

AWARD/CONTRACT

1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350) RATING

2. CONTRACT NO. (Proc. Inst. Ident.) No. NRC-04-90-047	3. EFFECTIVE DATE 07/16/90	4. REQUISITION/PURCHASE REQUEST/PROJECT NO. RES-90-047
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5. ISSUED BY Code: U.S. Nuclear Regulatory Commission Div. of Contracts & Property Mgmt. Contract Neg. Branch No. 2; P-1042 Washington, DC 20555 CONTACT - Paul J. Edgeworth PHONE - (301) 492-4279	6. ADMINISTERED BY Code: P-902 (If other than Item 5) Contract Administration Branch Div. of Contracts & Property Mgmt. Mail Stop P-902 Washington, DC 20555
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7. NAME AND ADDRESS OF CONTRACTOR Battelle Human Affairs Research Centers 4000 N.E. 41st Street Seattle, WA 98105 Duns Code: Facility Code:	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 See Subsection F.5	12. PAYMENT WILL CODE BE MADE BY U.S. Nuclear Regulatory Commission Division of Accounting and Finance GOV/COM Accounting Section Washington, DC 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) ()

14. ACCOUNTING AND APPROPRIATION DATA
B&R No. 0601922030 Fin. No. L15310
OBLIGATE: \$98,515.00

15A. ITEM NO.	15B. SUPPLIES/ SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT
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Perform the effort delineated in the Statement of Work herein (Task 1) as implemented by Battelle's technical proposal dated November 17, 1989, as revised April 13, 1990, which is incorporated by reference herein.

15G. TOTAL AMOUNT OF CONTRACT \$98,515.00

EXCEPTION TO STANDARD FORM SF26 (REV. 4-85)

Prescribed by GSA
FAR(48 CFR) 53.214(a)

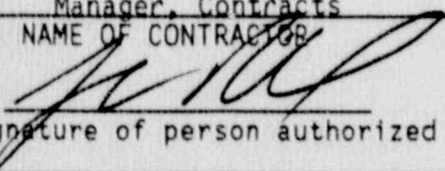
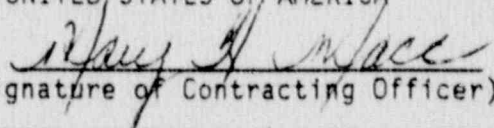
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CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE

17. (X) CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return 2 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) James L. Richards Manager, Contracts	20A. NAME OF CONTRACTING OFFICER Mary H. Mace
19B. NAME OF CONTRACTOR by  (Signature of person authorized to sign)	20B. UNITED STATES OF AMERICA by  (Signature of Contracting Officer)
19C. DATE SIGNED July 24, 1990	20C. DATE SIGNED 7/13/90

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

*Contractor Spending Plan (CSP) is not required.

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PART I - THE SCHEDULE

SECTION B - SUPPLIES OR SERVICES AND PRICE/COSTS

B.1 PROJECT TITLE

The title of this project is as follows:

Human Factors Evaluation of Industrial Radiography

(End of Clause)

B.2 BRIEF DESCRIPTION OF WORK (MAR 1987)

The contractor shall perform evaluations of the human factors of industrial radiography activities, including those activities involving fixed and portable radiography equipment.

(End of Clause)

B.3 CONSIDERATION AND OBLIGATION--COST PLUS FIXED FEE
(JUNE 1988)

a. The total estimated cost to the Government for full performance of this contract is \$98,515.00, of which the sum of \$91,218.00 represents the estimated reimbursable costs, and of which \$7,297.00 represents the fixed fee.

b. In the event that the option to extend the services to include Tasks 2 through 6 herein is exercised, the total estimated cost to the Government for full performance of optional Tasks 2 through 6 is \$163,484.00, of which the sum of \$151,374.00 represents the estimated reimbursable costs, and of which \$12,110.00 represents the fixed fee.

c. There shall be no adjustment in the amount of the Contractor's fixed fee by reason of differences between any estimate of cost for performance of the work under this contract and the actual cost for performance of that work.

d. The amount obligated by the Government with respect to this contract is \$98,515.00.

(End of Clause)

SECTION C - DESCRIPTION/SPECIFICATION /WORK STATEMENT

C.1 STATEMENT OF WORK

B. BACKGROUND

Industrial radiography, a technique of nondestructive testing, uses radioactive sources or x-rays to detect flaws in welds, cracks, breaks, etc., in bridges, buildings, and manufactured articles. (X-ray machines and other radiation producing equipment are not licensed by the NRC.) Most radiographic devices use gamma rays to produce radiographs, although x-rays and neutrons are also used. Approximately 90% of the devices are designed for an operation that involves moving a radioactive source out of its shielded position within the device to the working position.

The procedure for taking radiographs is basically to position a film about the object to be examined, position one end of a guide tube (the other end is attached to the radiographic device) on the other side of the object from the film, crank the radioactive source out from its shielded position in the device to the end of the guide tube, leave it there for the required length of time, crank it back into the device, and recover the film for processing.

Although the procedure appears straightforward, radiation over-exposures of radiographers and the general public occur with a frequency that concerns both the NRC and its Agreement States. Additionally, serious injuries and even some deaths (all outside the United States) have occurred as a result of accidental over-exposures involving radiography sources. The potential for serious consequences is present because of the high intensity of the radioactive sources used in industrial radiography. This research effort is intended to identify the factors contributing to human error that may warrant regulatory action to ensure the health and safety of radiographers and the public.

C.1.2 OBJECTIVE

The objective of this project is to identify factors contributing to human error in industrial radiography activities, including those activities involving fixed and portable radiographic equipment. The human factors evaluations shall include the assessment of the human-system interfaces; operating, emergency, and maintenance procedures; training; and organizational practices and policies; and shall provide the technical basis for regulatory decisions. The effort includes analyzing the results of these evaluations to provide the NRC with the identification of human factors concerns, prioritized according to their safety significance and likelihood of adversely impacting safe industrial

radiography activities, that may warrant regulatory attention. Human factors concerns identified shall be specific and detailed, and reflect potential and actual root causes of human error in industrial radiography activities. Further, the effort shall identify and evaluate alternative means to address the human factors concerns identified.

C.1.3 WORK REQUIREMENT

Task 1. Perform Function and Task Analyses of Industrial Radiography Activities

The contractor shall perform function and task analyses of industrial radiography activities performed using fixed (shielded work room) and portable (most often used at an unshielded work site) radiographic equipment. For purposes of this work effort, industrial radiography activities are defined as involving the operation, maintenance, storage, and transport of industrial radiographic equipment as part of nondestructive testing activities. The function and task analyses shall be conducted and documented in such a way as to provide the level of detail required to support the human factors evaluation of human-system interfaces; operating, emergency, and maintenance procedures and practices; training; and organizational and management practices and policies related to industrial radiography. The function and task analysis shall also address allocation of functions and personnel workloads. A letter report describing the function and task analyses performed, and a detailed description of how the analyses will be applied to the evaluations required by Task 2 through 5, shall be submitted to the NRC Project Manager within seven months after contract initiation.

Estimated Completion Time: Seven Months After Contract Award

Estimated Level of Effort: 6 staff months

Option Clause: The NRC Project Officer shall review the report described in Task 1 for thoroughness and validity within one month of receipt and, based on that review, may or may not authorize continuation of Tasks 2 through 6 of the project. Upon approval the Contracting Officer shall issue a modification to the contract to proceed with the optional work.

Task 2. Perform a Human Factors Evaluation of the Human-System Interfaces Involved in Industrial Radiography Activities

(OPTIONAL -- See Clause I, Option to Extend the Term of the Contract.)

The contractor shall perform a human factors evaluation of the human-system interfaces involved in industrial radiography activities using fixed and portable radiographic equipment. The evaluation shall be based on the results of the function and task analyses conducted in Task 1 as well as established human

engineering guidelines and standards. The evaluation shall identify strengths and weaknesses of the interfaces. A letter report describing the results of the human-system interfaces evaluation shall be submitted to the NRC Project Officer within thirteen months after contract initiation.

Estimated Completion Time: Thirteen Months After Award Initiation

Estimated Level of Effort: 1.5 staff months

Task 3. Perform a Human Factors Evaluation of Industrial Radiography Operating, Emergency, and Maintenance Procedures and Practices

(OPTIONAL -- See Clause I, Option to Extend the Term of the Contract.)

The contractor shall perform a human factors evaluation of the operating, emergency, and maintenance procedures and practices involved in industrial radiography activities using fixed and portable radiographic equipment. The evaluation shall be based on the results of the function and task analyses conducted in Task 1 as well as established guidelines and standards addressing the preparation, presentation, and verification and validation of procedures. The evaluation shall identify strengths and weaknesses of the procedures and practices. A letter report describing the results of the procedures and practices evaluation shall be submitted to the NRC Project Officer within thirteen months after contract award.

Estimated Completion Time: Thirteen Months After Contract Award

Estimated Level of Effort: 1.5 staff months

Task 4. Perform a Human Factors Evaluation of Training Related to Industrial Radiography

(OPTIONAL -- See Clause I, Option to Extend the Term of the Contract.)

The contractor shall perform a human factors evaluation of training and qualifications related to industrial radiography using fixed and portable radiographic equipment. Issues such as differences training and negative transfer of training shall be included in the evaluation. The evaluation shall be based on the results of the function and task analyses conducted in Task 1 as well as established guidelines and standards addressing a systematic approach to training. The evaluation shall identify strengths and weaknesses of radiography training. A letter report describing the results of the training evaluation shall be submitted to the NRC Project Manager within seventeen months after contract award.

Estimated Completion Time: Seventeen Months After Contract

Award

Estimated Level of Effort: 1.5 staff months

Task 5. Perform a Human Factors Evaluation of Organizational Practices and Policies

(OPTIONAL -- See Clause I, Option to Extend the Term of the Contract.)

The contractor shall perform a human factors evaluation of organizational practices and policies (e.g., shift schedules, staffing, supervision, and lines of authority) as they relate to industrial radiography activities involving fixed and portable radiographic equipment. The evaluation shall be based on the results of the function and task analysis conducted in Task 1 as well as a knowledge of good organizational principles and practices. The evaluation shall identify strengths and weaknesses of the organizational practices and policies. A letter report describing the results of the organization evaluation shall be submitted to the NRC Project Officer within seventeen months after contract award.

Estimated Completion Time: Seventeen Months After Contract Award

Estimated Level of Effort: 1.5 staff months

Task 6. Identify and Prioritize Areas for Recommended NRC and Industry Attention

(OPTIONAL -- See Clause I, Option to Extend the Term of the Contract.)

Based on the results of Tasks 1 through 5, the contractor shall identify human factors concerns, prioritized according to their safety significance and likelihood of adversely impacting safe industrial radiography activities, that may warrant regulatory attention. Human factors concerns identified shall be specific and detailed, and reflect potential and actual root causes of human error in industrial radiography activities. Further, alternative measures for resolving the human factors concerns to reduce the likelihood of human error shall be identified. The relative effectiveness of the alternative measures in reliably reducing the likelihood of human error shall be assessed. Additional needs for regulatory research, if any, shall be identified.

Estimated Completion Time: Nineteen Months After Contract Award

Estimated Level of Effort: 1.5 staff months

Reference Section F, Technical NUREG Reports, for reporting requirements.

(End of Clause)

C.2 TRAVEL APPROVALS (MAR 1987)

a. All domestic travel requires the prior approval of the Project Officer.

b. All foreign travel must be approved in advance by the NRC on NRC Form 445 and shall be in compliance with 52.247-63 Preference For U.S. Flag Air Carriers. Such approval will be communicated in writing through the Contracting Officer.

(End of Clause)

C.3 MEETINGS AND TRAVEL

In order to complete the effort required under Task 1 and Tasks 2 through 6 (Optional), it is anticipated that the following travel shall be required:

Task 1,

One trip to NRC Headquarters (2 days)
Number of persons: 2

One trip to industrial radiographic equipment distributor (1 week)
Number of persons: 3

Three trips to observe industrial radiographic activities with fixed and portable radiographic equipment (1 week each)
Number of persons: 2

Task 2,

One trip to NRC Headquarters (2 days)
Number of persons: 1

Three trips to observe industrial radiographic activities with fixed and portable radiographic equipment (3-4 days each)
Number of persons: 2

Task 3,

One trip to NRC Headquarters (2 days)
Number of persons: 1

Three trips to observe industrial radiographic activities with fixed and portable radiographic equipment (3-4 days each)
Number of persons: 2

Task 4,

One trip to NRC Headquarters (2 days)
Number of persons: 1

Three trips to observe industrial radiographic activities with fixed and portable radiographic equipment (3-4 days each)
Number of persons: 2

Task 5,

One trip to NRC Headquarters (2 days)
Number of persons: 1

Three trips to observe industrial radiographic activities with fixed and portable radiographic equipment (3-4 days each)
Number of persons: 2

Task 6,

One trip to NRC Headquarters (2 days)
Number of persons: 2

(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 NOTICE LISTING CONTRACT CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

NUMBER	DATE	TITLE
52.246-5	APR 1984	INSPECTION OF SERVICES-- COST-REIMBURSEMENT

SECTION F - DELIVERIES OR PERFORMANCE

F.1 NOTICE LISTING CONTRACT CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

NUMBER	DATE	TITLE
52.212-13	AUG 1989	STOP-WORK ORDER ALTERNATE I (APR 1984)

F.2 PREPARATION OF TECHNICAL REPORTS (JUNE 1988)

All technical reports required by Section C and all Technical Progress Reports required by Section F are to be prepared in accordance with the attached NRC Manual Chapter 3202. NRC Manual Chapter 3202 is not applicable to any Contractor Spending Plan (CSP) and any Financial Status Report that may be included in this contract. (See Section J for List of Attachments).

(End of Clause)

F.3 TECHNICAL PROGRESS REPORT (JUNE 1988)
(OMB CLEARANCE NUMBER 3150-0112)

The Contractor shall provide a monthly Technical Progress Report to the Project Officer and the Contracting Officer. The report is due within 15 calendar days after the end of the report period and shall identify the title of the project, the contract number, project manager and/or principal investigator, the contract period of performance, and the period covered by the report. Each report shall include the following for each discrete task:

- a. A listing of the efforts completed during the period; milestones reached or, if missed, an explanation provided;
- b. Any problems or delays encountered or anticipated and recommendations for resolution; (if the recommended resolution involves a contract modification, e.g., change in work requirements, level of effort (cost) or schedule delay, the Contractor shall submit a separate letter to the Contracting Officer identifying the required change and estimated cost impact).
- c. A summary of progress to date; and
- d. Plans for the next reporting period.

(End of Clause)

F.4 FINANCIAL STATUS REPORT (JUNE 1988)
(OMB CLEARANCE NUMBER 3150-0112)

The Contractor shall provide a monthly Financial Status Report to the Project Officer and the Contracting Officer. The report is due within 15 calendar days after the end of the report period and shall identify the title of the project, the contract number, project manager and/or principal investigator, the contract period of performance, and the period covered by the report. Each report shall include the following for each discrete task:

a. Provide total estimated cost (value) of the project as reflected in the contract, the amount of funds available in the contract to date, and the balance of funds required to complete the work as follows:

- 1) Total Estimated Contract Amount.
- 2) Total Funds Obligated To Date.
- 3) Total Costs Incurred This Reporting Period.
- 4) Total Costs Incurred To Date.
- 5) Balance of Obligations Remaining.
- 6) Balance of Funds Required To Complete Contract.

b. Detail of all direct and indirect costs incurred during the reporting period for each task.

c. Update the approved Contractor Spending Plan (CSP) if required under this contract. If there have been no changes to the projections, a certification to that effect may be provided with the Financial Status Report in lieu of the CSP.

(End of Clause)

F.5 PLACE OF DELIVERY--REPORTS (JUNE 1988)

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

a. Project Officer (3 copies)

Ann Ramey Smith
U.S. Nuclear Regulatory Commission
Human Factors Branch
Mail Stop NLN316
Office of Nuclear Regulatory Research
Washington, DC 20555

b. Contracting Officer (1 copy)

U.S. Nuclear Regulatory Commission
Contract Number: NRC-04-90-047
Division of Contracts and Property Management

Contract Administration Branch
Washington, D.C. 20555

(End of Clause)

F.6 DURATION OF CONTRACT PERIOD (MAR 1987)

This contract shall commence on 07/16/90 and will expire on 07/15/91. The term of this contract may be extended at the option of the Government through February 15, 1992.

(End of Clause)

F.7 TECHNICAL NUREG REPORTS

The contractor shall document the results of this research effort in two camera-ready NUREG/CR documents. The FIRST such document shall describe the results of Task 1. This document shall be delivered in accordance with Section F.5 herein and is due within twelve months after the effective date of this contract. The SECOND camera-ready NUREG/CR document shall provide the results of Tasks 2 through 6. This document shall be delivered in accordance with Section F.5 herein and is due within nineteen months after the effective date of this contract. These documents shall conform to the guidelines in NUREG-0650, "Technical Writing Style Guide," November 1979.

(End of Clause)

SECTION G - CONTRACT ADMINISTRATION DATA

G.1 INDIRECT COST RATES (JUNE 1988)

a. Pending the establishment of final indirect rates which shall be negotiated based on audit of actual costs, the Contractor shall be reimbursed for allowable indirect costs as follows:

CATEGORY	RATE(%)	COST BASE	APPLICABLE PERIOD
Overhead	36%	Total direct on-site salaries and wages including fringe benefits	07/16/90-07/15/91
G&A	79%	Total direct on-site salaries and wages including fringe benefits.	07/16/90-07/15/91
G&A (Applicable to subcontracts)	7%	The entire direct cost of all subcontracts in excess of \$10,000.	07/16/90-07/15/91

b. The Contracting Officer may adjust the above rates as appropriate during the term of the contract upon acceptance of any revisions proposed by the Contractor. It is the Contractor's responsibility to notify the Contracting Officer in accordance with 52.232-20 - Limitation of Cost or 52.232-22 - Limitation of Funds, as applicable, if such change(s) affect(s) performance of work within the established cost or funding limitations.

(End of Clause)

G.2 PROJECT OFFICER AUTHORITY (JUNE 1988)

a. The Contracting Officer's authorized representative hereinafter referred to as the Project Officer for this contract is:

Name: Ann Ramey Smith

Address: U.S. Nuclear Regulatory Commission
Human Factors Branch
Mail Stop NLN316
Office of Nuclear Regulatory Research
Washington, DC 20555

Telephone Number: (301) 492-3555

b. Performance of the work under this contract shall be subject to the technical direction of the NRC Project Officer. 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, fills in details or otherwise serves to accomplish the contractual statement of work.
- 2) Provide advice and guidance 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.

c. Technical direction must be within the general statement 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 "Changes" clause of this contract.
- 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.
- 5) Terminates the contract, settles any claim or dispute arising under the contract, or issues any unilateral directive whatever.

d. 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 furnished to the Contracting Officer.

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

f. 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 c 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.

g. 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.

h. 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 52.233-1 - Disputes.

i. In addition to providing technical direction as defined above, 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) Assisting the Contractor in the resolution of technical problems encountered during performance.

- 3) Reviewing all costs requested for reimbursement by the Contractor and submitting to the Contracting Officer recommendations for approval, disapproval, or suspension of payment for supplies and services required under this contract.

(End of Clause)

G.3 TRAVEL REIMBURSEMENT (JUNE 1988)

a. Total expenditure for domestic travel shall not exceed \$17,632.00 without the prior approval of the Contracting Officer.

b. The Contractor is encouraged to use Government contract airlines, AMTRAK rail service, and discount hotel/motel properties in order to reduce the cost of travel under this contract. The Contracting Officer will, upon request, provide each additional traveler with a letter of identification which is required in order to participate in this program. The Federal Travel Directory (FTD) identifies carriers, contract fares, schedules, payment conditions, and hotel/motel properties which offer their services and rates to Government contractor personnel traveling on official business under this contract. The FTD, which is issued monthly, may be purchased from the U.S. Government Printing Office, Washington, DC 20402.

c. The Contractor will be reimbursed for reasonable domestic travel costs incurred directly and specifically in the performance of this contract. The cost limitations for travel costs are determined by the Federal Travel Regulations that are in effect on

the date of the trip. These Regulations specify the daily maximum per diem rates for specific localities within the Conterminous United States (CONUS), the standard CONUS rate, the allowance for meals and incidental expenses (M&IE), the cost of travel by privately owned automobile, and the items which require receipts. A copy of the Regulations may be obtained from the Superintendent of Documents, Government Printing Office, Washington, DC 20402.

d. When the Government changes the Federal Travel Regulations, it is the responsibility of the Contractor to notify the Contracting Officer in accordance with the Limitation of Cost clause of this contract if the Contractor will be unable to make all of the approved trips and remain within the cost and fee limitations of this contract due to the changes.

e. The rates for foreign travel are established by the U.S. Department of State and are listed in a publication entitled "Maximum Travel Per Diem Allowances For Foreign Areas". Copies of this publication may be obtained from the U.S. Government Printing Office, Washington, D.C. 20402.

(End of Clause)

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 KEY PERSONNEL (MAR 1987)

a. The following individuals are considered to be essential to the successful performance of the work hereunder.

William Wheeler
Tom Sanquist
Jody Toquam
Doug Wieringa
Patrick Murphie

The Contractor agrees that such personnel shall not be removed from the contract work or replaced without compliance with paragraphs b and c hereof.

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 Officer, promptly replace such personnel with personnel of at least substantially equal ability and qualifications.

c. All requests for approval of substitutions hereunder must be in writing and provide a detailed explanation of the circumstances necessitating the proposed substitutions. They contain a complete resume for the proposed substitute, and other information requested by the Contracting Officer to approve or disapprove the proposed substitution. The Contracting Officer will evaluate such requests and promptly notify the Contractor of his/her approval or disapproval thereof in writing.

d. If the Contracting Officer determines that:

1) 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

2) That the resultant reduction of 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.2 SAFETY, HEALTH, AND FIRE PROTECTION (MAR 1987)

The Contractor shall take all reasonable precautions in the performance of the work under this contract to protect the health and safety of employees and of members of the public and to minimize danger from all hazards to life and property and shall comply with all applicable health, safety, and fire protection regulations and requirements (including reporting requirements) of the Commission and the Department of Labor. In the event that the Contractor fails to comply with these regulations or requirements, the Contracting Officer, may, without prejudice to any other legal or contractual rights of the Commission, issue an order stopping all or any part of the work; thereafter, a start order for resumption of work may be issued at the discretion of the Contracting Officer. The Contractor shall make no claim for an extension of time or for compensation or damages by reason of or in connection with such work stoppage.

(End of Clause)

H.3 DISSEMINATION OF CONTRACT INFORMATION (FEB 1990)

In addition to the reports required under Section F, the contractor and the NRC Project Officer shall discuss whether the information resulting from this research warrants publication in refereed scientific and engineering journals. Such publication should focus on advances in science and technology and minimize conclusions and/or recommendations which may have regulatory implications. The Contracting Officer will make the final determination whether the publication of research results is within the scope of work under this contract and therefore an allowable cost. The Contracting Officer will notify the contractor of the decision in writing. The contractor shall not incur costs associated with such publication until after receipt by the contractor of notification that publication should be pursued. If the decision is made to publish, the contractor shall actively pursue the publication in accordance with the provisions of NRC Manual Chapters 3202 and 3206. The contractor shall coordinate all such publications with, and transmit a copy of the proposed article to, the NRC Project Officer for review and approval prior to publication. The intent of this provision is to facilitate the broad dissemination of significant information. It is not intended to control the publication of research supported by the NRC.

(End of Clause)

H.4 PRIVATE USE OF CONTRACT INFORMATION AND DATA (JUNE 1988)

Except as specifically authorized by this contract, or as otherwise approved by the Contracting Officer, information and other data developed or acquired by or furnished to the Contractor in the performance of this contract shall be used only in connection with the work under this contract.

(End of Section)

H.5 CONTRACTOR ORGANIZATIONAL CONFLICTS OF INTEREST

(a) Purpose. The primary purpose of this clause is to aid in ensuring that the contractor: (1) is not placed in a conflicting role because of current or planned interests (financial, contractual, organizational, or otherwise) which relate to the work under this contract, and (2) does not obtain an unfair competitive advantage over other parties by virtue of its performance of this contract.

(b) Scope. The restrictions described apply to performance or participation by the contractor as defined in 41 CFR §20-1.5402(f) in the activities covered by this clause.

(c) Work for others. Notwithstanding any other provision of this contract, during the term of this contract, the contractor agrees to forego entering into consulting or other contractual arrangements with any firm or organization, the result of which may give rise to a conflict of interest with respect to the work being performed under this contract. The contractor shall ensure that all employees under this contract abide by the provision of this clause. If the contractor has reason to believe with respect to itself or any employee that any proposed consultant or other contractual arrangement with any firm or organization may involve a potential conflict of interest, the contractor shall obtain the written approval of the contracting officer prior to execution of such contractual arrangement.

(d) Disclosure after award.

(1) The contractor warrants that to the best of its knowledge and belief, and except as otherwise set forth in this contract, it does not have any organizational conflicts of interest as defined in 41 CFR §20-1.5402(a).

(2) The contractor agrees that, if after award, it discovers organizational conflicts of interest with respect to this contract, it shall make an immediate and full disclosure in writing to the contracting officer. This statement must include a description of the action which the contractor has taken or proposes to take to avoid or mitigate such conflicts. The NRC may, however, terminate the contract if termination is in the best interest of the Government.

(e) Access to and use of information.

(1) If the contractor in the performance of this contract obtains access to information, such as NRC plans, policies, reports, studies, financial plans, internal data protected by the Privacy Act of 1974 (Pub. L. 93-579), or data which has not been released to the public, the contractor agrees not to:

(i) Use this information for any private purpose until the information has been released to the public;

(ii) Compete for work for the Commission based on the information for a period of six months after either the completion of this contract or the release of the information to the public, whichever is first;

(iii) Submit an unsolicited proposal to the Government based on the information until one year after the release of the information to the public, or

(iv) Release the information without prior written approval by the contracting officer unless the information has previously been released to the public by the NRC.

(2) In addition, the contractor agrees that, to the extent it receives or is given access to proprietary data, data protected by the Privacy Act of 1974 (Pub. L. 93-579), or other confidential or privileged technical, business, or financial information under this contract, the contractor shall treat the information in accordance with restrictions placed on use of the information.

(3) The contractor shall have, subject to patent and security provisions of this contract, the right to use technical data it produces under this contract for private purposes provided that all requirements of this contract have been met.

(f) Subcontracts. Except as provided in 41 CFR §20-1.5402(h), the contractor shall include this clause, including this paragraph, in subcontracts of any tier. The terms "contract," "contractor," and "contracting officer," must be appropriately modified to preserve the Government's rights.

(g) Remedies. For breach of any of the above restrictions, or for intentional nondisclosure or misrepresentation of any relevant interest required to be disclosed concerning this contract or for such erroneous representations that necessarily imply bad faith, the Government may terminate the contract for default, disqualify the contractor from subsequent contractual efforts, and pursue other remedies permitted by law or this contract.

(h) Waiver. A request for waiver under this clause must be directed in writing through the contracting officer to the Executive Director for Operations (EDO) in accordance with the procedures outlined in 41 CFR §20-1.5411.

(End of Clause)

H.6 GOVERNMENT FURNISHED EQUIPMENT/PROPERTY - NONE PROVIDED
(JUNE 1988)

The Government will not provide any equipment/property under this contract.

(End of Clause)

PART II -- CONTRACT CLAUSES

SECTION I - CONTRACT CLAUSES

I.1 NOTICE LISTING CONTRACT CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

NUMBER	DATE	TITLE
52.202-1	APR 1984	DEFINITIONS
52.203-1	APR 1984	OFFICIALS NOT TO BENEFIT
52.203-3	APR 1984	GRATUITIES
52.203-5	APR 1984	COVENANT AGAINST CONTINGENT FEES
52.203-6	JUL 1985	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT
52.203-7	OCT 1988	ANTI-KICKBACK PROCEDURES
52.209-6	MAY 1989	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT
52.215-1	APR 1984	EXAMINATION OF RECORDS BY COMPTROLLER GENERAL
52.215-2	DEC 1989	AUDIT -- NEGOTIATION
52.215-22	APR 1988	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA
52.215-24	APR 1985	SUBCONTRACTOR COST OR PRICING DATA
52.215-31	SEP 1987	WAIVER OF FACILITIES CAPITAL COST OF MONEY
52.215-33	JAN 1986	ORDER OF PRECEDENCE
52.216-7	APR 1984	ALLOWABLE COST AND PAYMENT
52.216-8	APR 1984	FIXED FEE
52.219-8	FEB 1990	UTILIZATION OF SMALL BUSINESS CONCERNS AND SMALL DISADVANTAGED BUSINESS CONCERNS
52.219-13	AUG 1986	UTILIZATION OF WOMEN-OWNED SMALL BUSINESSES
52.220-3	APR 1984	UTILIZATION OF LABOR SURPLUS AREA CONCERNS
52.222-3	APR 1984	CONVICT LABOR
52.222-26	APR 1984	EQUAL OPPORTUNITY
52.222-35	APR 1984	AFFIRMATIVE ACTION FOR SPECIAL

52.222-36	APR 1984	DISABLED AND VIETNAM ERA VETERANS
52.222-37	JAN 1988	AFFIRMATIVE ACTION FOR HANDICAPPED WORKERS
52.223-2	APR 1984	EMPLOYMENT REPORTS ON SPECIAL
52.223-3	AUG 1987	DISABLED VETERANS AND VETERANS
		OF THE VIETNAM ERA
52.223-2	APR 1984	CLEAN AIR AND WATER
52.223-3	AUG 1987	HAZARDOUS MATERIAL
		IDENTIFICATION
		AND MATERIAL SAFETY DATA
52.225-13	MAY 1989	RESTRICTIONS ON CONTRACTING
		WITH SANCTIONED PERSONS
52.227-1	APR 1984	AUTHORIZATION AND CONSENT
52.227-2	APR 1984	NOTICE AND ASSISTANCE REGARDING
		PATENT AND COPYRIGHT INFRINGEMENT
52.227-14	JUN 1987	RIGHTS IN DATA--GENERAL
52.227-17	JUN 1987	RIGHTS IN DATA--SPECIAL WORKS
52.228-7	APR 1984	INSURANCE -- LIABILITY TO
		THIRD PERSONS
52.230-3	SEP 1987	(OST ACCOUNTING STANDARDS
52.230-4	SEP 1987	ADMINISTRATION OF COST
		ACCOUNTING STANDARDS
52.232-17	APR 1984	INTEREST
52.232-20	APR 1984	LIMITATION OF COST
52.232-23	JAN 1986	ASSIGNMENT OF CLAIMS
52.233-1	APR 1984	DISPUTES ALTERNATE I (APR 1984)
52.233-3	AUG 1989	PROTEST AFTER AWARD
		ALTERNATE I (JUN 1985)
52.242-1	APR 1984	NOTICE OF INTENT TO
		DISALLOW COSTS
52.243-2	AUG 1987	CHANGES -- COST-REIMBURSEMENT
		ALTERNATE I (APR 1984)
52.244-2	JUL 1985	SUBCONTRACTS
		(COST-REIMBURSEMENT
		AND LETTER CONTRACTS)
52.244-2	APR 1984	COMPETITION IN SUBCONTRACTING
52.245-5	JAN 1986	GOVERNMENT PROPERTY (COST-REIM-
		BURSEMENT, TIME-AND-MATERIAL,
		OR LABOR-HOUR CONTRACTS)
52.249-6	MAY 1986	TERMINATION (COST-REIMBURSEMENT)
52.249-14	APR 1984	EXCUSABLE DELAYS

I.2 PAYMENT FOR OVERTIME PREMIUMS
(FAR 52.222-2) (APR 1984)

(a) The use of overtime is authorized under this contract if the overtime premium cost does not exceed \$0. In addition to this dollar ceiling, overtime is permitted only for work--

(1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;

(2) By indirect-labor employees such as those performing duties

in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;

(3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or

(4) That will result in lower overall costs to the Government.

(b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall--

(1) Identify the work unit; e.g., department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;

(2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;

(3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and

(4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel.

(End of Clause)

I.3 DRUG-FREE WORKPLACE (FAR 52.223-6) (MAR 1989)

(a) Definitions. As used in this clause, "Controlled Substances" means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11-1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession or use of any controlled substance.

"Drug-free workplace" means a site for the performance of work done in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract.

"Individual" means an offeror/contractor that has no more than one employee including the offeror/contractor.

(b) The Contractor, if other than an individual, shall-

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish a drug-free awareness program to inform such employees about-

(i) The dangers of drug abuse in the workplace;

(ii) The contractor's policy of maintaining a drug-free workplace;

(iii) Any available drug counseling, rehabilitation, and employee assistance programs; and

(iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause;

(4) Notify such employees in the statement required by subparagraph (b)(1) of this clause, that as a condition of continued employment on this contract, the employee will-

(i) Abide by the terms of the statement; and

(ii) Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.

(5) Notify the contracting officer within ten (10) days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction;

(6) Within 30 days after receiving notice under subparagraph (b)(4)(ii) of this clause of a conviction, impose the following sanctions or remedial measures on any employee who is convicted of drug abuse violations occurring in the workplace:

(i) Taking appropriate personnel action against such employee, up to and including termination; or

(ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency.

(7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(6) of this clause.

(c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in the performance of this contract.

(d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraphs (b) and (c) of this clause may, pursuant to FAR 23.506, render the contractor subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.

(End of Clause)

I.4 PROMPT PAYMENT (FAR 52.232-25) (APR 1989)

Notwithstanding any other payment clause in this contract, the Government will make invoice payments and contract financing payments under the terms and conditions specified in this clause. Payment shall be considered as being made on the day a check is dated or an electronic funds transfer is made. Definitions of pertinent terms are set forth in 32.902. All days referred to in this clause are calendar days, unless otherwise specified. The term "foreign vendor" means an incorporated concern not incorporated in the United States, or unincorporated concern having its principal place of business outside the United States.

(a) Invoice Payments.

(1) For purposes of this clause, "invoice payment" means a Government disbursement of monies to a Contractor under a contract or other authorization for supplies or services accepted by the Government. This includes payments for partial deliveries that have been accepted by the Government and final cost or fee payments where amounts owed have been settled between the Government and the Contractor.

(2) Except as indicated in subparagraph (a)(3) and paragraph (c) of this clause, the due date for making invoice payments by the designated payment office shall be the later of the following two events:

(i) The 30th day after the designated billing office has received a proper invoice from the Contractor.

(ii) The 30th day after Government acceptance of supplies delivered or services performed by the Contractor. On a final invoice where the payment amount is subject to contract settlement actions, acceptance shall be deemed to have occurred on the effective date of the contract settlement. However, if the designated billing office fails to annotate the invoice with the actual date of receipt, the invoice payment due date shall be deemed to be the 30th day after the date the Contractor's invoice is dated, provided a proper invoice is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(3) The due date on contracts for meat and meat food products, contracts for perishable agricultural commodities, contracts for dairy products, edible fats or oils, and food products prepared from edible fats or oils, and contracts not requiring submission of an invoice shall be as follows:

(i) The due date for meat and meat food products, as defined in section 2(a)(3) of the Packers and Stockyard Act of 1921 (7 U.S.C. 182(3)) and further defined in Pub. L. 98-181 to include any edible fresh or frozen poultry meat, any perishable poultry meat food product, fresh eggs, and any perishable egg product, will be as close as possible to, but not later than, the 7th day after product delivery.

(ii) The due date for perishable agricultural commodities, as defined in Section 1(4) of the Perishable Agricultural Commodities Act of 1930 (7 U.S.C. 499a(4)), will be as close as possible to, but not later than, the 10th day after product delivery, unless another date is specified in the contract.

(iii) The due date for dairy products, as defined in Section 111(e) of the Dairy Production Stabilization Act of 1983 (7 U.S.C. 4502(e)), edible fats or oils, will be as close as possible to, but not later than, the 10th day after the date on which a proper invoice has been received.

(4) An invoice is the Contractor's bill or written request for payment under the contract for supplies delivered or services performed. An invoice shall be prepared and submitted to the designated billing office specified in the contract. A proper invoice must include the items listed in subdivisions (a)(4)(i) through (a)(4)(viii) of the clause. If the invoice does not comply with these requirements, then the contractor will be notified of the defect within 7 days after receipt of the invoice at the designated billing office (3 days for meat and meat food products and 5 days for perishable agricultural commodities, edible fats or oils, and food products prepared from edible fats or oils). Untimely notification will be taken into account in the computation of any interest penalty owed the Contractor in the manner described in subparagraph (a)(6) of this clause.

(i) Name and address of the Contractor.

(ii) Invoice date.

(iii) Contract number or other authorization for supplies delivered or services performed (including order number and contract line item number).

(iv) Description, quantity, unit of measure, unit price, and extended price of supplies delivered or services performed.

(v) Shipping and payment terms (e.g., shipment number and date of shipment, prompt payment discount terms). Bill of lading number and weight of shipment will be shown for shipments on Government bills of lading.

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number and mailing address of person to be notified in event of a defective invoice.

(viii) Any other information or documentation required by other requirements of the contract (such as evidence of shipment).

(5) An interest penalty shall be paid automatically by the Government, without request from the Contractor, if payment is not made by the due date and the conditions listed in subdivisions (a)(5)(i) through (a)(5)(iii) of this clause are met, if applicable. An interest penalty shall not be paid on contracts awarded to foreign vendors outside the United States for work performed outside the United States.

(i) A proper invoice was received by the designated billing office.

(ii) A receiving report or other Government documentation authorizing payment was processed and there was no disagreement over quantity, quality, or contractor compliance with any contract term or condition.

(iii) In the case of a final invoice for any balance of funds due the Contractor for supplies delivered or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(6) The interest penalty shall be at the rate established by the Secretary of the Treasury under Section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date, except where the interest penalty is prescribed by other governmental authority. This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the Federal Register semiannually on or about January 1 and July 1. The interest penalty shall accrue daily on the invoice payment amount

approved by the Government and be compounded in 30-day increments inclusive from the first day after the due date through the payment date. That is, interest accrued at the end of any 30-day period will be added to the approved invoice payment amount and be subject to interest penalties if not paid in the succeeding 30-day period. If the designated billing office failed to notify the contractor of a defective invoice within the periods prescribed in subparagraph (a)(4) of this clause, then the due date on the corrected invoice will be adjusted by subtracting the number of days taken beyond the prescribed notification of defects period. Any interest penalty owed the Contractor will be based on this adjusted due date. Adjustments will be made by the designated payment office for errors in calculating interest penalties, if requested by the Contractor.

(i) For the sole purpose of computing an interest penalty that might be due the contractor, Government acceptance shall be deemed to have occurred constructively on the 7th day after the contractor delivered the supplies or performed the services in accordance with the terms and conditions of the contract, unless there is a disagreement over quantity, quality, or contractor compliance with a contract provision. In the event that actual acceptance occurs within the constructive acceptance period, the determination of an interest penalty shall be based on the actual date of acceptance. The constructive acceptance requirement does not, however, compel Government officials to accept supplies or services, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The following periods of time will not be included in the determination of an interest penalty:

(A) The period taken to notify the contractor of defects in invoices submitted to the Government, but this may not exceed 7 days (3 days for meat and meat food products and 5 days for perishable agricultural commodities, dairy products, edible fat or oils, and food products prepared from edible fats or oils).

(B) The period between the defects notice and resubmission of the corrected invoice by the Contractor.

(iii) Interest penalties will not continue to accrue after the filing of a claim for such penalties under the clause at 52.233-1, Disputes, or for more than 1 year. Interest penalties of less than \$1.00 need not be paid.

(iv) Interest penalties are not required on payment delays due to disagreement between the Government and Contractor over the payment amount or other issues involving contract compliance or on amounts temporarily withheld or retained in accordance with the terms of the contract. Claims involving disputes, and any interest that may be payable, will be resolved in accordance with the clause at 52.233-1, Disputes.

(7) An interest penalty shall also be paid automatically by the designated payment office, without request from the contractor, if a

discount for prompt payment is taken improperly. The interest penalty will be calculated as described in subparagraph (a)(6) of this clause on the amount of discount taken for the period beginning with the first day after the end of the discount period through the date when the Contractor is paid.

(8) If this contract was awarded on or after October 1, 1989, a penalty amount, calculated in accordance with regulations issued by the Office of Management and Budget, shall be paid in addition to the interest penalty amount if the contractor:

(i) Is owed an interest penalty;

(ii) Is not paid the interest penalty within 10 days after the date the invoice amount is paid; and

(iii) Makes a written demand, not later than 40 days after the date the invoice amount is paid, that the agency pay such a penalty.

(b) Contract Financing Payments.

(1) For purposes of this clause, "contract financing payment" means a Government disbursement of monies to a Contractor under a contract clause or other authorization prior to acceptance of supplies or services by the Government. Contract financing payments include advance payments, progress payments based on cost under the clause at 52.232-16, Progress Payments, progress payments based on a percentage or stage of completion (32.102(e)(1)) other than those made under the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, or the clause at 52.232-10, Payments Under Fixed-Price Architect-Engineer Contracts, and interim payments on cost type contracts.

(2) For contracts that provide for contract financing, requests for payment shall be submitted to the designated billing office as specified in this contract or as directed by the Contracting Officer. Contract financing payments shall be made on the 30th day after receipt of a proper contract financing request by the designated billing office. In the event that an audit or other review of a specific financing request is required to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the due date specified.

(3) For advance payments, loans, or other arrangements that do not involve recurrent submissions of contract financing requests, payment shall be made in accordance with the corresponding contract terms or as directed by the Contracting Officer.

(4) Contract financing payments shall not be assessed an interest penalty for payment delays.

(c) If this contract contains the clause at 52.213-1, Fast Payment Procedure, payments will be made within 15 days after the date of

receipt of the invoice.

(End of Clause)

I.5 ELECTRONIC FUNDS TRANSFER PAYMENT METHODS (FAR 52.232-28)
(APR 1989)

Payments under this contract will be made by the Government either by check or electronic funds transfer (through the Treasury Fedline Payment System (FEDLINE) or the Automated Clearing House (ACH), at the option of the Government. After award, but no later than 14 days before an invoice or contract financing request is submitted, the Contractor shall designate a financial institution for receipt of electronic funds transfer payment, and shall submit this designation to the Contracting Officer or other Government Official, as directed.

(a) For payment through FEDLINE, the Contractor shall provide the following information:

(1) Name, address, and telegraphic abbreviation of the financial institution receiving payment.

(2) The American Bankers Association 9-digit identifying number for wire transfers of the financing institution receiving payment if the institution has access to the Federal Reserve Communications System.

(3) Payee's account number at the financial institution where funds are to be transferred.

(4) If the financial institution does not have access to the Federal Reserve Communications System, name, address, and telegraphic abbreviation of the correspondent financial institution through which the financial institution receiving payment obtains wire transfer activity. Provide the telegraphic abbreviation and the American Bankers Association identifying number for the correspondent institution.

(b) For payment through ACH, the Contractor shall provide the following information:

(1) Routing transit number of the financial institution receiving payment (same as American Bankers Association identifying number used for FEDLINE).

(2) Number of account to which funds are to be deposited.

(3) Type of depositor account ("C" for checking, "S" for savings).

(4) If the Contractor is a new enrollee to the ACH system, a "Payment Information Form," SF 3881, must be completed before payment can be processed.

(c) In the event the Contractor, during the performance of this contract, elects to designate a different financial institution for the receipt of any payment made using electronic funds transfer procedures, notification of such change and the required information specified above must be received by the appropriate Government official 30 days prior to the date such change is to become effective.

(d) The documents furnishing the information required in this clause must be dated and contain the signature, title, and telephone number of the Contractor official authorized to provide it, as well as the Contractor's name and contract number.

(e) Contractor failure to properly designate a financial institution or to provide appropriate payee bank account information may delay payment of amounts otherwise properly due.

(End of Clause)

I.6 CLAUSES INCORPORATED BY REFERENCE
(FAR 52.252-2) (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.

(End of Clause)

I.7 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL
TRANSACTIONS--(FAR 52.203-12) (JAN 1990)

(a) Definitions.

"Agency", as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

- (a) The awarding of any Federal contract.
- (b) The making of any Federal grant.
- (c) The making of any Federal loan.
- (d) The entering into of any cooperative agreement.
- (e) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this

clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

(a) An individual who is appointed to a position in the Government under title 5, United States Code, including a position under a temporary appointment.

(b) A member of the uniformed services, as defined in subsection 101(3), title 37, United States Code.

(c) A special Government employee, as defined in section 202, title 18, United States Code.

(d) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, United States Code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and a multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions.

(1) Section 1352 of title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in paragraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this

clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action--

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those activities expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.

(ii) Professional and technical services.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of--

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(2) Any reasonable payment to a person other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the

payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable.

Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(iii) Disclosure.

(A) The Contractor who requests or receives from an agency a Federal Contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using

nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.

(B) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes--

(1) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(2) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(3) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(C) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or received any subcontract exceeding \$100,000 under the Federal contract.

(D) All subcontractor disclosure forms (but not certification) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.

(iv) Agreement. The Contractor agrees not to make any payment prohibited by this clause.

(v) Penalties.

(A) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(B) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.

(vi) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically

unallowable by the requirements in this clause will not be made allowable under any other provision.

(End of clause)

I.8 OPTION TO EXTEND THE TERM OF THE CONTRACT (FAR 52.217-9)
(MAR 1989)

(a) The Government may extend the term of this contract by written notice to the Contractor within one month after receipt of the letter report addressed in Task 1; provided, that the Government shall give the Contractor a preliminary written notice of its intent to extend at least 150 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 nineteen months.

(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	NRC Contractor Organizational Conflicts of Interest (41 CFR Part 20)
3	NRC Manual Chapter 3202
4	NRC Manual Chapter 3206
5	NUREG-0650