

NRC-02-82-043

NMS-82-043

4. CERTIFIED FOR NATIONAL DEFENSE UNDER REG. 2 AND/OR SIMILAR RATING

5. ISSUED BY

CODE

6. ADMINISTERED BY (If other than block 5)

CODE

7. DELIVERY FOR NATIONAL DEFENSE  OTHER  below

U.S. Nuclear Regulatory Commission  
Division of Contracts  
Washington, DC 20555

8. CONTRACTOR NAME AND ADDRESS

CODE

FACILITY CODE

9. DISCOUNT FOR PROMPT PAYMENT

(Street, city, county, State, and ZIP code)

Science Applications, Inc.  
1710 Boulderidge Drive  
P.O. Box 1303  
McLean, Virginia 22102

10. SUBMIT INVOICES In accordance with Article Billing Instructions

11. SHIP TO/MARK FOR

CODE

12. PAYMENT WILL BE MADE BY

CODE

U.S. Nuclear Regulatory Commission  
Office of Resource Management  
Division of Accounting and Finance  
ATTN: GOV/COM ACCOUNTS

13. THIS PROCUREMENT WAS  ADVERTISED,  NEGOTIATED, PURSUANT TO

10 U.S.C. 2304 (a)(1) Washington, DC 20555  
 41 U.S.C. 252 (c)(1)(D)

14. ACCOUNTING AND APPROPRIATION DATA

B&R No. 50-19-03-02

FIN No. B7356-2

\$300,000.00

15. ITEM NO.	16. SUPPLIES/SERVICES	17. QUANTITY	18. UNIT	19. UNIT PRICE	20. AMOUNT
	Provide all necessary personnel, facilities, materials, and services to accomplish the effort entitled, "Assay of Long-Lived Radionuclides in Low-Level Wastes from Power Reactors," as set forth in the Statement of Work herein and as implemented by SAI's technical proposal dated April 30, 1982 and SAI's letters of May 17, 1982 and May 21, 1982.	Estimated	Cost		\$363,2
		Fixed Fee			32,5
		Cost Plus	Fixed Fee		395,7
	(Incrementally Funded CPFF Contract)				

21. TOTAL AMOUNT OF CONTRACT \$395,769.00

CONTRACTING OFFICER WILL COMPLETE BLOCK 22 OR 26 AS APPLICABLE

22.  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.)

26.  AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number \_\_\_\_\_, including any additions or changes made by you which additions or changes are set forth in the 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. If further contractual document is necessary.

23. NAME OF CONTRACTOR  
*Diane E. Findley*  
(Signature of person authorized to sign)

27. UNITED STATES OF AMERICA  
*M. J. Mattia*  
BY (Signature of Contracting Officer)

24. NAME AND TITLE OF SIGNER (Type or print)  
DIANE E. FINDLEY  
SR. CONTRACT REPRESENTATIVE 6/28/82

28. NAME OF CONTRACTING OFFICER (Type or print)  
Mary Jo Mattia  
29. DATE SIGNED  
6/28/82

TABLE OF CONTENTS

This contract consists of the following:

1. STANDARD FORM 26 - COVER PAGE

2. TABLE OF CONTENTS

3. CONTRACT SCHEDULE:

Article I - Statement of Work

Article II - Period of Performance

Article III - Consideration and Payment

Article IV - Incremental Funding

Article V - Overhead/General and Administrative Rates

Article VI - Private Use and Protection of Unclassified  
Government Information

Article VII - Key Personnel

Article VIII - Technical Direction

Article IX - Project Officer

Article X - Travel Reimbursement

Article XI - General Provisions/Alterations

Article XII - Billing Instructions for NRC Cost-Type Contracts

4. ATTACHMENTS:

a) General Provisions for Cost Type Research and Development Contracts,  
dated 12/01/81

b) NRC Manual Appendix 3202

c) Microform Specifications for Division of Waste Management Contracts

## CONTRACT SCHEDULE

### ARTICLE I - STATEMENT OF WORK

#### 1.0 BACKGROUND

The Nuclear Regulatory Commission (NRC) recently published in the Federal Register (Vol. 46, No. 142, Friday, July 24, 1981, pp 38081-38105 a proposed rule, 10 CFR 61, "Licensing Requirements for Land Disposal of Radioactive Waste." This proposed rule provides requirements for waste form characteristics based on a waste classification system. The waste classification system defines waste form requirements based on the concentrations of specified radionuclides.

In order to implement the waste classification system in a manner which is enforceable, is cost-effective, minimizes occupational exposures, and provides sufficiently accurate quantification of nuclides, the NRC needs a data base of radionuclide concentrations in representative waste streams from nuclear power plants. In addition, the NRC needs a method for correlating the concentrations of those radionuclides which require complex analytical assay methods to the concentration of radionuclide which can be measured more easily.

#### 2.0 WORK REQUIRED

The contractor shall provide the necessary personnel, materials and facilities required to accomplish the tasks set forth in the Statement of Work.

##### Task 1. Radionuclide Assay

The Contractor shall research the literature to determine the most effective analytic procedures for assaying  $H^3$ ,  $C^{14}$ ,  $Ni^{59}$ ,  $Ni^{63}$ ,  $Sr^{90}$ ,  $Nb^{94}$ ,  $Tc^{99}$ ,  $I^{129}$ , and  $Cs^{135}$  in radwaste samples. The contractor shall also provide for a peer review in order to come to a consensus regarding the assay procedures to be used for the radwaste samples. The contractor shall then analyze up to one hundred twenty-five (125) samples obtained from the Electric Power Research Institute (EPRI) study, "Activity Levels of Transuranic Nuclides in Low-Level Solid Wastes from U.S. Power Reactors," and determine to the extent practicable, the concentrations of the following radionuclides:  $H^3$ ,  $C^{14}$ ,  $Ni^{59}$ ,  $Ni^{63}$ ,  $Nb^{94}$ ,  $Tc^{99}$ ,  $I^{129}$ , and  $Cs^{135}$ . Measurements for  $Sr^{90}$  shall be performed on those samples for which  $Sr^{90}$  measurements were not previously performed.

In order to confirm the validity of analytic results, the contractor shall organize a confirmatory sample-splitting program and contract with an outside source to verify the analytic results.

In order to assure that the EPRI samples, which are up to six (6) years old, have undergone negligible aging effects, up to twenty (20) new samples from similar nuclear power facility waste streams as used in the EPRI study, shall be acquired and analyzed. If practicable, the new samples should be acquired from the same facilities as the EPRI study samples. In addition to the analyses performed as described above, measurements shall be made for the actinide and gamma-emitting nuclides

determined in the EPRI study. The data from the new samples shall be compared with the data from the EPRI study samples to assure that the older sample results are consistent with the new sample data.

## Task 2. Scaling Factor Development

Following the generation of the assay data, the contractor shall apply statistical correlation methods to provide appropriate scaling factors for use in implementing the 10 CFR 61 waste classification system. Statistical correlation methods could include the linear least square method or other appropriate computational techniques. Scaling factors should be based on correlations with more easily measured nuclides such as  $Co^{60}$ ,  $Cs^{137}$ , and  $Ce^{144}$ .

### 3.0 REPORTING REQUIREMENTS

#### 3.1 Project Plan

Within three weeks after the award of the contract, the contractor shall submit to the NRC Project Officer for approval a detailed schedule of the planned activities showing milestones, and key events within each milestone.

The project plan will be approved or comments for revision returned to the contractor within two weeks after receipt by the NRC Project Officer. Comments shall be resolved and a revised project plan shall be submitted to the NRC Project Officer for approval. The NRC Project Officer's review of the project plan shall not delay the contractor's start of the project effort. Revisions to the approved project plan shall be made only with the approval of the NRC Project Officer or Contracting Officer.

#### 3.2 Monthly Progress Reports

Each month the contractor shall submit a progress report which includes a detailed summary of the work accomplished during the reporting period. The progress report shall also summarize (1) personnel time expenditures during the previous month; and (2) costs: (i) current period, (ii) cumulative to date, and (iii) cost projection by month to the completion of the work effort. (The first monthly report shall provide the initial cost projections and subsequent reports shall either provide revised projections or indicate "no change in the cost projection.") The report shall be due by the 15th of the month following each reporting period. One (1) copy of the progress report shall be submitted to the NRC Project Officer and one (1) copy shall be submitted to the Director, Division of Waste Management.

#### 3.3 Final Report

At the conclusion of Tasks 1 and 2, the contractor shall furnish to the NRC Project Officer for review and comment ten (10) copies of a draft final report. The report shall be in the format specified in NRC Manual Appendix 3202 for "Formal Contractor Documents, Attachment B."

The NRC Project Officer will furnish comments on the draft report to the contractor within four (4) weeks after receipt of the draft report. Within six (6) weeks after the receipt of the NRC Project Officer's comments, the contractor shall revise the draft report and submit to the NRC Project Officer one (1) camera-ready copy and ten (10) copies of the final report. In addition, one (1) copy shall be submitted to the Contracting Officer, Division of Contracts, one (1) copy to the Program Support Branch, Office of Nuclear Materials Safety and Safeguards, one (1) copy to the Director, Division of Waste Management, and one (1) copy to the Waste Management Docket Control Center, Division of Waste Management.

### 3.4 Microfiche Requirements

Microfiche is required of all interim and final reports. The specifications for this microfiche are listed in Attachment C and the distribution is as follows:

Document Management Branch  
Division of Technical Information  
and Document Control, 1 Master

Docket Control Center  
Division of Waste Management, 1 Duplicate

### 3.5 Meetings

The Contractor shall meet with the NRC Project Officer up to four (4) times during the conduct of the study and within two (2) weeks following submittal of the draft final report. Upon completion of the final report the contractor shall brief the NRC Project Officer and other NRC staff on the final report. These meetings shall be of (1) day's duration and shall be held at at the NRC's offices in Silver Spring, MD.

### 4.0 NRC FURNISHED MATERIAL

Within two (2) weeks of the award of this contract, the NRC Project Officer will provide the performing organization with one (1) copy of the proposed rule, 10 CFR 61, "Licensing Requirements for Land Disposal of Radioactive Waste" and one (1) copy of NUREG-0782, "Draft Environmental Impact Statement on 10 CFR Part 61."

### 5.0 QUALITY ASSURANCE PROCEDURES

For all draft and final technical reports delivered under this contract the contractor shall assure that an independent review and verification of all numerical computations and mathematical equations and derivations are performed by qualified personnel other than the original author(s) of the reports. If the contractor proposes to verify/check less than 100 percent of all computations and mathematical equations and derivations in the report(s), (such as might be the case when there are a large number of routine, repetitive calculations), the contractor must

first obtain written approval from the NRC Project Officer. Computer-generated calculations will not require verification where the computer program has already been verified.

In addition, for all reports, including those which do not contain numerical analyses, a management review shall be conducted at Division Manager level prior to submission to the NRC.

All reports shall be annotated to indicate that the review and verification has been accomplished prior to their submission to the NRC. (This may be accomplished by use of a cover letter accompanying the report if preferable.)"

#### ARTICLE II - PERIOD OF PERFORMANCE

The performance of work described in ARTICLE I hereof shall commence as of the effective date of this contract and shall continue through 24 months after said contract is effective at which time all work shall have been completed and all reports shall have been submitted.

#### ARTICLE III - CONSIDERATION AND PAYMENT (Incrementally Funded CPFF)

##### A. Estimated Cost, Fixed Fee and Obligation

1. It is estimated that the total cost to the Government for full performance of this contract will be \$395,769.00, of which the sum of \$363,257.00 represents the estimated reimbursable costs, and of which \$32,512.00 represents the fixed fee.
2. Total funds currently available for payment and allotted to this contract are \$300,000.00, of which \$275,356.00 represents the estimated reimbursable costs, and of which \$24,644.00 represents the fixed fee.
3. It is estimated that the amount currently allotted will cover performance through 14 months from the effective date of the contract.

##### B. Payment

The Government shall render payment to the contractor in approximately thirty (30) days after submission of proper and correct invoices or vouchers.

Additional provisions relating to payment are contained in Provision No. 5.3 of the General Provisions hereto.

ARTICLE IV - INCREMENTAL FUNDING

1. Sufficient funds are not presently available to cover the totality of work over the entire period of performance under this contract. Additional funds will be allotted from time to time by contract modification up to the full estimated amount of the contract. While it is the Government's intention to progressively fund this contract up to the full estimated amount over the entire period of performance, the Government will not be obligated to reimburse the Contractor for costs in excess of periodic allotments, nor will the contractor be obligated to continue performance in excess of amounts allotted.
2. Clause Number 5.2 "Limitation of Funds" of the General Provisions, attached hereto, shall supercede Clause Number 5.1 "Limitation of Cost" until such time as the contract is fully funded.

ARTICLE V - OVERHEAD/GENERAL AND ADMINISTRATIVE RATES/ALLOWABLE COSTS

- A. Pending the establishment of final overhead rates which shall be negotiated based on audit of actual costs, the contractor shall be reimbursed for material overhead costs at the provisional rate of 2.5 percent of subcontract costs and for labor overhead costs at the provisional rate of 83.5 percent of direct labor costs. The fringe benefit overhead cost shall be reimbursed at the provisional rate of 40.7 percent of direct labor costs.
- B. Pending the establishment of final general and administrative rates which shall be negotiated based on audit of actual costs, the contractor shall be reimbursed for allowable indirect costs hereunder at the provisional rate of 12.5 percent of total direct cost and overhead except for subcontract costs.
- C. Notwithstanding A. and B. of this Article, said provisional overhead and G&A rates may be adjusted as appropriate during the term of the contract upon the acceptance of such revised rates by the Contracting Officer.

ARTICLE VI - PRIVATE USE AND PROTECTION OF UNCLASSIFIED GOVERNMENT INFORMATION

- A. Except as specifically authorized by this contract, or as otherwise approved by the Contracting Officer, records or other information, documents and material furnished by the Commission to the contractor in the performance of this contract, or information developed by the contractor in the course of the work hereunder, shall be used only in connection with the work performed under this contract. The contractor shall, upon completion or termination of this contract, transmit to the Commission all records or other information, documents and material, and any copies thereof, furnished by the Commission to the contractor or developed by the contractor in the performance of this contract.
- B. The contractor shall be responsible for safeguarding from unauthorized disclosure any information or other documents and material exempt from public disclosure by the Commission's regulations and made available to the contractor in connection with the performance of work under this contract. The contractor agrees to conform to all regulations, requirements, and directives of the Commission with respect to such material.
- C. The contractor's duties under this clause shall not be construed to limit or affect in any way the contractor's obligation to conform to all security regulations and requirements of the Commission pertaining to classified information and material.

ARTICLE VII - KEY PERSONNEL

Pursuant to General Provision No. 2.3 (Key Personnel), the following individuals are considered to be essential to the successful performance of the work hereunder and shall not be replaced without the prior approval of the Contracting Officer. In such event, the contractor agrees to substitute persons possessing substantially equal abilities and qualifications satisfactory to the Contracting Officer.

James E. Cline, Project Manager  
 James R. Noyce, Principal Investigator  
 Kelvin L. Wright, Lead Chemist

Joanne Hollcroft, Senior Analyst  
 Charles A. Pelletier, Technical Advisor

ARTICLE VIII - TECHNICAL DIRECTION

- A. Performance of the work under this contract shall be subject to the technical direction of the NRC Project Officer named in ARTICLE IX of this contract. The term "Technical Direction" is defined to include the following:
  1. Technical direction to the contractor which shifts work emphasis between areas of work or tasks, requires pursuit of certain lines of inquiry, fills in details or otherwise serves to accomplish the contractual scope of work.
  2. Providing assistance to the contractor in the preparation of drawings, specifications or technical portions of the work description.
  3. Review and where required by the contract, approval of technical reports, drawings, specifications and technical information to be delivered by the contractor to the Government under the contract.



- 9 of 23
- B. Technical direction must be within the general scope of work stated in the contract. The Project Officer does not have the authority to and may not issue any technical direction which:
1. Constitutes an assignment of additional work outside the general scope of the contract.
  2. Constitutes a change as defined in the clause of the General Provisions entitled "Changes."
  3. In any way causes an increase or decrease in the total estimated contract cost, the fixed fee, if any, or the time required for contract performance.
  4. Changes any of the expressed terms, conditions or specifications of the contract.

- C. ALL TECHNICAL DIRECTIONS SHALL BE ISSUED IN WRITING BY THE PROJECT OFFICER OR SHALL BE CONFIRMED BY SUCH PERSON IN WRITING WITHIN TEN (10) WORKING DAYS AFTER VERBAL ISSUANCE. A copy of said written direction shall be submitted to the Contracting Officer.

The contractor shall proceed promptly with the performance of technical directions duly issued by the Project Officer in the manner prescribed by this article and within such person's authority under the provisions of this article.

If, in the opinion of the contractor, any instruction or direction issued by the Project Officer is within one of the categories as defined in B(1) through (4) above, the contractor shall not proceed but shall notify the Contracting Officer in writing within five (5) working days after the receipt of any such instruction or direction and shall request the Contracting Officer to modify the contract accordingly. Upon receiving such notification from the contractor, the Contracting Officer shall issue an appropriate contract modification or advise the contractor in writing that, in the Contracting Officer's opinion, the technical direction is within the scope of this article and does not constitute a change under the Changes Clause.

- D. Any unauthorized commitment or direction issued by the Project Officer may result in an unnecessary delay in the contractor's performance, and may even result in the contractor expending funds for unallowable costs under the contract.
- E. A failure of the parties to agree upon the nature of the instruction or direction or upon the contract action to be taken with respect thereto shall be subject to the provisions of the contract clause entitled "Disputes".

## ARTICLE IX- PROJECT OFFICER

Timothy Johnson, NMSS, is hereby designated as the Contracting Officer's authorized representative (hereinafter called Project Officer) for technical aspects of the contract. The Project Officer is not authorized to approve or request any work which results in or could result in an increase in contract cost; or terminate or settle any claim or dispute arising under the contract; or issue any unilateral directive whatever.

The Project Officer is responsible for: (1) monitoring the contractor's technical progress, including surveillance and assessment of performance, and recommending to the Contracting Officer changes in requirements; (2) interpreting the scope of work; (3) performing technical evaluation as required; (4) performing technical inspections and acceptances required by this contract; and (5) assisting the contractor in the resolution of technical problems encountered during performance. Within the purview of this authority, the Project Officer is authorized to recommend all costs requested for reimbursement by contractors and submit recommendations for approval, disapproval, or suspension for supplies, services required under the contract. The Contracting Officer is responsible for directing or negotiating any changes in terms, conditions, or amounts cited in the contract.

For guidance from the Project Officer to the contractor to be valid, it must: (1) be consistent with the description of work set forth in the contract; (2) constitute new assignment of work or change to the expressed terms, conditions, or specifications incorporated into this contract; (3) not constitute a basis for an extension to the period of performance or contract delivery schedule; and, as stated above, (4) not constitute a basis for any increase in the contract cost.

## ARTICLE X - TRAVEL REIMBURSEMENT

The contractor will be reimbursed for the following reasonable domestic travel costs incurred directly and specifically in the performance of this contract and accepted by the Contracting Officer:

1. The cost of travel by privately owned automobile shall be reimbursed at a rate of .20¢ per mile.
2. The cost of travel by rented automobile shall be reimbursed on a reasonable actual expense basis.

ARTICLE XI - GENERAL PROVISIONS/ALTERATIONS

This contract is subject to Attachment A provisions of Appendix A, General Provisions, entitled "Cost Type Research and Development Contracts With Commercial Organizations," dated 12/1/81.

Provisions Added:-----

3.12 Labor Surplus Area Subcontracting Program (1-1.805-3(b))(Over \$500,000)

(a) The Contractor agrees to establish and conduct a program which will encourage labor surplus area concerns to compete for subcontracts within their capabilities. In this connection, the Contractor shall--

(1) Designate a liaison officer who will (i) maintain liaison with duly authorized representatives of the Government on labor surplus area matters, (ii) supervise compliance with the Utilization of Concerns in Labor Surplus Areas clause, and (iii) administer the Contractor's "Labor Surplus Area Subcontracting Program;"

(2) Provide adequate and timely consideration of the potentialities of labor surplus area concerns in all "make-or-buy" decisions;

(3) Assure that labor surplus area concerns will have an equitable opportunity to compete for subcontracts, particularly by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation of labor surplus area concerns;

(4) Maintain records showing the procedures which have been adopted to comply with the policies set forth in this clause and report subcontract awards (see 41 CFR 1-16.804-5 regarding use of Optional Form 61). Records maintained pursuant to this clause will be kept available for review by the Government until the expiration of 1 year after the award of this contract, or for such longer period as may be required by any other clause of this contract or by applicable law or regulations; and

(5) Include the Utilization of Concerns in Labor Surplus Areas clause in subcontracts which offer substantial labor surplus area subcontracting opportunities.

(b) (1) The term "labor surplus area" means a geographical area identified by the Department of Labor as an area of concentrated unemployment or under-employment or an area of labor surplus.

(2) The term "concern located in a labor surplus area" means a labor surplus area concern.

(3) The term "labor surplus area concern" means a concern that, together with its first-tier subcontractors, will perform substantially in labor surplus areas.

(4) The term "perform substantially in labor surplus areas" means that the costs incurred on account of manufacturing, production, or appropriate services in labor surplus areas exceed 50 percent of the contract price.

(c) The Contractor further agrees to insert, in any subcontract hereunder which may exceed \$500,000 and which contains the Utilization of Concerns in Labor Surplus Areas clause, provisions which shall conform substantially to the language of this clause, including this paragraph (c), and to notify the Contracting Officer of the names of such subcontractors.

14 of 23  
3.13 Utilization of Women-Owned Business Concerns (Over \$10,000)

(a) It is the policy of the United States Government that women-owned businesses shall have the maximum practicable opportunity to participate in the performance of contracts awarded by any Federal agency.

(b) The Contractor agrees to use his best efforts to carry out this policy in the award of subcontracts to the fullest extent consistent with the efficient performance of this contract. As used in the contract, a "women-owned business" concern means a business that is at least 51% owned by a woman or women who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" in this context means being actively involved in the day-to-day management. "Women" mean all women business owners.

3.14 Women-Owned Business Concerns Subcontracting Program (Over \$500,000 or \$1,000,000 for Construction of Any Public Facility)

(a) The Contractor agrees to establish and conduct a program which will enable women-owned business concerns to be considered fairly as subcontractors and suppliers under this contract. In this connection, the contractor shall:

- (1) Designate a liaison officer who will administer the Contractor's "Women-Owned Business Concerns Program."
- (2) Provide adequate and timely consideration of the potentialities of known women-owned business concerns in all "make-or-buy" decisions.
- (3) Develop a list of qualified bidders that are women-owned businesses and assure that known women-owned business concerns have an equitable opportunity to compete for subcontracts, particularly by making information on forthcoming opportunities available, by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation of women-owned business concerns.
- (4) Maintain records showing (i) procedures which have been adopted to comply with the policies set forth in this clause, including the establishment of a source list of women-owned business concerns; (ii) awards to women-owned businesses on the source list by minority and non-minority women-owned business concerns; and (iii) specific efforts to identify and award contracts to women-owned business concerns.
- (5) Include the "Utilization of Women-Owned Business Concerns" clause in subcontracts which offer substantial subcontracting opportunities.
- (6) Cooperate in any studies and surveys of the Contractor's women-owned business concerns procedures and practices that the Contracting Officer may from time-to-time conduct.

- (7) Submit periodic reports of subcontracting to women-owned business concerns with respect to the records referred to in subparagraph (4) above, in such form and manner and at such time (not more often than quarterly) as the Contracting Officer may prescribe.

(b) The Contractor further agrees to insert, in any subcontract hereunder which may exceed \$500,000 or \$1,000,000 in the case of contracts for the construction of any public facility and which offers substantial subcontracting possibilities, provisions which shall conform substantially to the language of this clause, in this paragraph (b), and to notify the Contracting Officer of the names of such subcontractors.

(c) The contractor further agrees to require written certification by its subcontractors that they are bona fide women-owned and controlled business concerns in accordance with the definition of a women-owned business concern as set forth in the Utilization Clause 1(b) above at the time of submission of bids or proposals.

#### 5.8 Price Reduction for Defective Cost or Pricing Data (1-3.814-1(a))

If any price, including profit or fee, negotiated in connection with this contract or any cost reimbursable under this contract was increased by any significant sums because:

(a) The Contractor furnished cost or pricing data which was not accurate, complete and current as certified in the Contractor's Certificate of Current Cost or Pricing Data;

(b) A subcontractor, pursuant to the clause of this contract entitled "Subcontractor Cost or Pricing Data" or "Subcontractor Cost or Pricing Data--Price Adjustments" or any subcontract clause therein required, furnished cost or pricing data which was not accurate, complete and current as certified in the subcontractor's Certificate of Current Cost or Pricing Data;

(c) A subcontractor or prospective subcontractor furnished cost or pricing data which was required to be accurate, complete and current and to be submitted to support a subcontract cost estimate furnished by the Contractor but which was not accurate, complete and current as of the date certified in the Contractor's Certificate of Current Cost or Pricing Data; or

(d) The Contractor or a subcontractor or prospective subcontractor furnished any data, not within (a), (b) or (c) above, which was not accurate as submitted; the price or cost shall be reduced accordingly and the contract shall be modified in writing as may be necessary to reflect such reduction. However, any reduction in the contract price due to defective subcontract data of a prospective subcontractor when the subcontract was not subsequently awarded to such subcontractor, will be limited to the amount (plus applicable overhead and profit markup) by which the actual subcontract, or actual cost to the Contractor if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor: Provided, The actual subcontract price was not affected by defective cost or pricing data.

(Note: Since the contract is subject to reduction under this clause by reason of defective cost or pricing data submitted in connection with certain subcontracts, it is expected that the Contractor may wish to include a clause in each such subcontract requiring the subcontractor to appropriately indemnify the Contractor. It is also expected that any subcontractor subject to such indemnification will generally require substantially similar indemnification for defective cost or pricing data required to be submitted by his low tier subcontractors.)

5.9 Price Reduction for Defective Cost or Pricing Data - Price Adjustments  
(1-3.814-1(b))

(a) This clause shall become operative only with respect to any modification of this contract which involves aggregate increases and/or decreases in costs plus applicable profits in excess of \$100,000 unless the modification is priced on the basis of adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation. The right to price reduction under this clause is limited to defects in data relating to such modification.

(b) If any price, including profit, or fee, negotiated in connection with any price adjustment under this contract was increased by any significant sums because:

(1) The Contractor furnished cost or pricing data which was not accurate, complete and current as certified in the Contractor's Certificate of Current Cost or Pricing Data;

(2) A subcontractor, pursuant to the clause of this contract entitled "Subcontractor Cost or Pricing Data" or "Subcontractor Cost or Pricing Data--Price Adjustments" or any subcontract clause therein required, furnished cost or pricing data which was not accurate, complete and current as certified in the subcontractor's Certificate of Current Cost or Pricing Data;

(3) A subcontractor or prospective subcontractor furnished cost or pricing data which was required to be accurate, complete and current and to be submitted to support a subcontract cost estimate furnished by the Contractor but which was not accurate, complete and current as of the date certified in the Contractor's Certificate of Current Cost or Pricing Data; or

(4) The Contractor or a subcontractor or prospective subcontractor furnished any data, not within (1), (2) or (3) above, which was not accurate, as submitted; the price shall be reduced accordingly and the contract shall be modified in writing as may be necessary to reflect such reduction. However, any reduction in the contract price due to defective subcontract data of a prospective subcontractor, when the subcontract was not subsequently awarded to such subcontractor, will be limited to the amount (plus applicable overhead and profit markup) by which the actual subcontract, or actual cost to the Contractor if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor. Provided the actual subcontract price was not affected by defective cost or pricing data.

(Note: Since the contract is subject to reduction under this clause by reason of defective cost or pricing data submitted in connection with certain subcontracts, it is expected that the Contractor may wish to include a clause in each such subcontract requiring the subcontractor to appropriately indemnify the Contractor. It is also expected that any subcontractor subject to such indemnification will generally require substantially similar indemnification for defective cost or pricing data required to be submitted by his lower tier subcontractors.)

(c) Failure to agree on a reduction shall be a dispute concerning a question of fact within the meaning of the "Disputes" clause of this contract.