



## ATTACHMENT A - SCHEDULE

### A.1 PURPOSE OF THIS GRANT AWARD

The purpose of this award is to provide support to Yakima Valley Nuclear Technology Program Development Project at Heritage University; Toppenish as described in Attachment B entitled "Program Description."

### A.2 PERIOD OF PERFORMANCE

1. The effective date of this award is September 30, 2010 with an estimated completion date of September 30, 2014.
2. Funds obligated hereunder are available for program expenditures for the estimated period: September 30, 2010 – September 30, 2014.

#### A. GENERAL

1. Total Estimated NRC Amount: \$359,741
2. Total Obligated Amount: \$90,000
3. Cost-Share/Other Agency Support: \$0
4. Activity Title: Yakima Valley Nuclear Technology Program Development Project at Heritage University; Toppenish
5. NRC Project Officer: Tuwanda Smith
6. DUNS No.: 123577538

#### B. SPECIFIC

- RFPA No.: SDB-27-10-516  
FFS: SBC10324  
Job Code: N7316  
BOC: 4110  
B&R Number: 07P-15-5C1-161  
Appropriation #: 31X0200  
Amount Obligated: \$90,000

### A.3 BUDGET

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

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>
Direct Costs	\$80,081	\$79,772	\$79,688	\$79,528
F&A Costs	\$9,868	\$10,065	\$10,267	\$10,472
Total Costs	\$89,949	\$89,837	\$89,955	\$90,000

All Travel must be in accordance with the Heritage University's Travel Regulations or the US Government Travel Policy in absence of grantee's regulations.

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

1. The total estimated amount of this Award is \$359,741 for four years.

2. NRC hereby obligates the amount of \$90,000 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**

Heritage University, in partnership with the Columbia Basin College (CBC) and University of Washington (UW), is proposing new degree programs in Nuclear Technology. This proposed degree program has three basic components. 1) Develop and offer a pathway to Bachelor of Science in Nuclear Technology which builds on the AAS degree program in Nuclear Technology currently offered by the CBC, 2) Develop new courses focused in Nuclear Technology for the existing Environmental Science degree at HU. 3) Design those courses for both traditional and online course delivery methods and offer those courses to other universities via **Online Consortium of Independent Colleges and Universities (OCICU)**. The project period is for 4 years with a proposed budget of **\$359,741**. The purpose of the program is to meet the growing demand for a workforce trained in nuclear technology related fields while enhancing diversity among nuclear related workforce.

#### Goal 1: Pathway to Bachelor of Science in Nuclear Technology

CBC currently offers a professional 2 year AAS degree program in Nuclear Technology which is designed following the National Uniform Curriculum Program Guide standards by the Nuclear Energy Institute (NEI) and Institute of Nuclear Power Operations (INPO). In its current format, however, this 2 year degree in Nuclear Technology is not transferable to HU and does not provide a pathway to a bachelor's degree. AAS degrees such as this one are great ways for many students to enter the workforce. However, their advancement within the field is limited due to a lack of an advance degree. HU, CBC and UW will develop a curriculum to enable students to apply credit hours earned in the AAS in Nuclear Technology program (from CBC and elsewhere) towards a Heritage University BS degree. We will develop 12 four credits courses to achieve this goal.

#### Goal 2: Environmental Science Courses in Nuclear Technology at HU

HU currently offers a Bachelor of Science degree in Environmental Sciences with concentrations in Natural Resources or Chemistry. HU currently does not offer any courses related to Nuclear Technology. Nuclear Technology related topics are briefly discussed as an "alternative clean energy source" or "problems associated with nuclear waste" in introductory environmental science course. Given the close proximately and historical relationships to Hanford Nuclear Reservation, it is incumbent on HU to offer more courses related to Nuclear Technology in Environmental Sciences. HU environmental science faculty members will modify courses developed in Goal 1 to meet this need. This new courses will set a foundation for HU to offer a BS in Environmental Science with Emphasis on Nuclear Technology. One of the course will be designed to target K-12 Math & Science teachers to ensure larger audience for this project. Students from the Confederated Tribes and Bands of the Yakama Nation have a special interest in receiving training in Nuclear Technology and Environmental Sciences. Tribal members have a vested interest in the management of energy production where cleanup

activities at the Hanford site must also address issues related to the Yakama Nation's Treaty Rights and the access by the Yakamas to the cultural and natural resources at the Hanford Site. Knowledge of environmental science in the context of Nuclear Technology is essential for many Native Americans who live closely to Hanford Nuclear Reservation site.

### Goal 3: On-line Course Delivery Beyond Yakima Valley

As mentioned earlier, HU is an active member of **Online Consortium of Independent Colleges and Universities** (OCICU). From the beginning, HU will design all of the courses in the NT program to be on-line ready. This will allow HU to deliver a program beyond its immediate geographical area and share those courses with the other 75 OCICU member universities. In addition to its ability to deliver online courses, HU holds an Elluminate license to add the synchronous capability and enhance online course delivery as well as virtual office hours, along with faculty planning and training sessions across regional sites. Purchased through the support of a Title V grant (2005-2010) partnership with Big Bend Community College (125 miles away), Elluminate has allowed faculty from the two institutions to create online tutoring opportunities, virtual office hours, and enhanced sharing of student projects in online courses. For our proposed NT programs, Elluminate will allow the faculty of the contributing institutions to work more closely in planning and implementing the new curricula. Elluminate ([www.elluminate.com](http://www.elluminate.com)) provides versatile multi-point video conferencing with application sharing to promote collaboration across geographical sites, and all full-time faculty at HU have been trained in its use.

## 1. Methodology

### A. Personal and Qualifications:

Heritage's Dean of Arts and Sciences is responsible for successful implementation of this project. The Dean works closely with HU and CBC administrations to ensure timely program introduction and recruitment. PI and co-PIs will coordinate the curriculum and program development with inputs from experts in the fields, HU, CBC and UW faculty.

### B. Curriculum development guidelines:

1. *Definition* – Curriculum in Nuclear Technology and its related fields is a linked series of credit or noncredit courses that constitute a coherent body of study in a discipline. It is designed for college-level or post-baccalaureate participants.
2. *Purpose* – Programs in Nuclear Technology and its related fields will reflect the educational missions of HU, CBC and UW. It will help participants achieve specified learning objectives and competencies in the field of Nuclear Technology and its related fields.
3. *Curriculum* – The programs in Nuclear Technology and its related fields will include a structured progression of classes for participants who will have achieved specified learning objectives upon successful completion.
4. *Academic Approval* – The Nuclear Technology degree program will be reviewed and approved on a yearly basis by the appropriate HU, CBC and UW colleges, schools and departments. Deans or associate deans and departmental chairs will approve the program curriculum and instructors.

5. **Advisory Boards** – An advisory board (**Nuclear Technology program development advisory Boards**) will consist of representatives from HU, CBC, UW, and the professional community. We will invite Original members of a program planning committee developed the AAS degree program at CBC (representatives from organization such as Areva, CHPRC – CH2MHill, Plateau Remediation Company, Central Washington Building and Construction Trades Council, Energy Northwest, EnergX, Fluor/HAMMER, IBEW Local 77, TFE, Inc.- Technical and Field Engineering, and WRPS - Washington River Protection Solution). The advisory board will define the target audience, admission standards, the curriculum, instructional qualifications and, on an ongoing basis, monitor the progress and quality of the program.

C. Implementation:

1. **Instructors** – Courses will be taught by HU, CBC, UW faculty, or qualified professionals from the community who have been approved by the appropriate academic units. The curriculum development cost covers first year of instruction cost (see Budget justification). Tuition income will be used to cover instructional cost in following years.
2. **Admission Process and Standards**– The advisory board will provide clearly published admission process. To ensure the quality and level of the instruction, the program will have published minimum standards, which have been established by the program advisory board to reflect the skills needed for success in the program.
3. **Recruitment**: Availability of BS in NT related degree programs at HU will be advertized and promoted through HU advancement office (we included advertising budget for this purpose). In addition, we will utilize our existing recruitment channels such as federally funded “Trio” programs at HU: 1) Talent Search (recruitment), 2) Student Support Service (SSS), 3) McNair Scholar Program, UW Gear-up program, and our in-house student recruiters. All newly developed courses will be offered to other universities audience via OCICU starting third year of this project.
4. **Course delivery** – All courses will be delivered in both traditional in-class face to face lecture format and on-line distance learning format. On-line format allows HU to deliver the program beyond geographical limitation (in 3<sup>rd</sup> and 4<sup>th</sup> year and beyond).
5. **Grading and Assessment** – Each participant will be graded in each course by standards established by the advisory board and/or instructors and approved the appropriate academic units. The grading will follow HU policies. Grading and assessment standards will be carefully communicated in print to the participants.
6. **Program Evaluation** – Each course and instructor will be evaluated to ensure the quality of the program. The evaluations will be designed cooperatively with the HU Office of Educational Assessment and will be included in the materials sent to the academic units in the annual review process. We will conduct annual external evaluation of the entire program.

## 2. Evaluation and Dissemination Plans

The PI will track and measure activities, outputs, and outcomes to ensure progress and productive performance. The PI will collect data necessary to measure the success of the program. Such data includes but not limited to students inquiry rates, student enrollments, graduation rates, meeting minutes, plans, certificates issued (if applicable), receipts, contracts, curricula (including syllabi), invoices, reports, scripts, schedules, logs, project data, presentations, lists, and proposals. The measurable outcomes are listed in the Logic Model (attachment). In addition to internal evaluation of the program, HU will invite external evaluator to evaluate the program performance annually. We have requested funding to conduct such external evaluation in this proposal.

### Plan of Operation and Timetable

Year 1	Year 2	Year 3	Year 4
Establish Nuclear Tech. program development advisory committee.	First cohort (10 students) in a new transferable Nuclear Tech. degree program.	Second cohort (15 students) in a new transferable Nuclear Tech. degree program.	Third cohort (15 students) in a new transferable Nuclear Tech. degree program.
Begin curriculum design for all courses.	Complete first year curricula for a new transferable Nuclear Tech. degree program.	Complete second year curricula for a new transferable Nuclear Tech. degree program.	Evaluate transferable Nuclear Tech. degree program.
Develop student recruitment plan for a new transferable Nuclear Tech. degree program at CBC.	Begin developing courses in Nuclear Tech. for Environ. Science degree program.	Begin offering first year courses online by using OCICU system.	Evaluate course in Nuclear Tech. for Environ. Science degree program
Begin recruiting students.	Recruitment continues.	Begin offering a course in Nuclear Tech. for Environ. Science degree program.	Begin offering second year courses online by using OCICU system.
Annual external evaluation on the program.	Annual external evaluation on the program.	Recruitment continues.	Recruitment continues.
		Annual external evaluation on the program.	Annual external evaluation on the program.

## 3. Expected Product: BS in Nuclear Technology and Environmental Science with emphasis on NT curriculum (modeled after UW Nuclear related courses).

### *PHYS xxx: Radiation: Nature, Technology, and Society (4)*

Introduction to the science and implications of nuclear physics and radiation. Emphasis on qualitative rather than quantitative understanding. Physics of the nucleus, types of radiation, technological uses, and human exposure. Critical evaluation of current issues, including food irradiation, depleted uranium, nuclear power, and nuclear weapons.

*PHYS xxx: Contemporary Nuclear and Particle Physics (4)*

Survey of the principal phenomena of nuclear and elementary-particle physics. Introduction to nonrelativistic quantum mechanics: need for quantum theory, Schrodinger equation, operators, angular momentum, the hydrogen atom, identical particles, and the periodic table, perturbation theory, the variational principle, radiation; application of quantum mechanics to atomic physics, magnetic resonance, scattering, and various special topics.

*ENSC xxx: Energy and Environment (4)*

Energy use. Fossil energy conversion. Oil, gas, coal resources. Air impacts. Nuclear energy principles, reactors, fuel cycle.

*ENSC xxx: Advanced Energy Conversion Systems (4)*

Advanced and renewable energy conversion systems and technologies are treated. Included are high efficiency combined cycles; renewable energy conversion involving solar, wind, and biomass; direct energy conversion and fuel cells; and nuclear energy. Environmental consequences of energy conversion and environmental control are discussed.

*ENSC xxx: Nuclear Technology and Environment for K-12 Teachers (4)*

Explore various concepts of sciences applied in Nuclear Technology and how it relates to our environment. Topics include: Energy use, Fossil energy conversion and environmental impacts, Nuclear energy and environmental impacts, Science in Nuclear Technology, History of Nuclear Technology.

*ENVH xxx: Non-Ionizing Radiation and Electrical Safety (4)*

Introduction to health hazards from UV, optical laser hazards, infrared radiation, radio-frequency radiation, heat stress, electrical shock, electric and magnetic fields. Application of current standards for these physical agents. Emphasis on occupational hazards with additional discussion of environmental exposures where appropriate.

*CHEM xxx: Nuclear Chemistry (4)*

Natural radioactivity, nuclear systematics and reactions, radioactive decay processes, stellar nucleosynthesis, applications of radioactivity.

In addition to courses listed above, curriculum appropriate for the unique cultural context of the Yakama Indian Reservation in South Central Washington near the Hanford Nuclear Reservation will be developed by this program. Such courses may include topics related to "nuclear safety", "history of Hanford", and others

**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:

- Cooperative Agreement program legislation and program regulation cited in this Notice of Cooperative Agreement/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 cooperative agreements with Institutions Of Higher Education, Hospitals, And Other Non-Profit Organizations (OMB Circulars), as applicable.

To assist with finding additional guidance for selected items of cost as required in 2 CFR 220, 2 CFR 225, and 2 CFR 230 these URLs to the Office of Management and Budget Cost Circulars are included for reference:

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

Any inconsistency or conflict in terms and conditions specified in the award will be resolved according to the following order of precedence: public laws, regulations, applicable notices published in the Federal Register, Executive Orders (EOs), Office of Management and Budget (OMB) Circulars, the Nuclear Regulatory Commission's (NRC) Mandatory Standard Provisions, special award conditions, and standard award conditions.

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

Certifications and representations. These terms incorporate the certifications and representations required by statute, executive order, or regulation that were submitted with the SF424B application through Grants.gov.

## **I. Mandatory General Requirements**

The order of these requirements does not make one requirement more important than any other requirement.

### **1. Applicability of 2 CFR Part 215**

a. All provisions of 2 CFR Part 215 and all Standard Provisions attached to this cooperative Agreement/grant are applicable to the recipients and to the sub-recipients which meet the definition of "Recipient" in Part 215, unless a section specifically excludes a sub-recipient from coverage. The Recipient 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. Recipient 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

### **§ 215.41 Recipient's responsibilities.**

The Recipient is obligated to conduct such project oversight as may be appropriate, to manage 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 Recipient of the contractual responsibilities arising under its contract(s). The Recipient 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, and 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.

### **Sub Agreements**

#### **Appendix A to Part 215—Contract Provisions**

Sub-recipients, sub-awardees, and contractors have no relationship with NRC under the terms of this Cooperative Agreement/Grant. All required NRC approvals must be directed through the Recipient to NRC. See 2 CFR 215.180 and 215.41.

### **Nondiscrimination**

(This provision is applicable when work under the Cooperative Agreement/Grant 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 Recipient 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 Recipient makes certain budget modifications or undertakes particular activities. If NRC approval is required for changes in the Cooperative Agreement or Grant, 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's prior approval must be made, in writing (which includes submission by e-mail), to the designated Grants Officer 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 Recipient 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 Recipient 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 Recipient 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 Recipient must submit the SF-LLL, including those received from sub-recipients, contractors, and subcontractors, to the Grants Officer.

#### **§ 215.13 Debarment And Suspension.**

The Recipient 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 Recipient agrees that, unless authorized by the Grants Officer, it will not knowingly enter into any sub agreements or contracts under this Cooperative Agreement/Grant with a person or entity that is included on the Excluded Parties List System (<http://epls.arnet.gov>).

The Recipient further agrees to include the following provision in any subagreements or contracts entered into under this award:

'Debarment, Suspension, Ineligibility, and Voluntary Exclusion

The Recipient 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 Recipient 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 Recipient 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 Recipient to ensure compliance with these Executive Orders and laws. This provision must be included in all contracts/sub-awards issued under this Cooperative Agreement/Grant award. Recipient 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 Recipient 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 Recipient 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 Recipient'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 Recipient 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 Recipient the right to elect title and retain ownership to inventions they develop with funding under an NRC Cooperative Agreement award ("subject inventions"). In accepting an award, the Recipient 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 Recipient 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 Recipients to use this system to comply with Bayh-Dole and related intellectual property reporting requirements. The system allows for Recipient 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 Recipients, 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 Recipient uses or has used patented technology under this award without license or permission from the owner, the Recipient 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 Recipient 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 Recipient 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 Recipient employees may be copyrighted but only the part authored by the Cooperative Agreement 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 Recipient 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 Recipient 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 Recipient 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 Recipient 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 Recipient'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 Recipient 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. Recipient 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 Recipient 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 Recipient 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/Cooperative Agreements/standard forms/ffr.pdf](http://www.whitehouse.gov/omb/Cooperative%20Agreements/standard%20forms/ffr.pdf)

[http://www.whitehouse.gov/omb/Grants/standard forms/ffr instructions.pdf](http://www.whitehouse.gov/omb/Grants/standard%20forms/ffr_instructions.pdf)

The Recipient 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 Recipient may charge to the Cooperative Agreement/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 Cooperative Agreement/Grant expiration date. Any request for extension after the expiration date may not be honored.

### **Automated Standard Application For Payments (ASAP) Procedures**

Unless otherwise provided for in the award document, payments under this award will be made using the Department of Treasury's Automated Standard Application for Payment (ASAP) system < <http://www.fms.treas.gov/asap/> >. Under the ASAP system, payments are made through preauthorized electronic funds transfers, in accordance with the requirements of the Debt Collection Improvement Act of 1996. In order to receive payments under ASAP, Recipients 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. Recipients 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> Recipients 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 Cooperative Agreement/Grant -related records available to NRC or other designated officials for review or audit.

### **III. Programmatic Requirements**

#### **Performance (Technical) Reports**

a. The Recipient 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 Recipient organization 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 Recipient 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 Cooperative Agreement**

The Recipient 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 Recipient or contractor under an award, the Recipient 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 Cooperative Agreement/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**

Recipients 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, Recipient 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 Recipient 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 Recipient'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 Recipient 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 Recipients 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 Recipient 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 Recipient organization shall investigate the allegation and submit its findings to the Grants Officer. The NRC may accept the Recipient's findings or proceed with its own investigation. The Grants Officer shall inform the Recipient 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 Recipient 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 Recipient 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 [Recipient organization 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.”