

Grant and Cooperative Agreement

CHOOSE ONE:
 COOPERATIVE AGREEMENT
 GRANT

CHOOSE ONE: EDUCATION FACILITIES RESEARCH SDCR TRAINING

| | | | |
|--------------------------------------------------------------|----------------------|---------------------------------|--------------------|
| 1. GRANT/COOPERATIVE AGREEMENT NUMBER NRC-HQ-60-17-G-0033 | 2. SUPPLEMENT NUMBER | 3. EFFECTIVE DATE 06/30/2017 | 4. COMPLETION DATE |
|--------------------------------------------------------------|----------------------|---------------------------------|--------------------|

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 5. ISSUED TO NAME/ADDRESS OF RECIPIENT (No., Street, City/County, State, Zip) RECINTO UNIVERSITARIO MAYAGUEZ Attn: [REDACTED] CALL BOX 9000 MAYAGUEZ PR 006819000 | 6. ISSUED BY U.S. NRC - HQ Mailing Address: Acquisition Management Division Mail Stop: TWFN-8E06M Washington DC 20555-0001 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|

| | |
|----------------------------------------------|-----------------------------------------------------------------------------------------------|
| 7. TAXPAYER IDENTIFICATION NO. (TIN) | 9. PRINCIPAL INVESTIGATOR/ORGANIZATION'S PROJECT OR PROGRAM MGR. (Name & Phone) [REDACTED] |
| 8. COMMERCIAL & GOVERNMENT ENTITY (CAGE) NO. | |

10. RESEARCH, PROJECT OR PROGRAM TITLE
 The University of Puerto Rico Fellowship Program in Earthquake Engineering for Nuclear Facilities

11. PURPOSE
 See Schedule

12. PERIOD OF PERFORMANCE (Approximately)
 06/30/2017 through 06/29/2021

| 13A. | AWARD HISTORY | 13B. | FUNDING HISTORY |
|-----------------|---------------|--------------|-----------------|
| PREVIOUS | \$0.00 | PREVIOUS | \$0.00 |
| THIS ACTION | \$399,624.00 | THIS ACTION | \$399,624.00 |
| CASH SHARE | \$0.00 | TOTAL | \$399,624.00 |
| NON-CASH SHARE | \$0.00 | | |
| RECIPIENT SHARE | \$0.00 | | |
| TOTAL | \$399,624.00 | | |

14. ACCOUNTING AND APPROPRIATION DATA
 2017-X0200-IUPMRU-60-60D099-52-S-164-1148-4110

| PURCHASE REQUEST NO. | JOB ORDER NO. | AMOUNT | STATUS |
|----------------------|---------------|--------|--------|
| RES-17-0158 | | | |

15. POINTS OF CONTACT

| | NAME | MAIL STOP | TELEPHONE | E-MAIL ADDRESS |
|-------------------|------------------------|-----------|--------------|-----------------------------|
| TECHNICAL OFFICER | NANCY V. HEBRON-ISREAL | TWFN10B56 | 301-415-6996 | Nancy.Hebron-Isreal@nrc.gov |
| NEGOTIATOR | | | | |
| ADMINISTRATOR | M'LITA R. CARR | | 301-415-6869 | MLita.Carr@nrc.gov |
| PAYMENTS | | | | |

16. THIS AWARD IS MADE UNDER THE AUTHORITY OF:
 Pursuant to Section 31b and 141b of the Atomic Energy Act of 1954, as amended.

| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 17. APPLICABLE STATEMENT(S), IF CHECKED: <input type="checkbox"/> NO CHANGE IS MADE TO EXISTING PROVISIONS <input type="checkbox"/> FDP TERMS AND CONDITIONS AND THE AGENCY-SPECIFIC REQUIREMENTS APPLY TO THIS GRANT | 18. APPLICABLE ENCLOSURE(S), IF CHECKED: <input type="checkbox"/> PROVISIONS <input type="checkbox"/> SPECIAL CONDITIONS <input type="checkbox"/> REQUIRED PUBLICATIONS AND REPORTS |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| | |
|---------------------------------|----------------------------------------|
| UNITED STATES OF AMERICA | COOPERATIVE AGREEMENT RECIPIENT |
|---------------------------------|----------------------------------------|

| | | | |
|---------------------------------------------|--------------------|---------------------------|------|
| CONTRACTING/GRANT OFFICER M'LITA R. CARR | DATE 06/29/2017 | AUTHORIZED REPRESENTATIVE | DATE |
|---------------------------------------------|--------------------|---------------------------|------|

Grant and Cooperative Agreement

| ITEM NO. (A) | ITEM OR SERVICE (Include Specifications and Special Instructions) (B) | QUANTITY (C) | UNIT (D) | ESTIMATED COST | |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|-------------------|---------------|
| | | | | UNIT PRICE (E) | AMOUNT (F) |
| | <p>CFDA Number: 77.008</p> <p>Payment will be made through the Automated Standard Application for Payment (ASAP.gov) unless the recipient has failed to comply with the program objectives, award conditions, Federal reporting requirements or other conditions specified in 2 CFR 200.</p> <p>Payment:</p> <p style="padding-left: 40px;">ASAP GRANT FUNDS REIMBURSEMENT SYS US TREASURY</p> <p>Period of Performance: 06/30/2017 to 06/29/2021</p> | | | | |

Attachment A - Schedule

A.1 PURPOSE OF GRANT

The purpose of this Grant is to provide support to the "The University of Puerto Rico Fellowship Program in Earthquake Engineering for Nuclear Facilities" as described in Attachment B entitled "Program Description."

A.2 PERIOD OF GRANT

1. The effective date of this Grant is June 30, 2017. The estimated completion date of this Grant is June 29, 2021.
2. Funds obligated hereunder are available for program expenditures for the estimated period: June 30, 2017 – June 29, 2021.

A.3 GENERAL

- | | |
|--------------------------------|---------------------------------------------------------------------------------------------------|
| 1. Total Estimated NRC Amount: | \$399,624.00 |
| 2. Total Obligated Amount: | \$399,624.00 |
| 3. Cost-Sharing Amount: | \$000,000.00 |
| 4. Activity Title: | The University of Puerto Rico Fellowship Program in Earthquake Engineering for Nuclear Facilities |
| 5. NRC Project Officer: | Nancy Hebron-Isreal |
| 6. DUNS No.: | 175303262 |

A.4 AMOUNT OF AWARD AND PAYMENT PROCEDURES

1. The total estimated amount of this Award is \$399,624.00 for the four year period.
2. NRC hereby obligates the amount of \$399,624.00 for program expenditures during the period set forth above and in support of the Budget above. 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 Recipient in accordance with procedures set forth in the Automated Standard Application for Payments (ASAP) Procedures set forth below.

A.5 BUDGET

Revisions to the grant award budget shall be made in accordance with Revision of Grant Budget in accordance with [2 CFR § 200.308](#).

SECTION B - BUDGET CATEGORIES

| 6. Object Class Categories | GRANT PROGRAM, FUNCTION OR ACTIVITY | | | | Total (5) |
|----------------------------|-------------------------------------|---------------|---------------|---------------|---------------|
| | (1) | (2) | (3) | (4) | |
| | NRC-HQ-60-17-FOA-0001 | | | | |
| | \$ [REDACTED] | \$ [REDACTED] | \$ [REDACTED] | \$ [REDACTED] | \$ [REDACTED] |
| | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| | \$ 92,968.56 | \$ 100,468.56 | \$ 102,718.56 | \$ 103,468.56 | \$ 399,624.24 |
| 7. Program Income | \$ [REDACTED] | \$ [REDACTED] | \$ [REDACTED] | \$ [REDACTED] | \$ [REDACTED] |

Standard Form 424A (Rev. 7-97)
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ATTACHMENT B - PROJECT DESCRIPTION

I. Justification – The need for a program in earthquake engineering for nuclear facilities:

Nuclear power plants (NPPs) in the US and Japan have recently experienced strong ground motions exceeding the original design values. In 2011, the Mineral-Virginia earthquake imposed ground accelerations to the North Anna NPP exceeding the design basis earthquake (DBE) and causing the initiation of safety shutdown procedures. Other documented events involving NPPs are the Fukushima Daiichi NPP during the 2011 Tohoku earthquake and the Kashiwazaki-Kariwa NPP struck by the 2007 Niigata Earthquake, with this last one inducing seismic accelerations at the base of the reactor building exceeding twice its design level considerations (Takada 2012). Moreover, the US Nuclear Regulatory Commission (NRC) determined that the estimates of seismic hazard for many operating NPPs in Central and Eastern United States (CEUS) has increased from earlier seismic hazard evaluations (US-NRC 2012, Hardy et al. 2015).

These incidents, and the need to account for newly available seismic data, triggered a program that requires site seismic hazard re-evaluation for all US operating NPPs and that may require some plants to perform a seismic risk analysis to determine if the plant's seismic design provides adequate seismic margin (Li and Manoly 2012, EPRI 2013). The objective of the proposed fellowship program is to formally train the fellows in structural/geotechnical earthquake engineering focusing on aspects currently affecting the nuclear industry.

II. Description of the proposed program: The proposed program builds on the PIs lessons learnt from the proven successful - University of Puerto Rico Fellowship Program in Nuclear Structural Engineering (2012-2017). It is envisioned that through this new program 4 to 6 outstanding students will be supported to complete MS and PhD degrees. Every effort will be made to provide the selected students with the required knowledge and skills to manage current issues in civil infrastructure hosting existing and new nuclear facilities. In order to deliver a holistic well-grounded education, the fellows would be engaged on a comprehensive training plan that synergistically combines: (1) mentored research work on topics of current relevance to the nuclear industry, (2) enrollment on carefully chosen graduate courses, (3) interaction with leading research/professional-practice nuclear related organizations, (4) participation on local seminars and (5) participation on world and/or national conferences:

(1) Mentored research work: The seismic design and assessment of nuclear facilities comprise more exhaustive and demanding analyses than that prescribed in conventional seismic standard and codes. In addition to advance the current state of the practice, the mentored research component is aimed to develop in the fellows the high analytical skills required to satisfactorily perform once employed in the nuclear industry. The PIs have already identified some relevant research areas that will form the basis of the fellows' dissertation topics. To ensure the completion of a relevant thesis, each fellow would be assigned an advisor and a graduate committee with demonstrated expertise in the research topic assigned. The preliminary research areas are listed next, specific topics to be addressed would be defined in association with our partners in the industry and national labs: site response analyses based on random vibration theory, soil-structure interaction effects on seismic soil pressures on embedded structures, significance of high frequency ground motions in the evaluation of nuclear power plants, beyond design earthquake considerations, soil layering inhomogeneity and topographic effects on seismic wave transmission, generation of near-fault pulse-like records compatible with a design spectrum, accounting for loading history and aging effects on the design and assessment process.

(2) Graduate coursework: Following the proven successful training framework from our previous fellowship program, the fellows would be asked to enroll on a selection of courses that harmonize and complement each of their research projects. Rather than create new ones, some appropriate existing courses will be modified to include topics and examples relevant to the analysis and design of nuclear facilities. The courses that the fellows will be required to take will vary depending on each dissertation topic, but they are likely to be selected from the following existing courses at UPRM: Dynamics of Structures, Advances Structural Dynamics, Geotechnical Earthquake Engineering, Soil Dynamics, Finite Element Analysis of Structures, Nonlinear Analysis of Structures, Structural Earthquake Engineering, Engineering Seismology, Plates and Shells, Structural Reliability, Applied Signal Processing for Engineering Mechanics and graduate level design courses (Reinforced Concrete and Steel Structures).

(3) Interaction with leading research/professional-practice nuclear related organizations: To provide the graduate fellows acquaintance with the state-of-the-art research on seismic assessment of nuclear facilities and exposure to the nuclear industry, we have partnered with Idaho National Laboratory (INL) and Rizzo Associates. The Seismic Research Group (SRG) at INL will offer technical support and research guidance to the UPRM research team, and will provide on-site living expenses for selected fellowship recipients to internship at INL during the summer. Rizzo will provide technical support and research guidance with emphasis on industry trends and the state of practice in the fields of nuclear structural and geotechnical engineering. We are confident that the key partnerships established will guarantee that the research performed would be of actual relevance and benefits the nuclear industry broadly.

(4) Participation on local seminars: Compulsory annual seminars will be organized where the fellows will have the opportunity to share their latest research findings. These small seminars would provide a space for the fellows to improve their presentation skills and share research experiences with other graduate students and faculty.

(5) Participation on world and/or national conferences: This component will accomplish a two-fold objective: (1) to incentive the writing and publication of scientific articles, which is a challenging and time demanding task, especially for beginner researchers; and (2) to disseminate the fellows latest research outcomes and receive valuable feedback from research and industry leaders.

III. Recruitment activities and marketing strategies: The fellowship program will be marketed in the entire island to attract a large and diverse pool of applicants. There are three universities in Puerto Rico offering bachelor degrees in engineering; however, UPRM is the only one with doctorate programs in Civil and Mechanical Engineering and a MS program in Materials. A good percent of the students graduating from these schools have developed excellent analytical skills and the desire to continue on a graduate program. However, due to the limited support available some of them accept entry-level industry jobs or are recruited by out-of-state schools with substantial financial support.

The proposed fellowship program presents a unique opportunity to attract talented students to form highly qualified professionals in the area of nuclear earthquake engineering. A presentation explaining the program, its advantages and requirements will be prepared by the PIs. The presentation will be offered at UPRM and open to students and professors from the other universities in Puerto Rico. The program and presentation schedule will be advertised through a broadcast e-mail to the student body at each university. A user-friendly website for the fellowship program will be developed to enhance the recruiting efforts. At UPRM additional announcements

will be targeted to the students attending the elective undergraduate courses in areas related to this proposal. With an almost 100% Hispanic enrollment, a large majority of applicants is warranted to be Hispanic minorities. In addition, women participation will be strongly encouraged by the PI, who has become a role model for young Hispanic women pursuing engineering careers at UPRM.

IV. Selection process: The selection process will be managed by a committee composed by the PIs and the graduate studies coordinators. Fellowship recipients will be selected based on their academic excellence and demonstrated research motivation. To accomplish this, each participant would be initially required to submit an official transcript and an essay summarizing past research experiences and long term career goals. Top candidates will then be interviewed by the selection committee to decide on the final recipients. Specifically, the criteria used to rank the applicants includes:

- Undergraduate and graduate (when available) GPAs (in all cases must be above 3.3).
- Demonstrated research motivation through documented undergraduate research experiences.
- Quality of the essay provided: clarity of long term career goals.
- Positive attitude towards challenging projects and potential as graduate student (assessed through the in-person interview).
- Financial need and contribution to diversity.

The application process and the selection criteria will be clearly described in the program webpage. Each student selected must accept a service agreement with NRC where they commit to serve 6 months in nuclear-related employment for each full or partial year of academic support.

V. Management and administrative structure: The PIs are responsible for the overall management of the fellowship program, including the recruitment activities, selection process, coordination of the summer internships and fellows' conferences attendance. A fellowship committee composed of the PIs and graduate committee members of the students will approve the coursework and research plans developed for each recipient and examine the compliance of the recipients with their study plans. The PIs will work closely with the Department Head and the graduate studies coordinators to ensure that the objectives of the fellowship program are successfully accomplished. The semi-annual and final performance reports will detail, in addition to the NRC required performance metrics, all the progress and challenges encountered during the reporting period. The financial reports will be prepared within the Research and Development Center which is the research support organization at UPRM.

VI. Evaluation plan: An evaluation plan would be implemented to measure the project's impact and the effectiveness of proposed activities in attracting, preparing, and retaining individuals in nuclear careers. The proposed evaluation plan comprises quantitative measures enhanced through qualitative interviews aimed to explore specific aspects of the program from the fellows' perspective. This evaluation would be included in each semi-annual report in addition to the compulsory metrics required by the agency:

Evaluation of recruitment activities: the effectiveness of the recruitment activities and marketing strategies would be estimated based on the documented attendance to the recruitment activities and through a survey performed to the candidates during the selection interview. Specific metrics include: number of students reached by each marketing strategy, students attending the recruitment activities, number of applications received, number of fellowships granted, number of fellowships granted to underrepresented minorities in engineering.

Evaluation of the academic/professional preparation: the quality of the academic and professional training provided to the fellows would be evaluated based on the fellows’ academic performance in their graduate coursework, quality of their research work and performance at seminars, conferences and internships. The compulsory annual seminars previously described will serve to evaluate the fellows’ progress and quality of their research. After each conference and internship, a qualitative evaluation of the student performance would be completed between the fellow, the PIs and the internship host or accompanying faculty. After each fellow degree completion or if a fellow drops out of the program, an exit interview and standardized survey would be implemented to gather the fellow feedback on the fellowship program. Specific metrics include: average GPA of the fellows, number of internships, presentations, average degree completion time, number of peer reviewed journal articles, number of referee conference proceedings.

Evaluation of the retention capacity: Student retention capacity would be evaluated based on the percentage of fellows that completed their degree. The capacity of the program to retain individuals in nuclear careers would be measured based on the percentage of fellows that pursue a career in nuclear related industries, research or academia after graduation. The PIs would keep track of the fellows’ professional careers and report to NRC at least until the service agreements are fulfilled. To help on the accomplishment of this last objective, we will take advantage of the partnerships established (INL and Rizzo Associates) and the job fairs the UPRM Placement Office organizes each semester where leading nuclear industry related agencies and companies are usually present (e.g. Federal Energy Regulatory Commission FERC, Nuclear Regulatory Commission NRC, Bechtel, Dominion, Southern Company). Finally, the fellows will be required to complete a report 3 months before their schedule thesis defense summarizing their job seeking experience in nuclear related industry or academia.

VII. Fellowship benefits: In order to attract and retain the most talented students, an attractive “fellowship package” has been designed. In addition to cover tuition and other fees for the two or four years (MS or PhD) duration of the fellowship, each fellow will be provided with a monthly stipend. In years 2, 3 and 4 the fellows will have the opportunity to present their work in national or international conferences with all the costs being covered by the program. Based on our previous experience and aiming to encourage the pursuing of PhD degrees, students that decide to enroll in the PhD program will receive a higher monthly stipend [redacted] than MS students [redacted]. Table 1 presents a schedule of the fellowship costs for students who would be participating in this program. The actual number of students to be supported would depend on the graduate plan (MS or PhD) the fellows are enrolled, based on our previous experience we expected to support around 6 students. Notice that most of the requested funding (83% of the total) will go directly to support the fellows in the form of tuition fees payment, monthly stipend and travel support.

Table 1. Schedule of fellowship costs

| | year 1 | year 2 | year 3 | year 4 | summary |
|------------|------------|------------|------------|------------|------------|
| [redacted] | [redacted] | [redacted] | [redacted] | [redacted] | [redacted] |
| [redacted] | [redacted] | [redacted] | [redacted] | [redacted] | [redacted] |
| [redacted] | [redacted] | [redacted] | [redacted] | [redacted] | [redacted] |
| [redacted] | [redacted] | [redacted] | [redacted] | [redacted] | [redacted] |

*These are additional tuition fees; the University will provide a waiver for the credits fees.

VIII. Fellowship program as an integrated element of a strategic plan: Implementation of the proposed fellowship program will perfectly complement current research and educational efforts in nuclear engineering education at UPRM. The university has been recently awarded two NRC Faculty Development Plans to enable three professors to establish a strong foundation in

research, teaching and professional service related to the design and analysis of nuclear facilities. Moreover, the commitment of the university is demonstrated with the release time provided to the PIs (22%, i.e. 3 credits per year) during the 4-years duration of the grant. This release time would be used by the PIs to design, lead and support the research projects and master/doctoral dissertations by the fellows, ensuring in this way the timely completion and relevance to the nuclear industry of the projects. Moreover, the university would also provide a waiver for the fellows' tuition so that more funds can be allocated for the fellows' stipends and travel.

IX. Key factors that guarantee the successful implementation of the proposed program:

(1) Demonstrated capacity of the institution to effectively conduct the program: In the last twenty years, UPRM has been evolving into a research oriented institution through the creation of new graduate programs and research centers. UPRM is a co-educational, *bilingual*, and non-sectarian school and holds membership in the Middle States Commission on Higher Education since 1946. The school of engineering of UPRM only admits the top 5% of the high school graduating classes; all the engineering programs are ABET-accredited *five-year* programs. The graduates are actively recruited by US companies and federal agencies, including the Nuclear Regulatory Commission. Moreover, the capacity and ability of the PIs and UPRM to effectively conduct the program is amply demonstrated by the results from a previous fellowship program ending this year. Through this program a total of 7 fellows were/are being supported through their graduate studies, 3 already completed their MS degrees and are working in the nuclear industry, the other 4 (2MS and 2 PhD are expected graduate this year). In addition, 4 peer-reviewed journal, 7 national/international conference articles and 1 national laboratory research report have been produced as part of the previous program.

(2) Strong student support: The proposed fellowship package and training program would ensure that the fellows receive the support required, both economic and academic, to complete their degrees and make a significant contribution to the nuclear industry. Economically, the fellowship will cover all tuition fees and provide a monthly stipend above the university estimated costs of living, so that the fellows would not have to worry about finding additional support and can focus on their research/academic work. Academically, the proposed training program was designed to form well-rounded high qualified professionals through a combination of mentored research, graduate coursework, and interaction with leading professionals through consulting, internships and conferences.

(3) Robust evaluation plan: The proposed evaluation plan was meticulously design to evaluate the efficiency of each of the activities to be executed as part of the program, from the marketing and recruiting strategies to the capacity to accommodate and retain the fellows in the nuclear industry.

(4) Sustainable program with dedicated institutional support: This fellowship program will complement already existing research and teaching initiatives in the area of nuclear structural and geotechnical engineering at the University of Puerto Rico at Mayaguez (UPRM). Moreover, it was designed to encompass and leverage research efforts at two current UPRM NRC faculty development programs in related areas. The University commitment is demonstrated through the release time provided to the faculty to engage in previous, current and the proposed program, and the administrative support provided. Moreover, by no subjecting the fellows' stipends to indirect costs and waiving the tuition credit fees, a larger number of outstanding students from underrepresented minorities can benefit from the program.

(5) Innovation demonstrated through key partnerships: We have established key partnerships with Idaho National Laboratory (INL) and Rizzo Associates. At INL we would be working with the Seismic Research Group (SRG) - a team of experts aiming to provide the Department of Energy and industry partners with advanced, verified and validated methods and tools that provide best-estimate predictions of nuclear facility response during and after external hazard events. Rizzo Associates has served the nuclear industry for more than 30 years, both internationally and in the United States. Rizzo has a multidisciplinary team of experts specializing in all aspects of the civil engineering and earth sciences fields for the power generation industry. These key partnerships would provide technical support and research guidance to guarantee that: (1) the training received by the fellows is aligned with current industry trends and the state of practice, and (2) the fellows research is of actual relevance and benefit the nuclear industry broadly. Moreover, selected fellows would have the opportunity to internship at INL during the summer.

ATTACHMENT C – STANDARD TERMS AND CONDITIONS

The Nuclear Regulatory Commission's Standard Terms and Conditions for U.S. Nongovernmental Recipients

Preface

This award is based on the application submitted to, and as approved by, the Nuclear Regulatory Commission (NRC) under the authorization [42 U.S.C. § 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 grant or cooperative agreement. The following also apply:

- 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 Part 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards](#).

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 (E.O.), Office of Management and Budget (OMB) Circulars, the NRC's Mandatory Standard Provisions, special award conditions, and standard award conditions.

Certifications and Representations: These terms incorporate the certifications and representations required by statute, executive order, or regulation that were submitted with the SF424B application through [GRANTS.GOV](#).

I. Mandatory General Requirements

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

1. Applicability of 2 CFR Part 200

All provisions of 2 CFR Part 200 and all Standard Provisions attached to this grant/cooperative agreement are applicable to the Recipient and to sub-recipients which meet the definition of "Recipient" in 2 Part [§200.86](#), 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 D](#) of [2 CFR Part 200](#) and include this term in lower-tier (sub-award) covered transactions.

Recipients must comply with monitoring procedures and audit requirements in accordance with [2 CFR Part 200, Subpart F—AUDIT REQUIREMENTS](#).

2. Award Package

The Recipient is obligated to conduct project oversight as may be appropriate, to manage the funds with prudence, and to comply with the provisions outlined in [2 CFR Part 200](#). Within this framework, the Principal Investigator (PI) named on the award face page, 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, and is subject to a refund of unexpended grant funds to the NRC.

The non-Federal entity alone must be responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements related to its grant award. These issues include, but are not limited to, source evaluation, protests, disputes, and claims. These standards do not relieve the non-Federal entity of any financial or fiduciary responsibilities or obligations arising under its grant, including sub-contracts and sub-awards, or any other contractual or financial obligation. The Federal awarding agency will not substitute its judgment for that of the non-Federal entity unless the matter is primarily a Federal concern. Violations of law will be referred to the local, State, or Federal authority having proper jurisdiction. See [2 CFR § 200.318\(k\)](#), General Procurement Standards.

Subawards

[Appendix II to Part 200](#) Contract Provisions for Non-Federal Entity Contracts Under Federal Awards

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 Recipient to NRC. See [2 CFR § 200.318](#).

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.

The Recipient agrees to comply with the non-discrimination requirements below:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. §§ 2000d et seq.), which prohibits discrimination on the grounds of race, color, or national origin in any program or activity receiving federal financial assistance.
- Title IX of the Education Amendments of 1972 (20 U.S.C. §§ 1681 et seq.), which prohibits discrimination on the basis of sex in any education program or activity receiving federal financial assistance.

- Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of disability in any program or activity receiving federal financial assistance.
- The Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101 et seq.), which prohibits discrimination on the basis of age in any program receiving federal financial assistance.
- The Americans with Disabilities Act of 1990 (42 U.S.C. §§ 12101 et seq.), which prohibits recipients from discriminating on the basis of disability in employment (Title I); State and local government services (Title II); and places of public accommodation and commercial facilities (Title III).
- Parts II and III of E.O. 11246, as amended by E.O. 11375, 11478, 12086, 12107, 13279, 13665, and 13672, which prohibits federal contractors and federally assisted construction contractors and subcontractors, who do over \$10,000 in Government business in one year, from discriminating in employment decisions on the basis of race, color, religion, sex, or national origin and requires that government contractors take affirmative action to ensure that equal opportunity is provided in all aspects of their employment.
- E.O. 13166, "Improving Access to Services for Persons with Limited English Proficiency," which clarifies that national origin discrimination under Title VI includes discrimination on the basis of limited English proficiency (LEP) and requires that the recipient take reasonable steps to ensure that LEP persons have meaningful access to programs and activities.
- Any other applicable non-discrimination law(s).

Generally, Title VII of the Civil Rights Act of 1964, 42 U.S.C. § 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 U.S.C. § 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.

Applicants must ensure that individuals selected as beneficiaries of support under this grant meet the legal requirements consistent with Supreme Court Decisions including *Fisher*, *Gratz*, and *Grutter*.

Based on the pre-award compliance review conducted by NRC's Small Business and Civil Rights Office (SBCR), your institution is placed in a periodic status pending resolution of issues/concerns discussed with your Authorized Representative during the review. Within 60 days of the effective award date, SBCR will conduct a periodic review to ensure compliance with applicable Civil Rights statutes. SBCR will notify, within the 60 days, the institution's Authorized Representative as to the results of the review and requirements, if any, for compliance. The institution's cooperation with SBCR is essential. The continued eligibility for Federal financial assistance is conditioned upon compliance with anti-discrimination regulations.

Modifications/Prior Approval

NRC's 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

grant or cooperative agreement, it must be requested and obtained from the NRC Grants Officer in advance of the change or obligation of funds. All requests for NRC prior approval, including requests for extensions to the period of performance, must be made, in writing (which includes submission by e-mail), to the designated Grants Officer at least 30 days before the proposed change. The request must be signed by the authorized organizational official. Failure to obtain prior approval, when required, from the NRC Grants Officer, may result in the disallowance of costs, or other enforcement action within NRC's authority.

Lobbying Restrictions

The Recipient will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§ 1501-1508 and 7324-7328) which limits the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

The Recipient will comply with provisions of 31 U.S.C § 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 shall submit, at the time of application, a completed "Certification Regarding Lobbying" form, regardless of dollar value.

If applicable, the Recipient receiving in excess of \$100,000.00 in Federal funding shall submit a completed Standard Form (SF-LLL), "Disclosure of Lobbying Activities" for any persons engaged in lobbying activities, as discussed at 31 U.S. Code § 1352 – Limitation on use of appropriated funds to influence certain Federal contracting and financial transactions. The form concerns 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. If the Recipient must submit the SF-LLL, including those received from sub-recipients, contractors, and subcontractors, to the Grants Officer.

Debarment And Suspension – (See [2 CFR Part 180](#); [2 CFR § 200.205](#); [2 CFR § 200.113](#); and [2 CFR Part 200, Appendix II.](#))

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, 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 the recipient's 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); or

(4) Have had one or more public transactions (Federal, State, or local) terminated for cause or default within the preceding three years.

(5) The Recipient agrees that, unless authorized by the Grants Officer, it will not knowingly enter into any subaward or contracts under this grant/cooperative agreement with a person or entity that is not included on the System for Award Management (SAM) (<https://www.sam.gov>).

The Recipient further agrees to include the following provision in any subaward 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 [2 CFR Part 180](#) and [2 CFR Part 200](#).

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 U.S.C. §§ 8101-8106](#).

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 grant/cooperative agreement.

The Recipient must comply with E.O. 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:

[Implementation of Executive Order 13224 Blocking Property and Prohibiting Transactions With Persons Who Commit, Threaten To Commit, or Support Terrorism amended by E.O. 13268, 13284, and 13372.](#)

Procurement Standards - 2 CFR §§ 200.318-200.326

Sections 200.318 - 200.326 set forth standards for use by Recipients 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 will be imposed by the Federal awarding agencies upon Recipients, unless specifically required by Federal statute, executive order, or approved by OMB.

Travel and Transportation

Travel must be in accordance with the Recipient's Travel Regulations or the U.S. Government Travel Policy and Regulations at: <http://www.gsa.gov/portal/category/21222> and the per diem rates set forth at: <http://www.gsa.gov/portal/content/104877>, absent Recipient's travel regulations. Travel and transportation costs for the grant must be consistent with provisions as established in [2 CFR § 200.473-474](#).

All other travel, domestic or international, must not increase the total estimated award amount for the grant.

The Recipient will comply with the provisions of the Fly America Act (49 U.S.C 40118), as implemented at 41 CFR §§ 301-10.131 through 301-10.143.

Federal funds may not be used to travel to countries identified as "Foreign Policy Restricted Countries", as identified by the U.S. Department of State or the U.S. Agency for International Development.

Property Standards

Property standards of this award shall follow provisions as established [2 CFR §§ 200.310-200.316](#).

Intangible Property

Intangible and intellectual property of this award shall generally follow provisions established in [2 CFR § 200.315](#).

Inventions Report - The Bayh-Dole Act (P.L. 96-517) affords Recipients the right to elect and retain title to inventions they develop with funding under an NRC grant award ("subject inventions"). In accepting an award, the 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.

Patent Notification Procedures - If the NRC or its 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, E.O.12889 requires NRC to notify the owner. 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 imply 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, such as data, databases or software are determined by [Subpart D](#) of [2 CFR Part 200](#). 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 Recipient is protected because, under [17 U.S.C. § 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 U.S.C. § 105](#).

Record Retention and Access

Recipient shall follow established provisions in [2 CFR §§ 200.333-337](#).

Conflict Of Interest

Conflict of Interest standards for this award will follow the Organizational Conflict of Interest (OCOI) requirements set forth in Section 170A of the Atomic Energy Act of 1954, as amended, and provisions set forth at [2 CFR § 200.112](#), Conflict of Interest.

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 Acquisition Management Division, unless otherwise delegated, who shall appoint an intra-agency Appeal Board to review a recipient appeal of an agency action, if required, which will consist of the program office director, the Deputy Director of Office of Administration, and the Office of General Counsel, or their designees.
- 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.

Remedies for Noncompliance

Termination of this award will follow provisions as established and described above in "Dispute Review Process" in [2 CFR §§ 200.338-342](#).

Performance and Financial Monitoring and Reporting - 2 CFR §§ 200.327-329

Recipient Financial Management systems must comply with the provisions in [2 CFR § 200.302](#).

- Payment – [2 CFR § 200.305](#)
- Cost Share or Matching – [2 CFR § 200.306](#)
 - Recipients are to be careful with providing excessive cost share or match since at the end of the grant, if the identified match has not been provided, then a portion of the federal share may be required to be returned to the Government.
- Program Income – [2 CFR § 200.307](#)
 - Earned program income, if any, will be added to funds committed to the project by the NRC and Recipient and used to further eligible project or program objectives or be deducted from the total project cost for the grant, as directed by the Grants Officer or indicated in the terms and conditions of the award.
- Revision of Budget and Program Plans – [2 CFR § 200.308](#)
 - The Recipient is required to report deviations from the approved budget and program descriptions in accordance with – [2 CFR § 200.308\(b\)](#) and request prior written approval from the Project Officer and the Grants Officer.
 - The Recipient is not authorized to re-budget between direct costs and indirect costs without written prior approval of the Grants Officer.
 - The Recipient is authorized to transfer funds among direct cost categories up to a cumulative 10 percent of the total approved budget. The Recipient is not allowed to transfer funds if the transfer would cause any Federal appropriation to be used for purposes other than those consistent with the original intent of the appropriation.
 - Allowable Costs – [2 CFR §§ 200.403](#)
- See section [2 CFR §§ 200.330-332](#) for Subrecipient Monitoring and Management.

FEDERAL FINANCIAL REPORTS

Federal Financial Reports (SF-425) are semi-annually, for the periods ending March 31 and September 30. Reports are due within 30 calendar days following the end of the reporting period and must be emailed to the Project Officer at the email addressed indicated in the Notice of Award, and to the Grants Officer at: Grants_FFR.Resource@nrc.gov. (NOTE: There is an underscore between Grants and FFR in the email address.) The SF-425 form and instructions are available at the following URL: http://www.whitehouse.gov/omb/grants_forms/.

PERFORMANCE PROGRESS REPORTS

The performance (technical) reports indicated below are subject to [2 CFR §200.328](#).

Fellowship Programs

Performance Progress reports must be submitted annually, for the period ending September 30, or any portion thereof, regardless of the award date. Reports are due within 30 days following the end of each reporting period and must be emailed to the Project Officer at the email addressed indicated in the Notice of Award, and to the Grants Officer at: Grants_PPR.Resource@nrc.gov. (NOTE: There is an underscore between Grants and PPR in the email address.)

Final Reports - The Recipient is required to submit final reports, both Financial (SF-425) and Performance (SF-PPR, SF-PPR-B, SF-PPR-E) within 90 days of the grant expiration. In addition to these reports, a final SF-428, Tangible property report, is also required, if applicable. The final PPR (for Scholarship, Fellowship, and Trade School and Community College Scholarship awards) must include the names of all students with up to date contact information (mailing address, telephone/cell phone, email address). The reports must be emailed to the Project Officer at the email addressed indicated in the Notice of Award, and to the Grants Officer at: Grants_FFR.Resource@nrc.gov and Grants_PPR.Resource@nrc.gov. (NOTE: There is an underscore between Grants and FFR and Grants and PPR in the email addresses.)

For grant awards that are modified to add additional Program Descriptions, the recipient is required to address the applicable grant performance metrics associated with all programs. Further, these metrics should be broken out by individual program (e.g. Program A and Program B). This can be done utilizing Block 10, Performance Narrative, of the SF-PPR form. If this block does not have sufficient space, additional pages will be accepted. Sf-PPR-B and SF-PPR-E should be used to address both programs as well.

Period of Performance – [2 CFR § 200.309](#)

The recipient may charge to the Federal award only allowable costs incurred during the period of performance and any costs incurred before the NRC or pass-through entity made the Federal award that was authorized by the NRC or pass through entity.

Unless otherwise authorized in [2 CFR Part 200](#) or by special award condition, any extension of the award period can only be authorized by the Grants Officer in writing. Assurances of funding from other than the Grants Officer shall not constitute authority to obligate funds for programmatic activities beyond the expiration date.

The NRC Grant Officer may authorize a no cost extension of the period of performance. The recipient must submit a no cost extension request no less than 30 days prior to the award end date. Any request for a no cost extension after the grant has expired will not be approved. However, the NRC has no obligation to provide any additional prospective or incremental funding. Any modification of the award to increase funding and/or to extend the period of performance is at the sole discretion of the NRC.

Automated Standard Application For Payments (ASAP) Procedures

Unless otherwise stated, Recipient payments are made using the Department of Treasury's Automated Standard Application for Payment (ASAP) system, ASAP.gov, through preauthorized electronic funds transfers. To receive payments, 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 is required to make ASAP withdrawals: (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).

II. Audit Requirements

Audits

Organization-wide or program-specific audits are performed in accordance with the Single Audit Act of 1996, as amended, and as implemented by [2 CFR Part 200, Subpart F—AUDIT REQUIREMENTS](#). Recipients are subject to the provisions of this subpart if they expend \$750,000 or more in a year in Federal awards. See [2 CFR 200.501](#).

The Form SF-SAC and the Single Audit Reporting packages for fiscal periods ending on or after January 1, 2008 are submitted online, as follows:

1. Create the recipient's 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; and
5. Click "Submit."

Organizations expending less than \$750,000 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

The recipient is responsible for providing documentation to the NRC that tracks each student's progress in achievement of the academic program for which federal funds were provided. This includes: (1) ensuring the service agreement is signed by the student prior to providing support; (2) providing the NRC with student contact information upon student entry into the program, upon completion or withdrawal from the program, and upon request by the NRC; and (3) monitoring the student's fulfillment of the service agreement for the duration of the award. The NRC shall be notified immediately if a student is not fulfilling the academic program or the service agreement.

Grant Performance Metrics

The Office of Management and Budget requires all Federal Agencies providing funding for educational scholarships and fellowships as well as other educational related funding to report on specific metrics. These metrics are part of the Academic Competitiveness Council's (ACC) 2007 report and specifically relates to Science, Technology, Engineering, and Mathematics (STEM) curricula.

As part of the OMB requirements indicated above (for metric reporting), the recipient shall address the following questions and submit responses with the required progress reports:

Fellowship Metrics:

1. How many graduate students have been sponsored by NRC funding?
 - a. Response is the number of students, for this reporting period and cumulative to the grant.
2. How many students, supported by NRC funding, have received M.S. or equivalent degrees?
 - a. Response is the number of students, for this reporting period and cumulative to the grant.

3. How many students, supported by NRC funding, have received Ph.D. or equivalent degrees?
 - a. Response is the number of students, for this reporting period and cumulative to the grant.
4. How many students, supported by NRC funding, have accepted a job and are employed in the nuclear industry?
 - a. Response is the number of students, for this reporting period and cumulative to the grant.
5. How many items have students produced, for example, Professional Journal articles, publications, patents, or conference reports?
 - a. Response is the type and number of items (not a bibliography), for this reporting period and cumulative to the grant.

As part of the PPR, include the following information for each student supported under this award:

1. Student Name
2. Years of Support
3. Cumulative Support in Dollars
4. Estimated Graduation Date
5. Status
6. Up to date student contact information (mailing address, telephone/cell phone, email address) for students no longer participating in the program, i.e. transferred programs, graduated, withdrew, etc.
7. Up to date student contact information, for all students at time of grant expiration, i.e. Final PPR.

Examples of status could be:

“Employed in Nuclear Industry”, if so, where;

“Looking for employment”, if so, how long;

“Deferred due to continuing education”, if so, what degree;

“Employed by Non-Nuclear”, if so, where; and

“Dropped out of program”

Unsatisfactory Performance

Failure to perform the work in accordance with the terms of the award and maintain at least a satisfactory performance rating may result in designation of the Recipient as high risk and the assignment of special award conditions. Further action may be required as specified in the standard term and condition entitled “Remedies for Noncompliance.”

Failure to comply with the award provisions may result in a negative impact on future NRC funding. In addition, the Grants Officer may withhold payments; change the method of payment from advance to reimbursement; impose special award conditions; suspend or terminate the grant.

Other Federal Awards With Similar Programmatic Activities

The Recipient will immediately notify the Project Officer and the Grants Officer in writing if after award, other financial assistance is received to support or fund any portion of the program description stated in the NRC award. NRC will not pay for costs that are funded by other sources.

Prohibition Against Assignment By The Recipient

The Recipient will not transfer, pledge, mortgage, or otherwise assign the award, or any interest to the award, or any claim arising under the award, to any party, banks, trust companies, or other financing or financial institutions without the written approval of the Grants Officer.

Site Visits

The NRC, through authorized representatives, has the right to make site visits to review project accomplishments and management control systems and to provide technical assistance as 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 reasonable access to all facilities and provide necessary assistance for the safety and convenience of the Government representative in the performance of his/her official duties.

IV. Additional Requirements

Criminal and Prohibited Activities

The Program Fraud Civil Remedies Act ([31 U.S.C. §§ 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).

False statements ([18 U.S.C. § 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.

False Claims Act ([31 U.S.C. § 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.

Copeland “Anti-Kickback” Act ([18 U.S.C. § 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 encouraged to purchase American-made equipment and products with funding provided under this award.

Increasing Seat Belt Use in the United States

E.O. 13043, amended by E.O. 13652, requires Recipients to encourage employees and contractors to enforce on-the-job seat belt policies and programs when operating company-owned, rented or personally-owned vehicle.

Federal Leadership of Reducing Text Messaging While Driving

E.O. 13513 requires Recipients to encourage employees, sub-awardees, and contractors to adopt and enforce policies that ban text messaging while driving company-owned, rented vehicles or privately owned vehicles when on official Government business or when performing any work for or on behalf of the Federal Government.

Federal Employee Expenses

Federal agencies are 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 Recipients or applicants regardless of the source.

Minority Serving Institutions (MSIs) Initiative

Pursuant to E.O.s 13230 and 13270, [amended by E.O. 13316](#) and [13385](#), 13532, 13592, 13555, 13515, and 13621, 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 name] under award [number] from [name of operating unit], Nuclear Regulatory Commission. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the view of the [name of operating unit] or the US Nuclear Regulatory Commission.”

Trafficking In Victims Protection Act Of 2000 (as amended by the Trafficking Victims Protection Reauthorization Act of 2003)

Section 106(g) of the Trafficking In Victims Protection Act Of 2000 (as amended as amended, directs on a government-wide basis that:

“...any grant, contract, or cooperative agreement provided or entered into by a Federal department or agency under which funds are to be provided to a private entity, in whole or in part, shall include a condition that authorizes the department or agency to terminate the grant, contract, or cooperative agreement, without penalty, if the recipient or any subrecipient, or the contractor or any subcontractor (i) engages in severe forms of trafficking in persons or has procured a commercial sex act during the period of time that the grant, contract, or cooperative agreement is in effect, or (ii) uses forced labor in the performance of the grant, contract, or cooperative agreement.” (See 22 U.S.C. §7104(g).)

EXECUTIVE COMPENSATION REPORTING

2 CFR § 170.220 directs agencies to include the following text to each grant award to a non-federal entity if the total funding is \$25,000 or more in Federal funding.

Reporting Subawards and Executive Compensation.

a. Reporting of first-tier subawards.

1. *Applicability.* Unless you are exempt as provided in paragraph d. of this award term, you must report each action that obligates \$25,000.00 or more in Federal funds that does not include Recovery funds (as defined in section 1512(a)(2) of the American Recovery and Reinvestment Act of 2009, Pub. L. 111–5) for a subaward to an entity (see definitions in paragraph e. of this award term).

2. *Where and when to report.*

i. You must report each obligating action described in paragraph a.1. of this award term to <http://www.fsrs.gov>.

ii. For subaward information, report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on November 7, 2010, the obligation must be reported by no later than December 31, 2010.)

3. *What to report.* You must report the information about each obligating action that the submission instructions posted at <http://www.fsrs.gov> specify.

b. Reporting Total Compensation of Recipient Executives.

1. *Applicability and what to report.* You must report total compensation for each of your five most highly compensated executives for the preceding completed fiscal year, if—

i. the total Federal funding authorized to date under this award is \$25,000.00 or more;

ii. in the preceding fiscal year, you received—

(A) 80 percent or more of your annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at [2 CFR § 170.320](#) (and subawards); and

(B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at [2 CFR § 170.320](#) (and subawards); and

iii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 ([15 U.S.C. 78m\(a\), 78o\(d\)](#)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/excomp.htm>.)

2. *Where and when to report.* You must report executive total compensation described in paragraph b.1. of this award term:

i. As part of your registration profile at <http://www.sam.gov> .

ii. By the end of the month following the month in which this award is made, and annually thereafter.

c. *Reporting of Total Compensation of Subrecipient Executives.*

1. *Applicability and what to report.* Unless you are exempt as provided in paragraph d. of this award term, for each first-tier subrecipient under this award, you shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if—

i. in the subrecipient's preceding fiscal year, the subrecipient received—

(A) 80 percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at [2 CFR § 170.320](#) (and subawards); and

(B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and subawards); and

ii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 ([15 U.S.C. 78m\(a\), 78o\(d\)](#)) or section 6104 of the Internal Revenue Code of 1986. (To

determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>.)

2. *Where and when to report.* You must report subrecipient executive total compensation described in paragraph c.1. of this award term:

i. To the recipient.

ii. By the end of the month following the month during which you make the subaward. For example, if a subaward is obligated on any date during the month of October of a given year (*i.e.*, between October 1 and 31), you must report any required compensation information of the subrecipient by November 30 of that year.

d. *Exemptions*

If, in the previous tax year, you had gross income, from all sources, under \$300,000.00, you are exempt from the requirements to report:

i. Subawards,

and

ii. The total compensation of the five most highly compensated executives of any subrecipient.

e. *Definitions.* For purposes of this award term:

1. *Entity* means all of the following, as defined in 2 CFR Part 25:

i. A Governmental organization, which is a State, local government, or Indian tribe;

ii. A foreign public entity;

iii. A domestic or foreign nonprofit organization;

iv. A domestic or foreign for-profit organization;

v. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

2. *Executive* means officers, managing partners, or any other employees in management positions.

3. *Subaward:*

i. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.

ii. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see Sec. __.210 of the attachment to OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations")

iii. A subaward may be provided through any legal agreement, including an agreement that you or a subrecipient considers a contract.

4. *Subrecipient* means an entity that:

i. Receives a subaward from you (the recipient) under this award; and

ii. Is accountable to you for the use of the Federal funds provided by the subaward.

5. *Total compensation* means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see [17 CFR § 229.402\(c\)\(2\)](#)):

i. *Salary and bonus.*

ii. *Awards of stock, stock options, and stock appreciation rights.* Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.

iii. *Earnings for services under non-equity incentive plans.* This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.

iv. *Change in pension value.* This is the change in present value of defined benefit and actuarial pension plans.

v. *Above-market earnings on deferred compensation which is not tax-qualified.*

vi. Other compensation, if the aggregate value of all such other compensation (e.g., severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.00.