

**SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS
OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30**

1. REQUISITION NO RES-10-151 PAGE 1 OF 27

CONTRACT NO: **NRC-04-10-151** 3. AWARD/EFFECTIVE DATE: **09-30-2010** 4. ORDER NO: 5. SOLICITATION NUMBER: **RS-RES-10-151** 6. SOLICITATION ISSUE DATE: **08-15-2010**

FOR SOLICITATION INFORMATION CALL: a. NAME: **HERIBERTO COLON JR** b. TELEPHONE NO (No Collect Calls): **301-492-3620** 8. OFFER DUE DATE/LOCAL TIME: **09-03-2010**

ISSUED BY: U.S. Nuclear Regulatory Commission, Div. of Contracts, Attn: H. (Eddie) Colon, Jr., Mail Stop: TWB-01-B10M, Washington, DC 20555. CODE: **3100**. 10. THIS ACQUISITION IS: UNRESTRICTED OR SET ASIDE. % FOR: SMALL BUSINESS, EMERGING SMALL BUSINESS, HUBZONE SMALL BUSINESS, SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS. NAICS: **333319**, SIZE STANDARD: **500 Employees**. B(A)

1. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED: SEE SCHEDULE. 12. DISCOUNT TERMS: **N/A**. 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700): . 13b. RATING: **N/A**. 14. METHOD OF SOLICITATION: RFO, IFB, RFP.

5. DELIVER TO: U.S. Nuclear Regulatory Commission, Washington DC 20555. CODE: 16. ADMINISTERED BY: U.S. Nuclear Regulatory Commission, Div. of Contracts, Mail Stop: TWB-01-B10M, Washington, DC 20555. CODE: **3100**

7a. CONTRACTOR/OFFEROR: **GSE POWER SYSTEMS, INC.** CODE: **606797264** FACILITY CODE: 18a. PAYMENT WILL BE MADE BY: **Department of Interior / NBC, NRCPayments_NBCDenver@nbc.gov, Attn: Fiscal Services Branch - D2770, 7301 W. Mansfield Avenue, Denver CO 80235-2230**. CODE: **3100**. 1332 LONDONTOWN BLVD STE 200, SYKESVILLE MD 217846587, TELEPHONE NO. 410-970-7881

17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER: . 18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED: SEE ADDENDUM

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	The contractor shall provide the U.S. Nuclear Regulatory Commission with the supplies/services described below, in accordance with the Statement of Work and the terms and conditions of this contract and at the Firm Fixed Prices stated in the PRICE SCHEDULE below:				
0001	NUCLEAR POWER PLANTS (NPP) CONTROL ROOM SIMULATOR 1		FFP		
0002	DOCUMENTATION SIMULATOR 1		FFP	11/C	
0003	INSTALLATION SIMULATOR 1		FFP		
0004	ACCEPTANCE AND TESTING SIMULATOR 1		FFP		
0005	TRAINING (3 days) SIMULATOR 1		FFP		
0006	ADDITIONAL TRAINING (7 days)		FFP		
				SUBTOTAL	\$248,127.63

5. ACCOUNTING AND APPROPRIATION DATA: See CONTINUATION Page. 060-15-111-203 V6053 252A 31X0200.060. OBLIGATE: \$365,257.63 (FFS #: RES-C10-848). DUNS #: 606797264. 26. TOTAL AWARD AMOUNT (For Govt. Use Only): \$365,257.63

27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4, FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA: ARE ARE NOT ATTACHED. 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4, FAR 52.212-5 IS ATTACHED. ADDENDA: ARE ARE NOT ATTACHED.

28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN 1 Electronic COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED. 29. AWARD OF CONTRACT: REF: OFFER DATED: YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN IS ACCEPTED AS TO ITEMS.

30a. SIGNATURE OF OFFEROR/CONTRACTOR: *Jeffery G. Hough*. 31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER): *H. Colon*. 30b. NAME AND TITLE OF SIGNER (TYPE OR PRINT): **JEFFERY G. HOUGH CFO**. 30c. DATE SIGNED: **9/30/10**. 31b. NAME OF CONTRACTING OFFICER (TYPE OR PRINT): **Heriberto Colon, Jr. Contracting Officer**. 31c. DATE SIGNED: **9/30/2010**

AUTHORIZED FOR LOCAL REPRODUCTION. PREVIOUS EDITION IS NOT USABLE.

STANDARD FORM 1449 (REV 3/2005) Prescribed by GSA - FAR (48 CFR) 53.212

TEMPLATE - ADMIN001

SUNSI REVIEW COMPLETE

OCT 04 2010

ADMIN002

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
0007	NUCLEAR POWER PLANTS (NPP) CONTROL ROOM SIMULATOR 2	[REDACTED]	FFP	[REDACTED]	[REDACTED]
0008	DOCUMENTATION SIMULATOR 2	[REDACTED]	FFP	N/C	[REDACTED]
0009	INSTALLATION SIMULATOR 2	[REDACTED]	FFP	[REDACTED]	[REDACTED]
0010	ACCEPTANCE & TESTING SIMULATOR 2	[REDACTED]	FFP	N/A	[REDACTED]
0012	TRAINING (3 days) SIMULATOR 2	[REDACTED]	FFP	N/C	[REDACTED]

32a. QUANTITY IN COLUMN 21 HAS BEEN

RECEIVED INSPECTED ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: _____

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE 32c. DATE 32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE 32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE

32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE

33. SHIP NUMBER 34. VOUCHER NUMBER 35. AMOUNT VERIFIED CORRECT FOR 36. PAYMENT 37. CHECK NUMBER

PARTIAL FINAL COMPLETE PARTIAL FINAL

38. S/R ACCOUNT NUMBER 39. S/R VOUCHER NUMBER 40. PAID BY

41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT 42a. RECEIVED BY (Print)

41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER 41c. DATE 42b. RECEIVED AT (Location)

42c. DATE REC'D (YY/MM/DD) 42d. TOTAL CONTAINERS

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SECTION B - CONTINUATION BLOCK

B.1 STATEMENT OF WORK

PROJECT TITLE

“NPP Control Room Simulator for Conducting Human Performance Research”

OBJECTIVE

The objective of this contract is to procure a turn-key, generic simulator for conducting human performance research with nuclear power plant operators. Being a turn-key product means that the simulator is already fabricated and does not require development parameters or specifications. Compared to plant-specific full scope simulators, the simulator through this procurement will be cost-efficient, ready to use, and easy to maintain.

SCOPE OF WORK

The contractor shall provide a turn-key solution and perform all the tasks in the statement of work without NRC's participation. The NRC staff will be available to answer questions as necessary but will not be available for providing plant parameters or detailed HSI specifications.

BACKGROUND

The Nuclear Regulatory Commission (NRC) staff reviews applications for construction permits, operating licenses, standard design certifications, and combined operating licenses to ensure plant safety. The operating nuclear power plants (NPPs) are undergoing various forms of control room modernization, and new and advanced reactors are being planned to support future power generation. This trend introduces new reactor and system designs, new technologies to support plant personnel, and possible changes to NPP staffing configurations. It is important that the potential impact of these developments on human performance are understood and evaluated for determining the acceptability of the changes or new designs to ensure plant safety.

Human performance simulation and testing have been used to understand the impacts of different technology systems on human responses. Human performance simulations assess human behavior and capabilities to perform tasks under various system conditions. Human performance testing, also referred to as human factors experiments, typically assess human responses to specifically designed variations or disturbances in systems in order to perform a given segment of the whole system tasks. Both types of research are referred to as human-in-the-loop studies because the object of such studies is human responses to the system.

The NRC's existing technical guidance relies on human performance research in nuclear and other domains relevant to the current concepts of operation as well as operational experience with operating reactors. Given the changes being proposed within the industry, it is essential that NRC update the technical bases and the corresponding regulatory guidance documents, as appropriate, by conducting confirmatory human-in-the-loop studies to determine the impacts of control room modernization and new technologies on human performance. The results will help the NRC to i) better understand human performance issues with technology changes in control rooms, ii) develop acceptance criteria for new technologies, and iii) guide the NRC staff to ask more informed safety questions in reviewing applications. For these purposes, the research should allow observation and measurement of human performance in responding to simulated plant behaviors during normal or emergency operations. The research

should also allow observation and measurement of human performance under different testing conditions that simulate new control room technologies such as digital human-system-interfaces (HSI), new design features (e.g., high level of automation), or new concepts of operations (e.g., reducing onsite crew size). Given that the NRC is interested in studying human performance issues applicable to all different designs, the research does not need to be specific to any given plant design, reactor model, or control room configuration, but generically applicable.

The following are two detailed examples to further illustrate the need for this research and how the results will be used:

Example 1: Impacts of digital instrument & control in control room HSI on human performance

Control rooms are moving toward digitized HSI. How digital HSI affects operators' performance and what the safety considerations are in new HSI designs are important regulatory questions. The specific questions to be studied include: How well is an operator aware of other crew members' activities? How do operators respond to failure modes specific to digital HSI? How does the use of computer interfaces impact teamwork? A human performance experiment can be designed as follows to answer those questions:

- The test with digital HSI will run scenarios that simulate different plant behaviors (e.g., steady state operation, normal evolutions, transients, emergency events, severe accidents, etc.).
- Scenarios will be run with different manipulations to the HSI such as those proposed or anticipated to be proposed in licensees' applications. For example, different ways of displaying parameters and/or trends, implementing soft control (e.g., plant control is conducted by a point-and-click of the mouse or by touch-screen), or failing HSI.
- Experiment participants will perform tasks required for these scenarios according to operation rules and procedures. Participants can be NPP operators or others, e.g., college students, with some basic operator training. Participants may work individually on specific parts of the HSI, or they may work as a crew to operate multiple parts or the entire HSI.
- During the scenarios, researchers will observe and assess participants' performance on completing assigned tasks, monitoring the HSI, detecting abnormal signals and alarms, diagnosing problems, making decisions and response plans, and implementing actions. Human errors and response time are the key elements in assessment. In addition, participants' workload and situational awareness will be assessed by adding secondary tasks to participants or periodically freezing the simulation.
- After the scenarios are completed, researchers will examine plant parameters and participants' actions recorded in data-logging files to further analyze the participants' performance in real-time.

Example 2: Evaluation of staffing plans in control rooms

Licensees may propose staffing plans that are different from the NRC's requirements for control room staffing specified in 10 CFR 50.54(m). For example, one potential request is reducing control room crew size from the current requirement of a minimum of three operators. The regulatory question is: Does the use of one or two people to operate the plant from the control room maintain adequate coverage to ensure safe operation? A human performance experiment can be designed as followed to address the question:

- The test will run scenarios that simulate normal operations and emergent events (e.g., steam generator tube rupture) with single or multiple disturbances (e.g., system malfunctions).
- Scenarios may be run with and without some advanced control room technologies such as advanced alarm systems or computerized procedures.
- Participants form a crew of one, two, or three members may perform the required actions for these scenarios according to operation procedures.

- During the scenarios, the participants' performance will be recorded. In addition, the subject's communication, decision-making process, and following/deviating/violating procedures will be systematically observed.
- Post-scenario interviews with the participants and data analysis will be performed to further understand the participants' behavior.

The ideal test participants would be plant operators, and getting statistically reliable human performance results will require repetitively testing the same scenarios over with many participants and/or testing the same participants multiple times. In reality, the number of operators and the time available to participate in the studies are limited. Therefore, the NRC plans to conduct the human performance studies in two steps. The first step will test many non-operator participants with various combinations of scenarios, system conditions, and new technologies. The results will allow researchers to identify safety-critical or error-prone scenarios. Using the insights from the first step, the second step will test a limited number of operators for those error-prone scenarios. As such, the experimental setup should be sufficiently flexible to simulate simplified tasks or tasks that would be performed in a full-scope control room.

PERFORMANCE REQUIREMENTS

The contract shall provide a simulator that allows the NRC to conduct experimental human performance research as described in the BACKGROUND section. The simulator shall meet the following Performance Requirements:

1. Models and parameters of the simulator are generic to plants, technologies, and control room configurations. The simulator shall not require the NRC to provide development parameters.
2. The simulator shall allow the NRC to conduct real time, human-in-the-loop simulations so that operator responses can be observed and assessed during scenarios of various initial conditions, plant behaviors, malfunctions, and transients. (Real time simulation follows the definition in ANS 3.5: Simulation of dynamic performance in the same time base relationships, sequences, durations, rates, and accelerations as the dynamic performance of real plants.)
3. The simulator shall have graphic tools to modify graphic interfaces as well as the ability to build and configure additional graphic displays so that the NRC can change the interfaces to study the impacts of new interface features or interface modifications on human performance.
4. The interface configuration shall be flexible so that the simulator allows one individual or a team of 2-3 personnel to perform tasks in scenarios.
5. The simulator shall provide ways to allow for non-operator participants to perform simplified tasks or parts of the tasks in scenarios. Examples of the ways to achieve this are automating parts of the tasks, taking some systems out of execution during scenarios, or controlling the systems not of interest in a scenario through the instructor station (i.e., the I/O override function).

BASE REQUIREMENTS

The simulator package shall consist of simulation software, hardware, manuals, and documents. The simulator shall meet the base requirements specified in this section. Minor adjustments or deviations from the requirements are allowed only when they do **not** prevent the simulator from meeting the Performance Requirements above.

1. Simulator in general
 - 1.1 The simulator shall meet the ANS 3.5 standard; minor simplifications from 3.5 are allowed provided that the simplification does not impact simulator capabilities to meet the Performance Requirements.
 - 1.2 The fidelity of the simulator shall be high enough not to mislead an experienced operator into error in actions.
 - 1.3 The simulator shall operate on desktop computers under a Microsoft Windows environment (XP or later version).
2. Software
 - 2.1 Reactor models and the software that implements reactor process models
 - 2.1.1 The reactor models that simulate reactor processes shall include basic process models of reactor physics, thermo hydraulics, and control systems such as:
 - Neutron kinetics
 - Reactor thermal hydraulics (the thermal hydraulics calculation shall be based on a best estimate code, such as RELAP 5)
 - Steam systems (main steam lines)
 - Safety relief system
 - Instrumentation
 - 2.1.2 The software shall implement the models with a minimum of 5,000 or more variables and update all the variables at least 2 times per second.
 - 2.1.3 The models and software shall allow for simulations of steady-state operations, normal evolutions, and transients such as plant startup from hot shutdown through reactor criticality and power ascension to full power, and plant shutdown from full power to a stable hot shutdown condition.
 - 2.1.4 The models and software shall allow for simulations of major malfunctions and accidents specified in ANS 3.5 such as the following:
 - Loss of coolant
 - Loss of instrument air
 - Loss of feedwater
 - Turbine trip
 - Reactor trip
 - Main steam line break
 - Process instrumentation, alarms, and control system failures
 - 2.1.5 Integration platform software that distributes data between the reactor software and HSI as well as instructor station.
 - 2.1.6 The software shall be designed in modules based on systems or I/O of HSI workstations. Examples of modules may include the reactor core, primary system thermo hydraulics, main steam system, feedwater system, circulating water system, etc. Each module shall independently support an individual section or client of the HSI so that users can take the modules into or out of execution during simulations, and a slow or failing client will not influence the updating of other clients or lead to a complete system failure.
 - 2.1.7 The software shall be able to distribute all the reactor model variables to multiple HSI sections and be able to update the displayed variables synchronously with each system updating (at least 2 times per second) on HSI, and still keep simulations in real time.

2.2 HSI

The simulator shall provide a HSI with multiple, with a minimum 3 sets of, operator displays, mouse, and keyboard application.

- 2.2.1 The HSI shall either simulate current control-room panels **OR** advanced control room displays.
- 2.2.2 The HSI shall be organized into sections for reconfiguration; Each section corresponds to a system module and; individual sections can be taken into or out of execution of scenarios.
- 2.2.3 The HSI shall, as a minimum, include the following sections:
 - reactor core
 - primary system thermo hydraulics
 - main steam system
 - feedwater system
 - circulating water system, and
 - alarm system
- 2.2.4 The HSI shall, as a minimum, have 2 operator stations with each station having a minimum of 2 operator displays. Each display shall be able to host multiple sections so that one operator can operate multiple sections. Each section shall be visualized on multiple displays so that one operator could choose to see what other operators are doing.
- 2.2.5 Users shall be able to configure how the sections are hosted on the displays.
- 2.2.6 The HSI shall come with a graphical editor that allows for customizing the interface with no or limited programming using any high level computer languages such as C++ or Java.

2.3 Instructor station

The contractor shall provide an instructor station capable of simulation control, monitoring, and data visualization activities. It should include customary instructor stations functions such as, but not limited to:

- Resetting the simulator to an initial condition
- Inserting and deleting malfunctions as selected by the instructor
- Performing local operator actions as selected by the instructor
- Monitor and alter simulator variable values in tabular form, and to monitor simulator variables in trend line form
- Simulation controls such as run, freeze, backtrack, reply, etc.
- A scriptable expert mode that allows the simulation to be controlled by means of a pre-prepared script or text file

2.4 Data-recording system

The simulator shall have a data-logging system to collect real-time plant parameter process values upon the users' selection and be capable of exporting data to files in a format readable by Microsoft Excel. This system may be accessible from the Instructor station.

3. Hardware

The Contractor shall provide all the necessary hardware (PCs, LCD displays, etc.) to operate the simulator. The Contractor shall obtain NRC's approval prior to purchasing the hardware.

Refer to ATTACHMENT 1 under Section D of this contract for details

4. Source codes

The Contractor shall provide source codes including, but not limited to, those for configuring and modifying HSI, instructor stations, and the data-logging system. The NRC will maintain and control the source codes and execute proper license agreement.

DOCUMENTATION

The contractor shall provide complete documentation of simulator, hardware, software, installation, trouble-shooting and maintenance shall be provided. Documentation may be provided either as hard copy or on CD/DVD ROM.

Manuals and documents - The contractor shall deliver complete documentation on all delivered items. The documentation shall as a minimum include:

- Detailed documentation of all software and hardware
- Users' manuals on how to operate the simulator
- Description and references for simulator models, source codes, and maintenance of simulator database.

INSTALLATION

The Contractor shall install the simulator at NRC Headquarters located in Rockville, MD 20852 within 30 days of delivery to that site. Installation, at a minimum, shall include uncrating/unpacking of all equipment, rigging, and set-up and hook-up of the system, demonstration of all required specifications, and removal of trash.

The Contractor is strongly encouraged to inspect the installation site prior to the shipment of the simulator.

ACCEPTANCE & TESTING

The Contractor shall perform the acceptance test for CLIN 0001 in the presence of the NRC Project manager to demonstrate that it meets contract minimum specifications and performs according to original equipment manufacturer (OEM) specifications. All samples, if any, used in the acceptance performance tests shall be provided by the Contractor.

TRAINING

The contractor shall provide 16-24 hours of simulator training at NRC Headquarters in Rockville, MD. The training shall be provided for a maximum of 6 NRC staff and/or NRC contractor staff. The training shall be conducted by senior personnel with significant (at least 5 years) simulator experience. Training materials shall be provided to the trainees. The training shall cover the items relevant to the use, configuration, and modification of the simulator. The training shall cover, but is not limited to, such areas as:

- Familiarization with HSI displays and functions
- Introduction on how to operate the simulated plant
- Utilizing the instructor system to build and run scenarios (i.e., by selecting initial conditions, operation modes, transients, and disturbances/malfunctions, etc.)
- Using the data-logging systems to collect simulator and operator action data
- Introduction on how to configure and modify the operator displays and I/O points

The contractor shall also provide the NRC with one additional 7-day training session (CLIN 0006).

The schedule for the training will be jointly agreed to by the contractor and the NRC Project Officer after award. The training shall be completed after installation/acceptance by the NRC.

TECHNICAL AND OTHER SPECIAL QUALIFICATIONS REQUIRED

The contractor shall have a minimum of 10+ years of experience in developing control process simulators and 5+ years of experience developing nuclear power plant control room simulators.

REPORTING REQUIREMENTS - MONTHLY LETTER STATUS REPORT

A Monthly Letter Status Report (MLSR) is to be submitted to the NRC Project Manager by the 20th of the month following the month to be reported with copies provided to the following:

Resource Name: RESDRAMLSR.Resource@nrc.gov

The MLSR will identify the title of the project, the job code, the contractor's project manager, the period of performance, the reporting period and will summarize each month's technical progress. Any administrative or technical difficulties which may affect the schedule or costs of the project shall be immediately brought to the attention of the NRC Project Officer.

MEETINGS AND TRAVEL

The contractor shall travel to NRC Headquarters in Rockville, MD to provide simulator training to the NRC staff.

NRC-FURNISHED MATERIAL

None.

WARRANTY - Terms of Express Warranty: 3 years of warranty for the hardware and software as described below: The contractor shall warrant that Goods shall conform in all material respects to applicable Contractor specifications. Services will be performed in a workmanlike manner. Unless otherwise specified, the warranty period shall commence three (3) years from the date of acceptance for Goods and Services by the NRC.

A. RETURN TO FACTORY: The contractor shall, at its option and expense, repair or replace any portion of the Goods that does not conform to the warranty for which the contractor is given written notice during the warranty period by the NRC. Repaired/replaced items shall be warranted for the remainder of the original warranty or ninety (90) days, whichever is longer.

B. EXCLUSIONS: Repairs and replacements caused by inadequate preventive maintenance, normal wear and usage, fault of Customer or others, power sources supplied by others, attachments, features, or devices not specifically authorized in writing by GSE, unauthorized modifications or alteration of hardware, software or firmware, unsuitable environmental conditions or improper software loading, are expressly excluded from warranty coverage. Unauthorized modifications void the warranty for any affected portion of the system.

C. This warranty is the only warranty made by the contractor and is the exclusive remedy of Customer for defects in Goods. It will not be affected by, and no obligations or liability will arise from, Contractor's rendering of technical or other advice or service in connection with the Goods. *GSE MAKES NO OTHER WARRANTIES OR CONDITIONS, EITHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE.*

B.2 CONSIDERATION AND OBLIGATION--FIRM FIXED PRICE (JUN 1988)

The firm fixed price of this contract is \$365,257.63.

B.3 DURATION OF CONTRACT PERIOD (MAR 1987)

This period of performance for delivery of all products and services, except warranty, shall commence on September 30, 2010 and will expire December 29, 2010.

The period of performance for the 3 year warranty (Refer to last paragraph under the Statement of Work above) shall commence the date of acceptance of Goods and Services by the NRC.

B.4 PLACE OF DELIVERY--REPORTS (JUN 1988)

The items to be furnished hereunder shall be delivered, with all charges paid by the Contractor, to:

- (a) **Project Officer** (1 Hard copy and 1 Electronic copy - RESDRAMLSR.Resource@nrc.gov)

U.S. Nuclear Regulatory Commission
RES/DRAA/HFRB
Mail Stop: C4A07A
ATTN: **Amy D'Agostino** or **Jing Xing**
Washington, DC 20555

Express mail shall be sent to:

U. S. Nuclear Regulatory Commission
RES/DRAA/HFRB
Mail Stop: CSB-4C07M
ATTN: **Amy D'Agostino** or **Jing Xing**
11545 Rockville Pike
Rockville, MD 20852

- (b) **Contracting Officer** (1 Email Heriberto.Colon@nrc.gov copy)

B.5 PLACE FOR DELIVERY OF EQUIPMENT AND MARKING DELIVERABLES

Refer to **ATTACHMENT 1** under **Section D** of this contract for details.

The contract number shall be placed on or adjacent to all exterior mailing or shipping labels of deliverable items called for by the contract, except for reports. Mark deliverables, except for reports, for: and the items to be furnished hereunder shall be delivered, with all charges paid by the Contractor, to:

U.S. Nuclear Regulatory Commission
ATTN: **WAREHOUSE**
Amy D'Agostino or Jing Xing
Mail Stop: C407A
5008 Boiling Brook Parkway
Rockville, MD 20852

SECTION C - CONTRACT CLAUSES**C.1 52.212-4 CONTRACT TERMS AND CONDITIONS--COMMERCIAL ITEMS (JUN 2010)**

(a) Inspection/Acceptance. The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. If repair/replacement or reperformance will not correct the defects or is not possible, the Government may seek an equitable price reduction or adequate consideration for acceptance of nonconforming supplies or services. The Government must exercise its post-acceptance rights-

(1) Within a reasonable time after the defect was discovered or should have been discovered; and

(2) Before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(b) Assignment. The Contractor or its assignee may assign its rights to receive payment due as a result of performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act (31 U.S.C. 3727). However, when a third party makes payment (e.g., use of the Government-wide commercial purchase card), the Contractor may not assign its rights to receive payment under this contract.

(c) Changes. Changes in the terms and conditions of this contract may be made only by written agreement of the parties.

(d) Disputes. This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613). Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR 52.233-1, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.

(e) Definitions. The clause at FAR 52.202-1, Definitions, is incorporated herein by reference.

(f) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(g) Invoice.

(1) The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized) to the address designated in the contract to receive invoices. An invoice must include-

(i) Name and address of the Contractor;

(ii) Invoice date and number;

- (iii) Contract number, contract line item number and, if applicable, the order number;
- (iv) Description, quantity, unit of measure, unit price and extended price of the items delivered;
- (v) Shipping number and date of shipment, including the bill of lading number and weight of shipment if shipped on Government bill of lading;
- (vi) Terms of any discount for prompt payment offered;
- (vii) Name and address of official to whom payment is to be sent;
- (viii) Name, title, and phone number of person to notify in event of defective invoice; and
- (ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.
- (x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision, contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer-- Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer--Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(2) Invoices will be handled in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) prompt payment regulations at 5 CFR part 1315.

(h) Patent indemnity. The Contractor shall indemnify the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.

(i) Payment.-

(1) Items accepted. Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract.

(2) Prompt payment. The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and prompt payment regulations at 5 CFR part 1315.

(3) Electronic Funds Transfer (EFT). If the Government makes payment by EFT, see 52.212-5(b) for the appropriate EFT clause.

(4) Discount. In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.

(5) Overpayments. If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall--

(i) Remit the overpayment amount to the payment office cited in the contract along with a description of the overpayment including the--

(A) Circumstances of the overpayment (e.g., duplicate payment, erroneous payment, liquidation errors, date(s) of overpayment);

(B) Affected contract number and delivery order number, if applicable;

(C) Affected contract line item or subline item, if applicable; and

(D) Contractor point of contact.

(ii) Provide a copy of the remittance and supporting documentation to the Contracting Officer.

(6) Interest.

(i) All amounts that become payable by the Contractor to the Government under this contract shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 611 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in (i)(6)(v) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid.

(ii) The Government may issue a demand for payment to the Contractor upon finding a debt is due under the contract.

(iii) Final decisions. The Contracting Officer will issue a final decision as required by 33.211 if--

(A) The Contracting Officer and the Contractor are unable to reach agreement on the existence or amount of a debt within 30 days;

(B) The Contractor fails to liquidate a debt previously demanded by the Contracting Officer within the timeline specified in the demand for payment unless the amounts were not repaid because the Contractor has requested an installment payment agreement; or

(C) The Contractor requests a deferment of collection on a debt previously demanded by the Contracting Officer (see 32.607-2).

(iv) If a demand for payment was previously issued for the debt, the demand for payment included in the final decision shall identify the same due date as the original demand for payment.

(v) Amounts shall be due at the earliest of the following dates:

(A) The date fixed under this contract.

(B) The date of the first written demand for payment, including any demand for payment resulting from a default termination.

(vi) The interest charge shall be computed for the actual number of calendar days involved beginning on the due date and ending on--

(A) The date on which the designated office receives payment from the Contractor;

(B) The date of issuance of a Government check to the Contractor from which an amount otherwise payable has been withheld as a credit against the contract debt; or

(C) The date on which an amount withheld and applied to the contract debt would otherwise have become payable to the Contractor.

(vii) The interest charge made under this clause may be reduced under the procedures prescribed in 32.608-2 of the Federal Acquisition Regulation in effect on the date of this contract.

(j) Risk of loss. Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:

(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or

(2) Delivery of the supplies to the Government at the destination specified in the contract, if transportation is f.o.b. destination.

(k) Taxes. The contract price includes all applicable Federal, State, and local taxes and duties.

(l) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

(m) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(n) Title. Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.

(o) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(p) Limitation of liability. Except as otherwise provided by an express warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.

(q) Other compliances. The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.

(r) Compliance with laws unique to Government contracts. The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C. 3701, et seq., Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58,

Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections; 49 U.S.C. 40118, Fly American; and 41 U.S.C. 423 relating to procurement integrity.

(s) Order of precedence. Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order:

(1) The schedule of supplies/services.

(2) The Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause.

(3) The clause at 52.212-5.

(4) Addenda to this solicitation or contract, including any license agreements for computer software.

(5) Solicitation provisions if this is a solicitation.

(6) Other paragraphs of this clause.

(7) The Standard Form 1449.

(8) Other documents, exhibits, and attachments

(9) The specification.

(t) Central Contractor Registration (CCR).

(1) Unless exempted by an addendum to this contract, the Contractor is responsible during performance and through final payment of any contract for the accuracy and completeness of the data within the CCR database, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(2)(i) If a Contractor has legally changed its business name, "doing business as" name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in FAR subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of subpart 42.12; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (t)(2)(i) of this clause, or fails to perform the agreement at paragraph (t)(2)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

(3) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see Subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will

be considered to be incorrect information within the meaning of the "Suspension of payment" paragraph of the EFT clause of this contract.

(4) Contractor and Contractors may obtain information on registration and annual confirmation requirements via the internet at <http://www.ccr.gov> or by calling 1-888-227-2423 or 269-961-5757.

ADDENDUM TO FAR 52.212-4 CONTRACT TERMS AND CONDITIONS--COMMERCIAL ITEMS

Clauses that are incorporated by reference (by Citation Number, Title, and Date), have the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available.

The following clauses are incorporated into 52.212-4 as an addendum to this contract:

C.2 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://www.arnet.gov/far>

52.227-14	RIGHTS IN DATA--GENERAL	DEC 2007
52.227-19	COMMERCIAL COMPUTER SOFTWARE LICENSE	DEC 2007

(End of Addendum to 52.212-4)

C.3 52.212-5 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS--COMMERCIAL ITEMS (JUL 2010)

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses, which are incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

(1) 52.222-50, Combating Trafficking in Persons (FEB 2009) (22 U.S.C. 7104(g)).

Alternate I (AUG 2007) of 52.222-50 (22 U.S.C. 7104 (g)).

(2) 52.233-3, Protest After Award (Aug 1996) (31 U.S.C. 3553).

(3) 52.233-4, Applicable Law for Breach of Contract Claim (Oct 2004) (Pub. L. 108-77, 108-78)

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

□ (1) 52.203-6, Restrictions on Subcontractor Sales to the Government (Sept 2006), with Alternate I (Oct 1995) (41 U.S.C. 253g and 10 U.S.C. 2402).

(2) 52.203-13, Contractor Code of Business Ethics and Conduct (APR 2010)(Pub. L. 110-252, Title VI, Chapter 1 (41 U.S.C. 251 note)).

(3) 52.203-15, Whistleblower Protections under the American Recovery and Reinvestment Act of 2009 (JUN 2010) (Section 1553 of Pub. L. 111-5). (Applies to contracts funded by the American Recovery and Reinvestment Act of 2009.)

(4) 52.204-10, Reporting Executive Compensation and First-Tier Subcontract Awards (JUL 2010) (Pub. L. 109-282) (31 U.S.C. 6101 note).

(5) 52.204-11, American Recovery and Reinvestment Act-Reporting Requirements (JUL 2010) (Pub. L. 111-5).

(6) 52.219-3, Notice of Total HUBZone Set-Aside (Jan 1999) (15 U.S.C. 657a).

(7) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (July 2005) (if the Contractor elects to waive the preference, it shall so indicate in its offer) (15 U.S.C. 657a).

(8) [Reserved]

(9)(i) 52.219-6, Notice of Total Small Business Set-Aside (June 2003) (15 U.S.C. 644).

(ii) Alternate I (Oct 1995) of 52.219-6.

(iii) Alternate II (Mar 2004) of 52.219-6.

(10)(i) 52.219-7, Notice of Partial Small Business Set-Aside (June 2003) (15 U.S.C. 644).

(ii) Alternate I (Oct 1995) of 52.219-7.

(iii) Alternate II (Mar 2004) of 52.219-7.

(11) 52.219-8, Utilization of Small Business Concerns (May 2004) (15 U.S.C. 637(d)(2) and (3)).

(12)(i) 52.219-9, Small Business Subcontracting Plan (JUL 2010) (15 U.S.C. 637(d)(4)).

(ii) Alternate I (Oct 2001) of 52.219-9.

(iii) Alternate II (Oct 2001) of 52.219-9.

(iv) Alternate III (JUL 2010) of 52.219-9.

(13) 52.219-14, Limitations on Subcontracting (Dec 1996) (15 U.S.C. 637(a)(14)).

(14) 52.219-16, Liquidated Damages--Subcontracting Plan (Jan 1999) (15 U.S.C. 637(d)(4)(F)(i)).

(15)(i) 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (OCT 2008) (10 U.S.C. 2323) (if the Contractor elects to waive the adjustment, it shall so indicate in its offer.)

(ii) Alternate I (June 2003) of 52.219-23.

(16) 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting (APR 2008) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).

- (17) 52.219-26, Small Disadvantaged Business Participation Program--Incentive Subcontracting (Oct 2000) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- (18) 52.219-27, Notice of Total Service-Disabled Veteran-Owned Small Business Set-Aside (May 2004) (15 U.S.C. 657 f).
- (19) 52.219-28, Post Award Small Business Program Rerepresentation (APR 2009) (15 U.S.C 632(a)(2)).
- (20) 52.222-3, Convict Labor (June 2003) (E.O. 11755).
- (21) 52.222-19, Child Labor--Cooperation with Authorities and Remedies (JUL 2010) (E.O. 13126).
- (22) 52.222-21, Prohibition of Segregated Facilities (Feb 1999).
- (23) 52.222-26, Equal Opportunity (Mar 2007) (E.O. 11246).
- (24) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Sept 2006) (38 U.S.C. 4212).
- (25) 52.222-36, Affirmative Action for Workers with Disabilities (Jun 1998) (29 U.S.C. 793).
- (26) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Sept 2006) (38 U.S.C. 4212).
- (27) 52.222-54, Employment Eligibility Verification (Jan 2009). (Executive Order 12989). (Not applicable to the acquisition of commercially available off-the-shelf items or certain other types of commercial items as prescribed in 22.1803.)
- (28)(i) 52.223-9, Estimate of Percentage of Recovered Material Content for EPA-Designated Items (May 2008) (42 U.S.C.6962(c)(3)(A)(ii)). (Not applicable to the acquisition of commercially available off-the-shelf items.)
- (ii) Alternate I (MAY 2008) of 52.223-9 (42 U.S.C. 6962(i)(2)(C)). (Not applicable to the acquisition of commercially available off-the-shelf items.)
- (29) 52.223-15, Energy Efficiency in Energy-Consuming Products (DEC 2007)(42 U.S.C. 8259b).
- (30)(i) 52.223-16, IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products (DEC 2007) (E.O. 13423).
- (ii) Alternate I (DEC 2007) of 52.223-16.
- (31) 52.225-1, Buy American Act--Supplies (FEB 2009) (41 U.S.C. 10a-10d).
- (32)(i) 52.225-3, Buy American Act--Free Trade Agreements-- Israeli Trade Act (JUN 2009) (41 U.S.C. 10a-10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note, 19 U.S.C 3805 note, Pub. L. 108-77, 108-78, 108-286, 108-302, 109-53 and 109-169, 109-283, and 110-138).
- (ii) Alternate I (Jan 2004) of 52.225-3.
- (iii) Alternate II (Jan 2004) of 52.225-3.
- (33) 52.225-5, Trade Agreements (AUG 2009) (19 U.S.C. 2501, et seq., 19 U.S.C. 3301 note).

(34) 52.225-13, Restrictions on Certain Foreign Purchases (JUN 2008) (E.O.'s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).

(35) 52.226-4, Notice of Disaster or Emergency Area Set-Aside (Nov 2007) (42 U.S.C. 5150).

(36) 52.226-5, Restrictions on Subcontracting Outside Disaster or Emergency Area (Nov 2007) (42 U.S.C. 5150).

(37) 52.232-29, Terms for Financing of Purchases of Commercial Items (Feb 2002) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).

(38) 52.232-30, Installment Payments for Commercial Items (Oct 1995) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).

(39) 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration (Oct 2003) (31 U.S.C. 3332).

(40) 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration (May 1999) (31 U.S.C. 3332).

(41) 52.232-36, Payment by Third Party (FEB 2010) (31 U.S.C. 3332).

(42) 52.239-1, Privacy or Security Safeguards (Aug 1996) (5 U.S.C. 552a).

(43)(i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631).

(ii) Alternate I (Apr 2003) of 52.247-64.

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

(1) 52.222-41, Service Contract Act of 1965 (Nov 2007) (41 U.S.C. 351, et seq.).

(2) 52.222-42, Statement of Equivalent Rates for Federal Hires (May 1989) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

Employee Class

Monetary Wage-Fringe Benefits

(3) 52.222-43, Fair Labor Standards Act and Service Contract Act--Price Adjustment (Multiple Year and Option Contracts) (Sep 2009) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

(4) 52.222-44, Fair Labor Standards Act and Service Contract Act--Price Adjustment (Sep 2009) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

(5) 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Requirements (Nov 2007) (41 U.S.C. 351, et seq.).

□ (6) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services--Requirements (FEB 2009) (41 U.S.C. 351, et seq.).

□ (7) 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations. (MAR 2009)(Pub. L. 110-247)

□ (8) 52.237-11, Accepting and Dispensing of \$1 Coin (SEP 2008) (31 U.S.C. 5112(p)(1)).

(d) Comptroller General Examination of Record. The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records--Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e)(1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c), and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in this paragraph (e)(1) in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause--

(i) 52.203-13, Contractor Code of Business Ethics and Conduct (APR 2010) (Pub. L. 110-252, Title VI, Chapter 1 (41 U.S.C. 251 note)).

(ii) 52.219-8, Utilization of Small Business Concerns (May 2004) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$550,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(iii) [Reserved]

(iv) 52.222-26, Equal Opportunity (Mar 2007) (E.O. 11246).

(v) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Sept 2006) (38 U.S.C. 4212).

(vi) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C. 793).

(vii) [Removed and reserved]

(viii) 52.222-41, Service Contract Act of 1965 (Nov 2007) (41 U.S.C. 351, et seq.).

(ix) 52.222-50, Combating Trafficking in Persons (FEB 2009) (22 U.S.C. 7104(g)).

Alternate I (AUG 2007) of 52.222-50 (22 U.S.C. 7104(g)).

(x) 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Requirements "(Nov 2007)" (41 U.S.C. 351, et seq.).

(xi) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services-Requirements (FEB 2009)(41 U.S.C. 351, et seq.).

(xii) 52.222-54, Employee Eligibility Verification (JAN 2009)

(xiii) 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations. (MAR 2009)(Pub. L. 110-247). Flow down required in accordance with paragraph (e) of FAR clause 52.226-6.

(xiv) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631). Flow down required in accordance with paragraph (d) of FAR clause 52.247-64.

(2) While not required, the contractor may include in its subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

C.4 52.247-34 F.O.B. DESTINATION (NOV 1991)

(a) The term "f.o.b. destination," as used in this clause, means --

(1) Free of expense to the Government, on board the carrier's conveyance, at a specified delivery point where the consignee's facility (plant, warehouse, store, lot, or other location to which shipment can be made) is located; and

(2) Supplies shall be delivered to the destination consignee's wharf (if destination is a port city and supplies are for export), warehouse unloading platform, or receiving dock, at the expense of the Contractor. The Government shall not be liable for any delivery, storage, demurrage, accessorial, or other charges involved before the actual delivery (or "constructive placement" as defined in carrier tariffs) of the supplies to the destination, unless such charges are caused by an act or order of the Government acting in its contractual capacity. If rail carrier is used, supplies shall be delivered to the specified unloading platform of the consignee. If motor carrier (including "piggyback") is used, supplies shall be delivered to truck tailgate at the unloading platform of the consignee, except when the supplies delivered meet the requirements of Item 568 of the National Motor Freight Classification for "heavy or bulky freight." When supplies meeting the requirements of the referenced Item 568 are delivered, unloading (including movement to the tailgate) shall be performed by the consignee, with assistance from the truck driver, if requested. If the contractor uses rail carrier or freight forwarder for less than carload shipments, the contractor shall ensure that the carrier will furnish tailgate delivery, when required, if transfer to truck is required to complete delivery to consignee.

(b) The Contractor shall--

(1)(i) Pack and mark the shipment to comply with contract specifications; or

(ii) In the absence of specifications, prepare the shipment in conformance with carrier requirements;

(2) Prepare and distribute commercial bills of lading;

(3) Deliver the shipment in good order and condition to the point of delivery specified in the contract;

(4) Be responsible for any loss of and/or damage to the goods occurring before receipt of the shipment by the consignee at the delivery point specified in the contract;

- (5) Furnish a delivery schedule and designate the mode of delivering carrier; and
- (6) Pay and bear all charges to the specified point of delivery.

C.5 PROJECT OFFICER AUTHORITY ALTERNATE 2 (FEBRUARY 2004)

(a) The contracting officer's authorized representative hereinafter referred to as the project officer for this contract is:

Name: **Amy D'Agostino or Jing Xing**

Address: **U.S. Nuclear Regulatory Commission
Mail Stop: C4-A07A**

Washington, DC 20555

Telephone Number: **301-251-7915** (Amy D'Agostino) or **7580** (Jing Xing)

Email: Amy.DAgostino@nrc.gov; Jing.Xing@nrc.gov

(b) The project officer shall:

- (1) Monitor contractor performance and recommend changes in requirements to the contracting officer.
- (2) Inspect and accept products/services provided under the contract.
- (3) Review all contractor invoices/vouchers requesting payment for products/services provided under the contract and make recommendations for approval, disapproval, or suspension.
- (4) Immediately notify the Security Branch, Division of Facilities and Security (SB/DFS) (via e-mail) when a contractor employee no longer requires access authorization and return of any NRC issued badge to SB/DFS within three days after their termination.

(c) The project officer may not make changes to the express terms and conditions of this contract.

C.6 COMPLIANCE WITH U.S. IMMIGRATION LAWS AND REGULATIONS (MAY 2002)

NRC contractors are responsible to ensure that their alien personnel are not in violation of United States immigration laws and regulations, including employment authorization documents and visa requirements. Each alien employee of the Contractor must be lawfully admitted for permanent residence as evidenced by Permanent Resident Card Form I-551, or must present other evidence from the U.S. Department of Homeland Security/U.S. Citizenship and Immigration Services that employment will not affect his/her immigration status. The U.S. Citizenship and Immigration Services provides information to contractors to help them understand the employment eligibility verification process for non-US citizens. This information can be found on their website, www.uscis.gov.

The NRC reserves the right to deny or withdraw Contractor use or access to NRC facilities or its equipment/services, and/or take any number of contract administrative actions (e.g., disallow costs, terminate for cause) should the Contractor violate the Contractor's responsibility under this clause.

C.7 WHISTLEBLOWER PROTECTION FOR NRC CONTRACTOR AND SUBCONTRACTOR EMPLOYEES (JULY 2006)

(a) The U.S. Nuclear Regulatory Commission (NRC) contractor and its subcontractor are subject to the Whistleblower Employee Protection public law provisions as codified at 42 U.S.C. 5851. NRC contractor(s) and subcontractor(s) shall comply with the requirements of this Whistleblower Employee Protection law, and the implementing regulations of the NRC and the Department of Labor (DOL). See, for example, DOL Procedures on Handling Complaints at 29 C.F.R. Part 24 concerning the employer obligations, prohibited acts, DOL procedures and the requirement for prominent posting of notice of Employee Rights at Appendix A to Part 24.

(b) Under this Whistleblower Employee Protection law, as implemented by regulations, NRC contractor and subcontractor employees are protected from discharge, reprisal, threats, intimidation, coercion, blacklisting or other employment discrimination practices with respect to compensation, terms, conditions or privileges of their employment because the contractor or subcontractor employee(s) has provided notice to the employer, refused to engage in unlawful practices, assisted in proceedings or testified on activities concerning alleged violations of the Atomic Energy Act of 1954 (as amended) and the Energy Reorganization Act of 1974 (as amended).

(c) The contractor shall insert this or the substance of this clause in any subcontracts involving work performed under this contract.

C.8 PROHIBITION OF FUNDING TO ACORN (NOV 2009)

In accordance with section 163 of the Continuing Appropriations Resolution, 2010, Division B of Public Law No. 111-68 (CR), until further notice, no federal funds may be provided to the Association of Community Organizations for Reform Now (ACORN), or any of its affiliates, subsidiaries, or allied organizations. Additional information can be found at: http://www.whitehouse.gov/omb/assets/memoranda_2010/m10-02.pdf

C.9 HARMLESS FROM LIABILITY

The contractor shall hold and save the Government, its officers, agents, and employees harmless from liability or any nature or kind, including costs and expenses to which they may be subject, for or on account of any or all suits or damages of any character whatsoever resulting from injuries or damages sustained by any person or persons or property by virtue of performance of this contract, arising or resulting in whole or in part from the fault, negligence, wrongful act or wrongful omission of the contractor, or any subcontractor, their employees, and agents.

SECTION D - CONTRACT DOCUMENTS, EXHIBITS, OR ATTACHMENTS

ATTACHMENT 1 – LIST OF HARDWARE AND SOFTWARE

<u>Item #</u>	<u>Part #</u>	<u>Manufacturer</u>	<u>Product Description</u>	<u>Quantity</u>
1	780MT	Dell	Optiplex 780, Core 2 Quad, 9650 with VT	4
2	U2410	Dell	UltraSharp 24-inch Widescreen Flat Panel Monitor	4
3	VFP999WSAE001	Intel	Visual Fortran Compiler	4
4	C5E-000521	Microsoft	Visual Studio Professional	4
5	3295B002	Canon	PIXMA Pro9000 Mark II Color Inkjet Photo Printer	1

NOTE: The above list will be provided for each simulator (Above quantities multiplied by 2).

**ATTACHMENT 2 – BILLING INSTRUCTIONS FOR
FIXED PRICE CONTRACTS (JUNE 2008)**

General: During performance and through final payment of this contract, the contractor is responsible for the accuracy and completeness of data within the Central Contractor Registration (CCR) database and for any liability resulting from the Government's reliance on inaccurate or incomplete CCR data.

The contractor shall prepare vouchers/invoices as prescribed herein. **FAILURE TO SUBMIT VOUCHERS/INVOICES IN ACCORDANCE WITH THESE INSTRUCTIONS WILL RESULT IN REJECTION OF THE VOUCHER/INVOICE AS IMPROPER.**

Form: Claims shall be submitted on the payee's letterhead, voucher/invoice, or on the Government's Standard Form 1034, "Public Voucher for Purchases and Services Other than Personal," and Standard Form 1035, "Public Voucher for Purchases Other than Personal--Continuation Sheet."

Number of Copies: A signed original shall be submitted. If the voucher/invoice includes the purchase of any property with an initial acquisition cost of \$50,000 or more, a copy of the signed original is also required.

Designated Agency Billing Office: The preferred method of submitting vouchers/invoices is electronically to the Department of the Interior at NRCPAYMENTS_DENVERNBC@nbc.gov

If the voucher/invoice includes the purchase of any property with an initial acquisition cost of \$50,000 or more, a copy of the signed original shall be electronically sent to: Property@nrc.gov

However, if you submit a hard-copy of the voucher/invoice, it shall be submitted to the following address:

Department of the Interior
National Business Center
Attn: Fiscal Services Branch - D2770
7301 West Mansfield Avenue
Denver, CO 80235-2230

If you submit a hard-copy of the voucher/invoice and it includes the purchase of any property with an initial acquisition cost of \$50,000 or more, a copy of the signed original shall be mailed to the following address:

U.S. Nuclear Regulatory Commission
NRC Property Management Officer
Mail Stop: O-4D15
Washington, DC 20555-0001

HAND-CARRIED SUBMISSIONS WILL NOT BE ACCEPTED

Agency Payment Office: Payment will continue to be made by the office designated in the contract in Block 12 of the Standard Form 26, Block 25 of the Standard Form 33, or Block 18a. of the Standard Form 1449, whichever is applicable.

Frequency: The contractor shall submit a voucher/invoice only after the NRC's final acceptance of services rendered or products delivered in performance of the contract unless otherwise specified in the contract.

Preparation and Itemization of the Voucher/Invoice: The voucher/invoice shall be prepared in ink or by typewriter (without strike-overs). Corrections or erasures must be initialed. To be considered a proper voucher/invoice, all of the following elements must be included:

1. Contractor's Data Universal Number (DUNS) or DUNS+4 number that identifies the contractor's name and address. The DUNS+4 number is the DUNS number plus a 4-character suffix that may be assigned at the discretion of the contractor to identify alternative Electronic Funds Transfer (EFT) accounts for the same parent concern.
2. Contract number.
3. Sequential voucher/invoice number.
4. Date of voucher/invoice.
5. Payee's name and address. Show the name of the Payee as it appears in the contract and its correct address. If the Payee assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Payee shall require as a condition of any such assignment, that the assignee shall register separately in the Central Contractor Registration (CCR) database at <http://www.ccr.gov> and shall be paid by EFT in accordance with the terms of this contract. See Federal Acquisition Regulation 52.232-33(g) Payment by Electronic Funds Transfer - Central Contractor Registration (October 2003).
6. A description of articles or services, quantity, unit price, and total amount.
7. For contractor acquired property, list each item with an initial acquisition cost of \$50,000 or more and provide: (1) an item description, (2) manufacturer, (3) model number, (4) serial number, (5) acquisition cost, (6) date of purchase, and (7) a copy of the purchasing document.
8. Weight and zone of shipment, if shipped by parcel post.
9. Charges for freight or express shipments. Attach prepaid bill if shipped by freight or express.
10. Instructions to consignee to notify the Contracting Officer of receipt of shipment.
11. For Indefinite Delivery contracts or contracts under which progress payments are authorized, the final voucher/invoice shall be marked "FINAL VOUCHER" OR "FINAL INVOICE."

Currency: Billings may be expressed in the currency normally used by the contractor in maintaining his accounting records and payments will be made in that currency. However, the U.S. dollar equivalent for all vouchers/invoices paid under the contract may not exceed the total U.S. dollars authorized in the contract.