



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

September 30, 2014

Professor Edward Blandford
University of New Mexico
1 University of New Mexico
Albuquerque, NM 87131-0001

VIA Electronic Mail
edb@unm.edu

SUBJECT: GRANT NO. NRC-HQ-84-14-G-0002

Dear Mr. Blandford:

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 New Mexico (hereinafter referred to as the "Grantee" or "Recipient"), the sum of \$111,193 to— Developing a Modern Nuclear Reactor Safety Course at the University of New Mexico and University of California Berkley", 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 Fatima.Shuler@nrc.gov.

Sincerely yours,

Erika Eam

Erika Eam
Grants Officer
Research, Resources & Grants
Division of Contracts

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

Grant and Cooperative Agreement

CHOOSE ONE:

- COOPERATIVE AGREEMENT
 GRANT

CHOOSE ONE: EDUCATION FACILITIES RESEARCH SDCR TRAINING

1. GRANT/COOPERATIVE AGREEMENT NUMBER NRC-HQ-84-14-G-0002		2. SUPPLEMENT NUMBER		3. EFFECTIVE DATE 09/30/2014		4. COMPLETION DATE	
5. ISSUED TO NAME/ADDRESS OF RECIPIENT (No., Street, City/County, State, Zip) UNIVERSITY OF NEW MEXICO 1 University of New Mexico ALBUQUERQUE NM 87131-0001				6. ISSUED BY U.S. NRC - HQ Mailing Address: Acquisition Management Division Mail Stop: 3WFN-05-C64MP Washington DC 20555-0001			
7. TAXPAYER IDENTIFICATION NO. (TIN)				9. PRINCIPAL INVESTIGATOR/ORGANIZATION'S PROJECT OR PROGRAM MGR. (Name & Phone) Dr. Edward Blandford; edb@unm.edu; 505-277-7964			
8. COMMERCIAL & GOVERNMENT ENTITY (CAGE) NO.							
10. RESEARCH, PROJECT OR PROGRAM TITLE Developing a Modern Nuclear Reactor Safety Course at the University of New Mexico and University of California, Berkeley							
11. PURPOSE							
12. PERIOD OF PERFORMANCE (Approximately) 09/30/2014 through 09/29/2016							
13A. AWARD HISTORY		13B. FUNDING HISTORY		PREVIOUS		PREVIOUS	
PREVIOUS		\$0.00		THIS ACTION		\$111,193.00	
THIS ACTION		\$111,193.00		CASH SHARE		\$111,193.00	
CASH SHARE		\$111,193.00		NON-CASH SHARE		\$0.00	
NON-CASH SHARE		\$0.00		RECIPIENT SHARE		\$0.00	
RECIPIENT SHARE		\$0.00		TOTAL		\$111,193.00	
TOTAL		\$111,193.00		TOTAL		\$111,193.00	
14. ACCOUNTING AND APPROPRIATION DATA 2014-X0200-FEEBASED-84-84D002-51-K-134-T8453-4110							
PURCHASE REQUEST NO.		JOB ORDER NO.		AMOUNT		STATUS	
OCHCO-14-0297							
15. POINTS OF CONTACT							
		NAME		MAIL STOP		TELEPHONE	
TECHNICAL OFFICER		TANYA L. PARWANI-JAIMES				301-287-0730	
NEGOTIATOR							
ADMINISTRATOR		FATIMA SHULER				301-287-3726	
PAYMENTS							
16. THIS AWARD IS MADE UNDER THE AUTHORITY OF: Section 31b and 141b of the Atomic Energy Act of 1954, as amended							
17. APPLICABLE STATEMENT(S), IF CHECKED:				18. APPLICABLE ENCLOSURE(S), IF CHECKED:			
<input type="checkbox"/> NO CHANGE IS MADE TO EXISTING PROVISIONS				<input type="checkbox"/> PROVISIONS <input type="checkbox"/> SPECIAL CONDITIONS			
<input type="checkbox"/> FDP TERMS AND CONDITIONS AND THE AGENCY-SPECIFIC REQUIREMENTS APPLY TO THIS GRANT				<input type="checkbox"/> REQUIRED PUBLICATIONS AND REPORTS			
UNITED STATES OF AMERICA				COOPERATIVE AGREEMENT RECIPIENT			
CONTRACTING/GRANT OFFICER		DATE		AUTHORIZED REPRESENTATIVE		DATE	
ERIKA EAM		09/26/2014					

Grant and Cooperative Agreement

ITEM NO. (A)	ITEM OR SERVICE (Include Specifications and Special Instructions) (B)	QUANTITY (C)	UNIT (D)	ESTIMATED COST	
				UNIT PRICE (E)	AMOUNT (F)
	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 reporting requirements or other conditions specified in 2 CFR 215 (OMB Circular A110). Payment: ASAP GRANT FUNDS REIMBURSEMENT SYS US TREASURY Period of Performance: 09/30/2014 to 09/29/2016				

ATTACHMENT A - SCHEDULE

A.1 PURPOSE OF GRANT

The purpose of this Grant is to provide support to the “Developing a Modern Nuclear Reactor Safety Course at the University of New Mexico and University of California Berkley” 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: \$111,193.00
- 2. Total Obligated Amount: \$111,193.00
- 3. Cost-Sharing Amount: \$0
- 4. Activity Title: “Developing a Modern Nuclear Reactor Safety Course at the University of New Mexico and University of California Berkley”
- 5. NRC Project Officer: Tanya Parwani-Jaimes
- 6. DUNS No.: 868853094

A.3 BUDGET

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

	Year 1	Year 2
Total Salaries & Wages	\$18,907.00	\$19,474.00
Fringe Benefit	\$ 4,583.00	\$ 4,738.00
Travel	\$ 5,250.00	\$ 5,250.00
Equipment	\$ 7,260.00	\$ 0.00
Supplies	\$ 1,627.00	\$ 0.00
Other Cost	\$ 3,000.00	\$ 6,000.00
Indirect Costs (51%)	<u>\$17,017.00</u>	<u>\$18,087.00</u>
Yearly Total	\$57,644.00	\$53,549.00

A.4 AMOUNT OF AWARD AND PAYMENT PROCEDURES

- 1. The total estimated amount of this Award is \$111,193.00 for the two-year period.
- 2. NRC hereby obligates the amount of \$111,193.00 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. Overview and Key Objectives

This proposal presents a project designed to establish a modern nuclear reactor safety course offering at the University of New Mexico (UNM) and revise existing nuclear reactor safety curriculum at the University of California, Berkeley (UCB) in a manner consistent with the mission of the U.S. Nuclear Regulatory Commission (USNRC). The key outcome of this project will be a modern reactor safety course that will be piloted at both UNM and UCB in the Fall of 2014. This course will be offered to senior undergraduate and graduate students and co-taught by Prof. Blandford and Prof. Peterson. The course will be a permanent course offered every other year at both institutions and will incorporate modern distance learning techniques. The objectives of this proposal are based on a comprehensive and integrated approach to nuclear education that,

- Revises and modernizes an existing nuclear reactor safety and risk analysis course to incorporate the following elements which will each be developed as 2 week modules:
 1. Modern approaches to Level II and Level III PRA consistent with USNRC risk-informed and performance-based regulation
 2. Quantitative societal objectives as they relate to the existing USNRC quantitative health objectives
 3. Treatment of beyond design basis events with an emphasis on severe natural hazards
 4. Synergies and conflicts of reactor safety and security
- Utilizes modern technology for distance learning approaches such that the course can be offered simultaneously at both UNM and UCB thus maximizing both universities technical expertise and leveraging nearby DOE lab guest lecturers
- Achieves experiential learning through simulated real-world projects and interactions with involved reactor safety practitioners, decision-makers, and relevant stakeholders
- Increases access to course material through distance learning approaches, such that these course materials can be potentially used at other universities
- Develops stronger linkages between supporting courses offered at both universities in key areas important to nuclear reactor safety and security

The proposal is divided into two main sections. The first section of the project proposal focuses on curriculum development including the establishment of four new modules to be taught during the course. The second section focuses on the tasks related to establishing a modern, streamlined course offering at both UNM and UCB.

2. Curriculum Development

At the highest level, revising and modernizing coursework to incorporate modern approaches for a performance-based and risk-informed regulation consistent with NUREG-2150 will be a priority. Currently, UNM does not offer undergraduate or graduate courses in reactor safety while UCB does offer undergraduate and graduate courses in nuclear reactor safety (NE167/267). This course, NE167/267, covers many of the fundamental concepts related to the safety of the current generation of reactors that were licensed under 10CFR50 and its appendices. These key concepts and methods used in the safety evaluation of nuclear power plants include: safety philosophies, general design criteria, and regulations; deterministic and probabilistic models; reliability analysis; nuclear and thermal-hydraulic transients; design-basis and severe accident analysis; radiological consequences; risk analysis; code scaling, applicability, and uncertainty analysis; role of engineered safety systems; siting and licensing issues. Due to advancements in both analytical and computational methods for understanding severe accidents (i.e. SOARCA study), regulatory reform at the USNRC, interest in licensing of non-water-cooled Generation IV reactors, and the recent events in Japan, the need to modernize this course and expand its offering to more students has never been greater.

It is also important to mention that both Professor Blandford and Professor Peterson plan on making additional changes to the course curriculum that are not covered under this project proposal. These course modifications include:

- *Challenges and opportunities in the safety assessment of advanced reactors (e.g. the shift from active to passive safety and from water to non-water coolants)*
- *New licensing approaches (e.g. shifting the focus toward PRA-based categorization of licensing basis events and best estimate simulation of the reactor response with uncertainty quantification) including risk-informed approaches*
- *Proliferation resistance assessment implications including design for application of IAEA safeguards for international deployment*

As mentioned, the curriculum development is divided into four two-week learning modules. The content for each module will be developed based on input by industry experts at two workshops to be held at the UNM and UCB. Each workshop will be two days and bring together experts from academia, industry, and national laboratories with the sole purpose of developing curriculum suitable for an upper level undergraduate and graduate student. Both Berkeley and Albuquerque are strategically located near national laboratories with extensive expertise in reactor safety as well as industry organizations such as EPRI. The locations of both universities will greatly cut down the amount of travel costs required for each workshop.

The first workshop will be held at the end of Fall 2013 at UNM in Albuquerque, NM. This workshop will focus on curriculum development for the first two modules described in greater detail below (2.1 and 2.2). The second workshop will be held at the end of Spring 2014 at UC Berkeley in Berkeley, CA. This workshop will focus on curriculum development for the last two modules (2.3 and 2.4). It is important to recognize that there are similar reactor safety courses being offered at a few universities across the United States as well as relevant professional development courses at national laboratories such as SNL and INL. Therefore, it is important that judicious selection of workshop participants include these course instructors such that curriculum development at each workshop will benefit safety courses beyond the course proposed at UCB and UNM. For all four modules, a strawman list of topics and preliminary course material will be developed for review prior to both workshops. This work will be done by Prof. Blandford and is an important element of his professional development as a junior faculty member. The purpose of the two workshops is to review this material and provide invaluable

input on module curriculum. Prof. Blandford will use this feedback from each workshop in order to develop new course material as well as modify and enhance existing course material.

2.1 Modern approaches to Level II and Level III PRA consistent with USNRC risk-informed and performance-based regulation (Module 1). This module will be developed under the leadership of Professor Blandford and focus on developing course material for giving senior undergraduate and graduate students the tools to understand how Level II and Level III PRA's are performed in industry. Dr. Matt Denman (SNL) will be invited to participate and help coordinate this module development. Since this module will be done in a two-week period, it is unreasonable to develop a curriculum that teaches students how to run relevant Level II and Level III computational tools. However, students should be able to grasp the methods utilized and key assumptions such that they are familiar with the state of the art in radiological release and public health/economic consequence models. Key outputs from plant SPAR models will be discussed. The MAAP code capabilities and modifications will be discussed during this workshop as well as MELCOR/MACCS2 modeling capabilities and limitations. Ultimately, the role of Level III PRA use for cost-benefit analyses and planning purposes will be revisited with an emphasis on what is suitable for university course curriculum.

The curriculum for this module will be discussed and developed at the first projects workshop held at Albuquerque. Due to the proximity of SNL, key personnel such as Dr. Randy Gauntt and Dr. Patrick Matty with Level II and Level III expertise will be invited to attend to provide input on suitable curriculum for advanced undergraduate and graduate students. In addition, Dr. Curtis Smith (INL) will be invited to attend the workshop due to his extensive experience in Level II and Level III PRA. Additionally, Dr. Ed Fuller (US NRC) will be invited to attend in order to discuss the state of the art in Level II PRA and provide input on course development for this module. Relevant course instructors responsible for teaching reactor safety at the university level or for professional development will also be invited. It is important to recognize that government employees' travel cannot be supported under this project.

2.2 Synergies and conflicts of reactor safety and security (Module 2)

This module will be developed at UNM under the leadership of Professor Blandford. Dr. Jim Doyle (LANL) will be invited to participate in the development of this module. The module will focus on a variety of topics including but not limited to fundamental security risk assessment and management, synergies and conflicts when factoring safety and security simultaneously, strategies for estimating attack scenarios including general characteristics of design basis threats and the identification of target sets, and more generally safety and security by design. The skillset developed in this course applies equally across a spectrum of nuclear technologies that require robust physical protection strategies. Students will develop an understanding of fundamental defense in depth philosophy and blended approaches to physical protection to prevent theft of material and sabotage of equipment and facilities. Students who successfully complete the course module will have a practical understanding of the limitations of utilizing both game-theoretic and probabilistic risk analysis techniques and their ultimate implementation. It is critical to note that these techniques are applicable across a variety of disciplines ranging from state allocation strategy to facility optimization as examples. An example of material to be covered includes an overview of recent changes made by the US NRC with respect to strengthening and the integration of emergency operating procedures, severe accident management guidelines (SAMGs), and extensive damage mitigation guidelines (EDMGs). Furthermore, we plan to develop a module that integrates these efforts into design guidance for reactor designers and policymakers.

This module will be discussed during the second day of the Albuquerque workshop and key personnel from LANL and SNL will also be leveraged for this part of the workshop. In addition to Dr. Doyle, Dr. Greg Wyss (SNL) will be invited to attend to and give a talk on modern methods for assessing security risk based on the degree of difficulty an adversary will encounter to successfully execute the most advantageous attack scenario. As with the first module, relevant invited course instructors will be encourage to stay for both days and participate.

2.3 Quantitative societal objectives as they relate to the existing USNRC quantitative health objectives (Module 3)

This module will be developed under the leadership of Professor Blandford and Professor Kastenberg (emeritus UCB). The rare destructive accidents at Fukushima and Chernobyl have had a significant impact on nearby communities due to radioactive contamination of land, groundwater, and the ocean. Long-term evacuations that prevent people from returning to their homes, farms, and businesses have a lasting impact on public well-being. While these consequences should not be trivialized, large-scale contamination is not unique to accidents from nuclear power. It occurs across a broad spectrum of human activities ranging from dam failures, to accidents at chemical industrial facilities, to oil and coal-ash spills. In this module, students will learn about the societal impact of severe reactor accidents. Additionally, students will help develop mock societal goals factoring in all risks encountered by society and assess environmental contamination relative to other individual and public health risks.

This module will be the focus of the first day of the second workshop to be held at UCB. Prof. Kastenberg will lead the development of this module. Professor Joonhong Ahn (UCB) will be asked to contribute as he has just returned from visiting Fukushima and has first-hand, up-to-date knowledge and data regarding cleanup activities. Prof. Richard Denning (OSU) and Prof. Mohammad Modarres (UMD) will both be invited. The University of Maryland recently held a workshop on this topic and insights from this event will be given. Both Prof. Modarres and Prof. Denning teach related reactor safety and PRA courses at the university level. As mentioned, the focus of both workshops is to develop useful material that can be applied at different university and professional course offerings.

2.4 Treatment of beyond design basis events with an emphasis on natural hazards (Module 4)

This module will be developed under the leadership of Prof. Peterson and Prof. Blandford. Dr. Robert Budnitz (LBNL) will be asked to participate and provide invaluable input. While there was clearly substantial failure at Fukushima to adequately address external natural events that should have been included within the design basis, it is important to recognize that there will always be events, in particular natural events or potential terrorist attacks, that will surprise us (for example, the 5.8 magnitude earthquake at North Anna and the Missouri River flooding of Ft. Calhoun, both of which took place in 2011). These types of events are why margin and a defense-in-depth approach to safety are essential to ensuring minimal public risk. The failure at Fukushima was due to an insufficient "tsunami defense-in-depth approach," not a failure of the defense-in-depth philosophy itself. Students in this module will learn about how to deal with completeness uncertainty by improving defensive actions, mitigation measures, and emergency response to ensure facility robustness for events we can anticipate and those we cannot. The discussion will include the risk reduction provided by preparations to use portable equipment to restore safety functions, due to the inherent uncertainty in predicting plant damage states for beyond-design-basis events. Students will also be given an overview of the tradeoffs between PSHA and seismic safety case arguments.

This module will be the focus of the second day of the UCB workshop. All participants from the

first day of the UCB workshop will be encouraged to stay for both days. Dr. Robert Budnitz (LBNL) will provide an overview of modern methods for assessing seismic risk. Prof. Martin McCann (Stanford) will also be asked to participate and discuss suitable course material for flooding hazard assessments. During both workshops, participants will review and provide feedback on preliminary course material.

3. Experiential Learning, Distance Learning, and Knowledge Management

Innovative instructional approaches emphasizing experiential learning, distance-based learning, and knowledge management will be utilized during this project. The course will be piloted during the Fall of 2014 and offered at both UNM and UCB. It is important to note that this class will be initially offered between UNM and UCB but there are ambitions to ultimately open up the course to an international audience after gaining experience with a two-campus course offering. This course will impact an approximate total of 20 students at UNM and 20 students at UCB. Due to the fact this material will be accessible online, there will be the potential to reach many more students both domestically and internationally.

3.1 Experiential Learning

In lieu of a final exam, students at both UNM and UCB are assigned open-ended projects of importance to regulation. Student groups each select a specific reactor design or fuel cycle facility to focus their project on, along with a specific application (electricity generation, process heat, etc.), and a specific site where the facility will be located. It is perfectly acceptable to select a reactor design or fuel cycle facility of varying degrees of design maturity, and to select a site that may or may not already have existing reactors. Final projects are presented to a group of decision-makers and stakeholders including a mock Advisory Committee on Reactor Safeguards panel composed of members from academia, government, and industry. Students are challenged to adopt the views of the applicant, regulator (acting as an NRC staff reviewer of another group's project), and the public (by providing oral and written public comments on another group's project). By offering the course simultaneously at UCB and UNM, students at both institutions can see more student projects and will have the opportunity to represent these different stakeholders across universities.

3.2 Distance-Based Learning

Efforts to develop and implement distance learning between UNM and UCB will be expanded to increase access to course materials, foster collaboration, and preserve knowledge. There are existing capabilities at both UNM and UCB to enable a web-based course between the two campuses. However, UNM will need to purchase a very modest amount of video equipment to broadcast the course for lectures being taught at UCB. It is essential that students at both campuses can participate dynamically and ask questions to the instructor teaching at a different location. Campus-wide initiatives and resources for distance-based learning will be leveraged. Refining experiential learning approaches using these resources will be explored.

3.3 Knowledge Management

Effective knowledge management will be an essential objective for all aspects of this proposal to ensure subject matter expertise and teaching competencies are maintained. Therefore, a website for the course will be established and made publicly available. Material developed for these courses will be made available on this website. In addition, course lectures will also be recorded and uploaded to the website after each lecture is done. Ensuring effective knowledge management for this project is essential as both project investigators look to augment the scope of the course beyond UNM and UCB in future years. Additionally, one of the major benefits of this proposed course is the ability to leverage guest lecturers from nearby DOE laboratories. By

recording and uploading these lectures, the quality of the course can be maintained for future years independent of guest lectures schedule constraints.

4. Course Revision

The following sections describe proposed revisions to the existing risk analysis offered at UCB and will be adopted at UNM to achieve the objectives identified above. Changes to the syllabi developed under this project are highlighted. In addition to the 4 modules developed under this project, additional changes will be made by Professor Blandford to the course curriculum in order to ensure the course is streamlined. Deliverables for this project will be in the form of slide packages for use in the courses, both at UCB and UNM. As mentioned, the project culminates with a presentation to a mock Advisory Committee on Reactor Safety (ACRS). Members of the mock ACRS are typically drawn from the NRC staff, national laboratories, and industry.

Table 1 Revisions to Reactor Safety Syllabus (university which will teach course is indicated in parentheses)

<p>Week 1 (UNM) – Course Introduction and Reactor Safety Philosophy Topics: Course project and outline overview. PRA and evolution from WASH-1400 to NUREG 1150. Definition of risk, NRC safety goals (QHOs), and risk-based vs risk-informed. Levels 1, 2, and 3 PRA distinction in PRA. Current state of technology: advanced reactor licensing at NRC.</p>
<p>Week 2 (UCB) – Light Water Reactor Safety I (Consequence considerations) Topics: PWR and BWR safety systems (key differences). TMI and lessons learned. Licensing of Gen III+ reactors (ESBWR, AP-1000). 10CFR52 and advancements in site licensing. History of LWR consequence modeling; LOFT/Semi scale experiments, development of CSAU framework, Appendix K and PIRT process.</p>
<p>Week 3 – (UNM) Light Water Reactor Safety II (Probabilistic considerations) Topics: Design basis envelope determination (AOO, DBA,bdba). Top-down approach (master logic diagram) vs. bottom-up approach (FMEA/HAZOP) using LWR and non-LWR ASME PRA Standards. Fault tree and event tree development. Definition of SSC's (safety and non-safety related).</p>
<p>Week 4 (UNM) – Modern approaches to Level II and Level III PRA consistent with USNRC risk-informed and performance-based regulation I</p>
<p>Week 5 (UNM) – Modern approaches to Level II and Level III PRA consistent with USNRC risk-informed and performance-based regulation II</p>
<p>Week 6 – Group Presentations on Systems Overview (both UNM and UCB groups present) Focus of presentation is to provide an overview of the selected reactor concept with an emphasis on safety functions. Discuss site location and state of licensing (pre or post design certificate submittal). Group responsibilities should be established.</p>
<p>Week 7 (UCB) Treatment of beyond design basis events with an emphasis on natural hazards I</p>
<p>Week 8 (UCB) Treatment of beyond design basis events with an emphasis on natural hazards II</p>
<p>Week 9 (UNM) – Quantitative societal objectives as they relate to the existing USNRC quantitative health objectives I</p>
<p>Week 10 (UCB) – Quantitative societal objectives as they relate to the existing USNRC quantitative health objectives I</p>

<p>Week 11 (UCB) - Best-estimate computer modeling and uncertainty assessment Topics: State of technology; RELAP5-3D/TRACE. Use of CSAU to determine code uncertainties. Experimental validation; separate effects, integral effects and component tests. Use of PIRT process to identify key phenomena. Impact on safety margins.</p>
<p>Week 12 – Group Presentations on Design Basis Accidents (both UNM and UCB groups present) Focus of this presentation is to discuss the groups proposed licensing basis envelope. A discussion of each classification of event should be included in addition to frequency and consequence information. Must demonstrate understanding of how frequency and consequence results were obtained.</p>
<p>Week 13 (UCB) – Generation IV Reactor Safety (Advanced reactor licensing: case study of PBMR) Topics: Top level regulatory criteria, generation of regulatory design criteria, and licensing basis event identification. Integral vs standard LWR PRA approach. Defense in depth; rationalist vs structuralist approach.</p>
<p>Week 14 (UNM) Synergies and conflicts of reactor safety and security I</p>
<p>Week 15 (UNM only) Synergies and conflicts of reactor safety and security II</p>
<p>Week 16 Final Group Presentations: Mock ACRS Hearing (both UNM and UCB groups present)</p>

Proposed revisions to the course not covered by this project include:

- Advanced reactor licensing at the NRC, 10CFR52 and advancements in site licensing
- Semi-scale experiments, development of the Code Scaling, Applicability and Uncertainty (CSAU) framework, and the Phenomena Identification and Ranking Table (PIRT) process
- Design basis envelope determination (AOO, DBA, BDBA). Top-down approaches (master logic diagram) vs. bottom-up approach (i.e. Failure Modes and Effects Analysis, HAZOP approach) using LWR and non-LWR ASME/ANS PRA standards
- Top level regulatory criteria, generation of regulatory design criteria, and licensing basis event identification. Integral vs. standard LWR PRA approach. Defense in depth; rationalist vs. structuralist approach.
- State of technology; RELAP5-3D/TRACE. Use of CSAU to determine code uncertainties. Experimental validation; separate effects, integral effects and component tests. Use of PIRT process to identify key phenomena. Impact on safety margins.
- Performance based design methods for the response of civil structures to external events. State of technology in modern seismic construction. Computational methods for seismic response simulation. Reduced scale experiments.
- Active vs. passive component reliability. Distinction between hardware and functional failure

5. Project Benchmarks

A set of benchmarks is essential for establishing a set of success criteria. In Table 2 below, each task is listed and the overall schedule is graphically depicted. It is important to note that the period of performance goes from April, 2013 to March, 2015 for a total of 2 years. Key benchmarks are indicated at the bottom of the table. It should be noted that each year in the table is split into two-month increments.

Table 2 Proposed Project Schedule and Benchmarks for Success

Period of Performance	04/2013-03/2015											
Time (2 Month Periods)	1	2	3	4	5	6	7	8	9	10	11	12
<i>Tasks – Organize first two workshops</i>												
Establish contact with NRC and SNL/INL personnel who offer similar training courses	█											
Establish initial communication with other universities												
Establish formal course offerings at UNM	█	█										
Organize First Workshop at UNM		█	█									
Organize Second Workshop at UCB					█	█						
<i>Tasks – Course Material Development</i>												
Develop preliminary course material for Module 1 and 2		█	█									
Distribute course material for Workshop 1 to Participants			█									
Develop preliminary course material for Module 3 and 4				█	█							
Distribute course material for Workshop 2 to Participants						█						
Finalize course material for all four modules						█	█	█				
<i>Tasks – Development of website and distance learning capabilities</i>												
Establish contract with website developer			█									
Develop preliminary version of website			█	█								
Organize distance learning capabilities				█								
<i>Benchmarks</i>												
Distribute First Workshop Material			█									
Hold First Workshop at UNM				█								
Develop initial course website format					█							
Finalize distance learning arrangement between UNM and UCB					█							
Distribute Second Workshop Material						█						
Hold Second Workshop at UCB							█					
Complete Revised Material								█				
Finalize website incorporating workshop recommendations								█				
Offer reactor safety course									█			

Attachment C – Standard Terms and Conditions

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

Preface

This award is based on the application submitted to, and as approved by, the Nuclear Regulatory Commission (NRC) under the authorization 42 USC 2051(b) pursuant to section 31b and 141b of the Atomic Energy Act of 1954, as amended, and is subject to the terms and conditions incorporated either directly or by reference in the following:

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

To assist with finding additional guidance for selected items of cost as required in 2 CFR 220, 2 CFR 225, and 2 CFR 230 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.

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

I. Mandatory General Requirements

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

1. Applicability of 2 CFR Part 215

a. All provisions of 2 CFR Part 215 and all Standard Provisions attached to this grant/cooperative agreement are applicable to the Grantee and to sub-recipients which meet the definition of "Grantee" in Part 215, unless a section specifically excludes a sub-recipient from coverage. The Grantee and any sub-recipients must, in addition to the assurances made as part of the application, comply and require each of its sub-awardees employed in the completion

of the project to comply with Subpart C of 2 CFR 215 and include this term in lower-tier (subaward) covered transactions.

b. Grantees must comply with monitoring procedures and audit requirements in accordance with OMB Circular A-133. <
http://www.whitehouse.gov/omb/circulars/a133_compliance/08/08toc.aspx >

2. Award Package

§ 215.41 Grantee responsibilities.

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

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

Subgrants

Appendix A to Part 215—Contract Provisions

Sub-recipients, sub-awardees, and contractors have no relationship with NRC under the terms of this grant/cooperative agreement. All required NRC approvals must be directed through the Grantee to NRC. See 2 CFR 215 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 (<http://epls.arnet.gov>).

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

'Debarment, Suspension, Ineligibility, and Voluntary Exclusion

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

Drug-Free Workplace

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

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

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

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

Procurement Standards. § 215.40-48

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.

Travel

Travel must be in accordance with the Grantee's Travel Regulations or the US Government Travel Policy and Regulations at: www.gsa.gov/federaltravelregulation and the per diem rates set forth at: www.gsa.gov/perdiem, absent Grantee's travel regulation. Travel costs for the grant must be consistent with provisions as established in Appendix A to 2 CFR 220 (J.53). 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 PRIOR 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 2 CFR 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 2 CFR 215.36.

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 trans-government Interagency Edison system (<http://www.iedison.gov>) and expects NRC funding Grantees to use this system to comply with Bayh-Dole and related intellectual property reporting requirements. The system allows for Grantees to submit reports electronically via the Internet. In addition, the invention must be reported in continuation applications (competing or non-competing).

Patent Notification Procedures- Pursuant to EO 12889, NRC is required to notify the owner of any valid patent covering technology whenever the NRC or its financial assistance Grantees,

without making a patent search, knows (or has demonstrable reasonable grounds to know) that technology covered by a valid United States patent has been or will be used without a license from the owner. To ensure proper notification, if the Grantee uses or has used patented technology under this award without license or permission from the owner, the Grantee must notify the Grants Officer. This notice does not necessarily mean that the Government authorizes and consents to any copyright or patent infringement occurring under the financial assistance.

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

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

Records Retention and Access Requirements for records of the Grantee shall follow established provisions in 2 CFR 215.53.

Organizational Prior Approval System

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

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

Conflict of Interest Standards 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 2 CFR 215.42 Codes of Conduct.

Dispute Review Procedures

- a. Any request for review of a notice of termination or other adverse decision should be addressed to the Grants Officer. It must be postmarked or transmitted electronically no later than 30 days after the postmarked date of such termination or adverse decision from the Grants Officer.
- b. The request for review must contain a full statement of the Grantee's position and the pertinent facts and reasons in support of such position.
- c. The Grants Officer will promptly acknowledge receipt of the request for review and shall forward it to the Director, Office of Administration, who shall appoint 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.

Termination and Enforcement. Termination of this award by default or by mutual consent shall follow provisions as established in 2 CFR 215.60-62.

Monitoring and Reporting § 215.50-53

- a. Grantee Financial Management systems must comply with the established provisions in 2 CFR 215.21
 - Payment – 2 CFR 215.22
 - Cost Share – 2 CFR 215.23
 - Program Income – 2 CFR 215.24
 - Earned program income, if any, shall be added to funds committed to the project by the NRC and Grantee and used to further eligible project or program objectives or deducted from the total project cost allowable cost as directed by the Grants Officer or the terms and conditions of award.
 - Budget Revision – 2 CFR 215.25
 - 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 – 2 CFR 215.27

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: Grants FFR@NRC.GOV. **(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 2 CFR 215.25(e)(2) or a special award condition, any extension of the award period can only be authorized by the Grants Officer in writing. Verbal or written assurances of funding from other than the Grants Officer shall not constitute authority to obligate funds for programmatic activities beyond the expiration date.
- c. The NRC has no obligation to provide any additional prospective or incremental funding. Any modification of the award to increase funding and to extend the period of performance is at the sole discretion of the NRC.
- d. Requests for extensions to the period of performance 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 Department of Treasury's Automated Standard Application for Payment (ASAP) system < <http://www.fms.treas.gov/asap/> >. Under the ASAP system, payments are made through preauthorized electronic funds transfers, in accordance with the requirements of the Debt Collection Improvement Act of 1996. In order to receive payments under ASAP, Grantees are required to enroll with the Department of Treasury, Financial Management Service, and Regional Financial Centers, which allows them to use the on-line method of withdrawing funds from their ASAP established accounts. The following information will be required to make withdrawals under ASAP: (1) ASAP account number – the award number found on the cover sheet of the award; (2) Agency Location Code (ALC) – 31000001; and Region Code. Grantees enrolled in the ASAP system do not need to submit a "Request for Advance or Reimbursement" (SF-270), for payments relating to their award.

Audit Requirements

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

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

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

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

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

III. Programmatic Requirements**Performance (Technical) Reports**

a. The Grantee shall submit performance (technical) reports electronically to the NRC Project Officer and Grants Officer 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: Grants_PPR.Resource@NRC.GOV. (***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 §215.51 which are incorporated in the award.

c. The Office of the Chief Human Capital Officer 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 31st is due by April 30th, or any portion thereof. The submission for the six month period ending September 30th is due by October 31st 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 (31 USC §§ 3801-3812), provides for the imposition of civil penalties against persons who make false, fictitious, or fraudulent claims to the Federal government for money (including money representing grant/cooperative agreements, loans, or other benefits.)
- b. False statements (18 USC § 287), provides that whoever makes or presents any false, fictitious, or fraudulent statements, representations, or claims against the United States shall

be subject to imprisonment of not more than five years and shall be subject to a fine in the amount provided by 18 USC § 287.

- c. False Claims Act (31 USC 3729 et seq), provides that suits under this Act can be brought by the government, or a person on behalf of the government, for false claims under federal assistance programs.
- d. Copeland “Anti-Kickback” Act (18 USC § 874), prohibits a person or organization engaged in a federally supported project from enticing an employee working on the project from giving up a part of his compensation under an employment contract.

American-Made Equipment And Products

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

Increasing Seat Belt Use in the United States

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

Federal 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 13256, 13230, and 13270, NRC is strongly committed to broadening the participation of MSIs in its financial assistance program. NRC’s goals include achieving full participation of MSIs in order to advance the development of human potential, strengthen the Nation’s capacity to provide high-quality education, and increase opportunities for MSIs to participate in and benefit from Federal financial assistance programs. NRC encourages all applicants and Grantees to include meaningful participations of MSIs. Institutions eligible to be considered MSIs are listed on the Department of Education website:

<http://www.ed.gov/about/offices/list/ocr/edlite-minorityinst.html>

Research Misconduct

Scientific or research misconduct refers to the fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results. It does not include honest errors or differences of opinions. The Grantee organization has the primary responsibility to investigate allegations and provide reports to the Federal Government. Funds expended on an activity that is determined to be invalid or unreliable because of scientific

misconduct may result in a disallowance of costs for which the institution may be liable for repayment to the awarding agency. The Office of Science and Technology Policy at the White House published in the Federal Register on December 6, 2000, a final policy that addressed research misconduct. The policy was developed by the National Science and Technology Council (65 FR 76260). The NRC requires that any allegation be submitted to the Grants Officer, who will also notify the OIG of such allegation. Generally, the Grantee organization shall investigate the allegation and submit its findings to the Grants Officer. The NRC may accept the Grantee's findings or proceed with its own investigation. The Grants Officer shall inform the Grantee of the NRC's final determination.

Publications, Videos, and Acknowledgment of Sponsorship

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

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

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 <http://www.fsrs.gov>.

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

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

b. *Reporting Total Compensation of Recipient Executives.*

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

i. the total Federal funding authorized to date under this award is \$25,000 or more;

ii. in the preceding fiscal year, you received—

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

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

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

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

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

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

c. Reporting of Total Compensation of Subrecipient Executives.

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

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

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

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

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

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

i. To the recipient.

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

d. Exemptions

If, in the previous tax year, you had gross income, from all sources, under \$300,000, you are exempt from the requirements to report:

i. Subawards,

and

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

e. Definitions. For purposes of this award term:

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

- i. A Governmental organization, which is a State, local government, or Indian tribe;
- ii. A foreign public entity;
- iii. A domestic or foreign nonprofit organization;
- iv. A domestic or foreign for-profit organization;
- v. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

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

3. *Subaward*:

- i. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.
- ii. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see Sec. __ .210 of the attachment to OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations").
- iii. A subaward may be provided through any legal agreement, including an agreement that you or a subrecipient considers a contract.

4. *Subrecipient* means an entity that:

- i. Receives a subaward from you (the recipient) under this award; and
- ii. Is accountable to you for the use of the Federal funds provided by the subaward.

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

i. *Salary and bonus*.

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

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

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

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

vi. Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.



FedConnect[®]

Ready, Set, Go!

A quick start guide designed to get you up and running fast with FedConnect[®],
the portal for doing business with the federal government.



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

FedConnect® 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

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.*

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 www.sam.gov 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: https://www.fsd.gov/app/answers/detail/a_id/187. 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 www.sam.gov 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...

- 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.

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

The screenshot shows the 'FedConnect Registration Request' form. At the top, it says 'FedConnect' and 'Help'. Below that, the title is 'Registration Request'. The main text reads: 'Registering with FedConnect is fast, easy, and free. If your company already has a FedConnect account, complete the requested information and click Register. If your company does not have a FedConnect account, after clicking Register, you will be prompted to enter your company's CCR MPIN. For more information about the CCR MPIN or other registration requirements, [click here to launch the FedConnect Ready, Set, Go! guide](#) and review the section on registration'. There is a circular logo for 'Premium Level Support Now Available' with a 'Click here to learn more' link. The form fields include: 'Company DUNS', 'First name', 'Middle initial', 'Last name', 'Display name (first last)', 'Display name (last first)', 'Email', and 'Confirm email'. At the bottom, there are 'Register' and 'Cancel' buttons, and a '* Required Field' label.

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.

FedConnect Help | My Profile | Company Profile | Sign Out

XYZ Industries -- Diane Wilson

company info | users | address | psc/fsc | naic | company audits

XYZ Industries

DUNS 00000000

CAGE 0000

Update company info: Update Company from: www.CCR.gov

FedConnect sends information about opportunities, award notices, and alerts to your organization. Please select how you would like to receive these

Notification Method: Individual User Email Addresses

Continue | Return to Message Center

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.

The screenshot shows the FedConnect user profile page for Diane Wilson. The page has a navigation bar at the top with links for Help, My Profile, Company Profile, and Sign Out. Below the navigation bar, the user's name and agency are displayed. The main content area is titled "user info" and contains a table of personal information. At the bottom of the page, there are navigation buttons for Previous, Continue, and Return to Message Center, along with a "Required Field" indicator.

XYZ Industries	
First name:	Diane
Middle initial:	
Last name:	Wilson
Display name (First,Last):	Diane Wilson
Display name (Last,First):	Wilson, Diane
Email:	d_wilson@xyzindustries.com
Title:	Manager
Office Phone:	703-555-1234
Extension:	144
CellPhone:	703-555-9978
Password:	<input type="password"/> Change Password

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.

FedConnect Help | My Profile | Company Profile | Sign Out

XYZ Industries - Diane Wilson

message center | opportunities | my alerts

This is a list of directed and public opportunities that meet the criteria you have specified in your user profile. To view a particular opportunity, click the hyperlink under the title. For more details on using this page, click Help.

Search Criteria: Advanced Options: Search

Title	Type	Agency	Issuing Office	Issue Date	Response Due Date	PSC / FSC	NAICS	Reference Number	
Air Purifiers	Solicitation	ABC	Office for Procurement	4/13/2012	05/14/2012 03:00 PM CS	J075	236320	ABC-123	Audits
Facility Construction	Solicitation	DEF	Region 6	4/19/2012	04/26/2012 04:00 PM CS	7110	337214	DEF-44-3022	Audits
Field Training	Pre-solicitation Notice	GHI	OPO	5/4/2012 9:55:58 AM	05/09/2012 05:00 PM ET	9330	333220	GHI-AA-5578	Audits
Fuel	Pre-solicitation Notice	JKL	Construction and Acquisition	5/4/2012 9:37:28 AM	05:00 PM ET	5650	238160	JKL-111-A-02	Audits
IT Services	Solicitation	MNP	National Training Center	5/4/2012	05/11/2012 05:00 PM ET	0309	518210	MNP-566	Audits
Laptops	Solicitation	ABC	Division of Contracting	4/30/2012	05/21/2012 12:00 PM ET	Z291	237990	ABC-129	Audits
Maintenance & Support	Solicitation	GHI	Contracting Office	5/4/2012	05/14/2012 05:00 PM ET	6810	325320	GHI-AA-5600	Audits
Printers	Pre-solicitation Notice	GHI	Region A1	5/4/2012 6:06:32 AM	05/18/2012 05:00 PM MS	Y1PA	237990	GHI-AA-5580	Audits
Translation Services	Special Notice	MNP	Office of Contracting	5/3/2012 6:20:28 PM	05/21/2012 05:00 PM ET	9130	324110	MNP-578	Audits
Printers	Solicitation	JKL	Region 5	5/3/2012	05/30/2012 04:00 PM LT	R411	531320	JKL-111-B-22	Audits

1 2 3 4 5 6 7 8 9 10

4. Review the opportunity details.

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.

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.

The screenshot shows the FedConnect website interface. At the top, there is a navigation bar with 'FedConnect' on the left and 'Help | My Profile | Company Profile | Sign Out' on the right. Below the navigation bar, the user's name 'XYZ Industries - Diana Wilson' is displayed. The main content area is titled 'Opportunity: Laptops'. It is divided into three columns. The left column contains a 'Description' section with the text 'This request for proposal is for laptops to support the Contracting Division at the main headquarters' and an 'Overview' section with details such as 'Reference number: ABC-129', 'Issue date: 04/30/2012', 'Response due: 05/21/2012 12:00 PM ET', and agency information. The center column features a 'What do I do now?' section with two buttons: 'Register to Receive Notifications' and 'Return to Opportunity List'. The right column contains a 'Documentation' section with a list of documents including 'ABC-129', 'Solicitation', 'Overview', 'SF 1447', and 'Attachment'. The bottom of the page shows the 'Place of Performance' information for Agency ABC.

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.

The screenshot shows the FedConnect web application interface. At the top, there is a navigation bar with 'Help', 'My Profile', 'Company Profile', and 'Sign Out'. Below this, the user is identified as 'XYZ Industries - Diane Wilson'. The main content area is titled 'Opportunity: Laptops'. It is divided into several sections: 'Description' (with a placeholder text), 'Overview' (containing fields for Reference number: ABC-129, Issue date: 04/30/2012, Response due: 05/21/2012 12:00 PM ET, Set Aside, NAICS: 237990, PSC / FSC: 2291, Agency: ABC, Contracting office: Division of Contracting, Agency ABC address, and Place of Performance), 'Inbox' (with search criteria and a 'No messages found' message), 'Documentation' (listing ABC-129, Solicitation, Overview, SF 1447, and Attachment), 'Responses' (with 'Create' and 'Submit No Response' buttons and a 'No responses found' message), and 'Response Team' (listing Team Member Diane Wilson). A 'Return to Opportunity List' button is also visible.

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.
2. 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.

The screenshot shows the FedConnect interface. At the top, there is a navigation bar with 'Help', 'My Profile', 'Company Profile', and 'Sign Out'. Below this, the user's name 'XYZ Industries -- Diane Wilson' is displayed. The main content area is titled 'awards' and includes a search section with a dropdown menu for 'Search Criteria' set to 'Advanced Options' and a 'Search' button. Below the search section is a table of award results.

Title	Agency	Issuing Office	Award Date	Award Number	Modification Number	PSC / FSC	NAICS	Audits
Maintenance Renewal	ABC	Division of Contracting	5/2/2011	ABC-CO-55678	BASE	17030	511210	Audits

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**.

The screenshot displays the FedConnect interface for a user named Diane Wilson at XYZ Industries. The main heading is 'Award: Maintenance Renewal'. The page is divided into several sections:

- Description:** 'Award for FY-2013 Annual Maintenance for the Southwest Region data center'.
- Overview:** A table with the following data:

Post date	05/02/2011
NAICS	511210
PSC / FSC	7030
Award date	05/02/2011
Award / Order Number	ABC-CO-55678
- Inbox:** A search interface with 'Search Criteria: MAINTENANCE RENEWAL' and a 'Search' button. Below it, it says 'No messages found'.
- Documentation:** A section titled 'New documents have arrived' with a prompt to acknowledge. It lists three items:
 - ABC-CO-55678
 - BASE
 - SF 1449 Contract Clauses
- Acknowledge:** A button to acknowledge the award.
- Award Team:** A table with the following members:

Team Member	
Diane Wilson	<input type="checkbox"/>
Samir Sengupta	<input type="checkbox"/>
Mana Chh	<input type="checkbox"/>
- Return to Award List:** A button at the bottom center.
- Agency:** ABC
- Issuing office:** Agency ABC, Division of Contracting, 123 Main Street, Washington, DC 20002
- Contact name:** Mike Watkins

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 yet 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

The screenshot displays the FedConnect web interface. At the top, the user is logged in as 'Diane Wilson' from 'XYZ Industries'. The main heading is 'Opportunity: Laptops'. Below this, there are several sections:

- Description:** This request for proposal is for laptops to support the Contracting Division at the main headquarters.
- Overview:** Reference number: ABC-129; Issue date: 04/30/2012; Response due: 05/21/2012 12:00 PM ET; Set Aside NAICS: 237990; PSC / FSC: 2291; Agency: ABC; Contracting office: Division of Contracting; Agency ABC, Division of Contracting, 123 Main Street, Washington, DC 20002; Place of Performance: Agency ABC, Division of Contracting, 123 Main Street.
- Inbox:** A search box with 'Search Criteria: ALL OPPORTUNITIES' and a 'From' dropdown. Below it, a 'New' button and a message that says 'No messages found'. A 'Return to Opportunity List' button is also present.
- Documentation:** A list of documents including 'ABC-129 Solicitation', 'Overview', 'SF 1447', and 'Attachment'.
- Responses:** A section with 'Create' and 'Submit No Responses' buttons, and a message that says 'No responses found'.
- Response Team:** A table with one member listed: 'Team Member: Diane Wilson'.

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.

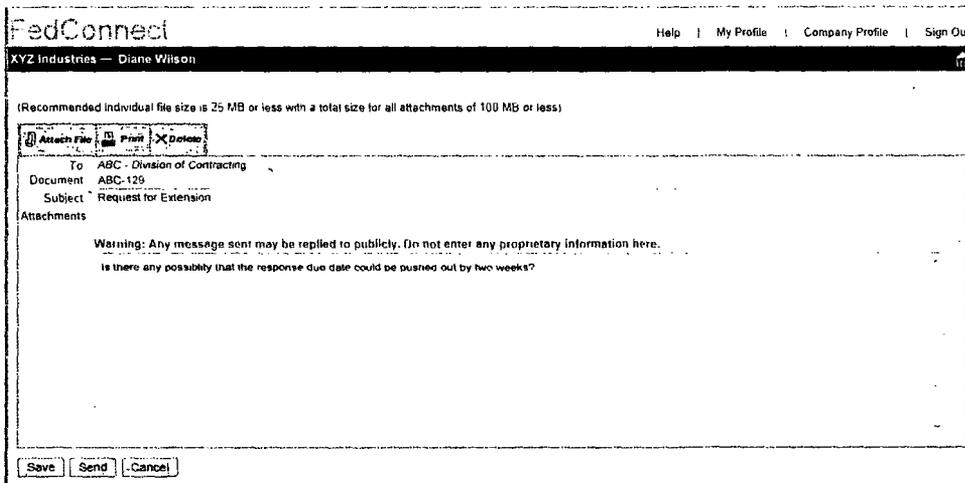
3. **Click the New button on the message center.**
Write your message. To add attachments, click **Attach File** and follow the prompts.
4. **Click Send.**

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.**



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.

The screenshot shows the 'Users' management interface for 'XYZ Industries'. At the top, there are navigation links: 'Help', 'My Profile', 'Company Profile', and 'Sign Out'. Below the navigation is a horizontal menu with 'Users' selected. A search criteria section is visible, with fields for 'First Name', 'Last Name', 'Email', 'Status' (set to 'All'), and 'Roles' (set to 'All'). A 'Search' button is located to the right of these fields. Below the search section is a table of users:

First Name	Last Name	Email	Status	Role
Diane	Wilson	dwilson@xyzindustries.com	Active	Vendor Administrator
Maria	Chan	mchin@xyzindustries.com	Active	Vendor Administrator
Samir	Sengupta	ssengupta@xyzindustries.com	Active	Vendor Representative

Managing Your User Accounts

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.**

The screenshot shows the 'admin tools' interface for a user named Sanhr Sengupta. The page header includes 'FedConnect' and navigation links for 'Help', 'My Profile', 'Company Profile', and 'Sign Out'. The user's name 'Sanhr Sengupta' is displayed, along with their role 'Vendor Representative' and status 'Active'. There is a 'Reset Password' button and a 'Comments' field. At the bottom, there are 'Continue' and 'Return to User List' buttons.

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

Quick Answers

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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