

UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D.C. 20555-0001

September 30, 2014

Dr. Ahsan Choudhuri University of Texas at El Paso 500 W.University Ave. El Paso, TX 79968-0521 VIA Electronic Mail ishabib@utep.edu

SUBJECT: GRANT NO. NRC-HQ-84-14-G-0068

Dear Dr. Choudhuri:

Pursuant to the authority contained in the Federal Grant and Cooperative Grantee Act of 1977 and the Atomic Energy Act of 1954, the Nuclear Regulatory Commission (NRC) hereby awards to the University of Texas at El Paso (hereinafter referred to as the "Grantee" or "Recipient"), the sum of \$188,684 to provide support for Development of Educational Courses on Nuclear Engineering Materials at the University of Texas at El Paso (UTEP), as described in Attachment B entitled "Program Description."

This award is effective as of the date of this letter and shall apply to expenditures made by the Grantee furtherance of program objectives during the period beginning with the effective date of September 30, 2014 and ending September 29, 2016.

This award is made to the Recipient on condition that the funds will be administered in accordance with the terms and conditions as set forth in Attachment A (the Schedule); Attachment B (the Program Description); and Attachment C (the Standard Provisions); all of which have been agreed to by your organization.

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

Please sign the enclosed grant to acknowledge your receipt of the award, and return by e-mail as a pdf file to <u>Fatima.Shuler@nrc.gov</u>.

Sincerely yours,

Erika Eam

Erika Eam Grants Officer Resources & Grants Acquisition Management Division

Attachments: Attachment A – Schedule Attachment B – Program Description Attachment C – Standard Terms and Conditions

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# **Grant and Cooperative Agreement**

				ESTIMATED COST				
ITEM NO.	ITEM OR SERVICE (Include Specifications and Special Instructions) (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)			
	CFDA Number: 77.006							
	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	Ì						
	reporting requirements or other conditions							
	specified in 2 CFR 215 (OMB Circular A110).	ł						
	Payment:							
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	US TREASURY							
	Period of Performance: 09/30/2014 to 09/29/2016							
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#### ATTACHMENT A - SCHEDULE

#### A.1 PURPOSE OF GRANT

The purpose of this Grant is to provide support to the "Development of Educational Courses on Nuclear Engineering Materials at the University of Texas at El Paso (UTEP)" as described in Attachment B entitled "Program Description."

#### A.2 PERIOD OF GRANT

1. The effective date of this Grant is September 30, 2014. The estimated completion date of this Grant is September 29, 2016.

2. Funds obligated hereunder are available for program expenditures for the estimated period: September 30, 2014 – September 29, 2016

#### A. GENERAL

1. Total Estimated NRC Amount:

2. Total Obligated Amount:

3. Cost-Sharing Amount:

4. Activity Title:

5. NRC Project Officer:

6. DUNS No.:

\$188,684.00
\$188,684.00
\$0
"Development of Educational Courses on Nuclear Engineering Materials at the University of Texas at El Paso (UTEP)" Tanya Parwani-Jaimes 132051285

#### A.3 BUDGET

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

	Year 1	Year 2
Total Salaries & Student Support	\$ 47,853.00	\$ 49,285.00
Fringe Benefit	\$ 10,958.00	\$ 11,112.00
Travel	\$ 2,500.00	\$ 2,500.00
Materials	\$ 1,000.00	\$ 1,000.00
Indirect Costs (49.5%)	<u>\$ 30,844.00</u>	<u>\$ 31,630.00</u>
Yearly Total	\$ 93,155.00	\$ 95,529.00

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

1. The total estimated amount of this Award is \$188,684.00 for the two-year period.

2. NRC hereby obligates the amount of \$188,684.00 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

#### 1.0. Introduction

#### 1.1. What is the Need?

Over the last six decades, the United States has led the global research and development in energy technologies. A highly educated and skilled workforce in the energy sectors is behind our nation's ability to maintain the quality of life and supremacy in the global economy through discovery, innovation and transformation in energy sciences and technologies. However, the US energy-engineering workforce is rapidly aging and during the last two decades the US energy enterprises have been experiencing a 'missing generation' of skilled energy engineers and professionals. One of the primary reasons of this gap is the lack of graduate students enrolled in energy disciplines at US universities to replace the existing engineers and scientists, who plan to retire within the next 5 to 8 years. The shortage of skilled workforce poses a serious threat to America's energy sectors, particularly in nuclear energy, where safety, security and environmental protection are of utmost importance.

Another critical concern of US energy R&D workforce is its limited ethnic diversity. Hispanics are critically underrepresented in energy related education and research. Despite being over 17% of the population aged 18-23, Hispanic engineering graduates represent less than 8% of the total, and only 4% students who are majoring in nuclear energy related discipline are Hispanics. University of Texas at El Paso (UTEP) is the only Research Intensive University in the U.S. with a student population of more than 80% Mexican-American. UTEP has a unique responsibility and opportunity to offer education and training in building energy workforce with

21st century demographics.

#### 1.2. Objective of this proposed work

The objective of the proposed project is to create and advance the nuclear engineering educational opportunities in Mechanical Engineering graduate and undergraduate programs at UTEP. The project proposes developing three nuclear engineering courses and a laboratory module to train BS, MS, and PhD students in broad areas of nuclear engineering with particular emphasis on material selection, characterization techniques, materials degradation and failure mechanisms, nondestructive evaluations, advanced structural materials, and computational model development to solve critical problems in nuclear engineering. The proposed courses are:

- i. MECH 43xx<sup>1</sup>: Introduction to Nuclear Engineering
- ii. MECH 53xx : Advanced Nuclear Engineering Materials, and
- iii. ESE 63xx : Computational Approaches to Nuclear Engineering Materials.
- iv. Laboratory module on nondestructive testing and material characterization techniques

The overarching goal is to graduate a new pedigree of qualified mechanical engineers with professional skills on designing, developing, maintaining and regulating nuclear facilities as well as safe handling of nuclear materials. In the long term the project will (i) coalesce faculty teaching interests in nuclear materials, (ii) enhance underlying teaching competencies and skills, (iii) add capacity to provide nuclear engineering educational training, and (iv) develop stronger collaboration between academia and industry for advancing educational infrastructure. The Department of Mechanical Engineering at UTEP, therefore, requests funding to create and advance these educational opportunities, which is aligned with the Nuclear Regulatory Commission's educational infrastructure development initiatives.

<sup>1</sup> New course numbers will be assigned.

#### 1.3. UTEP and its long term goal

University of Texas at El Paso (UTEP) is a leading U.S. doctoral/research intensive university serving the historically underrepresented Mexican-American student population. In year 2010, the total student enrollment in UTEP was more than 22,000, of them over 80% were Hispanic. UTEP is one of six universities that received a Model Institution for Excellence (MIE) grant from National Science Foundation (NSF) for its graduate programs in Science, Engineering and Mathematics (SEM). Over the past two decades, UTEP has become one of the nation's leading minority universities in terms of extramural funding for research and development. With a research-expenditure of \$70 million in FY 2010, UTEP ranked *fourth* among all 36 Texas public universities in federal research expenditures. UTEP's significant progress in research and doctoral education during the past 20 years had already earned the designation an "Emerging Tier One University" by the Texas Higher Education Coordinating Board.

UTEP has identified Energy Engineering as one of its key strategic areas for research and educational development. The proposed project is a part of its long-term strategies of creating a broad range of educational opportunities including nuclear engineering for historically underrepresented minority students. By making nuclear engineering educational opportunities available for UTEP engineering students the proposed project will tremendously benefit the university's efforts to create diversity in the nation's energy engineering workforce.

#### 2.0. Proposed Approach

#### 2.1. Course Description:

The project will develop three new courses and a laboratory module to provide nuclear engineering materials educational opportunities at the University of Texas at El Paso. The overarching goal is to better prepare the next generation engineering students with a broad knowledge and skill set in the topical areas of nuclear engineering materials. The proposed effort will augment the existing fossil and solar energy materials engineering education and research program at UTEP.

The project objectives include developing an undergraduate senior level course

MECH 43xx: Introduction to Nuclear Engineering, and a first year graduate level course MECH 53xx: Advanced Nuclear Engineering Materials. These two courses will be counted towards the requirement of technical electives for BS and MS in mechanical engineering degrees, respectively. The ESE 63xx: Computational Approaches to Nuclear Engineering Materials will available as a core course for the doctoral students at the Energy Engineering program. In addition, a laboratory module on nondestructive testing and characterization techniques will be developed and integrated with the existing Solid Mechanics Laboratory (MECH 3323) course, which will be taken by all mechanical engineering undergraduate students. The project will directly benefit 200 students every year and will create a long-term nuclear engineering education opportunities to historically underrepresented minority students. The course objectives, contents, and outcomes are presented below.

#### Course Title: MECH 43xx: Introduction to Nuclear Engineering

#### Objectives and Goals:

The objectives of this course are to introduce the engineering students to:

- The fundamental principles of nuclear energy and power plant operation.
- The mechanics, phenomena, and designing principles of nuclear engineering materials.
- Engineering the structural materials for improving the efficiency and safety.

The goal is to better prepare the next generation engineering students with a broad knowledge

and skill sets on nuclear engineering.

#### Outcomes:

The students will be able to:

• Understand the principles of nuclear reactor, fundamentals of nuclear reactions and various types of materials involved.

• Understand various mechanisms involved in the degradation of nuclear materials.

• Develop knowledge on reactor fuel, safety regulations, waste management and environmental impacts.

• Pursue careers in nuclear industry.

Course Contents:

- Fundamentals of nuclear energy and nuclear materials
- Nuclear energy concepts and importance
- Nuclear chain reactions cross-sections, reaction rates;
  - Reactor design: reactor components and their characteristics;
- Nuclear material design: structure, property, and damage
- Thermodynamics, heat transfer and fluid flow
- Fuel and fuel cycles reactor fuel requirements
- Safety and regulations
- Nuclear waste and environmental impact

#### Course Title: MECH 53xx: Advanced Nuclear Engineering Materials

Objectives and Goals:

The goal of this course is to prepare the next generation engineering professional with M.S. degree in engineering whose broad knowledge and skill set in the topical area of nuclear engineering materials will be beneficial to the nuclear industry. The objectives of the course are:

- Provide a deeper understanding of nuclear engineering materials.
- Introduce advanced structural and nuclear materials and their designing.
- Discuss and develop strategies to damage recovery and self healing materials.

• Develop problem solving skills to design efficient nuclear power plants.

#### Outcomes:

The students will be able to:

• Apply their fundamental knowledge and principles to design the efficient materials and structures for nuclear power plants and predict and prevent the materials' failure.

• Understand the processes leading to corrosion and mechanical degradation reactor.

• Demonstrate technical competence in nuclear engineering and power generation systems and pursue careers in nuclear industry.

Course Contents:

• Properties of engineering metals and alloys

Crystal structure, grain structure, characterization techniques

- Metallurgy for nuclear engineering
- Nuclear engineering materials

Structure and properties of structural materials: Al, Zr, Stainless steels

- Structure and properties of coolant & control rod materials
- Other functional materials: fuel, moderator, reflector, and shielding material
- Radiation interaction with matter and damage: fundamental principles and processes
- Nuclear radiation effects of materials: irradiation swelling, sputtering, erosion
- Failure mechanism of nuclear materials
- Recovery processes from radiation damage
- Self healing materials irradiation damage control

• Nuclear energy economy, cost effectiveness, and job market

#### Course Title: MECH 63xx: Computational Approaches to Nuclear Engineering Materials Objectives and Goals:

The goal is to prepare the next generation engineers with a doctoral degree in the area of computational approaches to nuclear engineering materials. The objectives of the course are:

• Understand and practice various computational approaches to solve critical problems in nuclear engineering materials.

• Develop a deeper understanding of the nuclear reactor structural materials through atomistic and molecular modeling and design.

• Utilize the computational tools to engineer the efficient nuclear materials and predict pathways to further improve the efficiency.

#### Outcomes:

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By taking this course, student will be able to:

• Apply their knowledge and computational modeling ability to design the efficient nuclear engineering materials.

• Develop computational tools and skills to understand the mechanisms associated damage, recovery and degradation of the materials in nuclear power plants.

o Demonstrate technical competence and pursue careers in nuclear engineering.

- Course Contents:
- Modeling across length and time scales
- Ab-initio calculation quantum mechanical modeling and density functional theory
  - Defect energy calculation
- Atomistic simulation: interatomic potential, embedded atom method
- Concept on ensemble average methods
- Molecular dynamics and Monte Carlo simulation technique
- Radiation damage of materials and point defect analysis techniques
- Displacement cascade, defect identification, evolution and statistics
- Meso-scale modeling
- Rate controlling mechanisms (e.g. dislocation cross-slip and climb)

Laboratory Module: Nondestructive Evaluation (NDE) and Characterization Techniques Objectives and Goals: The objectives of this lab course and module to be developed are to introduce the engineers to:

- The concept of defect structure and fracture mechanics in nuclear materials.
- Laboratory NDE experiments and characterization techniques.

• Practice structural materials for improving the efficiency and environmental safety. <u>Outcomes</u>: The students will be able to apply the fundamental knowledge gained from the Nuclear Engineering Materials course in the laboratory to evaluate the structure, damage and safety requirements. <u>Contents and Description</u>: Welded structures with and without defects as encountered in nuclear plants will be used to demonstrate the NDE effectiveness through this required lab course. The detection, location, and evaluation of discontinuities will be tested. The principle is based on the assumption of constant velocity of sound through a given material, making distance measurement possible and the relative amplitude of a reflected pulse is more or less proportional to the size of the reflector. The initial signal, the returned echoes from the discontinuities, and the echo of the rear surface are all displayed by a trace on the screen of a cathode-ray oscilloscope. Student will also be trained on various characterization techniques, which include optical microscopy, TEM, SEM, XRD.

#### 2.2. Justification and Effectiveness of this project in building the educational infrastructure,

#### Teaching Competencies, student enrollment, subject matter expertise and skills

#### 2.2.1. Existing Facility of the Department and its commitment

The Department of Mechanical Engineering at UTEP has an enrollment of more than 620 graduate and undergraduate students. The department offers Accreditation Board of Engineering and Technology (ABET) accredited Bachelor of Science (BS) degree in Mechanical Engineering, Master of Science (MS) degree in Mechanical Engineering and a PhD track in Energy Engineering. The department is also a key member of the interdisciplinary PhD programs in Materials Science and Engineering, Environmental Science and Engineering and Computational Science.

The Mechanical Engineering Department has a strong and rapidly growing energy education and research program. Through strategic partnership with industries, DOE

laboratories, federal agencies, a local government and other universities the department has been aggressively developing its research and educational capabilities in fossil energy, solar energy, aerospace and defense applications. The department's current research portfolio (more than \$8.45 million in 2010-2011) includes a broad range of federal and industry funded projects to support research and education in high temperature materials, nanocomposites, multifunctional materials, biomaterials, materials design for harsh and high-strain rate environment, combustion, and propulsion.

The department has state-of the art research laboratories in energy and propulsion engineering, materials synthesis, structural dynamics, and nanofabrication. The department also

has state-of-the-art manufacturing and design acceleration facilities. Currently 7 faculty members in the department are involved in materials engineering education and research activities. With these existing resources the department is highly committed to expand and grow in nuclear engineering education and research.

#### 2.2.2. Existing Faculty and enhancement of teaching competencies

The motivation to offer these courses and enhance the nuclear engineering curriculum at UTEP is derived from a natural combination of the faculties of mechanical engineering, whose interests and expertise span a broad range of energy engineering, structural and aerospace materials, fracture mechanics, nanotechnology, composites, nuclear engineering materials and computational approaches to nuclear materials. The faculties involved in this proposed effort are already collaborating on various aspects of combustion and propulsion, structural materials, composites, fracture mechanics, high temperature coatings and sensors for energy systems, and energy science and engineering. The team's ability to offer the interdisciplinary courses and success in the past will be the key to offer the proposed courses. The effort will unite faculty teaching interest on nuclear materials. Furthermore, the project will enhance the department's materials engineering educational infrastructure and faculty teaching competencies and skills in nuclear engineering.

#### 2.2.3. Student Enrollment

The uniqueness of the mechanical engineering department's energy program is the program's interdisciplinary breadth and multidisciplinary partnerships with the Physics, Chemistry, Geological Sciences, Electrical Engineering and Civil Engineering Departments. The proposed project will greatly extend the existing programs to include nuclear engineering education through new undergraduate and graduate courses and laboratory experiences. These multidisciplinary courses and lab module will enhance educational opportunities and enrollment of undergraduate and graduate students of mechanical engineering, as well as Materials Science and Engineering, Environmental Science and Engineering, Computational Science and Physics.

#### 2.2.4. Subject matter expertise and skills

The courses will be carefully designed in order to provide a wide range of knowledge on the subject matter to the students. The introductory course (MECH 43XX) will be focused on the fundamental

concepts of nuclear energy, nuclear plant design, material selection, safety and environmental issues. The masters level course (MECH 53XX) will be more concentrated on nuclear materials, radiation damage of materials, and failure mechanisms of nuclear structural materials. The doctoral level course (ESE 63XX) will provide a thorough understanding on model development to study irradiation induced damage at various length scale. In addition, the students will get a hands-on laboratory experience to enhance their skills on non-destructive testing and characterization techniques. Students successfully completing these courses are expected to gain strong subject matter expertise and skills to pursue career in nuclear industry, as well as research and development activities in academia and national laboratories.

#### 2.2.5. Partnership

The UTEP team will leverage the department's long standing partnership with the Pacific Northwest National Laboratory researches to integrate world-class materials research expertise, specifically in nuclear materials, into the proposed project.

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#### 2.3. Instructional Approach

As a part of a broader University of Texas System wide Initiative, UTEP has launched a major program to increase online and blended learning opportunities. All three courses will be developed in a blended format by integrating both online and classroom learning opportunities. Each course will be managed through the UTEP web-based learning platform (Blackboard<sup>™</sup>) and will include (i) streaming lecture modules, (ii) reading materials, (iii) assignments and projects, (iv) online discussion forum, (v) collaboration modules, and (iv) assessments. The UTEP team will make the course-package available at no-cost for any interested US universities or institutions. Each course will content at least one inverse or open-ended group design project to augment students understanding through active learning.

Recently the mechanical engineering department at UTEP has implemented several new initiatives to achieve a balance between the current 'engineering science' based learning and

the new paradigm of 'design centric' learning. As engineered systems get increasingly complex

with high degree of robustness, number of subsystems, and their interdependence, it is imperative that students achieve superior design skills especially 'design thinking' skills of complex systems. The initiatives include a combination of active learning and project based or experiential learning for all courses throughout the undergraduate and graduate curriculum. The three courses, which will be developed through the proposed effort, will have the following project based learning components:

• Analysis aspect of nuclear materials selection and design in the context of the inverse design problem.

• Nuclear materials engineering projects structured so as to give a design experience of graduated sophistication.

#### 2.4. Operating Plan and Time Table

The project will be directed by the Principal Investigator Dr. Ishraq Shabib. The proposed project will leverage existing administrative support resources from ME and NASA Center for Space Exploration and Technology Research (cSETR) at UTEP. The Principal Investigator (PI) will be ultimately responsible for all project activities, including development and integration of new courses, assessment and evaluation, and financial management. The PI will serve as the primary point of contact with NRC for reporting and other matters related to the proposed project. The team also includes three other Co-Investigators. Two of them, Dr. Yirong Lin and Dr. C. V. Ramana, will develop the new courses and laboratory modules, and Dr. Louis Everett will be primarily responsible for assessment and evaluation of the overall success of the project. The Co-Investigators along with other faculty members of the department will teach the courses.

A 24-month effort is proposed with a tentative starting date of May 01, 2013. The project activities include four months of course content development and the remaining period

for implementation and assessment of the project. Table 1 shows the time period of the major tasks along with the decision points and milestones of the proposed project.

Curriculum Development on Nuclear Engineering at	Ma	ayl	3-		Se	p1	3-	Jar	14	•	M	ay	14	•	S	epʻ	4-		Ja	n1	5-	
UTEP	Au	ıg1	3		De	<u>ec1</u>	3	Арі	14		Α	ug	14		D	ec1	14		Ap	r1:	5	
Task 1: Project Management, Planning, reporting							!	1.														
Task 2: Course Development								1 1 d						1		16.5						
Refine Content, Scope and Sequence per course																						
Industry pertinence and needs inclusion														-								
Instructor and course development						-																
Review: BS, MS, PhD Alignment																	Τ					
Decision Point #1 Course and Content													Γ			Т						
Refinement OR Course offering												Τ			1		2 					
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Task 3: Course Integration and Monitoring					en e										16.5							
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Task 4: Collaboration and Industry Ties		1									1		ر میں ان استاد ک		11.3			1	1			
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Task 5: Institutional Capacity Building												1999 - 1999 1999 - 1999 1999 - 1999					میار	Ţ	1			
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Project Management Plan and Schedule														ŀ				T				
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Course Readiness and Catalog Description				۲							-	Τ	Τ				1	T				
Mid-Term Feedback on Active Courses		1	-		-	۲			•													
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Yearly course assessment and report																1		T	1		$\square$	۲

Table 1: Time line of major tasks of the proposed project

#### 2.5. Assessment and Evaluation Plan

The project will use a two-tier assessment plan in order to evaluate the effectiveness of the proposed project. The *first-tier* plan is at the individual course level and is tied with department's ABET program outcomes assessment plan. The Department uses a Direct Assess Plan Act (DAPA) method to measure the effectiveness of each course to meet the ABET *a-k* criteria. The proposed new courses and modules meet the ABET Program Outcomes Criteria (*a, b, c, e,* and *k*). The department has well established measurable performance criteria (MPC), scoring rubrics (SC), and assessment instruments for each criterion to evaluate the effectiveness of every course.

The Second-Tier plan includes the assessment of the overall effectiveness of the project in achieving the major outcomes through a closed-loop assessment and evaluation process. The assessment will be done through data survey, student evaluation report, industry feedback and expert feedback. Experts from the industry and national laboratories will be invited through Energy Seminar Lecture series at UTEP to get feedback on designing the curriculum and measuring the success of building a skilled workforce. Table 2 shows the assessment plan of this proposed project. Each major outcome will be assessed and evaluated based on the listed measurable criteria. Dr. Louis Everett, one of the Co-PIs of the project and an expert on educational project development, implementation and assessment, will be primarily responsible

for measuring the overall success of the project. The evaluation results will be distributed to the NRC, university leadership, and the departmental advisory board.

Outcome	Assessment tool	Measurable Criteria
Institutional capacity and infrastructure development	Data Survey	<ul> <li># of student enrollment in mechanical engineering and other programs in nuclear energy related courses</li> <li># of new courses offered in nuclear (offered by both mechanical and other departments)</li> <li># Lab development,</li> <li># of Faculty hire</li> </ul>
Curriculum development (course and laboratory module)	Student course evaluation/ Data Survey	<ul> <li>Student evaluation on courses</li> <li>Attitude toward continued learning</li> <li>Confidence in ability to succeed</li> <li>Attitude towards pursuing MS and PhD</li> <li>Expert feedback through energy seminar lecture series at UTEP</li> </ul>
Building a skilled workforce	Data Survey	<ul> <li># of students receiving degree with enhanced knowledge in nuclear energy related area</li> <li># of students pursuing higher studies in nuclear energy related</li> <li># of students pursuing career in nuclear industry and academia</li> <li>Industry feedback on our graduates</li> </ul>
Coalesce faculty teaching interest, and enhance underlying teaching competency and skills	Student Evaluation/Data Survey	<ul> <li>Faculty involvement both in teaching and collaborative research</li> <li>Student evaluation on the instructor</li> </ul>
Develop collaboration	Data Survey	<ul> <li>Amount of external funding</li> <li># of proposals submitted</li> <li># of expert visits, industry visits, presentations, and educational training</li> </ul>
Subjective outcome	Exam Class project Faculty observation	<ul> <li>ABET <i>a, b, c,</i> e, and <i>k</i> criteria</li> <li>Faculty Feedback</li> </ul>

Table 2: Assessment plan of major outcomes of the proposed project

### **Dissemination plan**

The educational outcomes will be disseminated using national and international conferences and meetings. The investigators will speak at seminars and workshops and author educational journal articles and book chapters. The project will establish a dissemination website. More importantly, the leadership of the project will aggressively network with groups that support educational and workforce diversity initiatives consistent with NRC's goals.

## 3.0. Institutional Capability and Capacity

## Building

The UTEP Mechanical Engineering Department has more than adequate faculty capacity and instructional infrastructure to support the proposed effort. The proposed effort will build on outstanding education and research programs of the Mechanical Engineering Department at UTEP. Over the last decades the mechanical engineering undergraduate and graduate programs have experienced significant growth both in terms of student enrollment and research capacity. The growth was in large part due to several strategic initiatives in curriculum

enhancement, education and instructional infrastructure development, faculty recruitment and retention, increased extramural funding, and infrastructure development.

Capacity Building in energy engineering remain one of the top strategic initiatives for the department. The department has recently completed a 6 million dollars core facilities upgrade to develop several research and instructional laboratories. Among them are a new Lockheed Martin Mechanical Engineering Learning Laboratory, an Engineering Practice and Design Acceleration Space, and a 11,000 sq-ft Energy Engineering Laboratory Complex. With an enrollment of over 600 graduate and undergraduate students, the department is currently the largest department in the College of Engineering. Additionally, the department is currently among the top in the university in securing extramural funding. The department has 20 faculty and 7 of them are in materials and solid mechanics area. The proposed project will significantly help the department to build a sustainability capacity in nuclear materials engineering.

The proposed curriculum development in nuclear engineering materials is highly aligned with the Strategic Goals of UTEP. Professor Ahsan Choudhuri, the Chairman of the Mechanical Engineering Department, is willing to provide strong institutional support for success and sustainability of the project (the support letter has been included). The sustainability of the program will be ensured through the following outcomes of the project-

• An increase in the educational opportunity will increase the number of student enrollment and graduates in a degree program

• An increase in the number of undergraduate and graduate students interested in pursuing nuclear engineering career. This will ultimately help to develop stronger industrial collaboration for educational infrastructure development.

• An increase in the number of graduate students involved in academic research.

• An increase in the number of faculty interested in pursuing nuclear engineering education and research activities, which will create more opportunities to secure external funding.

• The Mechanical Engineering department has a long-term strategic roadmap to increase the nuclear engineering materials education and research opportunities.



#### 4.0. Key Personnel

Dr. Ishraq Shabib, the PI, is a Research Assistant Professor of Mechanical Engineering at

UTEP. He earned his Ph.D. degree in Mechanical Engineering from Carleton University in 2009. He was the recipient of NSERC Post-doctoral Visiting Fellow at the Materials Technology Laboratory of Natural Resources Canada from 2009 to 2011. His research expertise includes structure-property relationship of nano-crystalline materials, irradiation induced damage of nuclear materials, metallic thin films, failure analysis, atomistic and multi-scale modeling of material defects, and large scale computation on parallel environment. After joining at UTEP on Fall 2011, he designed and offered seven different courses (both at undergraduate and graduate levels) and contributed to a teaching laboratory development in the department. Since July 2012 he has been working as an Undergraduate Program Coordinator of the department to serve a student population of around 500.

**Dr. Yirong Lin** is currently an Assistant in Department of Mechanical Engineering at the University of Texas at El Paso. He received his Ph.D. degree in Mechanical Engineering from Arizona State University in 2009. Dr. Lin's research interests fall in design, fabrication and characterization of advanced nanomaterial systems for energy harvesting and storage, structural health monitoring and harsh environment application. His research encompasses micromechanics modeling, materials synthesis, structural characterization and device evaluation. He has published or submitted 45 technical articles since 2007 (22 referred journals and 23 conference proceedings). He was awarded the Best Paper at SAMPE 2008 fall technical conference, Honorable Mentioned Best Student Paper at SMASIS 2009 fall conference and ASME Best Paper in Materials of 2010 at SPIE Smart Materials/NDE 2011 conference. He is a member of ASME, SPIE, SAMPE and AIAA.

**Dr. C. V. Ramana**, is an Assistant Professor in Mechanical Engineering at UTEP. His background involves extensive work on structural ceramics for energy applications. He has contributed to the understanding of the nuclear radiation interaction with metals and ceramics in the past. He has been involved in creating opportunities and co-op interns for BS, MS, and PhD students with national laboratories and industry. His extensive background in materials will be useful to the development and offering of the proposed nuclear materials courses.

**Dr. Louis J. Everett** holds a B.S. degree from the University of Texas at El Paso, an M.S. degree from Stanford and a Ph.D. from Texas A&M in 1983 all in Mechanical Engineering. Industrial experience includes Texas Instruments, Bell Laboratories, IBM, and NASA. Currently he is serving as a Program Director in the Division of Undergraduate Education of National Science Foundation. He is also the John T. McGuire Distinguished Professor of Mechanical Engineering at UTEP. His research interests include education design, modeling, vibration, and mechatronics. He has authored or contributed to four textbooks. Dr. Everett is a member of IEEE, ASME and ASEE.

#### 5.0. Budget and Cost-Effectiveness

The funds requested (**\$188,684**) are reasonable and cost-effective. Only a fraction of a month's salary each year for faculty is requested. The approximate total for faculty and staff support including fringe is **\$72,213**. A total amount of **\$46,997** is requested for student participation in the UTEP development and teaching effort (fringe included). An annual raise of 3% has been included in the salaries. A total amount of **\$23,422** is requested to pay fringe benefits. Travel funds of **\$5,000** are requested to support travel to national conferences and to

facilitate collaboration and assessments. Indirect costs computed at 49.5% have also been included in the budget.

#### 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 <u>42 USC 2051(b)</u> pursuant to section 31b and 141b of the Atomic Energy Act of 1954, as amended, and is subject to the terms and conditions incorporated either directly or by reference in the following:

- Grant program legislation and program regulation cited in this Notice of Grant Award.
- Restrictions on the expenditure of Federal funds in appropriation acts, to the extent those restrictions are pertinent to the award.
- Code of Federal Regulations/Regulatory Requirements <u>2 CFR 215 Uniform</u> <u>Administrative Requirements</u> For Grants And Agreements With Institutions Of Higher Education, Hospitals, And Other Non-Profit Organizations (OMB Circulars), as applicable.

To assist with finding additional guidance for selected items of cost as required in <u>2 CRF 220, 2</u> <u>CFR 225</u>, and <u>2 CFR 230</u> this URL to the Office of Management and Budget Cost Circulars is included for reference to: A-21 (now 2 CFR 220)

A-87 (now 2 CFR 225) A-122 (now 2 CFR 230 A-102:

http://www.whitehouse.gov/omb/circulars\_index-ffm

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.

<u>Certifications and Representations:</u> 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 <u>2 CFR Part 215</u> and all Standard Provisions attached to this grant/cooperative agreement are applicable to the Grantee and to sub-recipients which meet the definition of "Grantee" in Part 215, unless a section specifically excludes a sub-recipient from coverage. The Grantee and any sub-recipients must, in addition to the assurances made as part of the application, comply and require each of its sub-awardees employed in the completion of the project to comply with <u>Subpart C of 2 CFR 215</u> and include this term in lower-tier (subaward) covered transactions.

b. Grantees must comply with monitoring procedures and audit requirements in accordance with <u>OMB Circular A-133.</u> < <u>http://www.whitehouse.gov/omb/circulars/a133\_compliance/08/08toc.aspx\_></u>

#### 2. Award Package

#### § 215.41 Grantee responsibilities.

The Grantee is obligated to conduct such project oversight as may be appropriate, to manage the funds with prudence, and to comply with the provisions outlined in <u>2 CFR 215.41</u> Within this framework, the Principal Investigator (PI) named on the award face page, Block 11, is responsible for the scientific or technical direction of the project and for preparation of the project performance reports. This award is funded on a cost reimbursement basis not to exceed the amount awarded as indicated on the face page, Block 16., and is subject to a refund of unexpended funds to NRC.

The standards contained in this section do not relieve the Grantee of the contractual responsibilities arising under its contract(s). The Grantee is the responsible authority, without recourse to the NRC, regarding the settlement and satisfaction of all contractual and administrative issues arising out of procurements entered into in support of an award or other agreement. This includes disputes, claims, protests of award, source evaluation or other matters of a contractual nature. Matters concerning violation of statute are to be referred to such Federal, State or local authority as may have proper jurisdiction.

#### **Subgrants**

#### Appendix A to Part 215-Contract Provisions

Sub-recipients, sub-awardees, and contractors have no relationship with NRC under the terms of this grant/cooperative agreement. All required NRC approvals must be directed through the Grantee to NRC. See 2 CFR 215 and 215.41.

#### Nondiscrimination

This provision is applicable when work under the grant/cooperative agreement is performed in the U.S. or when employees are recruited in the U.S.

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

- Title VI of the Civil Rights Act of 1964 (42 USC §§ 2000d et seq)
- Title IX of the Education Amendments of 1972 (20 USC §§ 1681 et seq)
- Section 504 of the Rehabilitation Act of 1973, as amended (29 USC § 794)
- The Age Discrimination Act of 1975, as amended (42 USC §§ 6101 et seq)

- The Americans with Disabilities Act of 1990 (42 USC §§ 12101 et seq)
- Parts II and III of EO 11246 as amended by EO 11375 and 12086.
- EO 13166, "Improving Access to Services for Persons with Limited English Proficiency."
- Any other applicable non-discrimination law(s).

Generally, Title VI 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 VI, 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's prior written approval may be required before a Grantee makes certain budget modifications or undertakes particular activities. If NRC approval is required for changes in the grant or cooperative agreement, it must be requested of, and obtained from, the NRC Grants Officer in advance of the change or obligation of funds. All requests for NRC prior approval should be made, in writing (which includes submission by e-mail), to the designated Grants Specialist and Program Office no later than 30 days before the proposed change. The request must be signed by both the PI and the authorized organizational official. Failure to obtain prior approval, when required, from the NRC Grants Officer may result in the disallowance of costs, or other enforcement action within NRC's authority.

#### Lobbying Restrictions

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

The Grantee shall comply with provisions of 31 USC § 1352. This provision generally prohibits the use of Federal funds for lobbying in the Executive or Legislative Branches of the Federal Government in connection with the award, and requires disclosure of the use of non-Federal funds for lobbying.

The Grantee receiving in excess of \$100,000 in Federal funding shall submit a completed Standard Form (SF) LLL, "Disclosure of Lobbying Activities," regarding the use of non-Federal funds for lobbying within 30 days following the end of the calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed. The Grantee must submit the SF-LLL, including those received from sub-recipients, contractors, and subcontractors, to the Grants Officer.

#### § 215.13 Debarment And Suspension.

The Grantee agrees to notify the Grants Officer immediately upon learning that it or any of its principals:

(1) Are presently excluded or disqualified from covered transactions by any Federal department or agency;

(2) Have been convicted within the preceding three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, making false claims, or obstruction of justice; commission of any other offense indicating a lack of business integrity or business honesty that seriously and directly affects your present responsibility;

(3) Are presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b); and

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

b. The Grantee agrees that, unless authorized by the Grants Officer, it will not knowingly enter into any subgrant or contracts under this grant/cooperative agreement with a person or entity that is included on the Excluded Parties List System (<u>http://epls.arnet.gov</u>).

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

'Debarment, Suspension, Ineligibility, and Voluntary Exclusion

The Grantee certifies that neither it nor its principals is presently excluded or disqualified from participation in this transaction by any Federal department or agency. The policies and procedures applicable to debarment, suspension, and ineligibility under NRC-financed transactions are set forth in <u>2 CFR Part 180</u>.'

#### **Drug-Free Workplace**

The Grantee must be in compliance with The Federal Drug Free Workplace Act of 1988. The policies and procedures applicable to violations of these requirements are set forth in  $\underline{41 \text{ USC}}$   $\underline{702}$ .

#### Implementation of E.O. 13224 -- Executive Order On Terrorist Financing

The Grantee is reminded that U.S. Executive Orders and U.S. law prohibits transactions with, and the provision of resources and support to, individuals and organizations associated with terrorism. It is the legal responsibility of the Grantee to ensure compliance with these Executive Orders and laws. This provision must be included in all contracts/sub-awards issued under this grant/cooperative agreement.

Award Grantees must comply with Executive Order 13224, Blocking Property and Prohibiting Transactions with Persons who Commit, Threaten to Commit, or Support Terrorism. Information about this Executive Order can be found at: <u>www.fas.org/irp/offdocs/eo/eo-13224.htm</u>.

#### Procurement Standards. § 215.40-48

Sections 215.41 through 215.48 set forth standards for use by Grantees in establishing procedures for the procurement of supplies and other expendable property, equipment, real property and other services with Federal funds. These standards are furnished to ensure that such materials and services are obtained in an effective manner and in compliance with the provisions of applicable Federal statutes and executive orders. No additional procurement standards or requirements shall be imposed by the Federal awarding agencies upon Grantees, unless specifically required by Federal statute or executive order or approved by OMB.

#### <u>Travel</u>

Travel must be in accordance with the Grantee's Travel Regulations or the US Government Travel Policy and Regulations at: <u>www.gsa.gov/federaltravelregulation</u> and the per diem rates set forth at: <u>www.gsa.gov/perdiem</u>, absent Grantee's travel regulation. Travel costs for the grant must be consistent with provisions as established in <u>Appendix A to 2 CFR 220 (J.53</u>). All other travel, domestic or international, must not increase the total estimated award amount.

#### **Domestic Travel:**

Domestic travel is an appropriate charge to this award and prior authorization for specific trips are not required, if the trip is identified in the Grantee's approved program description and approved budget. Domestic trips not stated in the approved budget require the written prior approval of the Grants Officer, and must not increase the total estimated award amount.

All common carrier travel reimbursable hereunder shall be via the least expensive class rates consistent with achieving the objective of the travel and in accordance with the Grantee's policies and practices. Travel by first-class travel is not authorized unless prior approval is obtained from the Grants Officer.

#### International Travel:

International travel requires <u>PRIOR</u> written approval by the Project Officer and the Grants Officer, even if the international travel is stated in the approved program description and the approved budget.

The Grantee shall comply with the provisions of the Fly American Act (49 USC 40118) as implemented through 41 CFR 301-10.131 through 301-10.143.

#### **Property and Equipment Management Standards**

Property and equipment standards of this award shall follow provisions as established in <u>2 CFR</u> 215.30-37.

#### **Procurement Standards**

Procurement standards of this award shall follow provisions as established in 2 CFR 215.40-48

#### Intangible and Intellectual Property

Intangible and intellectual property of this award shall generally follow provisions established in <u>2 CFR 215.36</u>.

**Inventions Report** - The Bayh-Dole Act (P.L. 96-517) affords Grantees 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 Grantee agrees to comply with applicable NRC policies, the Bayh-Dole Act, and its Government-wide implementing regulations found at Title 37, Code of Federal Regulations (CFR) Part 401. A significant part of the regulations require

that the Grantee report all subject inventions to the awarding agency (NRC) as well as include an acknowledgement of federal support in any patents. NRC participates in the transgovernment Interagency Edison system (<u>http://www.iedison.gov</u>) and expects NRC funding Grantees to use this system to comply with Bayh-Dole and related intellectual property reporting requirements. The system allows for Grantees to submit reports electronically via the Internet. In addition, the invention must be reported in continuation applications (competing or noncompeting).

**Patent Notification Procedures-** Pursuant to <u>EO 12889</u>, NRC is required to notify the owner of any valid patent covering technology whenever the NRC or its financial assistance Grantees, without making a patent search, knows (or has demonstrable reasonable grounds to know) that technology covered by a valid United States patent has been or will be used without a license from the owner. To ensure proper notification, if the Grantee uses or has used patented technology under this award without license or permission from the owner, the Grantee must notify the Grants Officer. This notice does not necessarily mean that the Government authorizes and consents to any copyright or patent infringement occurring under the financial assistance.

**Data, Databases, and Software** - The rights to any work produced or purchased under a NRC federal financial assistance award are determined by <u>2 CFR 215.36</u>. Such works may include data, databases or software. The Grantee owns any work produced or purchased under a NRC federal financial assistance award subject to NRC's right to obtain, reproduce, publish or otherwise use the work or authorize others to receive, reproduce, publish or otherwise use the data for Government purposes.

**Copyright** - The Grantee may copyright any work produced under a NRC federal financial assistance award subject to NRC's royalty-free nonexclusive and irrevocable right to reproduce, publish or otherwise use the work or authorize others to do so for Government purposes. Works jointly authored by NRC and Grantee employees may be copyrighted but only the part authored by the Grantee is protected because, under <u>17 USC § 105</u>, works produced by Government employees are not copyrightable in the United States. On occasion, NRC may ask the Grantee to transfer to NRC its copyright in a particular work when NRC is undertaking the primary dissemination of the work. Ownership of copyright by the Government through assignment is permitted under <u>17 USC § 105</u>.

**Records Retention and Access Requirements** for records of the Grantee shall follow established provisions in <u>2 CFR 215.53</u>.

#### Organizational Prior Approval System

In order to carry out its responsibilities for monitoring project performance and for adhering to award terms and conditions, each Grantee organization shall have a system to ensure that appropriate authorized officials provide necessary organizational reviews and approvals in advance of any action that would result in either the performance or modification of an NRC supported activity where prior approvals are required, including the obligation or expenditure of funds where the governing cost principles either prescribe conditions or require approvals.

The Grantee shall designate an appropriate official or officials to review and approve the actions requiring NRC prior approval. Preferably, the authorized official(s) should be the same official(s) who sign(s) or countersign(s) those types of requests that require prior approval by NRC. The authorized organization official(s) shall not be the principal investigator or any official

having direct responsibility for the actual conduct of the project, or a subordinate of such individual.

**Conflict Of Interest Standards** for this award shall follow OCOI requirements set forth in Section 170A of the Atomic Energy Act of 1954, as amended, and provisions set forth at <u>2 CFR</u> <u>215.42</u> Codes of Conduct.

#### **Dispute Review Procedures**

a. Any request for review of a notice of termination or other adverse decision should be addressed to the Grants Officer. It must be postmarked or transmitted electronically no later than 30 days after the postmarked date of such termination or adverse decision from the Grants Officer.

b. The request for review must contain a full statement of the Grantee's position and the pertinent facts and reasons in support of such position.

c. The Grants Officer will promptly acknowledge receipt of the request for review and shall forward it to the Director, Office of Administration, who shall appoint an intra-agency Appeal Board to review a grantee 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.

d. Pending resolution of the request for review, the NRC may withhold or defer payments under the award during the review proceedings.

e. The review committee will request the Grants Officer who issued the notice of termination or adverse action to provide copies of all relevant background materials and documents. The committee may, at its discretion, invite representatives of the Grantee and the NRC program office to discuss pertinent issues and to submit such additional information as it deems appropriate. The chairman of the review committee will insure that all review activities or proceedings are adequately documented.

f. Based on its review, the committee will prepare its recommendation to the Director, Office of Administration, who will advise the parties concerned of his/her decision.

**<u>Termination and Enforcement.</u>** Termination of this award by default or by mutual consent shall follow provisions as established in <u>2 CFR 215.60-62</u>,

#### Monitoring and Reporting § 215.50-53

a. Grantee Financial Management systems must comply with the established provisions in <u>2</u> CFR 215.21

- Payment <u>2 CFR 215.22</u>
- Cost Share <u>2 CFR 215.23</u>
- Program Income <u>2 CFR 215.24</u>
  - Earned program income, if any, shall be added to funds committed to the project by the NRC and Grantee and used to further eligible project or program

objectives or deducted from the total project cost allowable cost as directed by the Grants Officer or the terms and conditions of award.

- Budget Revision <u>2 CFR 215.25</u>
  - The Grantee is required to report deviations from the approved budget and program descriptions in accordance with 2 CFR 215.25, and request prior written approval from the Program Officer and the Grants Officer.
  - The Grantee is not authorized to rebudget between direct costs and indirect costs without written approval of the Grants Officer.
  - The Grantee is authorized to transfer funds among direct cost categories up to a cumulative 10 percent of the total approved budget. The Grantee 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 <u>2 CFR 215.27</u>

#### b. Federal Financial Reports

The Grantee shall submit a "Federal Financial Report" (SF-425) on a semi-annual basis for the periods ending March 31 and September 30, or any portion thereof, unless otherwise specified in a special award condition. Reports are due no later than 30 days following the end of each reporting period. A final SF-425 is due within 90 days after expiration of the award. The report should be submitted electronically to: <u>Grants\_FFR@NRC.GOV</u>. (NOTE: There is an underscore between Grants and FFR).

#### Period of Availability of Funds 2 CFR § 215.28

a. Where a funding period is specified, a Grantee may charge to the grant only allowable costs resulting from obligations incurred during the funding period and any pre-award costs authorized by the NRC.

b. Unless otherwise authorized in <u>2 CFR 215.25(e)(2)</u> 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 should be sent to the Grants Officer at least 30 days prior to the grant/cooperative agreement expiration date. Any request for extension after the expiration date 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 <u>Department of Treasury's Automated Standard Application for Payment (ASAP)</u> <u>system</u> < <u>http://www.fms.treas.gov/asap/</u> >. Under the ASAP system, payments are made through preauthorized electronic funds transfers, in accordance with the requirements of the Debt Collection Improvement Act of 1996. In order to receive payments under ASAP, Grantees are required to enroll with the Department of Treasury, Financial Management Service, and Regional Financial Centers, which allows them to use the on-line method of withdrawing funds from their ASAP established accounts. The following information will be required to make withdrawals under ASAP: (1) ASAP account number – the award number found on the cover sheet of the award; (2) Agency Location Code (ALC) – 31000001; and Region Code. Grantees enrolled in the ASAP system do not need to submit a "Request for Advance or Reimbursement" (SF-270), for payments relating to their award.

#### Audit Requirements

Organization-wide or program-specific audits shall be performed in accordance with the Single Audit Act Amendments of 1996, as implemented by <u>OMB Circular A-133</u>, "Audits of States, Local Governments, and Non-Profit Organizations."

<u>http://www.whitehouse.gov/omb/circulars/a133/a133.html</u> Grantees are subject to the provisions of <u>OMB Circular A-133</u> if they expend \$500,000 or more in a year in Federal awards.

The Form SF-SAC and the Single Audit Reporting packages for fiscal periods ending on or after January 1, 2008 must be submitted online.

- 1. Create your online report ID at http://harvester.census.gov/fac/collect/ddeindex.html
- 2. Complete the Form SF-SAC
- 3. Upload the Single Audit
- 4. Certify the Submission
- 5. Click "Submit."

Organizations expending less than \$500,000 a year are not required to have an annual audit for that year but must make their grant-related records available to NRC or other designated officials for review or audit.

#### III. Programmatic Requirements

#### Performance (Technical) Reports

a. The Grantee shall submit performance (technical) reports electronically to the NRC Project Officer and Grants Officer on a semi-annual basis unless otherwise authorized by the Grants Officer. Performance reports should be sent to the Program Officer at the email address indicated in Block 12 of the Notice of Award, and to Grants Officer at: <u>Grants\_PPR.Resource@NRC.GOV</u>. (NOTE: There is an underscore between Grants and PPR).

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  $\underline{\$215.51}$  which are incorporated in the award.

c. The Office of the Chief of Human Capital Officer (OCHCO) requires the submission of the semi-annual progress report on the SF-PPR, SF-PPR-B, and the SF-PPR-E forms. The submission for the six month period ending March 31<sup>st</sup> is due by April 30<sup>th</sup>, or any portion thereof. The submission for the six month period ending September 30<sup>th</sup> is due by October 31<sup>st</sup> or any portion thereof.

d. 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 OCHCO grant awards, in addition to the customary performance progress report requested on the SF-PPR, SF-PPR-B, and SF-PPR-E forms, HR requires the following metrics to be reported on by the awardees as follows:

#### **Curriculum Development Awards**

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

#### **Unsatisfactory Performance**

Failure to perform the work in accordance with the terms of the award and maintain at least a satisfactory performance rating or equivalent evaluation may result in designation of the Grantee as high risk and assignment of special award conditions or other further action as specified in the standard term and condition entitled "Termination."

Failure to comply with any or all of the provisions of the award may have a negative impact on future funding by NRC and may be considered grounds for any or all of the following actions: establishment of an accounts receivable, withholding of payments under any NRC award, changing the method of payment from advance to reimbursement only, or the imposition of other special award conditions, suspension of any NRC active awards, and termination of any NRC award.

#### Other Federal Awards With Similar Programmatic Activities

The Grantee shall immediately provide written notification to the NRC Project Officer and the Grants Officer in the event that, subsequent to receipt of the NRC award, other financial assistance is received to support or fund any portion of the program description incorporated into the NRC award. NRC will not pay for costs that are funded by other sources.

#### Prohibition Against Assignment By The Grantee

The Grantee shall not transfer, pledge, mortgage, or otherwise assign the award, or any interest therein, or any claim arising thereunder, to any party or parties, banks, trust companies, or other financing or financial institutions without the express written approval of the Grants Officer.

#### **Site Visits**

The NRC, through authorized representatives, has the right, at all reasonable times, to make site visits to review project accomplishments and management control systems and to provide such technical assistance as may be required. If any site visit is made by the NRC on the premises of the Grantee or contractor under an award, the Grantee shall provide and shall require his/her contractors to provide all reasonable facilities and assistance for the safety and convenience of the Government representative in the performance of their duties. All site visits and evaluations shall be performed in such a manner as will not unduly delay the work.

#### IV. Miscellaneous Requirements

#### **Criminal and Prohibited Activities**

- a. The Program Fraud Civil Remedies Act (<u>31 USC §§ 3801</u>-3812), provides for the imposition of civil penalties against persons who make false, fictitious, or fraudulent claims to the Federal government for money (including money representing grant/cooperative agreements, loans, or other benefits.)
- b. False statements (<u>18 USC § 287</u>), 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 (<u>31 USC 3729 et seq</u>), 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 (<u>18 USC § 874</u>), prohibits a person or organization engaged in a federally supported project from enticing an employee working on the project from giving up a part of his compensation under an employment contract.

#### American-Made Equipment And Products

Grantees are herby notified that they are encouraged, to the greatest extent practicable, to purchase American-made equipment and products with funding provided under this award.

#### Increasing Seat Belt Use in the United States

Pursuant to EO 13043, Grantees should encourage employees and contractors to enforce onthe-job seat belt policies and programs when operating company-owned, rented or personallyowned vehicle.

#### Federal Leadership of Reducing Text Messaging While Driving

Pursuant to EO 13513, Grantees should 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 generally barred from accepting funds from a Grantee to pay transportation, travel, or other expenses for any Federal employee unless specifically approved in the terms of the award. Use of award funds (Federal or non-Federal) or the Grantee's provision of in-kind goods or services, for the purposes of transportation, travel, or any other expenses for any Federal employee may raise appropriation augmentation issues. In addition, NRC policy prohibits the acceptance of gifts, including travel payments for Federal employees, from Grantees or applicants regardless of the source.

#### Minority Serving Institutions (MSIs) Initiative

Pursuant to EOs <u>13256</u>, <u>13230</u>, and <u>13270</u>, 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 form Federal financial assistance programs. NRC encourages all applicants and Grantees to include meaningful participations of MSIs. Institutions eligible to be

considered MSIs are listed on the Department of Education website: <u>http://www.ed.gov/about/offices/list/ocr/edlite-minorityinst.html</u>

#### Research Misconduct

Scientific or research misconduct refers to the fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results. It does not include honest errors or differences of opinions. The Grantee organization has the primary responsibility to investigate allegations and provide reports to the Federal Government. Funds expended on an activity that is determined to be invalid or unreliable because of scientific misconduct may result in a disallowance of costs for which the institution may be liable for repayment to the awarding agency. The Office of Science and Technology Policy at the White House published in the Federal Register on December 6, 2000, a final policy that addressed research misconduct. The policy was developed by the National Science and Technology Council (65 FR 76260). The NRC requires that any allegation be submitted to the Grants Officer, who will also notify the OIG of such allegation. Generally, the Grantee organization shall investigate the allegation and submit its findings to the Grants Officer. The NRC may accept the Grantee's findings or proceed with its own investigation. The Grants Officer shall inform the Grantee of the NRC's final determination.

#### Publications, Videos, and Acknowledgment of Sponsorship

Publication of the results or findings of a research project in appropriate professional journals and production of video or other media is encouraged as an important method of recording and reporting scientific information. It is also a constructive means to expand access to federally funded research. The Grantee is required to submit a copy to the NRC and when releasing information related to a funded project include a statement that the project or effort undertaken was or is sponsored by the NRC. The Grantee is also responsible for assuring that every publication of material (including Internet sites and videos) based on or developed under an award, except scientific articles or papers appearing in scientific, technical or professional journals, contains the following disclaimer:

"This [report/video] was prepared by [Grantee name] under award [number] from [name of operating unit], Nuclear Regulatory Commission. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the view of the [name of operating unit] or the US Nuclear Regulatory Commission."

#### 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 grantee or any subgrantee, 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." (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 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 <u>http://www.fsrs.gov</u>.

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 <u>http://www.fsrs.gov</u> 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 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 <u>2</u> <u>CFR 170.320</u> (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 <u>CFR 170.320</u> (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 (<u>15 U.S.C.</u> 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 <u>http://www.sec.gov/answers/execomp.htm</u>

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  $\underline{2}$  <u>CFR 170.320</u> (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 (<u>15 U.S.C.</u> 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, 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 <u>17 CFR 229.402(c)(2)</u>):

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.



FedGonnect. Ready, Set, Go!

A quick start guide designed to get you up and running fast with FedConnecte, the portal for doing business with the federal government

## www.fedconnect.net



Registering2
Managing Your Profile4
Searching for Opportunities6
Creating a Response8
Receiving an Award10
Sending and Receiving Messages12
Managing Users14
Quick Answers16

FedConnect Support

Email: support@fedconnect.net Phone: 1-800-899-6665 The FedConnect Support Center is staffed Monday – Friday, -8 a.m. to 8 p.m., EDT. Closed on Federal holidays.

## Are you looking to do business with the U.S. federal government? Are you seeking grants or assistance funding?

FedConnect<sup>®</sup> can help you do both. FedConnect is a one stop location where you can find opportunities for federal contracts, grants, and other types of assistance funding.

FedConnect is a web portal that bridges the gap between government agencies and their vendor and grants applicant/recipient communities to streamline the process of doing business with government. Through this portal you will be able to review opportunities and receive awards. You'll also have an open channel of communication with the government that is both secure and auditable where you can ask questions, submit responses, acknowledge receipt of documents, and receive awards. You can even create teams within FedConnect to manage your response or award.

This guide is designed to help you get up and running as quickly as possible. First we'll take you through the registration process. *It's fast, easy and most important, free!* Next, we'll walk you through the basics of everything from creating your organization and user profiles to submitting a response, and receiving an award.

Of course, if you ever need help, the FedConnect support team is standing by, ready to assist you.

Ready? Let's go!

## www.fedconnect.net

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## Registering

Registering and using FedConnect is fast, easy, and free.

You can have an unlimited number of users under your FedConnect company account.

You can check the status of your registration at any point by clicking the **Check Registration Status** link on the sign in page.

When you sign in, FedConnect checks to see whether you are an administrator or a representative. What you see on the pages within FedConnect and the tasks you can perform are determined by this role designation. For more information about the differences between administrator and representative access, see page 15.

#### Before you can register with FedConnect, you will need the following:

· Your company's DUNS (including plus 4 extensions if applicable).

If you don't know your company's DUNS or if your company does not have a DUNS you can search for it or request one at http://fedgov.dnb.com/webform.

• A Federal System for Award Management (SAM) account.

If your company is not currently registered with SAM, please register at <u>www.sam.gov</u> before continuing with your FedConnect registration.

· Possibly, your company's SAM MPIN.

If you are the first person from your company to register, FedConnect will need your SAM MPIN to create a company account.

Guidance for how to find your MPIN on SAM is available at the following link: <u>https://www.fsd.gov/app/answers/detail/a\_id/187</u>. If you don't have the sign in credentials for SAM, you can identify the person who does by looking up your organization's SAM record. Go to <u>www.sam.gov</u> and use the Search Records tool available on the home page. Click **POC** on the left menu and then look for the Electronic Business POC and Alternate Electronic Business POC information. These are the people who should know your MPIN.

After the initial FedConnect account is created, employees can register themselves without the MPIN. If you are not sure whether your company has an account with FedConnect, don't worry. Complete the registration form and FedConnect will let you know.

#### 1. Click Register for Free Account.

This link is available on the FedConnect home page at www.fedconnect.net.

2. Fill in the requested information.

The email address that you enter on this page will become your FedConnect user ID and will be used for all communication between FedConnect and you. Make sure that any SPAM filters you or your company use are set up to allow communication from the. fedconnect.net URL. If not, important notices and alerts might never reach you.

#### 3. Click the Register button.

What happens next depends upon whether or not your company currently has a master FedConnect account.

#### If your company has a master FedConnect account...

- · FedConnect creates an account for you with a status of pending.
- · An email is sent to your company's FedConnect administrators.

An administrator decides whether to activate your account. The administrator also decides whether you are to be given administrator privileges or if you will be a standard user.

You will receive an email from FedConnect.

When your account status has been changed, either activated or denied, you will receive an email from FedConnect.

#### If your company does not have a FedConnect account...

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You will be prompted to enter your company's SAM MPIN.

If you know your company's SAM MPIN, enter it in the field that now displays and click the **Register** button again. If you don't know this number, see the "*Before you can register...*" section on page 2 for guidance on who in your company would know this.

NOTE: The FedConnect screen currently says "CCR MPIN". We are in the process of updating that to SAM MPIN. Until that is complete, please enter your SAM MPIN in the CCR MPIN field.

· FedConnect will confirm your SAM registration.

This process normally takes just a few seconds. If your registration is valid and active, FedConnect will create a FedConnect company profile for you, download your address from SAM, and populate preferences such as your SAM-specified NAICS and PSC/FSC codes.

 FedConnect will create a personal account for the person creating this company account and make that person a FedConnect administrator.

Since the person who sets up the initial company account on FedConnect must know your agency's MPIN, that person is designated as an administrator for the FedConnect company account. An administrator can perform a variety of management duties within FedConnect, including updating company information and activating or denying registration requests by others in your company.

· An email will be sent to this new administrator.

Once the registration is complete, this new administrator will receive an email notification that the account has been activated.

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If you forget your password, you can reset it using the "Forgot your password" link on the FedConnect sign in page.

> Have questions? Email.us.at support@fedconnect.net

## **Managing Your Profile**

The links to access the company profile and your personal profile are at the top of most FedConnect pages.

Some of the information in your company profile comes directly from SAM and displays in read-only mode in FedConnect. If you ve recently made changes to your SAM account, be sure to click the Update Company from www.SAM.gov button on the FedConnect company info page. There are two different profiles associated with you in FedConnect, your company profile and your personal profile. Each user can edit to his or her own personal profile. However, users designated as administrators for your company can also edit the company profile. This section will explain the differences between the two and show you how to access them.

#### **Company Profile**

Editable by administrators only

The company profile includes information such as the company address, a list of company users, and the NAICS codes as well as the PSC/FSC codes in which your company is interested. The address and the codes are all downloaded automatically from SAM when the initial company account is created and cannot be edited within FedConnect. If your company makes changes to its SAM information at www.sam.gov, an administrator for your company's FedConnect account can click the **Update Company from www.SAM.gov** button within FedConnect on the Company Info page to download the changes to FedConnect.

NOTE: The "Update Company from www.SAM.gov" button currently displays as "Update Company from www.CCR.gov". We are in the process of updating the label. Although the button still references CCR, we are actually downloading your information with that in the new SAM system.

To access the company profile:

- 1. Sign in to FedConnect.
- 2. Click the Company Profile link at the top of the page.

A link to the company profile is available on most pages within FedConnect.

To move between sections within the company profile, click the menu options on the horizontal menu bar, or the buttons at the bottom of each page.

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#### Your Personal Profile

Editable by you and administrators only

Your personal profile is where you maintain information such as your name, how it displays or prints, and the agencies from whom you would like to receive information about opportunities or awards. It is also where you must go to change your password.

#### To access your personal profile:

1. Sign in to FedConnect.

#### 2. Click the My Profile link at the top of the page.

A link to your profile is available on most pages within FedConnect.

To move between sections within your profile, click the menu options on the horizontal menu bar, or the buttons at the bottom of each page.

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The email address listed in your personal profile is also your FedConnect user ID. Be sure the email address you use here is one you frequently monitor, as FedConnect will send email alerts for opportunities, awards, etc. to this address.

You can change your password at any time by clicking the **Change Password** button.

You will receive opportunities only from agencies you specify on the Agencies tab in your user profile. To access, click Agencies.

Although an administrator can access your personal profile, the administrator cannot see your password.

Have questions? Email.us.at\_ support@fedconnect.net

## **Searching for Opportunities**

Opportunities are filtered behind the scenes to show only opportunities from agencies you specified on the Agencies tab in your user profile. To update that list, click **My Profile** at the top of the page. Opportunities posted on FedConnect include both publicly posted (available for access by anyone) and directed (available to only a limited agency-specified list of vendors). FedConnect offers a number of options to simplify the searching process, including the ability to specify search criteria and to sort by column.

To search for opportunities as a registered vendor...

- 1. Sign in to FedConnect.
- 2. Go to Opportunities.

Click Opportunities and FedConnect displays the available opportunities.

FedConnect displays 10 opportunities per page. If more than 10 opportunities are available, you can click the numbered hyperlinks at the bottom of the list to page through them.

#### Tips for finding opportunities:

To sort the opportunities in the list by different columns, click the column headings. For example, if you know an opportunity is from a specific agency, click the **Agency** column heading and FedConnect reorders the list by agency name. You can then page through the list until you find the opportunity you seek.

Search criteria can be specified in the fields at the top of the list of opportunities. These criteria can be used to filter, or limit, the opportunities that display. Search criteria options include both basic and advanced search capabilities. To view the advanced search capability options, click **Advanced Options**. To return to the basic options, click **Search Criteria**. For easier viewing of the search results, click the [-] minus sign next to Search Criteria to hide the criteria. To reopen the search section, click the [+] plus sign.

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#### 4. Review the opportunity details.

12

To view the details of a specific opportunity, click the hyperlink under the opportunity title to go to the opportunity summary page.

On the opportunity summary page, an overview of the opportunity can be found in the left column. The actual opportunity and all attachments are available in the documentation section in the right column. To view the form or attachments, click the document title.

If you see an opportunity you'd like to pursue, click the **Register to Receive Notifications** button in the center of the page. The page refreshes and displays the message center for the opportunity in the center column, and the Responses and Response Team sections in the right column. Your name displays in the Response Team list.

If someone from your company has already registered interest for an opportunity, the **Register to Receive Notifications** button does not display. Instead, you can join the response team by clicking the **Join** button within the Response Team section. Once on the team, you will receive all amendments, messages, and email alerts issued for the opportunity.

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Anyone in your company who wants to stay informed about the opportunity should join the response team to ensure that he or she has access to all email alerts, amendments, and communications related to the opportunity.

To remove yourself from the response team, click the "X" next to your name.

Have questions? Email.us.at support@fedconnect.net

## **Creating a Response**

Throughout the entire response development process, FedConnect tracks all activity and edits and stores who did what and when in an audit log.

To learn more about using the Message Center to communicate with an agency, see "Sending and Receiving Messages" on page 12.

Anyone in your company who will work on the response should join the response team to ensure that he or she has access to all email alerts, amendments, and communications related to the opportunity. Registered vendors can electronically respond to any opportunity available to them in FedConnect.

- 1. Sign in to FedConnect.
- 2. Go to Opportunities.

Click Opportunities on the horizontal menu bar.

3. Open the opportunity.

Find the opportunity in the list. For help on using the search and sorting options available on this page, see "Tips for Finding Opportunities" on page 6. Once you've located the opportunity, click the hyperlink under the title to open it and view the opportunity summary page.

#### 4. Create the response.

What displays on the opportunity summary page depends upon whether your company has registered interest with the agency through FedConnect and whether you are currently on the response team. When your company registers interest, all members of the response team are kept up to date with future amendments and email alerts. Team members can use the message center for an opportunity to communicate with the agency and to view publicly posted messages. In addition, team members can participate in response development.

To register interest, click the **Register to Receive Notifications** button in the center column. If the button does not display, your company has already registered interest for the opportunity.

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Once interest is registered and you are a member of the response team, the message center for an opportunity displays in the center column and the Responses and Response Team sections display in the column to the right.

If you are not currently on the Response Team, and want to join, click **Join** in the Response Team section. To delete yourself from the team, click the **X** next to your name.

#### To create and submit a response...

 Click the Create button in the Responses section. Your response is created and the first data entry page displays.

Some opportunities allow more than one response or alternate responses to be created and submitted. If a response has already been created for this opportunity, it displays in the Response section. Click the response description to open.

· Complete the data entry pages.

The data entry pages available to you within the response vary depending upon the opportunity and how the agency configured it. For more details about a particular page, see the online help.

To move between the pages, click the options on the menu bar or by use the Continue and Previous buttons at the bottom of the page. Each time you move from one page to the next, the system saves your data.

· Submit the response to the agency.

On the response complete page, specify the number of days the response is good and click Submit to Agency. If you are not ready to submit to the agency, but want to exit the response, click Return to Opportunity Summary at the bottom of the page, or the home button in the toolbar at the top of the page.

• Print the confirmation page.

You'll notice that on your confirmation there are two dates and times. One is when you submitted the response, and the other is when the agency's system actually picked up the response. For security reasons, FedConnect cannot directly insert any data into the agency's internal systems. Because of this, there might be a time delay between when you submit, and when the agency electronically picks up the response. But don't worry, the official time of submission is the one that was recorded when you clicked the Submit to Agency button.

#### For a No Bid response...

If you want to submit a No Bid type of response, click the **Submit No Response** button in the Responses section. Once a No Bid is submitted to the agency, you cannot create a standard response, and the **Create** button will be hidden. Likewise, once a standard response is created, you cannot submit a No Bid response and the **Submit No Response** button is hidden.

Editing a Response Option available for responses with a status of In Progress.

- 1. Follow the steps 1-3 on page 8 to open the opportunity.
- 2. In the Responses section, click the response description to open a response you want to edit.

**Deleting a Response** Option available for responses with a status of In Progress.

- 1. Follow the steps 1-3 on page 8 to open the opportunity.
- In the Responses section, click the delete button on the row of a response you want to delete.

Withdrawing a Response Option available for responses with a status of Submitted or Received.

- 1. Follow the steps 1-3 on page 8 to open the opportunity.
- 2. In the Responses section, click the **Withdraw** button on the row of a response you want to withdraw.

NOTE: If the response is for an opportunity that is not a sealed bid and the due date/time has passed, a withdrawal request is sent to the agency. It is up to the agency to decide, based upon FAR rules, whether to accept or deny the request.

> Have questions? Email.us.at support@fedconnect.net

## **Receiving an Award**

Anyone in your company who wants to stay informed about the award should join the team for this award to ensure that he or she has access to all email alerts, modifications, and communications related to the award.

To remove yourself from the team for this award, click the "X" next to your name. When an agency posts an award to you through FedConnect, an email alert is sent to the email address you specified when you registered in FedConnect. You can then sign in to FedConnect to view and acknowledge the award.

#### 1. Sign in to FedConnect.

The email alert sent to you from FedConnect includes a URL link.

#### 2. Go to Awards.

Click **Awards** on the menu bar, and FedConnect displays all the awards that have been made to your company.

FedConnect displays 10 awards per page. If more than 10 awards display, click the numbered hyperlinks at the bottom of the awards list to page through them.

#### Tips for finding awards:

To sort the awards in the list by different columns, click the column headings. For example, if you know an award is from a specific agency, click the **Agency** column heading and FedConnect reorders the list by agency name. You can then page through the list until you find the award you seek.

Search criteria can be specified in the fields at the top of the list of awards. These criteria can be used to filter, or limit, the awards that display. Search criteria options include both basic and advanced search capabilities. To view the advanced search capability options, click **Advanced Options**. To return to the basic options, click **Search Criteria**. For easier viewing of the search results, click the [-] minus sign next to Search Criteria to hide the criteria. To reopen the search section, click the [+] plus sign.

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#### 3. Review the award details.

To view the details of a specific award, click the hyperlink under the award title to go to the award summary page.

On the award summary page, an overview of the award can be found in the left column. The actual award and all attachments are available in the Documentation section in the right column. To view the form or attachments, click the document title.

#### 4. Join the Team.

To see all information concerning the award, click Join.

#### 5. Acknowledge the award.

Click the **Acknowledge** button. If someone from your company has already acknowledged the award, the button does not display.

Later, if modifications are issued for the award, they automatically display in the Documentation section. To acknowledge these new documents, select the check box next to the title and click **Acknowledge**.

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Have questions? Email.us.at support@fedconnect.net

## **Sending and Receiving Messages**

An agency can respond publicly to any message you send, so be sure not to include any proprietary information.

The main message center offers a delete option to make it more manageable and easier to find things. Messages deleted from the main message center are not actually deleted from the document record. They just don't display in your main message center any longer. However, they are still available for viewing within the summary of the related opportunity or award. The only exceptions to this are draft messages that have not vet been sent. When you click the delete option for a draft message, it permanently removes it from FedConnect.

To restore a deleted message, go to the main message center's Deleted folder and click the restore button. The message is returned to the folder from which it was originally deleted. When you review an opportunity, work on a response, or manage an award, you might have questions or need to discuss something with the agency. FedConnect provides a dedicated, secure channel for that communication and automatically captures it in a permanent record. When you use FedConnect, there is no risk that you or the agency will lose any important information.

FedConnect's message center works much like a standard email program. Many of the concepts such as creating a new message, replying, or adding attachments will feel familiar. What is different is that everything sent through FedConnect is secure, recorded, and automatically associated with the related opportunity or award.

When you first sign in to FedConnect, the Message Center page displays. Therein you will see a compilation of all messages, both those directed to you, and those sent publicly. Any time you open an opportunity or award to view the details, you will also find a condensed version of the message center where the content is limited to only the communication sent or received for that specific document.

#### Overview

The message center contains different folders to organize your messages. Depending upon where you are in FedConnect, or the context of the page you are viewing, the available folders might differ. The actions available to you depend upon the folder you are currently viewing and your access level. To move between folders, click the folder icons on the left side of the message center.

Here are the folders that might display and what they include:

Inbox – Public or directed messages sent to you Drafts – Messages you previously saved but have not yet sent Outbox – Messages awaiting pickup by the agency Sent – Messages you sent that the agency has picked up Deleted – Messages you deleted from the main message center view

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#### To send a new message...

- 1. Sign in to FedConnect.
- 2. Go to the Opportunity or Award summary page.

Since all new messages must be associated with a particular opportunity or award, the ability to create a new message is available only on the opportunity and award summary pages. If the message is about an opportunity, click **Opportunities** on the menu bar. If the message concerns an award, click **Awards**. Find the opportunity or award in the list and click the hyperlink under the title to open the summary.

#### Click the New button on the message center. Write your message. To add attachments, click Attach File and follow the prompts.

4. Click Send.

#### To reply to a message...

1. Sign in to FedConnect.

#### 2. Find the message you wish to reply to in the message center.

You can also go directly to the opportunity or award summary pages for a particular document and locate the message in the document-specific message center. See instructions for sending a new message (above) or how to open the summary page.

3. Click the Reply icon at the right end of the message's row.

Write your message. To add attachments, click Attach File and follow the prompts.

4. Click Send.

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The message center displays on the summary page of an opportunity only if you have registered interest or joined the response team. It displays on an award's summary page after you join the team.

All information, including messages, is retrieved electronically from FedConnect by the agency's contract management system. For security reasons, FedConnect cannot directly insert any data into the agency's internal systems. Therefore there might be a time delay between when you click Send and when the agency actually picks up the message. During this time, the message is held in the Outbox folder. Once the agency picks up the message, it will be moved to the Sent folder.

Have questions? Email.us.at support@fedconnect.net

## **Managing Users**

Your company can have an unlimited number of FedConnect user accounts.

Each of your company's users should have his or her own account in FedConnect and should not share the password. This allows FedConnect to keep a complete audit log of who did what and when.

Your company profile and user accounts can be accessed by an administrator by clicking the **Company Profile** link at the top of most pages. Your company has complete control over its FedConnect account and which employees have access. Employees who have been designated as administrators can add new users and activate users who have submitted registration requests. Administrators can also perform such tasks as changing a user's role designation and access levels, and resetting passwords.

#### Adding More Users to Your FedConnect Account

You can have an unlimited number of company representatives using your FedConnect account. Each additional representative must create a personal account associated with your company's master account. There are two ways this can be done—each person can register on his or her own, or if you are an administrator for your company's FedConnect account, then you can add them.

For employees who are going to register on their own, refer them to the instructions in the "Registering" section of this guide, starting on page 2.

If you are an administrator and want to add a user, here's how:

- 1. Sign in to FedConnect.
- 2. Click the **Company Profile** link at the top of the page.
- 3. Click Users on the horizontal menu bar.
- 4. Click Add at the top of the user list.

Fill in the required fields and click Return to User List.

A new account has been created for the user. By default, the user is a representative. An email with a system-generated password is sent to the email address you entered for the user when you created the new account. The new user can change the password at any time by updating his or her personal profile. See "Managing Your Profile" on page 4.

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#### Managing Your User Accounts

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If you are an administrator for your company's FedConnect account, you have the ability to control a variety of things concerning a particular user. For example, you could change someone's role (administrator/representative), activate or deactivate his or her account, specify access rights, and reset his or her password.

You can also manage the personal details of your own account. You cannot, however, deactivate yourself or change your role designation. Another administrator must assist you.

To access the administrative tools for a particular user.

- 1. Sign in to FedConnect.
- 2. Click the Company Profile link at the top of the page.
- 3. Click Users on the horizontal menu bar.
- 4. Select the user by clicking the hyperlink under the name.
- 5. Click Admin Tools on the horizontal menu.

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## There are two types of users: administrators and representatives. Page displays are controlled by this role designation. Here are the differences between the two roles:

#### Representative

Access to:

- Opportunities
- Responses
- Awards
- Communication tools
- His or her personal profile

#### Administrator

All access rights available to the representative, plus...

- Full access to the company profile

- Full access to all user profiles for your company.

NOTE: Although an administrator has access to another user's profile the Administrator cannot see that user's password.

#### Have questions? Email.us.at support@fedconnect.net

## I've forgotten my password and locked my account, what do I do?

Contact your FedConnect administrator. You can find the list of FedConnect administrator's for your company at https://www.fedconnect.net/FedConnect/Contact.aspx.

#### My account has been deactivated, what do I do?

Each company manages its own users and who has access. If your account has been deactivated, contact your company's FedConnect administrator. https://www.fedconnect.net/FedConnect/Contact.aspx

## Are there limits to the types of files that can be included as an attachment to a response or message?

Yes, there are certain file types that cannot be uploaded. We've followed Microsoft's lead and use the list they've developed for excluding files with extensions that are considered high risk. For a complete list of these files, please visit, http://support.microsoft.com/?kbid=883260.

#### What if I accidentally submit a response before I meant to?

If the due date and time have not passed, you can simply withdraw the response. After the due date and time, depending upon the type of opportunity and the FAR rules governing it, you might be able to submit a withdrawal request. It would then be up to the agency to decide whether or not to allow the withdrawal. For more details, see page 9.

#### Initially my company submitted a No Bid type of response, but now we changed our minds and want to submit a proposal. How do we start over?

If the due date and time have not passed, you can simply withdraw the No Bid response and then create a new response for submission.

#### Have questions? Email.us.at

support@fedconnect.net

#### I've submitted my response, but the confirmation page says that it is queued awaiting agency pickup. What does this mean and will it still be counted as having been submitted on time?

Due to agency security requirements, FedConnect can never upload data into an agency's database. Instead, it is up to each agency to retrieve the information from FedConnect. This retrieval is an automatic process that happens on a schedule determined by each individual participating agency.

When you submit your response, the time of submission is captured and recorded. This is the official time of submission to be used in determining whether it was on time. It does not matter if the agency picks it up a minute later or the next day. Their pickup time is not used to calculate whether you met the deadline. For some types of opportunities, the agency cannot pick up until after the official due date and time.

#### How do I know when the agency picks up my response?

You can see the exact date/time of pickup by opening the response and going to the Confirmation page.

## I'm working on a response and I've noticed that some of my work has been changed. How can that happen?

Anyone on the Response Team has access to the In Progress response and can make changes. To see who has changed what, click the History link within the Responses section of the opportunity's summary page. The history contains a complete audit of who did what and when. 

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