

AWARD/CONTRACT

1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)		RATING
2. CONTRACT NO. NRC-26-94-264	3. EFFECTIVE DATE APR 26 1994	4. REQUISITION/PROJECT NO. AED-94-264
5. ISSUED BY Code: U.S. Nuclear Regulatory Commission Div. of Contracts & Property Mgmt. Technical Acquisition Br. 2 Two White Flint - MS 7E25 Washington, D.C. 20555		6. ADMINISTERED BY Code: (If other than Item 5) U.S. Nuclear Regulatory Commission Div. of Contracts & Property Mgmt FIPS Branch Two White Flint - MS 7E41 Washington, D.C. 20555
7. NAME AND ADDRESS OF CONTRACTOR Prime: U.S. Small Business Admin. Balto. Dist. Off.; City Crescent Bldg., 6th Fl 10 S. Howard St; Baltimore, MD 21201 Sub: SETECH, Inc. (A/K/A Simulation Engineering and Technologies, Inc.); 6684 Hawkeye Run; Columbia, MD 21044 Tech. Contact: Joseph Chen Telephone No. 410-997-7806		8. DELIVERY [] FOB ORIGIN [X] OTHER (See below)
		9. DISCOUNT FOR PROMPT PAYMENT N/A
10. SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN ITEM: 6		
11. SHIP TO/MARK FOR CODE U.S. Nuclear Regulatory Commission Technical Training Center 5700 Brainerd Rd, Suite 200 Chattanooga, TN 37411		12. PAYMENT WILL BE MADE BY CODE U.S. Nuclear Regulatory Commission Division of Accounting and Finance GOV/COM Accounting Section Washington, D.C. 20555
13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION [] 10 U.S.C. 2304(c) [] [X] 41 U.S.C. 253(c) [5]		
14. ACCOUNTING AND APPROPRIATION DATA 482-19-301-402 E8229 BOC: 252F 31X0200.824 \$271,982		
15A. ITEM NO.	15B. SUPPLIES/SERVICES	15C. QUANTITY 15D. UNIT 15E. UNIT PRICE 15F. AMOUNT

The U.S. Nuclear Regulatory Commission hereby accepts SETECH's technical proposals dtd 10/12/93 and revised on 12/14/93, & 4/1/94 which are incorporated herein by this reference and made a part of this contract to perform the work in accordance with Solicitation No. RS-AED-94-264 which is incorporated herein and made a part of this contract. This firm fixed price & cost reimbursement type contract is completed as follows:

15G. TOTAL AWARD AMOUNT OF CONTRACT \$271,982

EXCEPTION TO STANDARD FORM SF26 (REV.4-85)
FAR(48 CFR) 53.214(a)

Prescribed by GSA

9406270171 940510
PDR CONTR
NRC-26-94-264 PDR

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X SEC	DESCRIPTION	PAGE(S)
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CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE

17. CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return 3 copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)

18. AWARD (Contractor is not required to sign this document. Your offer on Solicitation Number _____, including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.

19A. NAME AND TITLE OF SIGNER (Type or print) Contracting Officer	20A. NAME OF CONTRACTING OFFICER ELOIS J. WIGGINS
19B. NAME OF CONTRACTOR by <u>[Signature]</u> (Signature of person authorized to sign)	20B. UNITED STATES OF AMERICA by <u>[Signature]</u> (Signature of Contracting Officer)
19C. DATE SIGNED 5/10/94	20C. DATE SIGNED 4/26/94

EXCEPTION TO STANDARD FORM 26 (REV. 4-85)

AWARD/CONTRACT

1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)	RATING
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2. CONTRACT NO. 0373-94-1-CCCC3	3. EFFECTIVE DATE	4. REQUISITION/PROJECT NO. AED-94-264
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5. ISSUED BY Code: U.S. Small Business Admin. Balto. Dist. Office Attn: Ms. Lyndia Smith City Crescent Bldg., 6th Fl 10 S. Howard St. Baltimore, MD 21201	6. ADMINISTERED BY Code: (If other than Item 5) U.S. Nuclear Regulatory Commission Div. of Contracts & Property Mgmt FIPS Branch Two White Flint - MS 7E41 Washington, D.C. 20555
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7. NAME AND ADDRESS OF CONTRACTOR SETECH, Inc. A/K/A Simulation Engineering & Technologies Inc. 6684 Hawkeye Run Columbia, MD 21044 Principal Investigator/Technical Contact: Joseph Chen Telephone No: (410) 997-7806	8. DELIVERY <input type="checkbox"/> FOB ORIGIN <input checked="" type="checkbox"/> OTHER (See below)
9. DISCOUNT FOR PROMPT PAYMENT N/A	

10. SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN ITEM: 6

11. SHIP TO/MARK FOR CODE U.S. Nuclear Regulatory Commission Technical Training Center 5700 Brainerd Rd, Suite 200 Chattanooga, TN 37411	12. PAYMENT WILL BE MADE BY CODE U.S. Nuclear Regulatory Commission Division of Accounting and Finance GOV/COM Accounting Section Washington, D.C. 20555
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13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION
 10 U.S.C. 2304(c) 41 U.S.C. 253(c) [5]

14. ACCOUNTING AND APPROPRIATION DATA

15A. ITEM NO.	15B. SUPPLIES/SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT
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Technical Support Services (See Prime Contract). See Section I of Prime Contract/Award contract document for special 8(a) Subcontract clauses.

15G. TOTAL AWARD AMOUNT OF CONTRACT \$271,982

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18. AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number _____, including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.

19A. NAME AND TITLE OF SIGNER (Type or print) Joseph CHEN, <i>SE Tech, Inc of Tele Simulation Engineering & Technologies, Inc</i>	20A. NAME OF CONTRACTING OFFICER Lyndia L. Smith Contracting Officer
19B. NAME OF CONTRACTOR by <i>[Signature]</i> (Signature of person authorized to sign)	20B. UNITED STATES OF AMERICA by <i>[Signature]</i> (Signature of Contracting Officer)
19C. DATE SIGNED May 10, 1994	20C. DATE SIGNED 5/10/94

EXCEPTION TO STANDARD FORM 26 (REV. 4-85)

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PART I - THE SCHEDULE

SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 PROJECT TITLE

The title of this project is as follows:

Simulator Software Maintenance Support

[End of Clause]

B.2 BRIEF DESCRIPTION OF WORK (MAR 1987)

The Contractor shall supply the personnel and materials for software maintenance, modification, documentation and support services for five full scope simulators and any additional simulators located at the NRC's Technical Training Center (TTC).

[End of Clause]

B.3 SCHEDULE OF ITEMS AND PRICES

SEE PAGES 4 AND 5

B.3A SUPPLIES/SERVICES - OPTIONAL SUPPORT

ITEM NO	DESCRIPTION - BASE YEAR	QTY	UNIT	UNIT PRICE	AMOUNT
1	Software Maintenance (including Scheduled and Simulator Action Requests)	12	MO	\$19,356.16	\$232,274
	TOTAL FIRM FIXED PRICE (BASE PERIOD)				\$232,274
2	DESCRIPTION - OPTION YR 1				
2A	Software Maintenance (including Scheduled and Simulator Action Requests)	12	MO	\$19,722.83	\$236,674
	TOTAL FIRM FIXED PRICE (OY1)				\$236,674
3	DESCRIPTION - OPTION YR 2				
3A	Software Maintenance (including Scheduled and Simulator Action Requests)	12	MO	\$20,136.66	\$241,640
	TOTAL FIRM FIXED PRICE (OY2)				\$241,640
4	DESCRIPTION -OPTION YR 3				
4A	Software Maintenance (including Scheduled and Simulator Action Requests)	12	MO	\$20,589.50	\$247,074
	TOTAL FIRM FIXED PRICE (OY3)				\$247,074
5	DESCRIPTION - OPTION YR 4				
5A	Software Maintenance (including Scheduled and Simulator Action Requests)	12	MO	\$21,046.50	\$252,558
	TOTAL FIRM FIXED PRICE (OY4)				\$252,558
6	Relocation expenses (ref. Article B.5)		NTE*		\$39,708

B.3 SUPPLIES/SERVICES

	DESCRIPTION - OPTIONAL SUPPORT (See Note 1)	EST QTY	UNIT	UNIT PRICE	AMOUNT
7	Optional Support for Add'l Simulator (Base Yr)	12	MO	\$8,517.58	\$102,211
8	Optional Support for Add'l Simulator (OY1)	12	MO	\$8,678.92	\$104,147
9	Optional Support for Add'l Simulator (OY2)	12	MO	\$8,861.09	\$106,333
10	Optional Support for Add'l Simulator (OY3)	12	MO	\$9,060.33	\$108,724
11	Optional Support for Add'l Simulator (OY4)	12	MO	\$9,261.33	\$111,136
12	Relocation Expenses (ref. Article B.5)	NTE*			\$ 19,939

Note 1: Optional Support may be ordered at any time during the contract period and may be less than twelve months. The total amount of the Option may be prorated based on the time the option is exercised.

*NTE = Not to Exceed

B.4 CONSIDERATION AND OBLIGATION -- FIRM FIXED PRICE
(JUN 1988)

The firm fixed price of this contract is \$232,274.

(End of Clause)

**B.5 CONSIDERATION AND OBLIGATION -- COST REIMBURSEMENT
FOR RELOCATION EXPENSES**

- (a) The Contractor shall be reimbursed for all allowable relocation expenses incurred in moving key personnel identified in Article H.1 from the Contractor's headquarters in Columbia, Maryland to the NRC's Technical Training Center in Chattanooga, TN. Such expenses shall be reimbursed in accordance with this Article, Articles G.2 and G.3 and all cost reimbursable clauses incorporated by reference in this Contract.
- (b) The total estimated relocation expense amount is \$39,708 . The amount presently obligated by the Government with respect to this item is \$39,708.
- (c) It is estimated that this amount will cover expenses incurred through six months of the contract award date.

(End of Clause)

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1. BACKGROUND

The NRC Technical Training Center (TTC), located in Chattanooga, Tennessee, provides technical training to NRC personnel. Reactor training programs have involved full-scope reactor simulator training from their inception. Initially all simulator training was provided by contracting for time on industry simulators. Over the past several years, in order to ensure availability of adequate simulator training time and to allow integration of simulator training into classroom courses, the NRC has contracted to procure its own simulators. Five full scope control room simulators replicating the Babcock & Wilcox (B&W), General Electric (GE), Combustion Engineering (CE) and Westinghouse reactor designs have been acquired for the TTC. The vendors and approximate original delivery dates for the simulators are as follows: B&W - Singer, 1980; GE Black Fox, BWR/6 - Singer, 1980; Westinghouse - Westinghouse, 1978; CE - Upgraded by ABB Combustion Engineering, 1992; GE Shoreham, BWR/4 - Singer, 1987. Simulator training is scheduled for most day shifts (8:00 am - 4:00 pm), approximately 30% of evening shifts (4:00 pm - midnight) and occasionally on night shift (midnight - 8:00 am).

Presently, all software maintenance and modifications for these simulators are accomplished utilizing TTC simulator engineers. The implementation of planned computer and modeling upgrades to the simulators has severely taxed existing staff resources. The simulator engineers are heavily involved in major software modifications and upgrades, and hardware design changes, and advanced simulation applications. This has resulted in the inability to address simulator software deficiencies identified by the instructional staff in a timely manner without adversely affecting the simulator upgrade schedule. Reduced levels of software maintenance can result in degraded simulator performance and reduced effectiveness of simulator training for NRC personnel.

C.2. OBJECTIVE

The Contractor shall provide two full-time (excluding federal holidays) software engineers to perform full-time software maintenance, modifications and support services for the five full-scope simulators presently located at the TTC in Chattanooga, Tennessee, and any additional simulators which may be installed. Support will be required in the areas of correction of identified modeling deficiencies which produce incorrect simulator response,

development or modification of simulator malfunctions, development or modification of simulator local operator actions (LOA), development or modification of simulator I/O overrides, development or modification of simulator initial conditions (IC), modification of existing simulation models to address identified simulator performance deficiencies, development and implementation of new simulation models utilizing model development tools obtained by the NRC through previous contracts, conversion of existing assembly language code to Fortran, and maintenance and development of the documentation of the software of the TTC simulators.

C.3. SUPPORT REQUIREMENTS

The Contractor shall provide software maintenance, modification, and support services, as specified below, for the five full scope control room simulators presently located at the NRC Technical Training Center in Chattanooga, Tennessee, and any additional simulators which may be installed. All required software development tools, computer platforms and computer operating systems will be provided or obtained by the NRC.

1. The Contractor shall perform the routine software maintenance for the TTC simulators. Software maintenance which impacts simulator availability for training shall be performed during periods when the simulators are not scheduled for training. Examples of routine software maintenance tasks include, but are not limited to:

- a. Installation of software updates to the operating systems of the computers associated with the TTC simulators
- b. Evaluation of existing simulation code and removal of code not used in the simulation.
- c. Completion of routine backups of the simulation code of the TTC simulators

2. The Contractor shall perform required software modifications for the TTC simulators. Software modifications will be performed in response to written Simulator Action Requests completed by NRC personnel. Examples of such software modifications include, but are not limited to:

- a. Correction of the dynamic response of TTC simulators compared to actual plant data, similar plant data, vendor data, FSAR data, analysis codes, or best engineering

judgement. TTC personnel shall have final determination as to what constitutes acceptable simulator response.

b. Correction of the response of the logic of the TTC simulators compared to actual plant data, similar plant data, vendor data, FSAR data, or best engineering judgement. TTC personnel shall have final determination as to what constitutes acceptable simulator response.

c. Development or modification of simulator malfunctions.

d. Development or modification of simulator local operator actions.

e. Development or modification of simulator I/O overrides.

f. Development or modification of simulator initial conditions. Contractor responsibility in this area would include developing and implementing changes to reflect different times in core life and different core loads.

3. The Contractor shall convert selected existing models, developed in Encore Assembly language, to Fortran and integrate the converted models with the remainder of the simulation. The models to be converted will be identified by the NRC Project Officer.

4. The Contractor shall develop replacement models for simulated systems identified by the Project Officer and integrate these models with the remainder of the simulation. These models shall be developed utilizing commercial model development tools obtained by the NRC through separate contract. Any exceptions to this requirement must be approved, in writing, by the NRC Project Officer. Examples of presently available model development tools include:

a. Tools procured from S3 Technologies:

- 1.) FLOWNET
- 2.) TOPMERIT
- 3.) RADNET
- 4.) EDNET

b. Tools procured from General Physics International:

- 1.) G_FLOW
- 2.) COMPOSER

- 3.) MAGIC
- 4.) XG Editor
- 5.) ARTIST
- 6.) THEATRE
- 7.) CONCERT

c. Other tools as may be procured by the NRC.

5. The contractor shall provide support, as identified by NRC personnel, for upgrading the computer systems of the TTC simulators. These upgrades may include simulation computer replacement, interfacing additional computers with the existing configuration, or upgrading existing simulator computer systems and their peripherals.

C.4. DOCUMENTATION REQUIREMENTS

1. The Contractor shall fully document all modifications made to the simulation software of the NRC simulators using established NRC procedures. Minimum documentation requirements are as follows:

- a. Detailed description of software changes made, including affected models and their revision levels.
 - b. Detailed description of testing conducted to ensure validity of installed software changes including all validation data and its sources.
 - c. Revision of appropriate simulated system design specifications, including equations, flow charts, and drawings (as applicable).
 - d. Generation of new listings when necessary.
 - e. Creation of new documentation for any software elements newly developed. New documentation will contain, as a minimum:
 - 1) Description of the modeling approach including any assumptions made and their bases
 - 2) Simplified piping and instrumentation diagrams for fluid systems models showing the portions of the systems being modeled.
 - 3) One-line diagrams for electrical systems
 - 4) Simplified elementary diagrams for logic systems
 - 5) A detailed listing of the mathematical equations used within the model in the order of execution.
- a) Terms within an equation shall be defined

- immediately adjacent to the listing of that equation
- b) Symbology used within equations shall be identical to that used within the program module
- 6) Constant and variable lists for each constant and variable used including the following information at a minimum:
- a) Label (program name)
 - b) Physical name of constant or variable (i.e., reactor pressure, feed pump head-flow curve fit constant, valve 1300-12 position, etc.)
 - c) Derivation of constants
 - d) Engineering Units
- f. Creation of new documentation for any simulator executive models and utilities newly developed. New documentation will contain, as a minimum:
- 1) Description of the modelling approach, including any assumptions made and their bases
 - 2) Flow charts to show execution sequence

2. Since completion of the tasks identified under this contract will require access to simulation software and documentation which is proprietary to certain corporations, the Contractor shall obtain the necessary non-disclosure agreements from the following vendors of the simulation software of the TTC simulators:

- a. ABB Combustion Engineering (CE Simulator)
- b. S3 Technologies Company (GE Black Fox and Shoreham Simulators, B&W Simulator)
- c. Westinghouse Electric Corporation (Westinghouse Simulator)
- d. General Physics International (models and model development tools)

C.5 PERSONNEL REQUIREMENTS

1. The Contractor shall provide two full-time (excluding federal holidays) software engineers to provide software engineering support for the TTC simulators as described above in each year of the contract. These personnel shall be considered Key Personnel in accordance with Article H.1.

2. The Contractor shall provide an additional software engineer at the option of the NRC should the NRC's software engineering support requirements increase. This person also shall be considered Key Personnel in accordance with Article H.1. Some examples include, but are not limited to, addition of a new simulator, modification of simulators to address industry-wide changes, conversion of existing models to FORTRAN, development and installation of high fidelity models to replace existing models. The increased workload could also be produced by simulator performance issues which impact the ability to address training requirements or as part of planned hardware and software upgrades. Such support shall be provided at the prices listed in the Schedule.

3. The Contractor shall designate one of the engineers as the on-site manager/lead engineer. This individual will be the point of contact with the Project Officer for communications concerning the day-to-day implementation of the contract.

4. The NRC simulators are heavily utilized during the normal day shift and are unavailable for software work affecting simulator availability during this time. Therefore, to maximize the effectiveness of the software maintenance activities the principal period of maintenance for this contract should be nine consecutive hours between 12:00 noon and midnight, Monday through Friday, excluding federal holidays. The NRC would prefer 12:00 noon till 9:00 pm, but the actual schedule can be negotiated.

5. The Contractor shall provide personnel with sufficient qualifications to perform the software work described above. All software engineers shall possess a combination of education, training and experience to demonstrate competence in the maintenance and modification of the software of full-scope power plant simulators as described below:

a. Training and education related to the maintenance and modification of the software of full scope nuclear power plant simulators. Acceptable training and education includes degree programs, military training and commercial training programs. A bachelor's degree in engineering or science is preferred.

- b. A minimum of three years of work experience related to the maintenance and modification of full scope simulator software.
- c. A minimum of three years of work experience demonstrating the ability to develop and implement replacement models for full scope nuclear power plant simulators. Experience utilizing model development tools is preferred but not required.
- d. Demonstrated knowledge and experience utilizing the software languages and operating systems presently in use on NRC simulators. Knowledge and experience in items 1 through 4 is required. In addition, experience is required with at least one implementation of the UNIX operating system, such as the UNIX variants listed in items 5 and 6.
- 1.) FORTRAN 77
 - 2.) C
 - 3.) Encore Assembly Language
 - 4.) Encore MPX-3.x
 - 5.) Silicon Graphics IRIX (a UNIX variant)
 - 6.) Sun Microsystems SunOS (a UNIX variant)
- e. Demonstrated knowledge of the theory and operation of nuclear power plants.
6. The Contractor personnel identified to perform the software engineering services described in this contract shall be considered Key Personnel. If the Contractor proposes replacement of these personnel, appropriate resumes documenting the education and work experience of the proposed replacements shall be provided in accordance with the Key Personnel Clause in Section H.
7. The NRC will provide Contractor personnel unescorted access to the TTC facilities in order to perform the work specified in the contract. On-site Contractor personnel will be provided NRC contractor badges for access and identification.

(End of Clause)

SECTION D - PACKAGING AND MARKING

D.1 PACKAGING AND MARKING (MAR 1987)

The Contractor shall package material for shipment to the NRC in such a manner that will ensure acceptance by common carrier and safe delivery at destination. Containers and closures shall comply with the Interstate Commerce Commission Regulations, Uniform Freight Classification Rules, or regulations of other carriers as applicable to the mode of transportation. On the front of the package, the Contractor shall clearly identify the contract number under which the product is being provided.

[End of Clause]

SECTION E - INSPECTION AND ACCEPTANCE

E.1 52.252-2 CLAUSES INCORPORATED BY REFERENCE (JUN 1988)

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.

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

NUMBER	TITLE	DATE
52.242-4	INSPECTION OF SERVICES - FIXED-PRICE	FEB 1992

[End of Clause]

E.2 PLACE OF INSPECTION AND ACCEPTANCE (MAR 1987)

Inspection and acceptance of the deliverable items to be furnished hereunder shall be made by the Project Officer at the destination.

[End of Clause]

SECTION F - DELIVERIES OR PERFORMANCE

F.1 52.252-2 CLAUSES INCORPORATED BY REFERENCE (JUN 1988)

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.

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

NUMBER	TITLE	DATE
52.212-13	STOP-WORK ORDER	AUG 1989

[End of Clause]

F.2 DELIVERABLES

a. Software engineering support maintenance and modification of the software on the NRC simulators as described in the Statement of Work. Software maintenance and modifications should be provided in a manner consistent with the provisions of NRC Bulletin 0904-4, where appropriate. This Bulletin is included as an Attachment to Section J. Consideration should also be given to prevent the infection of NRC software by computer viruses.

b. Documentation for all modifications made to the software of the NRC simulators. All software development, modification or maintenance tasks shall follow general guidance in NUREG/BR-1067, "Software Quality Assurance Program a Guidelines," as appropriate, and specific quality guidance designated by the Project Officer. NUREG/BR-1067 is included as an Attachment to Section J.

c. A monthly progress report documenting major work activities and number of hours worked. Copies of this report are due within fifteen calendar days from the start of the reporting period and are to be provided to the Project Officer and Contract Administrator.

(End of Clause)

F.3 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 (2 copies)

Technical Training Center
Osborne Office Center
5700 Brainerd Rd., Suite 200
Chattanooga, TN 37411

(b) Contracting Officer (1 copy)

[End of Clause]

**F.4 DURATION OF CONTRACT PERIOD (MAR 1987)
ALTERNATE 2 (MAR 1987)**

This contract shall commence on the date specified in Block 20C of the Standard Form 26, Award/Contract, signed by the NRC Contracting Officer and will expire one year thereafter. The term of this contract may be extended at the option of the Government for an additional 4 twelve-month option periods.

[End of Clause]

SECTION G - CONTRACT ADMINISTRATION DATA

G.1 NRCAR 2052.215-72 PROJECT OFFICER AUTHORITY
ALTERNATE 1 (JAN 1993)

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

Name: Steven Showe

Address: Technical Training Center
Osborne Office Center
5700 Brainerd Rd., Suite 200
Chattanooga, TN 37411

Telephone Number: 615-855-6500

- (b) The project officer shall:

- (1) Monitor contractor performance and recommend to the contracting officer changes in requirements.
 - (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.
- (c) The project officer may not make changes to the express terms and conditions of this contract.

[End of Clause]

G. 2 ALLOWABLE RELOCATION EXPENSES

- a) The Contractor shall be reimbursed for all allowable relocation expenses incurred in moving key personnel identified in Article H.1 from the Contractor's headquarters in Columbia, Maryland to the NRC's Technical Training Center in Chattanooga, TN.
- b) The following rates and expense categories are taken from the NRC policy on Relocation Allowances for Government Employees dated 1/2/92 which is based on the Federal Travel Regulations. These regulations provide relocation cost reimbursement as follows:

I. En Route Travel Expenses

Transportation Expenses: Transportation expenses for employee and family from the old to the new official station by common carrier;

or

A mileage allowance with a privately owned automobile (POA) is used for en route travel as follows:

Employee (or one family member)	\$0.15 per mile
Employee + 1 (or 2 family members)	\$0.17 per mile
Employee + 2 (or 3 family members)	\$0.19 per mile
Employee + 3 (or 4 or more family members)	\$0.20 per mile

En Route Per Diem:

A per diem allowance for allowable en route travel time between the employee's old and new official stations not to exceed (NTE) the following maximum rates:

Employee, or spouse unaccompanied by employee	\$66.00 per day
--	-----------------

G.2 (Continued)

Spouse accompanied by employee \$49.50 per day

Each other family member 12 years or older \$49.50 per day

Each family member under 12 years \$33.00 per day

II. Household goods

Transportation Expenses: Expenses of shipping household goods from employee's old official station to the new official station NTE 18,000 lbs.

III. Temporary Quarters:

Maximum time allowable: 60 days.

Subsistence Expenses Covered: Lodging, meals, and laundry and dry cleaning expenses.

	1st 30-day period:	2nd 30-day period:
Employee, or spouse unaccompanied by employee	\$66.00 per day	\$49.50 per day
Accompanying Spouse (2/3 of employee's daily rate)	\$44.00 per day	\$33.00 per day
Each family member 12 years or older (2/3 of employee/unaccompanied spouse rate)	\$44.00 per day	\$33.00 per day
Each family member under 12 years (1/2 of employee/unaccompanied spouse rate)	\$33.00 per day	\$24.75 per day

IV. Miscellaneous Expenses Allowances

Employee with family: A flat allowance (without documentation) of: \$700.00 or Two weeks' basic pay*, whichever lesser amount;

or

Up to two weeks' basic pay for itemized expenses if supported by receipts or other documentation.

Employee without family: A flat allowance (without documentation) \$350.00 or One weeks' basic pay*,

G.2 (Continued)

the lesser amount;

or

Up to one weeks' basic pay for itemized expenses if supported by receipts or documentation.

*Basic pay rate is limited to the maximum rate of Grade GG-13

(c) All costs associated with relocation expenses shall be documented and invoiced in accordance with the Cost Reimbursement billing instructions provided as Attachment 1A to this contract.

(End of clause)

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 NRCAR 2052.204-71 SITE ACCESS BADGE
REQUIREMENTS (JAN 1993)

During the life of this contract, the rights of ingress and egress for contractor personnel must be made available as required. In this regard, all contractor personnel whose duties under this contract require their presence on-site shall be clearly identifiable by a distinctive badge furnished by the Government. The Project Officer shall assist the contractor in obtaining the badges for the contractor personnel. It is the sole responsibility of the contractor to ensure that each employee has proper identification at all times. All prescribed identification must be immediately delivered to the Security Office for cancellation or disposition upon the termination of employment of any contractor personnel. Contractor personnel must have this identification in their possession during on-site performance under this contract. It is the contractor's duty to assure that contractor personnel enter only those work areas necessary for performance of contract work, and to assure the safeguarding of any Government records or data that contractor personnel may come into contact with.

[End of Clause]

H.2 NRCAR 2052.215-70 KEY PERSONNEL (JAN 1993)

- (a) The following individuals are considered to be essential to the successful performance of the work hereunder:

Mr. V.M. Purushothaman (On-site Manager/Lead Engineer)
Jucy C. Lee (Software Engineer)
Shen-Teng Yang (Optional Software Engineer)

The contractor agrees that personnel may not be removed from the contract work or replaced without compliance with paragraphs (b) and (c) of this section.

- (b) If one or more of the key personnel, for whatever reason, becomes, or is expected to become, unavailable for work under this contract for a continuous period exceeding 30 work days, or is expected to devote substantially less effort to the work than indicated in the proposal or initially anticipated, the contractor shall immediately notify the contracting officer and shall, subject to the concurrence of the contracting

H.2 (Continued)

officer, promptly replace the personnel with personnel of at least substantially equal ability and qualifications.

- (c) Each request for approval of substitutions must be in writing and contain a detailed explanation of the circumstances necessitating the proposed substitutions. The request must also contain a complete resume for the proposed substitute and other information requested or needed by the contracting officer to evaluate the proposed substitution. The contracting officer or his/her authorized representative shall evaluate the request and promptly notify the contractor of his or her approval or disapproval in writing.
- (d) If the contracting officer determines that suitable and timely replacement of key personnel who have been reassigned, terminated, or have otherwise become unavailable for the contract work is not reasonably forthcoming, or that the resultant reduction of productive effort would be so substantial as to impair the successful completion of the contract or the service order, the contract may be terminated by the contracting officer for default or for the convenience of the Government, as appropriate. If the contracting officer finds the contractor at fault for the condition, the contract price or fixed fee may be equitably adjusted downward to compensate the Government for any resultant delay, loss, or damage.

[End of Clause]

H.3 GOVERNMENT FURNISHED EQUIPMENT/PROPERTY (JUNE 1988)

- (a) The NRC will provide the contractor with the following items for use under this contract:

Access to the model development tools identified in Article C.3.4, IBM compatible PC, and access to an engineering workstation (SPARCstation).

- (b) Only the equipment/property listed above in the quantities shown will be provided by the Government. This property is subject to the provisions of the Government Property clause under this contract. All other equipment/property required in performance of the contract shall be furnished by the Contractor.

[End of Clause]

PART II - CONTRACT CLAUSES
SECTION I - CONTRACT CLAUSES

I.1 52.252-2 CLAUSES INCORPORATED BY REFERENCE (JUN 1988)

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.

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

NUMBER	TITLE	DATE
52.202-1	DEFINITIONS	SEP 1991
52.203-1	OFFICIALS NOT TO BENEFIT	APR 1984
52.203-3	GRATUITIES	APR 1984
52.203-5	COVENANT AGAINST CONTINGENT FEES	APR 1984
52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT	JUL 1985
52.203-7	ANTI-KICKBACK PROCEDURES	OCT 1988
52.203-10	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY	SEP 1990
52.203-12	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS	JAN 1990
52.209-6	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT	NOV 1992
52.215-1	EXAMINATION OF RECORDS BY COMPTROLLER GENERAL	FEB 1993
52.215-2	AUDIT - NEGOTIATION	FEB 1993
52.215-22	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA	JAN 1991
52.215-24	SUBCONTRACTOR COST OR PRICING DATA	DEC 1991
52.215-27	TERMINATION OF DEFINED BENEFIT PENSION PLANS	SEP 1989
52.215-33	ORDER OF PRECEDENCE	JAN 1986
52.215-39	REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS OTHER THAN PENSIONS (PRB)	JUL 1991
52.216-7	ALLOWABLE COST AND PAYMENT	JUL 1991
52.216-11	COST CONTRACT - NO FEE	APR 1984
52.217-1	LIMITATION OF PRICE AND CONTRACTOR OBLIGATIONS	APR 1984

I.1 (Continued)

NUMBER	TITLE	DATE
52.217-2	CANCELLATION OF ITEMS Alternate I (APR 1984)	APR 1984
52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS AND SMALL DISADVANTAGED BUSINESS CONCERNS	FEB 1990
52.219-13	UTILIZATION OF WOMEN-OWNED SMALL BUSINESSES	AUG 1986
52.219-14	LIMITATIONS ON SUBCONTRACTING	JAN 1991
52.220-3	UTILIZATION OF LABOR SURPLUS AREA CONCERNS	APR 1984
52.222-3	CONVICT LABOR	APR 1984
52.222-26	EQUAL OPPORTUNITY	APR 1984
52.222-28	EQUAL OPPORTUNITY PREAWARD CLEARANCE OF SUBCONTRACTS	APR 1984
52.222-35	AFFIRMATIVE ACTION FOR SPECIAL DISABLED AND VIETNAM ERA VETERANS	APR 1984
52.222-36	AFFIRMATIVE ACTION FOR HANDICAPPED WORKERS	APR 1984
52.222-37	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA	JAN 1988
52.223-2	CLEAN AIR AND WATER	APR 1984
52.223-6	DRUG-FREE WORKPLACE	JUL 1990
52.225-11	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES	MAY 1992
52.227-1	AUTHORIZATION AND CONSENT	APR 1984
52.227-2	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT	APR 1984
52.227-3	PATENT INDEMNITY	APR 1984
52.228-5	INSURANCE - WORK ON A GOVERNMENT INSTALLATION	SEP 1989
52.228-7	INSURANCE - LIABILITY TO THIRD PERSONS	APR 1984
52.229-4	FEDERAL, STATE, AND LOCAL TAXES (NONCOMPETITIVE CONTRACT)	JAN 1991
52.232-1	PAYMENTS	APR 1984
52.232-8	DISCOUNTS FOR PROMPT PAYMENT	APR 1989
52.232-11	EXTRAS	APR 1984
52.232-17	INTEREST	JAN 1991
52.232-18	AVAILABILITY OF FUNDS	APR 1984
52.232-22	LIMITATION OF FUNDS	APR 1984
52.232-23	ASSIGNMENT OF CLAIMS	JAN 1986
52.232-25	PROMPT PAYMENT	SEP 1992
52.232-28	ELECTRONIC FUNDS TRANSFER PAYMENT METHODS	APR 1989
52.233-1	DISPUTES	DEC 1991
52.233-3	PROTEST AFTER AWARD	AUG 1989

I.1 (Continued)

NUMBER	TITLE	DATE
52.237-2	PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AND VEGETATION	APR 1984
52.237-3	CONTINUITY OF SERVICES	JAN 1991
52.242-13	BANKRUPTCY	APR 1991
52.243-1	CHANGES - FIXED-PRICE Alternates III (APR 1984)	AUG 1987
52.244-1	SUBCONTRACTS (FIXED-PRICE CONTRACTS)	APR 1991
52.244-2	SUBCONTRACTS (COST-REIMBURSEMENT AND LETTER CONTRACTS)	JUL 1985
52.244-5	COMPETITION IN SUBCONTRACTING	APR 1984
52.245-1	PROPERTY RECORDS	APR 1984
52.245-2	GOVERNMENT PROPERTY (FIXED-PRICE CONTRACTS) Alternate I (APR 1984)	DEC 1989
52.246-25	LIMITATION OF LIABILITY - SERVICES	APR 1984
52.249-2	TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE)	APR 1984
52.249-8	DEFAULT (FIXED-PRICE SUPPLY AND SERVICE)	APR 1984
52.253-1	COMPUTER GENERATED FORMS	JAN 1991

[End of Clause]

I.2 52.203-9 REQUIREMENT FOR CERTIFICATE OF PROCUREMENT INTEGRITY--MODIFICATION (NOV 1990)

- (a) Definitions. The definitions set forth in FAR 3.104-4 are hereby incorporated in this clause.
- (b) The Contractor agrees that it will execute the certification set forth in paragraph (c) of this clause when requested by the Contracting Officer in connection with the execution of any modification of this contract.
- (c) Certification. As required in paragraph (b) of this clause, the officer or employee responsible for the modification proposal shall execute the following certification:

CERTIFICATE OF PROCUREMENT INTEGRITY--
MODIFICATION (NOV 1990)

(1) I, [Name of certifier] _____, am the officer or employee responsible for the preparation of this modification proposal and hereby certify that, to the best of my knowledge and belief, with the exception of any information described in this certification, I have no

I.2 (Continued)

information concerning a violation or possible violation of subsection 27(a), (b), (d), or (f) of the Office of Federal Procurement Policy Act, as amended* (41 U.S.C. 423), (hereinafter referred to as "the Act"), as implemented in the FAR, occurring during the conduct of this procurement (contract and modification number).

(2) As required by subsection 27(e)(1)(B) of the Act, I further certify that to the best of my knowledge and belief, each officer, employee, agent, representative, and consultant of [Name of Offeror] _____ who has participated personally and substantially in the preparation or submission of this proposal has certified that he or she is familiar with, and will comply with, the requirements of subsection 27(a) of the Act, as implemented in the FAR, and will report immediately to me any information concerning a violation or possible violation of subsections 27(a), (b), (d), or (f) of the Act, as implemented in the FAR, pertaining to this procurement.

(3) Violations or possible violations: (Continue on plain bond paper if necessary and label Certificate of Procurement Integrity--Modification (Continuation Sheet), ENTER NONE IF NONE EXISTS)

[Signature of the officer or employee responsible for the modification proposal and date]

[Typed name of the officer or employee responsible for the modification proposal]

* Subsections 27(a), (b), and (d) are effective on December 1, 1990. Subsection 27(f) is effective on June 1, 1991.

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER TITLE 18, UNITED STATES CODE, SECTION 1001.

(d) In making the certification in paragraph (2) of the

I.2 (Continued)

certificate, the officer or employee of the competing Contractor responsible for the offer or bid, may rely upon a one-time certification from each individual required to submit a certification to the competing Contractor, supplemented by periodic training. These certifications shall be obtained at the earliest possible date after an individual required to certify begins employment or association with the contractor. If a contractor decides to rely on a certification executed prior to the suspension of section 27 (i.e., prior to December 1, 1989), the Contractor shall ensure that an individual who has so certified is notified that section 27 has been reinstated. These certifications shall be maintained by the Contractor for a period of 6 years from the date a certifying employee's employment with the company ends or, for an agency, representative, or consultant, 6 years from the date such individual ceases to act on behalf of the contractor.

- (e) The certification required by paragraph (c) of this clause is a material representation of fact upon which reliance will be placed in executing this modification.

[End of Clause]

I.3 52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 1989)

- (a) The Government may extend the term of this contract by written notice to the Contractor within 60 days; provided, that the Government shall give the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.
- (b) If the Government exercises this option, the extended contract shall be considered to include this option provision.
- (c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 5 years.

[End of Clause]

I.4 52.217-7 OPTION FOR INCREASED QUANTITY--SEPARATELY PRICED LINE ITEM (MAR 1989)

The Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor within 60 days. Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree.

I.4 (Continued)

[End of Clause]

I.5 52.219-11 SPECIAL 8(A) CONTRACT CONDITIONS
(FEB 1990)

The Small Business Administration (SBA) agrees to the following:

- (a) To furnish the supplies or services set forth in this contract according to the specifications and the terms and conditions hereof by subcontracting with an eligible concern pursuant to the provisions of section 8(a) of the Small Business Act, as amended (15 U.S.C. 637(a)).
- (b) That in the event SBA does not award a subcontract for all or a part of the work hereunder, this contract may be terminated either in whole or in part without cost to either party.
- (c) Except for novation agreements and advance payments, delegates to the U.S. Nuclear Regulatory Commission the responsibility for administering the subcontract to be awarded hereunder with complete authority to take any action on behalf of the Government under the terms and conditions of the subcontract; provided, however, that the U.S. Nuclear Regulatory Commission shall give advance notice to the SBA before it issues a final notice terminating the right of a subcontractor to proceed with further performance, either in whole or in part, under the subcontract for default or for the convenience of the Government.
- (d) That payments to be made under any subcontract awarded under this contract will be made directly to the subcontractor by the U.S. Nuclear Regulatory Commission.
- (e) That the subcontractor awarded a subcontract hereunder shall have the right of appeal from decisions of the Contracting Officer cognizable under the "Disputes" clause of said subcontract.
- (f) To notify the U.S. Nuclear Regulatory Commission Contracting Officer immediately upon notification by the subcontractor that the owner or owners upon whom 8(a) eligibility was based plan to relinquish ownership or control of the concern.

[End of Clause]

I.6 52.219-12 SPECIAL 8(A) SUBCONTRACT CONDITIONS
(FEB 1990)

- (a) The Small Business Administration (SBA) has entered into Contract No. NRC-26-94-264 _____ with the U.S. Nuclear

I.6 (Continued)

Regulatory Commission to furnish the supplies or services as described therein. A copy of the contract is attached hereto and made a part hereof.

- (b) The Simulation Engineering & Technologies, hereafter referred to as the subcontractor, agrees and acknowledges as follows:
- (1) That it will, for and on behalf of the SBA, fulfill and perform all of the requirements of Contract No. NRC-26-94-264 _____ for the consideration stated therein and that it has read and is familiar with each and every part of the contract.
 - (2) That the SBA has delegated responsibility, except for novation agreements and advance payments, for the administration of this subcontract to the U.S. Nuclear Regulatory Commission with complete authority to take any action on behalf of the Government under the terms and conditions of this contract.
 - (3) That it will not subcontract the performance of any of the requirements of this subcontract to any lower tier subcontractor without the prior written approval of the SBA and the designated Contracting Officer of the U.S. Nuclear Regulatory Commission.
 - (4) That it will notify the U.S. Nuclear Regulatory Commission Contracting Officer in writing immediately upon entering an agreement (either oral or written) to transfer all or part of its stock or other ownership interest to any other party.
- (c) Payments, including any progress payments under this subcontract, will be made directly to the subcontractor by the U.S. Nuclear Regulatory Commission.

[End of Clause]

I.7 52.219-17 SECTION 8(A) AWARD (FEB 1990)

- (a) By execution of a contract, the Small Business Administration (SBA) agrees to the following:
- (1) To furnish the supplies or services set forth in the contract according to the specifications and the terms and conditions by subcontracting with the Offeror who has been determined an eligible concern pursuant to the provisions of section 8(a) of the Small Business Act, as amended (15 U.S.C. 637(a)).
 - (2) Except for novation agreements and advance payments,

I.7 (Continued)

delegates to the U.S. Nuclear Regulatory Commission the responsibility for administering the contract with complete authority to take any action on behalf of the Government under the terms and conditions of the contract; provided, however that the contracting agency shall give advance notice to the SBA before it issues a final notice terminating the right of the subcontractor to proceed with further performance, either in whole or in part, under the contract.

- (3) That payments to be made under the contract will be made directly to the subcontractor by the contracting activity.
 - (4) To notify the U.S. Nuclear Regulatory Commission Contracting Officer immediately upon notification by the subcontractor that the owner or owners upon whom 8(a) eligibility was based plan to relinquish ownership or control of the concern.
- (b) The offeror/subcontractor agrees and acknowledges that it will, for and on behalf of the SBA, fulfill and perform all of the requirements of the contract.

[End of Clause]

PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS

SECTION J - LIST OF ATTACHMENTS

J.1 ATTACHMENTS (MAR 1987)

<u>Attachment Number</u>	<u>Title</u>
1	Billing Instructions
2	Standard Form 1411 with Instructions*
3	NUREG/BR-1067 Software Quality Assurance Program and Guidelines*
4	NRC Bulletin 0904-3 *

*Documents provided to the Contractor with the Solicitation RS-NRC-94-264

12/17/91

BILLING INSTRUCTIONS FOR
FIXED PRICE CONTRACTS

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

Form: Claims shall be submitted on the payee's letterhead, voucher/invoices, 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." These forms are available from the US Government Printing Office, 710 North Capitol Street, Washington, DC 20401.

Number of Copies: An original and three copies shall be submitted. Failure to submit all the required copies will result in rejection of the voucher/invoice as improper.

Designated Agency Billing Office: Vouchers/invoices shall be submitted to the following address:

US Nuclear Regulatory Commission
Division of Contracts and Property Management
Contract Administration Branch, P-902
Washington, DC 20555

HAND-DELIVERY OF VOUCHERS/INVOICES IS DISCOURAGED AND WILL NOT EXPEDITE PROCESSING BY THE NRC. However, should you choose to deliver vouchers/invoices by hand, including delivery by any express mail service or special delivery service which uses a courier or other person to deliver the vouchers/invoices in person to the NRC, such vouchers/invoices must be addressed to the above Designated Agency Billing Office and will only be accepted at the following location.

US Nuclear Regulatory Commission
One White Flint North - Mail Room
11555 Rockville Pike
Rockville, MD 20852

HAND-CARRIED SUBMISSIONS WILL NOT BE ACCEPTED AT OTHER THAN THE ABOVE ADDRESS

Note that the official receipt date for hand-delivered vouchers/invoices will be the date it is received by the official agency billing office in the Division of Contracts and Property Management.

Agency Payment Office: Payment will continue to be made by the office designated in the contract in Block 13 of the Standard Form 26 or Block 25 of the Standard Form 33, whichever is applicable.

2

Frequency: The contractor shall submit a voucher or 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 strikeouts). Corrections or erasures must be initialed. To be considered a proper voucher/invoice, all of the following elements must be included:

1. Contract number
2. Sequential voucher/invoice number
3. Date of voucher/invoice
4. Project Officer's name and mail stop as designated in the contract.
5. Payee's name and address. (Show the name of the contractor and its correct address. In addition, when an assignment of funds has been made by the contractor, or a different payee has been designated, include the name and address of the payee.) Indicate the name and telephone number of the individual responsible for answering questions which the NRC may have regarding the voucher/invoice.
6. Description of articles or services, quantity, unit price, and total amount.
7. Weight and zone of shipment, if shipped by parcel post.
8. Charges for freight or express shipments. Attached prepaid bill if shipped by freight or express.
9. Instructions to consignee to notify the Contracting Officer of receipt of shipment.
10. 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 US dollars authorized in the contract.

Supersession: These instructions supersede any previous billing instructions.

1

BILLING INSTRUCTIONS FOR
COST-REIMBURSEMENT TYPE CONTRACTS

General: The contractor shall prepare vouchers/invoices for reimbursement of costs in the manner and format described herein. A sample voucher/invoice is provided for your reference. **FAILURE TO SUBMIT VOUCHERS/INVOICES IN ACCORDANCE WITH THESE INSTRUCTIONS WILL RESULT IN REJECTION OF THE VOUCHER/INVOICE AS IMPROPER.**

Number of Copies: An original and three copies, including supporting documentation shall be submitted. A copy of all supporting documents must be attached to each copy of your voucher/invoice. Failure to submit all the required copies will result in rejection of the voucher/invoice as improper.

Designate Agency Billing Office: Vouchers/invoices shall be submitted to the following address:

U.S. Nuclear Regulatory Commission
Division of Contracts and Property Management
Contract Administration Branch, P-902
Washington, DC 20555

HAND DELIVERY OF VOUCHERS/INVOICES IS DISCOURAGED AND WILL NOT EXPEDITE PROCESSING BY NRC. However, should you choose to deliver vouchers/invoices by hand, including delivery by any express mail services or special delivery services which use a courier or other person to deliver the voucher/invoice in person to the NRC, such vouchers/invoices must be addressed to the above Designated Agency Billing Office and will only be accepted at the following locations:

U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Mail Room
Rockville, MD 20852

HAND-CARRIED SUBMISSIONS WILL NOT BE ACCEPTED AT OTHER THAN THE ABOVE ADDRESS.

Note that the official receipt date for hand-delivered vouchers/invoices will be the date it is received by the official agency billing office in the Division of Contracts and Property Management.

Agency Payment Office: Payment will continue to be made by the office designated in the contract in Block 12 of SF 26 of Block 25 of SF 33, whichever is applicable.

Frequency: The contractor shall submit claims for reimbursement once each month, unless otherwise authorized by the Contracting Officer.

Form: Claims should be submitted in the format depicted on the attached sample form entitled "Voucher for Purchase and Services Other than Personal" (see Enclosure 1). The sample form is provided for guidance only. The form is not required for submission of a voucher/invoice. Alternate formats are permissible provided all requirements of the billing instructions are addressed. Additional copies of the form are available from the Contracting Officer. The instructions form preparation and itemization of the voucher/invoice are included with the sample form (See Enclosure 2).

Task Ordering Contracts: If the contractor bills for more than one task order under a voucher/invoice, detailed cost information for each individual task order shall be submitted, together with a cumulative summary of all charges billed on the voucher/invoice. This includes all applicable cost elements discussed in paragraphs (a) through (p) of the attached instructions, together with appropriate supporting information (see Enclosure 3 for a sample of support information).

Fee Recovery Billings: Pursuant to the provisions of 10 CFR Part 170 and 171 on license fees, the NRC must recover the cost of work performed. Accordingly, the contractor must provide the total amount of funds billed during the period, fiscal year to date and the cumulative total for each task or task assignment by facility or report. The fee recovery billing reports shall be on a separate page, and shall be in the format provided in Enclosure 4. The billing period for fee recovery costs should be from the first day of each calendar month to the last day of the same month. Each separate fee billing report must be attached to the monthly invoice and cover the same period as the invoice.

Each report will contain a docket number or other unique identifier. The NRC will provide a unique identifier for all work performed. Costs should be reported as whole number to the nearest cent. For work that involves more than one facility at the same site, each facility should be listed separately and the costs should be split appropriately between the facilities. Common costs, as defined below, shall be identified as a separate line item in the fee recovery billing report each month.

Common costs are those costs that are not licensee unique and associated with the performance of an overall program that benefit all similar licensees covered under that program or that are required to satisfactorily carryout the program. Common costs include costs associated with the following: preparatory or startup efforts to interpret and reach agreement on methodology, approach, acceptance criteria, regulatory position, or technical reporting requirements; efforts associated with the "lead plant" concept that might be involved during the first one or two plant reviews; meetings and

discussions involving the above efforts to provide orientation, background knowledge or guidance during the course of a program; any technical effort applied to a docket or other unique identifier; and project management. Common costs must be reporting monthly for each docket or unique identifier. Common costs must be computed based on the proportion of direct costs incurred against each docket or unique identifier for the billing period.

Billing of Cost After Expiration of Contract: If costs are incurred during the contract period and claimed after the contract has expired, the period during which these costs were incurred must be cited. To be considered a proper expiration voucher/invoice, the contractor shall clearly mark it "EXPIRATION VOUCHER" or "EXPIRATION INVOICE".

Final vouchers/invoices 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; payments will be made in that currency. However, the U.S. dollar equivalent for all vouchers/invoices paid under the contract may not exceed to the total U.S. dollars authorized in the contract.

Supersession: These instructions supersede any previous billing instructions.

INSTRUCTIONS FOR PREPARING
COST INFORMATION FOR NRC CONTRACTS

Preparation and Itemization of the Voucher/Invoice: In order to constitute a proper invoice, the contractor shall furnish all the information set forth below. These notes are keyed to the entries on the sample voucher/invoice.

Official Agency Billing Office: Address the original and 3 copies of the voucher/invoice, together with supporting documentation attached to each copy to: U.S. Nuclear Regulatory Commission, Division of Contracts and Property Management, P-902, Washington, DC 20555.

Vouchers/invoices delivered by hand, including delivery by express mail or special delivery services which use a courier or other person to deliver the voucher/invoice in person to the NRC, should be addressed in accordance with the foregoing and delivered to: U. S. Nuclear Regulatory Commission, One White Flint North, 1155 Rockville Pike, Rockville, Maryland 20852. Hand-delivered vouchers/invoices will not be accepted at other than the above address. Note, however, that the official receipt date for hand-delivered vouchers/invoices will be the date it is received by the official agency billing office in the Division of Contracts and Property Management.

Payee's name and address. Show the name of the contractor as it appears in the contract and its correct address. When an approved assignment has been made by the contractor, or a different payee or addressee has been designated, insert the name and address of the payee. Indicate the name and telephone number of the individual responsible for answering any questions that the NRC may have regarding the invoice.

- (a) Contract Number. Insert the NRC contract number
Task Order Number, if applicable. Insert the task order number.
- (b) Title of Project. List the full title of the project being performed under the contract.
- (c) Sequential voucher/invoice number. The appropriate sequential number of the voucher/invoice, beginning with 001 should be designated. Contractors may also include individual internal accounting number, if desired, in addition to the 3-digit sequential number.
- (d) Project Officer's name as designated in the contract.

- (e) Date of voucher/invoice. Insert the date the voucher/invoice is prepared.
- (f) Contract Amount. Insert the total estimated cost of the contract, exclusive of fixed-fee. Include this information as it applies to individual task orders as well.
- (g) Fixed-Fee. Insert total fixed-fee. Include this information as it applies to individual task orders as well.
- (h) Billing Period. Insert the beginning and ending dates (day, month, year) of the period during which costs were incurred and for which reimbursement is claimed.
- (i) Direct Costs - Insert the major cost elements:

- (1) Direct Labor. This consists of salaries and wages paid (or accrued) for direct performance of the contract itemized as follows:

Labor Category	Labor Hrs. Negotiated	Hrs. Billed	Rate	Total	Cumulative Hrs. Billed
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- (2) Fringe Benefits. This represents fringe benefits applicable to direct labor and billed as a direct cost. Where a rate is used indicate the rate. Fringe benefits included in direct labor or in other indirect cost pools should not be identified here.
- (3) Direct Equipment. For education institutions, list each item costing \$500 or more and having a life expectancy of more than one year. For contractors other than educational institutions, list each item costing \$200 or more and having a life expectancy of more than one year. List only those items of equipment for which reimbursement is requested. A reference shall be made to the following (as applicable): (a) the item number for the specific piece of equipment listed in the property schedule of the contract; (b) the Contracting Officer's approval letter if the equipment is not covered by the property schedule; or (c) be preceded by an asterisk (*) if the equipment is below the approval level. Further itemization of vouchers/invoices shall only be required for items having specific limitations set forth in the contract.
- (4) Materials, Supplies, or Other Expendable Items. These are consumable materials, supplies, and equipment other than that described in (3) above.
- (5) Premium Pay. This remuneration in excess of the basic hourly rate. (Requires written approval of the Contracting Officer.)

(6) Consultant's Fee. The supporting information must include the name, hourly or daily rate of the consultant, and reference the NRC approval (if not specifically approved in the original contract).

(7) Travel. Domestic travel is travel within the United States, its territories, possessions, and Canada. It should be billed separately from foreign travel.

All costs associated with each trip must be shown in the following format:

Date	Traveler	Destination	Purpose	Cost
From	To	From	To	\$

(8) Subcontracts. Include separate detailed breakdown of all costs paid to approved subcontractors during the billing period.

(9) Other. List all other direct costs by cost element and dollar amount separately.

(j) Indirect Costs - Overhead. Cite the formula (rate and base) in effect during the time the cost was incurred and for which reimbursement is claimed.

(k) Fixed Fee. If the contract provides for a fixed fee, it must be claimed as provided for by the contract. Cite the formula or method of computation. The contractor may bill for fixed fee only up to 85% of total fee.

(l) Amount Billed for Current Period. Insert the amount billed for the major cost elements, adjustments, and total amount for the period.

(m) Cumulative Amount from Inception to Date of Current Billing. Insert the cumulative amounts billed for the major cost elements and adjusted amounts claimed during this contract.

(n) Total Amounts Claimed. Insert the total amounts claimed for the current cumulative periods.

(o) Adjustments. This includes cumulative amounts billed that have been suspended or disallowed.

(p) Grand Totals.

(1) Direct Labor - \$2400

Labor Category	Labor Hour Negotiated	Hours Billed	Rate	Total	Cumulative Hours Billed
Senior Engineer 1	2400	100	\$14	\$1400	975
Engineer	1500	50	\$10	\$500	465
Computer Analyst	700	100	\$5	\$500	320
				\$2400	

(3) Direct Equipment

Spectrometer - General Electric (as approved in Property Schedule)
\$5,000

(4) Materials, Supplies & Other Expendable Items

10 Radon Tubes @ \$110 = \$1100
6 Pairs Electrostatic Gloves @ \$150 = \$900
\$2000

(5) Premium Pay

Walter Murphy - 10 hours @ \$10 Per Hour = \$100
(This was approved by NRC in letter dated 3/6/89)

(6) Consultants' Fee

Dr. Carney - 1 hour @ \$100 = \$100

(7) Travel

Date	Traveler	Destination	Purpose	Costs
From To		From To		
3/1/89 3/6/89	William King	Chicago Wash	Mtg. w/PO	\$200

BILLING INSTRUCTIONS

COST-REIMBURSEMENT

MONTHLY CONTRACTUAL COST SUMMARY REPORT FOR FEE BILLING

FIN: _____

Facility Name or Report Title: _____

TAC or Inspection Report Number:
(or other unique identifier) _____

Docket Number (if applicable): _____

Cost Categories	Period Amt.	Period Cost Incurred	Fiscal Year To Date Costs	Total Cumulative Costs
Labor				
Materials				
Subcontractor/ Consultant				
Travel				
Other (specify)				
Common Costs				
Total				

Remarks: