to focus on only site-specific training issues. The enhanced relational database will provide ATC and its graduates with a complete map of their educational outcomes and how they match to the related requirements of the facility.

Project emphasis. The proposed project will complete a curriculum to train RPT workers at the associate degree level. With this funding, ATC will complete development of two courses; equip a scenario-driven laboratory to house industry equipment; perform a complete gap analysis between the program, DOE-SRS requirements, and INPO-ACAD standards; and develop a relational database to show interrelation of the program to requirements and standards. This database could also be utilized by the NRC and DOE to see relations between each standard and to modify the curriculum to address any skill and knowledge gaps.

ATC currently offers courses in advanced technical communication, introductory radiation protection, radiation fundamentals, radiation monitoring, hazardous waste operations and emergency response, radiation dosimetry, and an internship in radiation protection. Four of these courses were adapted from the radiation technology curriculum-development consortium lead by the University of Missouri. The University of Missouri curriculum was developed with Department of Labor funding. To complete the Associate of Applied Science program for RPT workers to fill regional workforce needs, ATC created three additional courses identified by the programs advisory committee. In addition, ATC needs to adapt an additional two courses: Radiological Safety and Response, and the Capstone Radiation Protection course. The capstone course will give students experience in solving a substantial problem, drawing on skills acquired in earlier radiation-protection courses and incorporating the online scenarios developed by the University of Missouri. The curriculum developed by the University of Missouri does not contain the materials necessary to implement a scenario-driven laboratory experience that is a crucial component of the capstone course.

The Radiological Safety and Response course presents scenarios in which RPTs are responsible for ensuring and maintaining doses ALARA (As Low As Reasonably Achievable) for the safety of individuals, the work environment, and the population, including response to abnormal and emergency radiological conditions. The Capstone Radiation Protection course utilizes a problem based approach to learning. This course will present radiation protection problems embedded in different radiation contexts, the majority of which are nuclear power reactor-based. Participants will be tasked with solving such problems as providing radiological coverage of jobs and high-risk and low-risk activities (e.g., outages), planning for protection from hazardous radiation, monitoring of activities in radioactive zones, and responding to emergencies. The intent of this project is to expand the scenario development beyond the online-scenario's developed by the University of Missouri and implement a lab-based, hands-on approach to the learning similar to the activities implemented at NRC-licensed and DOE

facilities.

Institutional capacity. The College has key infrastructure components in place as an institutional base for the program which includes a state-of-the-art presentation-capture system. ATC has the capacity and experience in developing scenario-driven laboratories as evidenced in our, 30,000 sq. ft. Manufacturing and Technology Training Center. The Center includes state-of-the-art lab facility with leading-edge laboratory test equipment. The Manufacturing and Technology Training Center currently houses Environmental Safety, Chemical Operations, and Mechanical and Electrical Labs. These existing resources will be used as the basis for the NSTEp2 program.

Enhanced lectures. Aiken Technical College will use our existing presentation-capture system to augment lectures with audio, video, multimedia, and other sources, publishing them in a variety of delivery formats. We will leverage this system to create topical learning modules that will complement the curriculum developed by the University of Missouri.

Scenario-driven laboratory sessions. Our scenario-driven approach requires active participation to complete the laboratory component of the capstone course. The College will provide 2,000 square feet for the scenario-driven laboratory for the RPT program. Regional employers have donated and purchased lab equipment for the NSTEp² program, and grant funds will be used to complete the needed lab environment/equipment to support the use of the donated and purchased equipment.

Performance indicators. ATC will rigorously measure success against five outcome goals.

Goal 1: Complete development and refinement of three courses. The first necessary component is infrastructure to complete development of the remaining three courses needed in ATC's RPT program. ATC has successfully completed development of three courses that were not part of the University of Missouri material and two courses that were part of the University of Missouri material. These courses have been augmented with dress-lab activities to simulate the work environment. In addition, ATC is actively completing the refinement of an additional two courses to augment them with hands-on activities to simulate the workplace. ATC requires assistance through this grant to complete the two courses. The curriculum packages will include textbook assignment; proper prerequisites to ensure student success; equipment and material listing; software listing; lesson plan; course learning outcomes; course syllabi adhering

to ATC standards; and detailed lesson plans that include lecture topics, notes, presentation materials, reading assignments, lab procedures and assessment tools and the requirements of the lab environment.

Goal 2: Capstone laboratory participation. Radiation protection and nuclear technology use laboratory equipment not found in traditional college physical science programs. Therefore, funds are included in this grant request to provide laboratory equipment and supplies so that students are trained in the use of equipment that will be encountered in the workforce. Laboratory sessions will be staffed by a subject-matter-expert instructor.

Goal 3: Increased number of radiation protection workers for the region. ATC will measure the number of A.A.S. graduates, their job placement, their performance as entry-level employees, and the effectiveness of NSTEp² in meeting critical workforce needs.

Goal 4: Decrease training necessary for graduates' employment. With this grant, the RPT program graduates will be highly skilled and will meet both INPO-ACAD standards and DOE-SRS requirements. Employer surveys will measure the work readiness of graduates

Goal 5: Create relational database that correlates INPO-ACAD standards, DOE-SRS requirements, and the RPT program and course learning outcomes. This database will enable ATC to cross-walk our program to the site-specific training requirements of our employers to assist with the reduction of training time necessary for full employment in the nuclear industry. Employer surveys will measure the reduction in the number of training days needed during new employee hiring and orientation process.

NSTep² is designed to train RPTs for an area whose workforce needs these workers immediately. The associate degree program combines a strong academic foundation in the physical sciences with practical hands-on experience in scenarios the technicians will encounter at entry-level. Aiken Technical College is part of a national collaborative effort to train workers in radiation protection, and the curriculum from that collaboration is used as a foundation for NSTep². The program is innovative in its flexibility, so that graduates can find high-wage employment either in NRC licensed power plants or at the DOE-SRS facility that is the area's largest employer.

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 2CFR 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 >

2. Award Package

Grant Performance Metrics:

The Office of Management and Budget requires all Federal Agencies providing funding for 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 curriculum development 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:

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

§ 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.

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 and the per diem rates set forth at: 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/fedreq/2008/081308_ffr.pdf

http://www.whitehouse.gov/omb/grants/standard_forms/ffr.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.

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.

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."