

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

1. REGION NO. HR-02-388 PAGE 1 OF 33

2. CONTRACT NO. NRC-38-02-388
 3. AWARD/EFFECTIVE DATE 07-01-2002
 4. ORDER NO. _____
 5. SOLICITATION NO. RS-HR-02-388
 6. SOLICITATION ISSUE DATE 02/22/2002
 7. FOR SOLICITATION INFORMATION CALL: _____
 a. NAME Carolyn A. Cooper
 b. TELEPHONE NO. (No Collect Calls) (301) 415-6737
 8. OFFER DUE DATE/LOCAL TIME 03/22/2002

9. ISSUED BY U.S. Nuclear Regulatory Commission
 Div of Contracts and Property Mgmt
 Two White Flint North - MS T-7-I-2
 Contract Management Branch No. 2
 Washington, DC 20555
 CODE _____
 10. THIS ACQUISITION IS
 UNRESTRICTED
 SET ASIDE: 0 % FOR
 SMALL BUSINESS
 HUBZONE SMALL BUSINESS
 8(A)
 NAICS: 611710
 SIZE STANDARD: _____
 11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED
 SEE SCHEDULE
 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)
 12. DISCOUNT TERMS Net 30 days
 13b. RATING N/A
 14. METHOD OF SOLICITATION
 RFQ IFB RFP

15. DELIVER TO U.S. Nuclear Regulatory Commission
 Technical Training Center
 ATTN: Mr. Steven Koscielny
 5746 Marlin Road, Suite 200
 Chattanooga TN 37411-5677
 CODE _____
 16. ADMINISTERED BY U.S. Nuclear Regulatory Commission
 Div of Contracts and Property Mgmt
 Two White Flint North - MS T-7-I-2
 Contract Management Branch No. 2
 Washington, DC 20555
 CODE _____

17a. CONTRACTOR/OFFEROR HELLIER
 ATTN: Mr. Charles Hellier
 277 West Main Street
 Suite 2
 Niantic CT 06357-1018
 CODE _____ FACILITY CODE _____
 18a. PAYMENT WILL BE MADE BY U.S. Nuclear Regulatory Commission
 Payment Team, Mail Stop T-9-H-4
 Two White Flint North
 ATTN: NRC-38-02-388
 Washington DC 20555
 CODE _____
 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER
 18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED
 SEE ADDENDUM

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	The contractor shall provide "Non-Destructive Examination" training courses in accordance with the attached statement of work. See Schedule of Items and Prices for details. <div style="text-align: center;"> <p>05 MAR 12 11:40</p> </div>				

25. ACCOUNTING AND APPROPRIATION DATA 284-15-107-114 R8438 251F 31X0200 OBLIGATE: \$66,840.00
 26. TOTAL AWARD AMOUNT (For Govt. Use Only) 119,352.00
 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4, FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA ARE ARE NOT ATTACHED.
 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA ARE ARE NOT ATTACHED.

28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN 2 COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.
 29. AWARD OF CONTRACT: REFERENCE _____ OFFER DATED _____ YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN IS ACCEPTED AS TO ITEMS:

30a. SIGNATURE OF OFFEROR/CONTRACTOR *Thomas L. Payne*
 30b. NAME AND TITLE OF SIGNER (TYPE OR PRINT) THOMAS L. PAYNE, DIRECTOR
 30c. DATE SIGNED 7/12/02
 31a. UNITED STATES OF AMERICA SIGNATURE OF CONTRACTING OFFICER *Sharon D. Stewart*
 31b. NAME OF CONTRACTING OFFICER (TYPE OR PRINT) Sharon D. Stewart, Contracting Officer
 31c. DATE SIGNED 6/28/02

TEMPLATE-ADM001

ADM02

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SECTION B

B.1 SCHEDULE OF ITEMS AND PRICES

BASE YEAR	EST. QUANT.	UNIT UNIT	PRICE	TOTAL AMOUNT
1. Instructor to teach NDE Technology and Codes Course. It is estimated that the course will be taught at least once a year.	[REDACTED]			\$14,200
2. Instructor to teach Eddy Current Testing Course. It is estimated that the course will be taught at least once a year.	[REDACTED]			\$12,000
3. Instructor to teach Welding and NDE Overview Course. It is estimated that the course will be taught at least once a year.	[REDACTED]			\$ 7,600
4. Provide updated pages for the Instructor's Manual and the Student's Manual for each course each time a course is updated or revised. It is estimated that the 3 courses will be revised at least once in a calendar year.	[REDACTED]			\$ 4,000
5. Provide Student's Manuals for for one year. It is estimated that 18 students will be in each course at least once a year.	[REDACTED]			\$ 3,240
6. Provide Instructor's Manual for the 3 courses. It is estimated that the course will be taught once a year.	[REDACTED]			\$ 300
7. Updating Course Materials NDE Technology and Codes Course	[REDACTED]			\$ 1,500
Professional Labor	[REDACTED]			\$ 250
Administrative Labor	[REDACTED]			
Eddy Current Testing Course	[REDACTED]			\$ 6,000
Professional Labor	[REDACTED]			\$ 1,250
Administrative Labor	[REDACTED]			
Welding and NDE Overview Course	[REDACTED]			\$ 9,000
Professional Labor	[REDACTED]			\$ 2,000
Administrative Labor	[REDACTED]			

8. Specialized Course Development and Presentation

Professional Labor
Administrative Labor

[REDACTED]

\$45,000
\$ 7,500

TOTAL ESTIMATED PRICE - BASE YEAR

\$119,340

OPTION YEAR ONE

	EST. QUANT.	UNIT PRICE	TOTAL AMOUNT
1. Instructor to teach NDE Technology and Codes Course. It is estimated that the course will be taught at least once a year.	[REDACTED]	[REDACTED]	\$14,200
2. Instructor to teach Eddy Current Testing Course. It is estimated that the course will be taught at least once a year.	[REDACTED]	[REDACTED]	\$12,000
3. Instructor to teach Welding and NDE Overview Course. It is estimated that the course will be taught at least once a year.	[REDACTED]	[REDACTED]	\$ 7,600
4. Provide updated pages for the Instructor's Manual and the Student's Manual for each course each time a course is updated or revised. It is estimated that the 3 courses will be revised at least once in a calendar year.	[REDACTED]	[REDACTED]	\$ 6,000
5. Provide Student's Manuals for one one year. It is estimated that 18 students will be in each course at least once a year.	[REDACTED]	[REDACTED]	\$ 3,240
6. Provide Instructor's Manual for the 3 courses. It is estimated that the course will be taught once a year.	[REDACTED]	[REDACTED]	\$ 300
7. Specialized Course Development and Presentation			
Professional Labor			\$45,000
Administrative Labor			\$ 7,500
TOTAL ESTIMATED PRICE - OPTION YEAR ONE			\$95,840

OPTION YEAR TWO	EST. QUANT.	UNIT PRICE	TOTAL AMOUNT
1. Instructor to teach NDE Technology and Codes Course. It is estimated that the course will be taught at least once a year.	[REDACTED]		\$14,600
2. Instructor to teach Eddy Current Testing Course. It is estimated that the course will be taught at least once a year.	[REDACTED]		\$12,400
3. Instructor to teach Welding and NDE Overview Course. It is estimated that the course will be taught at least once a year.	[REDACTED]		\$ 8,000
4. Provide updated pages for the Instructor's Manual and the Student's Manual for each course each time a course is updated or revised. It is estimated that the 3 courses will be revised at least once in a calendar year.	[REDACTED]		\$ 6,000
5. Provide Student's Manuals for for one year. It is estimated that 18 students will be in each course at least once a year.	[REDACTED]		\$ 3,240
6. Provide Instructor's Manual for the 3 courses. It is estimated that the course will be taught once a year.	[REDACTED]		\$ 300
7. Specialized Course Development and Presentation Professional Labor Administrative Labor	[REDACTED]		\$45,000
			\$ 7,500
TOTAL ESTIMATED PRICE - OPTION YEAR TWO			\$97,040

OPTION YEAR THREE	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
1. Instructor to teach NDE Technology and Codes Course. It is estimated that the course will be taught at least once a year.	[REDACTED]			\$14,600
2. Instructor to teach Eddy Current Testing Course. It is estimated that the course will be taught at least once a year.	[REDACTED]			\$12,400
3. Instructor to teach Welding and NDE Overview Course. It is estimated that the course will be taught at least once a year.	[REDACTED]			\$ 8,000
4. Provide updated pages for the Instructor's Manual and the Student's Manual for each course each time a course is updated or revised. It is estimated that the 3 courses will be revised at least once in a calendar year.	[REDACTED]			\$ 6,000
5. Provide Student's Manuals for for one year. It is estimated that 18 students will be in each course at least once a year.	[REDACTED]			\$ 3,780
6. Provide Instructor's Manual for the 3 courses. It is estimated that the course will be taught once a year.	[REDACTED]			\$ 300
7. Specialized Course Development and Presentation	[REDACTED]			\$45,000
Professional Labor Administrative Labor				\$ 7,500
TOTAL ESTIMATED PRICE - OPTION YEAR THREE				\$97,580

OPTION YEAR FOUR	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
1. Instructor to teach NDE Technology and Codes Course. It is estimated that the course will be taught at least once a year.	[REDACTED]			\$14,600
2. Instructor to teach Eddy Current Testing Course. It is estimated that the course will be taught at least once a year.	[REDACTED]			\$12,400
3. Instructor to teach Welding and NDE Overview Course. It is estimated that the course will be taught at least once a year.	[REDACTED]			\$ 8,000
4. Provide updated pages for the Instructor's Manual and the Student's Manual for each course each time a course is updated or revised. It is estimated that the 3 courses will be revised at least once in a calendar year.	[REDACTED]			\$ 6,000
5. Provide Student's Manuals for for one year. It is estimated that 18 students will be in each course at least once a year.	[REDACTED]			\$ 3,780
6. Provide Instructor's Manual for the 3 courses. It is estimated that the course will be taught once a year.	[REDACTED]			\$ 300
7. Specialized Course Development and Presentation Professional Labor Administrative Labor	[REDACTED]			\$45,000 \$ 7,500
TOTAL ESTIMATED PRICE - OPTION YEAR FOUR				\$97,580
GRAND TOTAL BASE YEAR AND OPTION YEARS				\$507,380

B.2 BACKGROUND

As part of its overall mission, the U.S. Nuclear Regulatory Commission (NRC) licenses and inspects various facilities to ensure compliance with applicable codes and standards during all phases of construction, testing and operation, in order to identify conditions which may adversely affect the health and safety of the public. In support of this mission, the NRC provides a program of training for its inspectors and other technical personnel. The NRC licenses and inspects nuclear power plants and other nuclear facilities where non-destructive examination methodologies are used to assure compliance with federal law as specified in part 10 of the Code of Regulations (CFR). The NRC ensures that these activities are conducted in compliance with applicable NRC regulations and license conditions, and identifies situations that may adversely affect the health and safety of workers and the public.

NRC regulations require, in part, that licensees maintain their facilities, in accordance with 10CFR, which incorporates by reference the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) and the American Society for Nondestructive Testing to assure quality and safety of safety related systems. To successfully do so, licensee programs must institute policies, procedures and practices which deter administrative, procedural and/or human errors, and prevent unacceptable protection of safety related systems.

The NRC Technical Training Division (TTD) has been able to provide quality and timely training in reactor technology by using the expertise of the TTD staff. However, in the area of Non-Destructive Examination (NDE), which is outside the bounds of reactor technology, the TTD staff does not possess the necessary technical expertise and experience to conduct an in-depth NDE training course. Consequently, the method of providing most of the training in the NDE area has been through commercial sources.

Periodically, unique or one-time training needs may arise. In order to respond to these needs, the NRC requires contractor support to provide specialized technical training in the area of NDE. In some cases, these needs may necessitate training to commence with relatively short advance notice (30 to 60 days).

In support of this mission, the NRC conducts special training programs for regulatory personnel responsible for the licensing and inspection of nuclear facilities in the area of NDE. This training is intended to maintain and/or augment the technical and analytical competence of these individuals to recognize unsafe practices and issues of regulatory noncompliance.

B.3 CONTRACT OBJECTIVE

The objective of this contract is to revise, update and present developed training courses entitled: "Nondestructive Examination (NDE) Technology and Codes Course", "Eddy Current Testing Course" and, "Welding and NDE Overview Course." These courses shall be presented these courses at least one time within the base period and one time during each of the four (4) additional option years. The contractor shall furnish the necessary personnel, facilities, materials and services to revise, update and present these courses and any specialized versions of these or other NDE related courses which may be deemed necessary.

B.4 TECHNICAL QUALIFICATION REQUIREMENTS

The courses shall be conducted by a contractor with broad experience in the field of Nondestructive Examination or experience in support of these activities from a professional, technical, safety and regulatory standpoint.

The contractor shall propose at least two (one primary and one back-up) instructors to present each course. These individuals will be considered key personnel under the contract. Substitution or replacement of key personnel shall require the approval of the NRC Project Officer. For each proposed instructor, a r, sum, shall be submitted to the NRC Project Officer for approval. R, sum, s shall also be provided for those individuals preparing the student and instructor manuals, if different from the instructors. Course instructors must have both academic and practical expertise in the areas being taught (i.e., knowledge, understanding and experience), as well as in related radiation safety activities. Proposed course instructors must have related training experience (i.e., ability to teach technical material to large groups of professional adults).

B.5 COURSE DESCRIPTION

General Information

The following information is provided for a typical training course which might be ordered.

a. Duration of Classes

1. The "Nondestructive Examination (NDE) Technology and Codes Course" shall be approximately eighty (80) hours in duration (Ten days @ 8 hours per day over a two week period).
2. The "Eddy Current Testing Course" shall be approximately forty (40) hours in duration (Five days @ 8 hours per day).
3. The "Welding and NDE Overview Course" shall be approximately forty (40) hours in duration (Five days @ 8 hours per day).

b. Frequency of Classes

The NRC will order at least one (1) presentation of each course per year during the period of this contract. Additional courses may be ordered if warranted by student demand.

c. Class Size

Class size shall be limited to no more than sixteen (16) students and two (2) optional observers (the Project Officer and/or an individual designated by the Project Officer). Observers will be provided with a copy of the student training materials and the examination (but they will not be required to take the examination).

d. Course Scheduling

1. Exact course dates will be arranged with the contractor at least ninety (90) days before each course. Courses will be formally scheduled via a delivery order using a Delivery Order Form (See Attachment No. 9)
2. Should the NRC determine, no later than thirty (30) days prior to the start of a course, that there is insufficient need to conduct the training, the NRC may reschedule or cancel the course without obligation to the government.
3. Each day of training will consist of approximately seven hours and will begin at 8:00 a.m. Each training hour will typically consist of 50 minutes of presentation and a 10 minute break.

e. Attendance

The NRC Project Officer will coordinate student attendance. The NRC Project Officer will provide the contractor with a copy of the proposed attendance roster to the contractor at least fifteen (15) work days prior to the start of the course, although revised rosters may be provided up to the start date of the course. Sometime during the morning of the first day of class, the contractor shall compare the names of the students attending the course with those on the most current attendance roster. The contractor shall contact the NRC Project Officer immediately if there are any discrepancies. Student background and experience will vary. The contractor should not assume any experience in any Nondestructive Examination Technique.

f. The contractor shall provide the following:

1. Training materials for student use during each course. At the beginning of each course, each student shall be provided with a copy of:

- A. Student Course Manual;
- B. Applicable NRC Regulatory Guides, Information Notices and Bulletins;
- C. Applicable NUREGs;
- D. Relevant vugraphs used during course presentations and not already provided in the student manual;
- E. All handouts. Handouts (i.e., material not included in the student manual) shall be kept to a minimum and shall represent material that could not realistically have been incorporated into the student text prior to the start of the course; and
- F. Applicable ASNT qualification standards.
- G. Course Examinations

2. All written materials in appropriately sized three-ring binders. Approximately eighteen (18) sets of student materials will be required for each course (sixteen (16) for students and two (2) for observers).

g. The contractor shall develop and furnish case studies and "real life" examples to supplement course lectures.

h. Guest Speakers

The NRC reserves the right to supplement course presentations with NRC or other technical expert guest speakers, if warranted. A guest speaker will require approximately two (2) consecutive hours sometime during the course. The NRC Project Officer shall notify the contractor at least thirty (30) days before the start of the course if such a time block needs to be reserved for a guest speaker. If an NRC guest speaker is not provided, the contractor shall occupy the time with relevant instruction.

i. Equipment and Facilities

The contractor shall provide facilities sufficient to demonstrate state of the art and current industry common equipment and techniques in support of those courses identified in this SOW. The facilities shall be large enough to accommodate an entire class of twenty students and allow students to operate the actual equipment. Equipment utilized is expected to be functional, industry related equipment. The use of a minimal number of mockups or other training aids is acceptable as long as their use supports the operation of actual equipment. The use of computer generated or overhead projector based training in lieu of the use of actual equipment is not desirable.

j. Meetings and Travel

Within thirty (30) days of contract award, a meeting will be scheduled at the contractor's facility. The meeting will be attended by the contractor, the NRC Project Officer, and possibly other NRC representatives to discuss the course outline, lesson objectives and course material preparation.

k. Guest Speakers

The NRC reserves the right to supplement course presentations with NRC or other technical expert guest speakers, if warranted. A guest speaker will require approximately two (2) consecutive hours sometime during the course. The NRC Project Officer shall notify the contractor at least thirty (30) days before the start of the course if such a time block needs to be reserved for a guest speaker. If an NRC guest speaker is not provided, the contractor shall occupy the time with relevant instruction.

l. Transportation

The contractor shall furnish transportation for all students between the training site and any remote exercise or tour location. If the contractor will present the training in a hotel/motel, the contractor shall be responsible for arranging for a block of rooms to be set aside at that hotel/motel to accommodate the students. The rooms should be held until approximately two (2) weeks prior to the course start date, at which time they may be released. The room rate (excluding any taxes) must be within applicable Federal Per Diem limits for the locality. Students will be offered the opportunity, but will not be required to stay, at that location.

m. Training Facility

The contractor shall provide to the NRC Project Officer in electronic form and also in hard copy, a map of the course locality. This map shall clearly show the training facility, nearby lodging facilities and dining establishments and provide the addresses and telephone numbers for the same. The contractor shall also provide directions to the contractor's training facility from airport(s) in the vicinity.

n. Shipment of Course Materials

The contractor shall package and mail via USPS or UPS, whichever is less costly, the student manuals and other material distributed during the course to each student's work or home address, as requested by the student, at the conclusion of the course. The contractor shall deliver to the NRC Project Officer the post course materials (exams, student information sheets, evaluation forms and course report) at the conclusion of the course.

B.6 COURSE CONTENT

a) Nondestructive Examination (NDE) Technology and Codes Course

Description: The course provides a working knowledge of ultrasonic, radiographic, liquid penetrant, and magnetic particle testing; technical evaluations of licensee and licensee contractor performance in these areas; and the codes and standards of special interest in NDE inspection activities.

Instructor Qualifications: Instructors shall possess a thorough knowledge and understanding of course materials and have demonstrated ability in course instruction and evaluation, based upon formal training and education, to teach the identified topics in NDE. The instructors for NDE techniques presentations shall be certified to Level III in accordance with American Society for Nondestructive Testing recommended practice ASNT-TC-1A in the NDE methodology being presented.

Course Information:

Course Length: Two weeks
Class Size: 12 To 16 students
Instructors: Two per week
Number of Exams: Two

Student Manual: Manual shall be provided by contractor in accordance with the section entitled, "Reporting Requirements and Deliverables"

Visual Aids: Contractor shall be required to develop overhead projection visual aids of the plates, figures and drawings prepared for the student text.

Instructor Manual: Manual shall be provided by contractor in accordance with the section entitled, "Reporting Requirements and Deliverables"

Lab Facilities: Contractor shall provide laboratory facilities and equipment sufficient to demonstrate state of the art and current industry common NDE equipment and techniques.

Test bank: None. Contractor shall develop a new test for each class

Course Presentation Report: In accordance with the section entitled, "Reporting Requirements and Deliverables"

Location: Contractor provided facility

NOTE: See Attachment 1 for a course outline. Course last updated in July, 2000.

b. Eddy Current Testing Course

Description: The course provides a working knowledge of eddy current testing with particular emphasis on nuclear power plant applications. Course topics include eddy current methodology, equipment operation, detection of damage; applications including steam generator, in-core thimble tube, control rod and balance of plant component inspections; data analysis tools; steam generator design review and damage mechanisms; codes and standards of special interest in eddy current inspections; and technical evaluation of licensee and licensee contractor performance.

Instructor Qualifications: Instructors shall possess a thorough knowledge and understanding of course materials and have demonstrated ability in course instruction and evaluation, based upon formal training and education, to teach the identified topics in eddy current. Instructors for eddy current presentations shall be certified to Level III in Eddy Current Inspection in accordance with American Society for Nondestructive Testing recommended practice ASNT-TC-1A. Personnel demonstrating equipment, or conducting laboratories shall have demonstrated experience with the equipment being used.

Course Information:

Course Length: One week
Class Size: 12 to 16 students

Instructors: Two (One primary and back-up)
Number of Exams: One

Student Manual: Manual shall be provided by contractor in accordance with the section entitled, "Reporting Requirements and Deliverables"

Visual Aids: Contractor will be required to develop overhead projection visual aids of the plates, figures and drawings prepared for the student text.

Instructor Manual: Manual shall be provided by contractor in accordance with the section entitled, "Reporting Requirements and Deliverables"

Lab Facilities: Contractor shall provide laboratory facilities and equipment sufficient to demonstrate state of the art and current industry common NDE equipment and techniques.

Test bank: None. Contractor shall develop a new test for each class.

Course Presentation Report: In accordance with the section entitled, "Reporting Requirements and Deliverables"

Location: Contractor provided facility

NOTE: See Attachment 2 for a course outline. Course was last updated in August, 1998.

c. Welding and NDE Overview Course

Description: This course assists NRC personnel in maintaining a general familiarity with metallurgy, welding, and nondestructive examination (NDE) technologies, including: welding fabrication, welding processes, welding inspection, ultrasonic testing, radiographic testing, eddy current testing, liquid penetrant testing, and magnetic particle testing. Also, the codes and standards relative to these technologies and relied upon during the technical evaluation and inspection of licensee and licensee contractor activities will be covered.

Instructor Qualifications: Instructors shall possess a thorough knowledge and understanding of course materials and have demonstrated ability in course instruction and evaluation, based upon formal training and education, to teach the identified topics in welding and NDE. Instructors for this course shall be certified to Level III in accordance with American Society for Nondestructive Testing recommended practice ASNT-TC-1A in the testing technology being presented. Instructors presenting the welding portion of the course shall be graduate welding engineers or possess significant welding experience. Personnel demonstrating equipment, or conducting laboratories shall have demonstrated experience with the equipment being used.

Course Information:

Course Length: One week
Class Size: 12 to 16 students
Instructors: Two (One primary and back-up)
Number of Exams: One

Student Manual: Manual shall be provided by contractor in accordance with the section entitled, "Reporting Requirements and Deliverables"

Visual Aids: Contractor shall be required to develop overhead projection visual aids of the plates, figures and drawings prepared for the student text.

Instructor Manual: Manual shall be provided by contractor in accordance with the section entitled, "Reporting Requirements and Deliverables"

Lab Facilities: Contractor shall provide laboratory facilities and equipment sufficient to demonstrate state of the art and current industry common NDE equipment and techniques.

Test bank: One examination exists, however, contractor shall generate a new test for each class.

Course Presentation Report: In accordance with the section entitled, "Reporting Requirements and Deliverables"

Location: Contractor provided facility

NOTE: See Attachment 3 for a course outline. Course last updated in April, 2000.

B.7 COURSE MATERIAL REVIEW AND UPDATE

The contractor shall review, update and provide course materials to support the Nondestructive Examination (NDE) Technology Course, Welding and NDE Overview Codes Course, and the Eddy Current Testing Course. Using the existing manuals for the three courses, update the manuals so that they are current with the industry codes and standards as of 2002. All manuals, both instructor and student shall be prepared in WordPerfect 8.0, the current word processing software program. As newer word processing software packages are selected as the NRC standard word processor all manuals will be made to be useable with the later word processing software.

The offeror shall base the estimated level of effort necessary to review and update the above subject courses based on the date of the last review and update. The existing course manuals are available upon request as part of this solicitation.

When required, the contractor will be expected to deliver all course materials for a specific course to the designated training site at least one week prior to the start of each training session. The contractor shall arrive at the training facility in sufficient time prior to the beginning of the first day's session to set up the training room, arrange the furniture as necessary, and lay out student materials.

The contractor shall provide the following items:

1. Student Manual

a. The contractor shall provide a student manual for use during the presentation of the course material. The student manual shall include printed copies of viewgraphs, slides and other visual aids required to present the course. The Student Manual shall be placed in a format consistent with the NRC Technical Training Center Style Guide (Attachment 4) or other Project Officer approved format.

b. Lesson objectives shall be included at the beginning of each section or chapter.

c. The student manual shall also include a Table of Contents, a glossary of common terms and copies of relevant reference material. Short references (approximately six pages or less) shall be included in the manual while lengthy references shall be listed in a bibliography which provides the student with sufficient information to determine what issues the reference covers and where a copy may be obtained.

The contractor shall provide a draft copy of the student manual to the NRC Project Officer for review and approval. The contractor shall revise the draft student manual incorporating the NRC's comments and then shall provide the final student manual to the NRC PO for review and approval. After receipt of approval, the contractor shall provide one copy to the NRC Project Officer, including computer discs containing the textual materials in WordPerfect 8.0 format or the NRC current word processor software standard.

2. Instructor's Manual

The contractor shall provide an instructor's manual to supplement the student manual and support presentation of the course. The instructor's manual shall include, as a minimum:

a. Detailed Course Outline;

b. Clearly defined learning objectives for each topic;

c. Copies or detailed description of each visual aid;

d. Detailed lesson plans indicating the manner in which the student material will be presented by the instructor, including appropriate references to which visual aids and other materials are required during the presentation, and indicate when it is to be used during the presentation;

- e. Detailed references to course references, codes, and standards.
- f. The instructor's manual shall be in sufficient detail such that a qualified individual who has not previously conducted the course could be expected to present the material in an organized fashion.

The contractor shall provide a draft copy of the instructor's manual to the NRC Project Officer for review and approval. The contractor shall revise the draft instructor's manual incorporating the NRC's comments and then shall provide the final instructor's manual to the NRC PO for review and approval. After receipt of approval, the contractor shall provide one copy to the NRC Project Officer, including computer discs containing the textual materials in WordPerfect 8.0 format or the NRC current word processor software standard.

3. Visual Aids

The Contractor shall develop or provide visual aids to assist students in understanding the course material. The contractor shall use these visual aids to supplement the presentation of the course material. Any visual aid which the contractor deems necessary for the presentation of this course must be provided to the NRC Project Officer as an integral part of the training package. A hard copy of each visual aid used during the course should be included in the student manual as a figure plate at the end of the applicable chapter.

The contractor shall provide a draft copy of the visual aids to the NRC Project Officer for review and approval. The contractor shall revise the draft visual aids incorporating the NRC's comments. The contractor shall provide the final visual aids to the NRC PO for review and approval. After receipt of approval, the contractor shall provide one copy to the NRC Project Officer. All visual aids purchased or created by the contractor or obtained from the NRC for use in the presentation of this course becomes the property of the NRC upon completion of this contract.

The contractor shall maintain the training materials in an up-to-date fashion by incorporating minor changes, as needed, throughout the period of performance of this contract. Examples of such modifications may include changes and/or updates to materials as a result of changes in regulations, agency policy, and new or revised NDE Techniques. Minor additions or deletions may also be required to reflect student course evaluation feedback, etc. If such necessary changes are not initiated by the contractor, the NRC Project Officer may request that the contractor incorporate them. Any major changes to the course presentation or materials will be accomplished via a modification to the contract with appropriate cost estimates solicited.

B.8 ADDITIONAL REQUIREMENTS

The NRC reserves the right to negotiate a fixed price modification to the contract, in accordance with the changes clause, for additional courses identified after the award of the contract. Any such additional courses shall be within the scope of the contract and shall be completed during the term of the contract. The NRC may require the contractor to develop or present specialized versions of the above-discussed courses, develop modified versions of these courses for specialized audiences to emphasize specialized aspects of these subjects, or develop new training courses dealing with the topics addressed by those courses. Such modified or new courses would be either equal to or shorter in length than the original courses. The NRC would provide the contractor with the background material necessary to support the modified or new courses. A specific contract modification establishing the scope of work, milestones, and soliciting costs would be issued. Milestones similar to those described above would be established.

In addition, the NRC may require the contractor to develop special courses or seminars dealing with the operation, maintenance, and testing of plant components; inspection and licensing issues, industry events, codes and standards or owner's group issues; quality assurance and control; and state of the art technology developments, provided they are within the scope the subject contract.

B.9 COURSE EXAMINATIONS

Knowledge and proficiency testing shall be a required element of evaluating the student's progress in the training course in which they are being instructed. Testing shall be administered by the Contractor to verify that they have attained the proper level of understanding of the course material, to determine the student's progress in training, and to identify areas of weakness where supplemental or remedial training may be needed.

All testing shall be performed using objective tests (i.e., multiple choice and calculation format) which have been approved in advance by the NRC PO. All tests shall assess the students knowledge of the NDE process and shall be

designed to determine if the learning objectives have been met. The Contractor shall allow no more than 120 minutes for each exam to be completed by the students.

The Contractor shall develop draft examinations which address the principals, policies and procedures covered in the course material. Typically, for each week of training, the examination shall consist of at least twenty five (25) questions. At least twenty (20) shall be in multiple choice format and five (5) shall be short answer, calculation format. The examinations, and an answer key will be submitted to the Project Officer prior to their use. For those courses without a test bank, examinations shall not repeat questions used in the most recent examination. The Contractor shall provide the draft tests to the NRC PO for review and comment within 25 days prior to the beginning of the course session for which the examination is to be used. The NRC PO will review and provide comments to the Contractor within 5 days of receipt. The contractor shall revise the draft tests incorporating the PO's comments and provide the final tests to the PO within 14 days of the beginning of the course session for which the examination is to be used.

The contractor shall administer, proctor and grade the examinations and provide test performance statistical data to the NRC Project Officer as part of the course report. The contractor shall record testing results, analyze results and prepare a report which shall documents the results of the examinations.

While taking the examination, students are permitted to request clarification of questions or potential answers. The contractor shall be sufficiently knowledgeable of the examination contents to be able to provide clarification when appropriate. However, the clarification must not indicate which responses are correct or incorrect.

The contractor may be requested to administer and grade re-examinations as required for students who do not achieve a sufficient understanding of course material (70% or higher) or equivalency examinations for students who have been approved to attempt validation of a course. The NRC Project Officer will coordinate administering and grading re-examinations and equivalency examinations with the contractor. To minimize the administrative burden, these re-examinations may be administered at the same time as the next course examination, if more than one course is given in one year. If only one course is given in one year, the re-examination can be administered at the NRC office where the student works .

The Contractor shall update the exams to reflect significant changes that have been made to the course materials.

B.10 COURSE EVALUATIONS

At the end of each course, the contractor shall provide students with a course evaluation form to complete. The Course Evaluation will be used to determine the quality of instruction and to determine if course materials used are adequate, current, the facilities were satisfactory, and if the course met NRC's training requirements.

The Course Evaluations shall be collected by one of the class participants, placed in a sealed envelope and returned to the NRC Project Officer for evaluation. The course evaluations will be used to evaluate the Instructor's performance (See Attachment No. 5, "Performance Requirement Summary.")

B.11 REPORTING REQUIREMENTS AND DELIVERABLES

B.11.1 DELIVERABLES

a. Nondestructive Examination Technology and Codes Course

1. Within 45 calendar days of contract award, the contractor shall provide draft outlines for the Nondestructive Examination Technology and Codes Course instructor and student manuals to the NRC Project Officer for review and approval.
2. Within 60 calendar days of contract award, the NRC Project Officer will provide his written comments on the draft outlines for the Nondestructive Examination Technology and Codes Course instructor and student manuals to the contractor.
3. Within 90 calendar days of contract award, the contractor shall provide the draft course materials for the Nondestructive Examination Technology and Codes course to the NRC Project Officer for review and approval.
4. Within 120 calendar days of contract award, the NRC Project Officer will provide written comments and/or acceptance of draft course materials for the Nondestructive Examination Technology and Codes course to the contractor.

5. Within 150 calendar days of contract award, the contractor shall final course materials for the Nondestructive Examination Technology and Codes course to the NRC Project Officer. Contractor shall be ready to present the Nondestructive Examination Technology and Codes course on dates mutually agreed upon and specified in accordance with delivery orders.

b. Eddy Current Testing Course

1. Within 45 calendar days of contract award, the contractor shall provide draft outlines for the Eddy Current Testing course instructor and student manuals to the NRC Project Officer for review and approval.

2. Within 60 calendar days of contract award, the NRC Project Officer will provide written comment on the draft outlines for the Eddy Current Testing course instructor and student manuals to the contractor.

3. Within 90 calendar days of contract award, the contractor shall provide draft course materials for the Eddy Current Testing course to the NRC Project Officer for review and approval.

4. Within 120 calendar days of contract award, the NRC Project Officer will provide written comments and/or acceptance of draft course materials for the Eddy Current Testing course to the contractor.

5. Within 150 calendar days of contract award, the contractor shall provide final course materials for the Eddy Current Testing to the NRC Project Officer. Contractor shall be ready to present the Eddy Current Testing on dates mutually agreed upon and specified in accordance with delivery orders.

c. Welding and Nondestructive Examination (NDE) Overview Course

1. Within 45 calendar days of contract award, the contractor shall provide draft outlines for the Welding and Nondestructive Examination (NDE) Overview Course instructor and student manuals to the NRC Project Officer.

2. Within 60 calendar days of contract award, the NRC Project Officer will provide written comments on the draft outlines for the Welding and Nondestructive Examination (NDE) Overview Course instructor and student manuals to the contractor.

3. Within 90 calendar days of contract award, the contractor shall provide draft course materials for the Welding and Nondestructive Examination (NDE) Overview course to the NRC Project Officer for review and approval.

4. Within 120 calendar days of contract award, the NRC Project Officer will provide written comments and/or acceptance of draft course materials for the Welding and Nondestructive Examination (NDE) Overview Course to the contractor.

5. Within 150 calendar days of contract award, the contractor shall provide the final course materials for the Welding and Nondestructive Examination (NDE) Overview Course to the NRC Project Officer. Contractor shall be ready to present the Nondestructive Examination Technology and Codes course on dates mutually agreed upon and specified in accordance with delivery orders.

For each course, the contractor shall provide the following to the NRC Project Officer:

a. Within 30 days after acceptance of the updated materials specified above, the contractor shall provide three (3) copies of final course materials including:

1. Student Manual
2. Instructor's Manual
3. Visual Aids (slides, view graphs, videos, or other)

The contractor shall provide computer diskettes or CD-ROM copy of all materials specified above (in WordPerfect 8.0 for PC the current NRC standard word processing software) shall be forwarded to the NRC Project Officer. Computer generated visual aids (such as view graphs), shall also be provided to the NRC Project Officer on computer disks or CD-ROM.

NOTE: All material developed for the courses described herein shall be property of the NRC at the completion of the period of performance.

b. Within 30 days prior to the start of each course, the contractor shall provide one (1) copy of the following material to the NRC Project Officer:

1. Course Schedule
2. Texts and handouts to be provided to the students (if different from those provided in previous courses)
3. Course examination and answer key to be used for that course session
4. Problem sets, study questions, and answers if used.

B.11.2 COURSE PRESENTATION REPORTS

Within 30 days of completion of a course presentation, the contractor shall submit a Course Presentation Report to the NRC Project Officer. The report shall contain the following:

- a. A cover letter report discussing course accomplishments, problems, and recommendations for improvement. The recommendations shall consider the student feedback provided in the student course evaluations.
- b. Examination booklets (originals), graded answer sheets (originals), a list of student grades, and the average class grade and standard deviation.
- c. Student evaluations (original plus one copy) and a summary of student comments.
- d. Individual dose monitoring records as applicable (two copies). If processing of dosimeters takes longer than twenty (20) days, reports of monitoring records shall be submitted within five (5) days of receipt of the results from the processing organization.

B.11.3 FINAL REPORT

The contractor shall prepare a final report in accordance with NRC Manual Chapter 3202. The contractor shall provide one (1) copy to the NRC Project Officer and two (2) copies to the NRC Contract Specialist. The report shall contain as a minimum:

- a. A technical report of the work completed.
- b. Any problems or delays encountered and their solutions.
- c. Recommendations for improvements.

Submission of the final report and transfer of all government furnished materials, and all contractor developed materials, shall be accomplished within 30 days after contract completion.

B.12 PERIOD OF PERFORMANCE

The term of this contract shall be one year from the effective date of this contract. The term of this contract may be extended at the option of the Government for four additional one year periods.

B.13 CONTRACT MONITORING

During the life of this contract, the NRC Project Officer or another designated NRC representative may monitor selected courses, pursuant to the requirements of the contract, to ensure that the quality of instruction and course materials are adequate, current, and meet the course requirements. As a minimum, the quality of the instruction will be evaluated on the instructor's ability to:

- a. Maintain control of the course pace so that course objectives are met, the presentation of information and exercises remain organized and timely, key points are emphasized, and breaks are appropriately scheduled.
- b. Tactfully control distractions, such as student questions that are not immediately relevant to the current discussion, and are of minimal interest to the class as a whole. The instructor shall defer such questions to a subsequent relevant lecture, or attempt to answer individually, outside of class time.
- c. Assess the effectiveness of instruction and the level of student comprehension throughout the courses. The instructor shall reasonably attempt to clarify, provide examples, or in some way, direct the course to help correct problems, and

improve the participants opportunity to learn.

- d. Improve materials, correct errors, and resolve other problems that may occur during the courses.
- e. Limit any instructor comments on NRC regulations and procedures to actual statements supported by documentation or observations. Personal opinions about the usefulness of NRC regulations shall not be expressed during classroom time. Such opinions may, however, be expressed during informal discussions with students between lectures.

B.14 NRC FURNISHED MATERIAL

Upon request, the NRC will furnish the contractor with at least one copy of applicable NRC documents deemed necessary to support course development and presentation, such as Regulatory Guides, Information Notices, Bulletins and NUREGs, and current version of the student and instructor's manuals for each course. If these documents are available on the NRC website, the contractor may be provided with the URL and directed to download the appropriate information. The NRC will also furnish one copy of a student information sheet and a course evaluation form. The student information sheet and course evaluation forms shall be included in the Student manual for each course.

SECTION C - CONTRACT CLAUSES

C.1 NOTICE LISTING CONTRACT CLAUSES INCORPORATED BY REFERENCE

The following contract clauses pertinent to this section are hereby incorporated by reference (by Citation Number, Title, and Date) in accordance with the clause at FAR "52.252-2 CLAUSES INCORPORATED BY REFERENCE" in Section I of this contract. See FAR 52.252-2 for an internet address (if specified) for electronic access to the full text of a clause.

NUMBER	TITLE	DATE
	FEDERAL ACQUISITION REGULATION (48 CFR Chapter 1)	

**C.2 52.212-4 CONTRACT TERMS AND CONDITIONS--COMMERCIAL ITEMS
(FEB 2002)**

(a) Inspection/Acceptance. The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its postacceptance rights (1) within a reasonable time after the defect was discovered or should have been discovered; and (2) before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

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

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

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

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

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

(g) Invoice.

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

(i) Name and address of the Contractor;

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

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

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

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

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

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

(i) Payment. Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract. The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and OMB prompt payment regulations at 5 CFR part 1315. If the Government makes payment by Electronic Funds Transfer (EFT), see 52.212-5(b) for the appropriate EFT clause.

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

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

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

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

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

(l) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work

performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

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

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

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

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

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

(r) Compliance with laws unique to Government contracts. The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C 327, et seq., Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58, Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.c. 2409 relating to whistle blower protections; 49 U.S.C 40118, Fly American; and 41 U.S.c. 423 relating to procurement integrity.

(s) Order of precedence. Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order: (1) the schedule of supplies/services; (2) the Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause; (3) the clause at 52.212-5; (4) addenda to this solicitation or contract, including any license agreements for computer software; (5) solicitation provisions if this is a solicitation; (6) other paragraphs of this clause; (7) the Standard Form 1449; (8) other documents, exhibits, and attachments; and (9) the specification.

C.3 ADDENDUM TO FAR 52.212-4 CONTRACT TERMS AND CONDITIONS-- COMMERCIAL ITEMS

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

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

C.4 2052.215-71 PROJECT OFFICER AUTHORITY

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

Name: Steven Koscielny

Address: U.S. Nuclear Regulatory Commission

Technical Training Center
5746 Marlin Road, Suite 200
Chattanooga, TN 37411-5677

Telephone Number: (423) 855-6642

(b) Performance of the work under this contract is 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, authorizes travel which was unanticipated in the Schedule (i.e., travel not contemplated in the Statement of Work or changes to specific travel identified in the Statement of Work), 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 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 must be issued in writing by the project officer or must be confirmed by the project officer in writing within ten (10) working days after verbal issuance. A copy of the written direction must be furnished to the contracting officer. A copy of NRC Form 445, Request for Approval of Official Foreign Travel, which has received final approval from the NRC must 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 the project officer'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 paragraph (c) of this section, the contractor may not proceed but shall notify the contracting officer in writing within five (5) working days after the receipt of any instruction or direction and shall request the contracting officer to modify the contract accordingly. Upon receiving the 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 is subject to 52.233-1 - Disputes.

(i) In addition to providing technical direction as defined in paragraph (b) of the section, the project officer shall:

(1) Monitor the contractor's technical progress, including surveillance and assessment of performance, and recommend to the contracting officer changes in requirements.

- (2) Assist the contractor in the resolution of technical problems encountered during performance.
- (3) Review all costs requested for reimbursement by the contractor and submit to the contracting officer recommendations for approval, disapproval, or suspension of payment for supplies and services required under this contract.
- (4) Assist the contractor in obtaining the badges for the contractor personnel.
- (5) Immediately notify the Personnel Security Branch, Division of Facilities and Security (PERSEC/DFS) (via e-mail) when a contractor employee no longer requires access authorization and return the individual's badge to PERSEC/DFS within three days after their termination.

C.5 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

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

www.arnet.gov

52.217-8

OPTION TO EXTEND SERVICES

NOV 1999

C.6 52.212-5 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS--COMMERCIAL ITEMS (DEC 2001)

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

- (1) 52.222-3, Convict Labor (E.O. 11755).
- (2) 52.233-3, Protest after Award (31 U.S.C. 3553).

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

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

(2) 52.219-3, Notice of HUBZone Small Business Set-Aside (Jan 1999).

(3) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (Jan 1999) (if the offeror elects to waive the preference, it shall so indicate in its offer).

(4) (i) 52.219-5, Very Small Business Set-Aside (Pub. L. 103-403, section 304, Small Business Reauthorization and Amendments Act of 1994).

(ii) Alternate I to 52.219-5.

(iii) Alternate II to 52.219-5.

(5) 52.219-8, Utilization of Small Business Concerns (15 U.S.C. 637 (d)(2) and (3)).

- (6) 52.219-9, Small Business Subcontracting Plan (15 U.S.C. 637(d)(4)).
- (7) 52.219-14, Limitations on Subcontracting (15 U.S.C. 637(a)(14)).
- (8)(i) 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323) (if the offeror elects to waive the adjustment, it shall so indicate in its offer).
- (ii) Alternate I of 52.219-23.
- (9) 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- (10) 52.219-26, Small Disadvantaged Business Participation Program--Incentive Subcontracting (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- (11) 52.222-21, Prohibition of Segregated Facilities (Feb 1999).
- (12) 52.222-26, Equal Opportunity (E.O. 11246).
- (13) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (38 U.S.C. 4212).
- (14) 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C. 793).
- (15) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (38 U.S.C. 4212).
- (16) 52.222-19, Child Labor--Cooperation with Authorities and Remedies (E.O. 13126).
- (17)(i) 52.223-9, Estimate of Percentage of Recovered Material Content for EPA-Designated Products (42 U.S.C. 6962(c)(3)(A)(ii)).
- (ii) Alternate I of 52.223-9 (42 U.S.C. 6962(i)(2)(C)).
- (18) 52.225-1, Buy American Act--Balance of Payments Program--Supplies (41 U.S.C. 10a-10d).
- (19)(i) 52.225-3, Buy American Act--North American Free Trade Agreement--Israeli Trade Act--Balance of Payments Program (41 U.S.C. 10a-10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note).
- (ii) Alternate I of 52.225-3.
- (iii) Alternate II of 52.225-3.
- (20) 52.225-5, Trade Agreements (19 U.S.C. 2501, et seq., 19 U.S.C. 3301 note).
- (21) 52.225-13, Restriction on Certain Foreign Purchases (E.O. 12722, 12724, 13059, 13067, 13121, and 13129).
- (22) 52.225-15, Sanctioned European Union Country End Products (E.O. 12849).
- (23) 52.225-16, Sanctioned European Union Country Services (E.O. 12849).
- (24) 52.232-33, Payment by Electronic Funds Transfer-- Central Contractor Registration (31 U.S.C. 3332).
- (25) 52.232-34, Payment by Electronic Funds Transfer-- Other than Central Contractor Registration (31 U.S.C. 3332).
- (26) 52.232-36, Payment by Third Party (31 U.S.C. 3332).
- (27) 52.239-1, Privacy or Security Safeguards (5 U.S.C. 552a).
- (28)(i) 52.247-64, Preference for Privately Owned U.S.- Flag Commercial Vessels (46 U.S.C. 1241).

(ii) Alternate I of 52.247-64.

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

[Contracting Officer check as appropriate.]

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

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

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

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

(5) 52.222-47, SCA Minimum Wages and Fringe Benefits Applicable to Successor Contract Pursuant to Predecessor Contractor Collective Bargaining Agreement (CBA) (41 U.S.C. 351, et seq.).

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

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

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

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

(e) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c) or (d) of this clause, the Contractor is not required to include any FAR clause, other than those listed below (and as may be required by an addenda to this paragraph to establish the reasonableness of prices under Part 15), in a subcontract for commercial items or commercial components--

(1) 52.222-26, Equal Opportunity (E.O. 11246);

(2) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (38 U.S.C. 4212);

(3) 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C. 793);

(4) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (46 U.S.C. 1241) (flow down not required for subcontracts awarded beginning May 1, 1996); and

(5) 52.222-41, Service Contract Act of 1965, As Amended (41 U.S.C. 351, et seq.).

C.7 52.216-18 ORDERING (OCT 1995)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from the date of award through the expiration date through of the contract..

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

C.8 52.216-19 ORDER LIMITATIONS (OCT 1995)

(a) Minimum order. When the Government requires supplies or services covered by this contract in an amount of less than \$60.00, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) Maximum order. The Contractor is not obligated to honor--

(1) Any order for a single item in excess of \$60.00;

(2) Any order for a combination of items in excess of \$66,840.00;

(3) A series of orders from the same ordering office within 30 days days that together call for quantities exceeding the limitation in subparagraph (b)(1) or (2) above.

(c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 15 days days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

C.9 52.216-21 REQUIREMENTS (OCT 1995)

(a) This is a requirements contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies or services specified in the Schedule are estimates only and are not purchased by this contract. Except as this contract may otherwise provide, if the Government's requirements do not result in orders in the quantities described as "estimated" or "maximum" in the Schedule, that fact shall not constitute the basis for an equitable price adjustment.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. Subject to any limitations in the Order Limitations clause or elsewhere in this contract, the Contractor shall furnish to the Government all supplies or services specified in the Schedule and called for by orders issued in accordance with the Ordering clause. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(c) Except as this contract otherwise provides, the Government shall order from the Contractor all the supplies or services specified in the Schedule that are required to be purchased by the Government activity or activities specified in the Schedule.

(d) The Government is not required to purchase from the Contractor requirements in excess of any limit on total orders under this contract.

(e) If the Government urgently requires delivery of any quantity of an item before the earliest date that delivery may be specified under this contract, and if the Contractor will not accept an order providing for the accelerated delivery, the Government may acquire the urgently required goods or services from another source.

(f) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after .

C.10 52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

(a) The Government may extend the term of this contract by written notice to the Contractor within 30 days provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed five years.

C.11 SEAT BELTS

Contractors, subcontractors, and grantees, are encouraged to adopt and enforce on-the-job seat belt policies and programs for their employees when operating company-owned, rented, or personally owned vehicles.

Nondestructive Examination Technology and Codes Course Outline

FIRST WEEK

Monday	AM	Introduction Personnel Certification
	PM	Classification and Interpretation of Discontinuities
Tuesday	AM	Visual Examination
	PM	Penetrant Examination
Wednesday	AM	Radiographic Examination
	PM	Radiographic Examination
Thursday	AM	Radiographic Examination
	PM	Radiographic Examination
Friday	AM	Radiographic Examination
	PM	Review and First Week Subjects Course Examination

SECOND WEEK

Monday	AM	Magnetic Particle Examination
	PM	Ultrasonic Examination
Tuesday	AM	Ultrasonic Examination
	PM	Ultrasonic Examination
Wednesday	AM	Ultrasonic Examination
	PM	Ultrasonic Examination
Thursday	AM	Ultrasonic Examination
	PM	Eddy Current Examination
Friday	AM	Eddy Current Examination
	PM	Review and Second Week Subjects Course Examination

SECTION D - CONTRACT DOCUMENTS, EXHIBITS, OR ATTACHMENTS

Attachment No. Title

- 1 **Nondestructive Examination Technology and Codes Course Outline**
- 2 **Eddy Current Testing Course Outline**
- 3 **Welding and NDE Overview Course Outline**
- 4 **Technical Training Course Manual Style Guide**
- 5 **Performance Requirement Summary**
- 6 **Quality Assurance Surveillance Plan**
- 7 **Surveillance Monitoring Form**
- 8 **Delivery Order Form**
- 9 **Course Evaluation Sheet**
- 10 **Billing Instructions - Fixed Price Contracts**
- 11 **Electronic Funds Transfer Form**

EDDY CURRENT TESTING COURSE OUTLINE

Day 1

1. COURSE INTRODUCTION

- Self-Introduction of Instructor and Background
- Administrative Details
 - Restrooms and Break Facilities
 - Telephones and Messages
 - Building Safety
- Class Policies
 - Class Start/Stop
 - Breaks
 - Lunch
- Objective of Training
- Training Course Overview

2. BASIC PRINCIPLES OF EDDY CURRENT THEORY

- Basic Eddy Current Theory
 - Review of Alternating Current Theory
 - Electromagnetic Fundamentals
 - Generation of Eddy Currents
 - Basic Eddy Current Flow Characteristics
 - Skin Effect and Phase Lag
 - Conductivity
 - Permeability
 - Magnetic Saturation
 - Geometry
 - Lift-off/fill factor
- Impedance Plane Display
 - Impedance Amplitude & Phase Angle
 - Display of Variables on the Impedance Plane
 - Effect of Frequency Variation
 - Angular Separation
 - Vectoral Relationship
 - Vector Subtraction
 - Multifrequency Mixing Principle

- Test Instruments
 - Bridge Circuits
 - The Basic Test Instrument
 - Multifrequency Instruments

- Inspection Modes
 - Differential Mode
 - Absolute Mode (Internal/External Reference)
 - Comparison of Differential and Absolute Modes
 - Differential and Absolute Mode Responses
 - Defect Shape, Size, and Orientation Factors

- Coil Designs and Applications
 - Basic Coil Types and Variables
 - Bobbin, Rotating Coil, Pancake
 - Special - 3D, 8x1, Shielded, Saturated
 - U-Bend

- Eddy Current Test Techniques
 - Single Frequency
 - Multifrequency (Mixes - Tube Support, I.D., Noise, Copper)

- Signal Analysis Techniques
 - Phase
 - Amplitude

Day 2

1. BASIC PRINCIPLES OF EDDY CURRENT THEORY- Cont'd

- Calibration Tubes
 - ASME
 - Wear Scar
 - Modeling of Damage

- Data Correlation

- Tube Testing Instruments
 - Data Acquisition
 - Data Analysis

- Test Procedures & Inspection Plans

2. LABORATORY

- Demonstration of Equipment Calibration Methods
- Demonstration of Mixing, Recording and Analysis
- "Hands-on" Exercises

Day 3

1. STEAM GENERATOR TECHNOLOGY

- Steam Generator Types
 - Industry Experience With Different Designs
- Damage Mechanisms
- ISI Scope and Frequency
- Tube Plugging/Sleeving Criteria
- Leak Rate Monitoring/Leak Before Break
- Loose Parts Control
- Inspection Plans
- Data Acquisition & Analysis
 - Techniques
 - Software
- Special Detection Techniques
 - Intergranular Attack (IGA)
 - Corrosion Under Sludge
 - Vibration Induced Damage
 - Analysis of Expansion in the Tube Sheet
- Other Techniques
 - Ultrasonic
 - Profilometry
 - Remote Visual
 - Radiography
- Guidelines for ISI Inspections
- Codes and Standards Review
 - Regulatory Requirements
 - Personnel Considerations

Day 4

1. OTHER NUCLEAR APPLICATIONS
 - Balance of Plant
 - Condenser Inspection
 - Feedwater Heaters
 - Heat Exchangers
 - Incore Thimble Tube Inspections
 - Control Rod Drive Mechanism (CRDM)
2. LABORATORY
 - Tubing Inspection

Day 5

1. LATEST DEVELOPMENTS
2. DISCUSSION OF CURRENT INSPECTION ISSUES
3. COURSE REVIEW
4. COURSE EXAMINATION

Welding and NDE Overview Course Outline

Day 1

- I. Introduction
 - A. Orientation
 - B. Overview and Course Objectives
 - C. Review of Course Objectives
 - D. NDE history and growth

- II Personnel considerations
 - A. NDE Certification programs
 - B. ASME certification/qualification requirements
 - C. Case histories dealing with certification violations

- III Discontinuities
 - A. Types and severity
 - B. Importance of proper interpretation
 - C. Repair examinations

- IV VISUAL Testing (VT)
 - A. VT principles
 - B. Visual Testing related to other NDE methods
 - C. Section XI VT requirements
 - D. Demonstration
 - 1. Plastic replicas
 - 2. Magnification devices
 - 3. Fiberoptic borescopes
 - 4. Videotape

- V Penetrants Testing (PT)
 - A. PT principles
 - B. Techniques
 - 1. Visible daylight dye
 - 2. Flourescent-black light
 - C. Procedures
 - D. Variables
 - E. ASME Section V, Article 6
 - F. Demonstration
 - 1. Visible Penetrants
 - 2. Flourescent

Day 2

I. Magnetic Particle Testing (MT)

- A. MT Principles
- B. Techniques
 - 1. Secondary-wet horizontal
 - 2. Portable AC yoke/DC prods
- C. Procedures
- D. Variables
- E. ASME Code Section V, Article 7
- F. Demonstration
 - 1. Wet horizontal unit
 - 2. AC yoke
 - 3. DC prods

II. Radiographic Testing (RT)

- A. RT principles
- B. Techniques
 - 1. X-Ray
 - 2. Gamma ray
- C. Variables
- D. Producing the radiograph
- E. Sensitivity/quality levels
- F. ASME Code Section V, Articles 2 and 3
- G. Management safety concerns
- H. Interpretation variables
- I. Demonstration
 - 1. Taking a radiograph
 - 2. Interpretation of a cross section of typical ASME radiographs

Day 3

I. Ultrasonic Testing (UT)

- A. UT Principles
- B. Techniques
 - 1. Compressional (straight beam)
 - 2. Shear (angle beam)
 - 3. Thickness
- C. Variables
- D. ASME Section V Articles 4 and 5
- E. Interpretation
- F. Section XI requirements and applications (Appendices 7 and 8)
- G. Demonstration
 - 1. Straight beam
 - 2. Angle beam

Day 4

I. Eddy Current Testing (ET)

- A. ET principles
- B. Techniques
 - 1. Surface probes/coils
 - 2. Internal probes/coils
- C. Variables
- D. ASME Section V, Article 8
- E. Section XI requirements and applications
- F. Demonstration
 - 1. Surface examination
 - 2. Tubing examination

II. Welding Technology

A. Weld Joint Design

- 1. Distinction between joint type and weld type
- 2. Pre-qualified joints
- 3. Weld joint variables
- 4. Spacers
- 5. Inserts

B. Weld testing procedure vs. performance qualifications

- 1. Pre-qualified procedures
- 2. Standard procedure qualification testing
- 3. Tensile testing
- 4. Bend testing
- 5. Toughness testing
- 6. Hardness testing

C. Mock-up test

D. Performance qualification testing

Day 5

II. Welding Technology (continued)

A. Weld variables

- 1. Base material groupings
- 2. Filler material groupings
- 3. Joint details
- 4. Fit-up

B. Process and variables

- 1. SMAW
- 2. GMAW
- 3. GTAW

C. ASME Section IX requirements

D. Demonstration

1. Examples of selected weld standards and discontinuities

III Review of Course Material

IV Course Examination

NOTES: 1) Case histories dealing with each subject will be included at the appropriate time.
2) Daily quizzes with self grading will be administered

Technical Training Division

Policy Document X

Training Course Manual Style Guide

Contents

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A. PURPOSE

The United States Nuclear Regulatory Commission (USNRC) Technical Training Division (TTD) Training Course Manual Style Guide describes and illustrates the required format for training course manuals developed by the TTD staff. Guidelines and standards for preparation are given in Section C. Section D contains instructions for format and layout of the manuals. Section E contains editorial style requirements and Section F includes the style requirements for abbreviations and terms. This style guide and the manuals that adhere to the requirements herein are developed in WordPerfect 3.1 for Macintosh.

B. OBJECTIVE

To provide for a standard and consistent format for TTD training course manuals.

C. DOCUMENT PREPARATION

1. Content

USNRC TTD training manuals include, in order, the following:

- | | |
|-------------------------|-----------------------------|
| Cover | List of Effective Revisions |
| Preface | Manual Table of Contents |
| Course Outline | Manual Chapters |
| Course Critique Sheet | Appendixes |
| Metric Conversion Table | |

Each chapter within the manual includes, in order, the following:

- Chapter Breaker
- Table of Contents
- Chapter Text
- Tables
- Graphics
- Appendixes

2. General Guidelines

a. Paper

The standard paper size is 8-1/2 inches wide by 11 inches long. Foldouts may be used if necessary. Paper shall be white and of good quality.

b. Page Setup

Pages can be set up using the attachments as templates. Preface and Table of Contents shall be in single column format. The column shall be 7.75 inches wide. Chapter text shall be in double column format. The columns shall be 3.25 inches wide with 0.25 inch spacing between columns. Tabs and indents shall be set every 0.25 inch.

(1) Text Margins

The text margins shall be 0.75 inch. Text margins are set under Layout and Margins. For double sided documents, to allow room for binding and holed paper, the binding width shall be set at 0.25 inches. The binding width is set under the File pull down menu and the Page Setup function.

(2) Hyphenation

Automatic hyphenation shall be selected and the left hyphenation zone set at 0.5. The hyphenation selection is made under the Layout pull down menu. Note that the cursor must be at the beginning of the document when this selection is made.

(3) Headers

A 2-point line shall be placed across the top of the page 1/8 inches above the margin (3/4-inch). A 1-point line shall be placed approximately 1/16 inches below the 2-point line.

The title of the manual shall be placed above the 2-point line at the inside margin, flush left. The title of the chapter shall be aligned with the manual title and aligned with the right margin. Text font for headers shall be 10-point Times, bold, initial caps.

(4) Footers

A 1-point line shall be placed 1/8 inches below the margin. "USNRC Technical Training Center" shall be placed 1/16 inches below the line at the bottom of the page, aligned with the left margin. The revision date (Rev MMY) shall be placed on the same line, aligned with the right margin. (There is no period [.] after the Rev abbreviation.) Text for footers shall be 10-point Times, bold, initial caps.

c. Line Spacing

Line spacing shall be set at 1.25. Line spacing is set under the Layout line spacing button bar. The line adjustment for subscripts and superscripts shall be not selected. This option is under the Style pull down menu and the Other function. The Super/Subscript box is selected, then the Affect Line Adjust box is deselected (no X in box).

d. Page Numbering

All pages shall be numbered sequentially within chapters or appendixes in Arabic numerals (for example, 3.0-1, 6.2-2, A-4). Page numbers for the table of contents shall be the chapter or section number followed by a dash and then the lower case Roman numerals (3.0-i, 5.1-ii, etc.). Page numbers shall be centered on the bottom of each page. Page numbers shall be in 10-point Times bold.

e. Figures and Tables

All figures and tables shall be placed at the end of each chapter. Figures and tables shall be on odd-numbered pages. Small illustrations and tables may be

included within the text.

3. Printing Requirements

Text shall be printed double sided; tables and figures shall be single sided.

4. Binding

Notebook-type binders (three-ring style with cover inserts) or plastic spiral binding shall be used for all manuals. Tab dividers shall be used to separate chapters.

D. FORMAT, LAYOUT, AND TYPING INSTRUCTIONS

1. Front Matter

a. Cover

The cover shall include the manual title beginning on line 25 and centered in all caps. Font shall be Helvetica bold, 36-point. The cover shall include the USNRC emblem. The USNRC TTD title shall be placed beginning on line 15, in all caps, Helvetica bold, 14 point font. Refer to Attachment 1 for layout and type style.

b. Preface

The preface shall be the first page of the manual and shall conform in content and format to Attachment 2. The preface shall be in single column format. The words UNITED STATES NUCLEAR REGULATORY COMMISSION TECHNICAL TRAINING CENTER shall be centered beginning on line 8, in all caps, and in 18 pt. Times font. The title of the manual shall be centered beginning on line 15, in all caps, and in 18 pt. Times font. Beginning on line 20, a brief statement of manual use, contents, and compilers of the manual shall be included.

c. List of Effective Revisions

The list of effective revisions shall be prepared in accordance with Attachment 3. The heading shall be centered on line 1, in all caps, bold 14 pt Times font. The list shall be in two column format, the columns are 2 1/4 " wide with 1/4" gutter. The left column is from 2" to 4 1/2", the right column is from 4 3/4" to 7". The column titles are on line 4, in caps, 12 pt. Times font, underlined and aligned left. There shall be a single space between section entries and a double space between chapters. The data begins on line 6. The revision date for each chapter and section is in the MMY format.

d. Table of Contents

The table of contents shall be prepared in accordance with Attachment 4. Headings are listed through the third order (1.1.1.2). List of Tables and List of Figures follow the Table of Contents as appropriate. The WordPerfect List tool shall be used for generating the Table of Contents. The words TABLE OF CONTENTS shall be placed on line 1, in all caps and in 14 pt. Times bold. The chapter title shall begin on line 4. Chapter titles shall be all caps and placed flush left. All subsection titles shall be indented (do not use tabs) 1/4 inch and typed with initial caps. Runover lines are aligned left with text. Page numbers shall be flush right at the margin.

Spacing shall be double space between first order and second order headings and between second-order headings. Single space between second-order and third order headings of the same section. Triple spacing shall be placed between the table of contents, list of tables and list of figures.

e. List of Tables

The words LIST OF TABLES shall be three spaces after the last line of the table of contents. The words shall be centered, in all caps, and in 14 pt. Times font. All numbered tables shall be listed. Page numbers shall be flush right at the margin. Titles shall be initial caps.

f. List of Figures

The words LIST OF FIGURES shall be three spaces after the last line of the list of tables. The words shall be centered, in all caps, and in 14 pt. Times font. If there are no tables, the list of figures will follow three spaces after the last line of the table of contents. All numbered figures shall be listed. Page numbers shall be flush right at the margin. Titles shall be initial caps.

2. Chapters

Chapters are sequentially numbered throughout the publication in Arabic numerals. Each chapter begins on a right-hand page.

a. Text

Text shall be double-column and right-left justified. Typing shall be single spaced. Spacing in between lines shall be set at 1.25 pts. Interparagraph spacing and spacing into all headings shall be two times the basic spacing. The first line of each paragraph shall be tabbed 1/4 inch. The font used for text is 12-point Times. Refer to Attachment 5.

b. Chapter and Section Headings

- (1) Chapter headings stand alone and are all caps, boldface type , and left justified.
- (2) Section headings stand alone, are initials caps, boldface type, and left justified.
- (3) Subheadings stand alone, are initial caps, boldface type, and left justified.
- (4) For all headings, an indent is placed between the heading number and the heading text.

c. Listings and Procedural Steps

Where necessary, various short items that are not complete sentences shall be listed and displayed within a paragraph as indented listings (see Attachment 5). These listings shall be considered as a part of the lead in sentence, unnumbered, and punctuated accordingly. Listings that are complete sentences shall also be indented but shall be preceded by a bullet or Arabic numeral. Procedural steps shall always be preceded by Arabic numerals. All runover lines shall be indented and aligned left under text.

d. Equations

The WordPerfect Equation tool shall be used for creation of equations. Equations shall be aligned left. Equations shall be numbered sequentially by chapter and the equation number placed flush right in parentheses. Runover lines are aligned on the first character to the right of the equal sign. Sequential equations are aligned on the equal sign. Equations are considered to be text and are punctuated accordingly. Connecting text shall be placed flush left on a new line. The following are examples of equations:

$$x = \int_{-\infty}^{\infty} \left(\frac{y^2 + z^2}{y(\pi\tau)} \right) \quad (2.0-1)$$

and

$$x = \frac{\sum_1^{n-1} y_i z_i}{\Theta} \quad (2.0-2)$$

e. Tables

WordPerfect Table tool shall be used for creation of tables. Refer to Attachment 6.

Tables shall be numbered consecutively within chapters. All tables shall be at the end of the chapter or appendix to which they apply and shall precede the figures. Whenever possible, tables shall be vertical on a page.

Table titles shall be at the top of the table, typed in initial caps and bold, 12 pt. Times font. Tables are lined as necessary to be readable.

f. **Figures**

Figures shall be at the end of each chapter, immediately following tables. Figures shall be full page. Figure titles shall be placed at the bottom of the figure, initial caps, 12 pt. Helvetica font.

g. **Chapter Breakers**

Chapter breaker pages shall be placed between chapters as shown in Attachment 7. The chapter breaker pages do not have headers and footers. The course manual title begins on line 8. The text is initial caps, centered, 14 pt. Times font. There is a double space between the manual title and chapter number, and the chapter number and chapter name.

3. **Appendixes**

Appendixes, if required shall follow the last chapter of text. Appendixes are given letter designations (A, B, etc.) in alphabetical order. Each appendix begins on an odd numbered page. Text format and style is usually the same as for chapters.

E. EDITORIAL STYLE REQUIREMENTS

The following requirements are generally consistent with the guidance in NUREG 0544, Rev. 3, NRC Collection of Abbreviations, and NUREG 1379, NRC Editorial Style Guide. Some deviations from these documents are necessary for consistency and clarity in training manuals. The requirements in this section are not all inclusive, the NUREGs mentioned above should be consulted for cases not covered by this style guide.

1. Abbreviations

- a. The term abbreviation in this policy document shall include abbreviations (e.g. Keff), acronyms (e.g. LOCA), and initialisms (SGTR).
- b. A list of common abbreviations used in reactor technology training course manuals and their correct format is in Section F.
- c. When a term is used several times throughout a manual chapter, the first time its abbreviation is used in the manual chapter, the term shall be spelled out with the abbreviation following in parentheses: effective multiplication factor (K_{eff}). When the abbreviation is an acronym or initialism, the term shall be spelled out in initial caps with the acronym or initialism following in parentheses: Loss of Coolant Accident (LOCA), Steam Generator Tube Rupture (SGTR).
- d. Subsequent uses of the term within a chapter shall be the abbreviation or the term spelled out in lower case letters.

1. Capitalization

- a. Terms shall be lowercase except as noted below. Abbreviations are uppercase, unless otherwise noted in Section F.
- b. Specific parts of a nuclear system or facility are only capitalized whenever they appear at the beginning of a chapter or section and include the acronym or initialism following in parentheses: Closed Cooling Water System (CCW). Throughout the rest of the chapter or section, either the acronym or the term spelled out in lower case letters shall be used.
- c. Generic terms designating equipment, systems, or programs are not capitalized: centrifugal charging pump (CCP); preventive maintenance program (PM).
- d. The names of specific documents, facilities, organizations, companies, and

committees are capitalized: Nuclear Regulatory Commission (NRC); Code of Federal Regulations (CFR). Use the following format when referring to a portion of the Code of Federal Regulations:

- Title Title 10 of the Code of Federal Regulations
- Chapter 10 CFR Chapter 1
- Part 10 CFR Part 50
- Section 10 CFR 50.46
- Appendix 10 CFR 50, Appendix R, or Appendix R to 10 CFR Part 50.

- e. Capitalize a common noun followed by a letter or number that refers to a specific publication, class figure, or table, except for page or paragraph: Category I, Appendix K, Chapter 3, Class 1E, Table 4, Figure 5.1-6, Section 4.1, but note *paragraph 3 on page 56*.
- f. Do not capitalize a common noun followed by a number or letter identifying a component of a nuclear power plant: train A, valve MS-10, pump B.

2. Hyphenation

Terms will generally not be hyphenated: loss of coolant accident (LOCA); loss of offsite power (LOOP); electrohydraulic control (EHC). This is a deviation from the NUREGs cited above.

3. Plurals

Plurals of terms are formed by adding a lowercase s without an apostrophe: design basis accidents (DBAs); pressurized water reactors (PWRs).

4. Units of Measure

- a. Refer to Section F for the specific format required for commonly used units of measure. Note that units of measure are usually lowercase.
- b. Use the same form of an abbreviation for both the singular and plural:
1 ft 5 ft 1 lb 5 lb

- c. Omit internal and terminal punctuation unless its omission would cause confusion: 1 in. (not to be confused with the word *in*).
- d. Use abbreviations for units of measure only if they are used with numbers: 200 rpm. In text, spell units of measure out: The test will determine the number of revolutions per minute.
- e. The first time a unit of measure is used in a chapter, the term shall be spelled out with the abbreviation following in parentheses: 200 revolution per minute (rpm). Subsequent uses of the term *with a number* and within the same chapter shall be the abbreviation.

5. Numbers

- a. Spell out numbers one through nine. Use figures for a single number or 10 or more. When two or more related numbers appear in a sentence and one of them is 10 or more, use a figure for each number: The NRC received comments from 13 utilities, 3 unions, and 6 intervenors.
- b. Use numbers to express a unit of measure: 2 feet, 6 inch diameter pipe. Use numbers for fractions, whole numbers combined with a fraction, and for fractions with units: 3/5, 1/2 inch width, 2 1/2 times as large.
- c. Use numbers for all decimals: 0.5 inch, 1.8 meters. For quantities less than one, use a zero before the decimal point: 0.6.
- d. Use commas every third place for numbers over 1,000:
3,443
1,093,934
- e. The degree symbol shall be made using the keystrokes SHIFT OPTION-8 which looks like: °F, °C. There is no space between the degree symbol and the temperature scale abbreviation.

6. Subscripts and Superscripts

Subscripts and superscripts will be used as indicated in the list of abbreviations and terms in Section F. Terms such as T_{avg} , T_{ref} , K_{eff} , T_{hot} , T_{cold} , T_h , and T_c shall include the lowercase subscripts as shown.

7. Exponents

Exponents shall be superscript, expressed in the form: 5.5×10^6 , 3.9×10^{-9} .

8. Punctuation

- a. Use a comma after each member of a series of three or more words, letters, figures, phrases, or clauses. Use semicolons if commas are prevalent within the elements of the series.
- b. Use a colon after a clause to introduce a list. Use a comma after each item in a list. Use a period after the last item in a list.
The safety limits are:
 1. Reactor coolant system pressure,
 2. Power density, and
 3. Departure from nucleate boiling ratio.
- c. Punctuate a sentence with parentheses the same as a sentence without parentheses. Do not precede an opening parentheses with a comma.

F. ABBREVIATIONS AND TERMS (LATER)

Refer to NUREG 0544, Rev. 3, "NRC Collection of Abbreviations" for guidance until this section is developed.

1. Abbreviations shall adhere to the following format including spelling, capitalization, punctuation, and style:

Term	Abbreviation
alternating current	ac
air conditioning	A/C
analog to digital	A/D
Asea Brown Boveri/Combustion Engineering	ABB/CE
bistable	B/S
Babcock and Wilcox	B&W
cooldown	C/D
direct current	dc

2. Terms and acronyms shall adhere to the following format including spelling, capitalization, punctuation, and style:

Term	Acronym
auxiliary feedwater pump auxiliary feedwater (system) anticipated transient without (a) scram bottom of active fuel beginning of life balance of plant	AFP AFW ATWS BAF BOL BOP

In general, abbreviations and acronyms that are formed simply as the first letter of each word of the term are not included in the tables.

**UNITED STATES
NUCLEAR REGULATORY COMMISSION
TECHNICAL TRAINING DIVISION**

**TRAINING COURSE
MANUAL
STYLE GUIDE**

**UNITED STATES
NUCLEAR REGULATORY COMMISSION
TECHNICAL TRAINING CENTER**

COURSE MANUAL TITLE (R-NNNX)

This manual is a text and reference document for the [Name of Course]. It should be used by students as a study guide during attendance at this course. This manual was compiled by staff members of the Technical Training Division in the Office of Analysis and Operational Data.

The information in this manual was developed or compiled for NRC personnel in support of internal training and qualification programs. No assumptions should be made as to its applicability for any other purpose. Information or statements contained in this manual should not be interpreted as setting official NRC policy. The data provided are not necessarily specific to any particular nuclear power plant, but can be considered to be representative of the vendor design.

LIST OF EFFECTIVE REVISIONS

<u>CHAPTER</u>	<u>REVISION</u>
1.0	1294
1.1	1294
1.2	1294
1.3	1194
1.4	1194
2.0	0195
2.1	0195
2.2	0195
3.0	1294
3.1	1294
3.2	1294
3.3	1294

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1.1.1 Section Title	1
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1.1.2.1 Subtitle	3
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LIST OF TABLES

1.1-1 Table Title	9
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LIST OF FIGURES

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6.1[INDENT]CHAPTER TITLE

Learning Objectives:

- 1.[INDENT] First learning objective.
- 2.[INDENT] Second learning objective with runover line which indent will align left with text.

- [INDENT] a.[INDENT] First item in list.
- [INDENT] b.[INDENT] Second item in list with runover aligned left by indent.

6.1.1[INDENT] Section Heading

[TAB] Headings are left justified. Chapter headings are in all caps and in bold. Section headings are in initial caps and bold.

[TAB] Body text paragraphs are tabbed and right-left justified.

[TAB] Double spacing is used between paragraphs. Double spacing shall lead into the next heading.

6.1.2[INDENT] Lists

[TAB] Text may include lists, either with bullets or numbered, which shall be punctuated as part of the lead sentence as follows:

- [INDENT] First item,
- [INDENT] Second item with a runover line which indent will align left under text, and
- [INDENT] Third item.

[TAB] Double spacing should always precede and follow a list. Lists may also be numbered, as follows:

- [INDENT] 1.[INDENT] First item,
- [INDENT] 2.[INDENT] Second item with runover aligned left by indent, and
- [INDENT] 3.[INDENT] Third item.

6.1.2.1[INDENT] Subheading

[TAB] Subheadings are left justified, in initial caps and in bold. Subheadings are *not* underlined. Any headings required within a subheaded section are not numbered, but are left justified and in bold. Non-numbered headings are not included in the table of contents.

Non-numbered Subheading

[TAB] Tabs are made using the tab key. Indents are made using the F5 key. Bullets are made using the option and 8 (*) keys. Degree symbol is made using the option and shift-8 (*) keys.

[TAB] Margins (under Layout) are set at 0.75" for top, bottom and right margins. The binding offset is set at 0.25" to allow room for holes in paper and binding.

[TAB] Tabs (under Layout) are set at 0.25" relative position and to repeat every 0.25". Spacing between lines is set at 1.25.

PERFORMANCE REQUIREMENT SUMMARY

<u>PERFORMANCE REQUIREMENT</u>	<u>PERFORMANCE STANDARD</u>	<u>PERFORMANCE MEASUREMENT</u>	<u>SURVEILLANCE METHOD</u>	<u>ACCEPTABLE QUALITY LEVEL (AQL)</u>	<u>MAXIMUM PAYMENT PERCENTAGE(MPP)</u>
NDE Technology and Codes Course Section C.3.2.a.	Required Proficiency Level: Not less than 80% of the students tested shall demonstrate a good working knowledge of ultrasonic, radiographic, liquid penetrant, and particle testing; technical evaluations of licensee and licensee contractor performance in these areas; and the codes and standards of special interest in NDE inspection activities; demonstrated by an exam score of not less than 70%.	Performance will be measured by administering a written examination to students to determine the students development and training outcomes and by administering course evaluations to the students upon completion of the course.	100% Inspection	20%	15%
Eddy Current Testing Course Section C.3.2.b.	Required Proficiency Level: Not less than 80% of the students tested shall demonstrate a good working knowledge of eddy current testing with particular emphasis on nuclear power plant applications, demonstrated by an exam score of not less than 70%.	Performance will be measured by administering a written examination to students to determine the students development and training outcomes and by administering course evaluations to the students upon completion of the course.	100% Inspection	20%	15%
Welding and NDE Overview Course Section C.3..2.c.	Required Proficiency Level: Not less than 80% of the students tested shall demonstrate a general familiarity with metallurgy, welding, and NDE technologies, including: welding fabrication, inspection	Performance will be measured by administering a written examination to students to determine the students development and training outcomes and by administering course evaluations to the students upon completion of the	100% Inspection	20%	15%

<u>PERFORMANCE REQUIREMENT</u>	<u>PERFORMANCE STANDARD</u>	<u>PERFORMANCE MEASUREMENT</u>	<u>SURVEILLANCE METHOD</u>	<u>ACCEPTABLE QUALITY LEVEL (AQL)</u>	<u>MAXIMUM PAYMENT PERCENTAGE (MPP)</u>
	and processes, ultrasonic testing, current testing, radiographic testing, liquid penetrant testing and magnetic particle testing. Students shall also demonstrate a familiarity with the codes and standards relative to these technologies and the technical evaluation and inspection of licensees and licensee contractor activities. This shall be demonstrated by an exam score of not less than 70%.	course.			
Revise, Update and Maintain Course Materials - Section C.3.3	Required Proficiency Level: Not less than 90% of the training materials shall be updated and maintained in an accurate and current state.	Performance will be measured by random inspection of the training materials by the NRC PO to determine if the are being updated as needed.	100% Inspection	10%	25%
Provide Training Materials Section C.6.1	Required Proficiency Level: Not less than 90% of the training materials shall be complete and contain required contents.	Performance will be measured by random inspection of the training materials by the NRC PO to determine if they are in accordance with the requirements of the contract.	Random Sampling	10%	30%

NOTES:

AQL = Acceptable Quality Level - This is the maximum percentage of defects that are acceptable. This sets a limit on how much will be accepted before taking a reduction in price.

MPP = Maximum payment percentage for meeting the PR. This is the maximum payment percentage of the total contract price that each listed contract requirement represents. Offerors are requested to complete this column as part of their proposal.

Contract Payment

1. For satisfactory performance of a service (deficiencies do not exceed the AQL), the contractor shall be paid the percentage of the monthly contract line item price indicated in MPP column of PRS chart for that service.
2. For defective performance of a service (deficiency exceeds the AQL), the Government will not pay full percentage in the MPP column of Performance Requirement Summary chart.
3. The payment for listed services with defective performance exceeding the AQL will be calculated as follows:

The percentage proficiency level exceeding the AQL multiplied by the MPP. For example, an inspection procedure reveals that 70% of evaluations indicated that the instructor was qualified, however the AQL is 80%; therefore the reduction in payment for unacceptable performance will be the difference between the performance standard and the actual evaluated performance multiplied by the MPP (80% - 70% = 10% X MPP (included in offeror's proposal) to compute the percent reduction of price. This percentage will be multiplied by the contract unit price to determine the amount of deduction

**QUALITY ASSURANCE SURVEILLANCE PLAN
CONTRACT NO. NRC-38-02-388**

INTRODUCTION

This Quality Assurance Surveillance Plan (QASP) has been developed pursuant to the requirements of FAR 37.602-2 for Contract No. NRC-38-02-388. This plan sets forth procedures that will be used in evaluating the technical performance of the contractor.

A. Purpose of the QASP

1. The QASP is intended to accomplish the following:

- a. Define the roles and responsibilities of participating government officials;
- b. Define the types of work to be performed;
- c. Describe the evaluation methods that will be employed by the government in assessing the contractor's performance;
- d. Provide copies of the quality assurance monitoring forms that will be used by the government in documenting and evaluating the contractor's performance; and
- e. Describe the process of performance documentation.

2. The contractor has developed a Quality Control Plan (QCP) which sets forth procedures and responsibilities for controlling high quality work. The contractor has designated his employee, Mr. Charles Hellier, to be responsible for implementation of the QCP.

B. Roles and Responsibilities of Government Officials

The following government officials will participate in assessing the quality of the contractor's performance. Their roles and responsibilities are described as follows:

1. Mr. Steven Koscielny will serve as the NRC Project Officer and be responsible for monitoring, assessing, recording and reporting on the technical performance of the contractor in accordance with the "Performance Requirement Summary". The PO will have primary responsibility for completing "Surveillance Monitoring Forms" which will be used to document the inspection and evaluation of the contractor's work performance.
2. Carolyn A. Cooper will serve as the NRC Contract Specialist (CS) and has overall responsibility for overseeing the contractor's performance. The CS will also be responsible for the day-to-day monitoring of the contractor's performance in the area of contract compliance and contract administration; reviewing the PO's assessment of the contractor's performance; and resolving all differences between the PO's version and the contractor's version.

C. Types of Work Performed

1. Training

The contractor shall present three courses on NDE Techniques.

2. Training Support

- a. The contractor shall revise, update, and provide course materials (Instructor and Student manual, handouts and visuals aids) for the three courses.
- b. The contractor shall develop, administer, and grade course examinations upon completion of each course session.
- c. The contractor shall prepare and provide course presentation reports for each course session and a final report upon completion of the contract.

D. Methods of Surveillance

- 1. The PO will monitor actual classroom instruction on a random basis to determine if training is effective; i.e., instructor succinctly and accurately imparts information and knowledge, responds to students questions and remarks and maintains course schedule. Every session of each course may not be monitored by the PO.
- 2. Information from all course evaluations and course examinations will be evaluated to determine if course objectives and performance measurements have been met.

E. Quality Assurance Forms and Report

- 1. The PO will use the Surveillance Monitoring Form to document and evaluate the contractor's performance under the contract.
- 2. The PO will judge each requirement in accordance with the performance standards and performance requirements stated in the Performance Requirements Summary (PRS).
- 3. The PO will substantiate all requirements which the PO judges to be indicative of "unacceptable" performance. Performance at the "acceptable" level is expected from the contractor and need not be substantiated.
- 4. The PO will forward copies of all completed surveillance monitoring forms to the CO and contractor upon completion of form. The contractor is required to respond in writing to any negative QA monitoring form(s) within 5 working days after receipt of the form.

F. Analysis of Surveillance Results

The CO will review each monitoring form prepared by the PO. When appropriate, the CO may investigate the performance event further to determine if all the facts and circumstances surrounding the event were considered in the PO's opinions outlined on the forms. The CO will discuss every event receiving a substandard rating with the contractor prior to taking the reduction in price.

CONTRACT NO. NRC-38-02-388

SURVEILLANCE MONITORING FORM
(To be performed after the completion of each course)

Course Name: _____

CONTRACT REQUIREMENT	CONTRACT PARAGRAPH #	METHOD OF SURVEILLANCE	DATE PERFORMED	COMPLIANCE
Provide Qualified Instructors to Teach NDE Courses	C.3.2	100% Inspection		
Revise, Update and Maintain Course Materials	C.3.3	100% Inspection		
Provide Complete and Accurate Training Materials	C.3.3	Random Sampling		

COURSE EVALUATION SHEETCOURSE TITLE: _____ COURSE (E-XXX)DATE:INSTRUCTIONS:

In order to improve and maintain the quality and applicability of TTC courses, it is necessary to obtain information from the attending students.

Please rate the following subject areas. Amplifying comments are requested, but not required. Please place your amplifying comments in the section for written comments.

PART A - PARTICIPANT BACKGROUND

1. Highest Level of Education

Doctorate Masters Bachelors Associates Other

2. Years of experience in nuclear industry

>6 4-6 1-3 <1 None

3. Years of experience in nuclear power

>6 4-6 1-3 <1 None

4. Percentage of time spent working in inspection/technical evaluation

90 - 100% 60 - 90% 30 - 60% 10 - 30% <1

PART B - COURSE DESIGN

	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Agree</u>	<u>Strongly Agree</u>
5. Course description in the Guide to Training Opportunities was accurate.	_____	_____	_____	_____
6. Course objectives are clear and realistic.	_____	_____	_____	_____
7. Subject matter was organized and presented logically.	_____	_____	_____	_____
8. Time spent in labs and for demonstrations was adequate.	_____	_____	_____	_____

PART C - COURSE MATERIALS AND FACILITIES

	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Agree</u>	<u>Strongly Agree</u>
9. The course manual adequately covered course topics (where applicable).	_____	_____	_____	_____
10. The course manual was organized and indexed so that it can be used as an effective study guide.	_____	_____	_____	_____
11. The course manual will be useful as a future reference.	_____	_____	_____	_____
12. Supplemental course materials (handouts, etc.) aided in the presentation of course concepts.	_____	_____	_____	_____

PART D - OVERALL COURSE RATING

	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Agree</u>	<u>Strongly Agree</u>
13. Classrooms were adequate and properly equipped for the course.	_____	_____	_____	_____
14. Laboratories and equipment were adequate for the course.	_____	_____	_____	_____
15. Class activities such as labs, demonstrations and work groups contributed to the course.	_____	_____	_____	_____
16. Case studies and example problems were used effectively throughout the course.	_____	_____	_____	_____
17. Concepts and skills can be applied on the job.	_____	_____	_____	_____
18. The instructors were technically proficient and able to convey the subject matter to the students.	_____	_____	_____	_____
19. The course meets the needs of the target audience.	_____	_____	_____	_____

PART E - COURSE INSTRUCTORS

(Use one page for each Instructor)

Name of Instructor: _____

	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Agree</u>	<u>Strongly Agree</u>
1. Well prepared for lectures.	_____	_____	_____	_____
2. Presented information in an organized and interesting manner.	_____	_____	_____	_____
3. Achieved lecture goals and learning objectives.	_____	_____	_____	_____
4. Spoke clearly and audibly.	_____	_____	_____	_____
5. Encouraged discussion and student questions.	_____	_____	_____	_____
6. Answered questions clearly and completely.	_____	_____	_____	_____
7. Stimulated interest in the class.	_____	_____	_____	_____
8. Used visual aids and other course materials effectively.	_____	_____	_____	_____
9. Was familiar with and used the student's training manual.	_____	_____	_____	_____
10. Presentation was at the appropriate technical level for the target audience.	_____	_____	_____	_____

PART E - COURSE INSTRUCTORS

(Use one page for each Instructor)

Name of Instructor: _____

	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Agree</u>	<u>Strongly Agree</u>
1. Well prepared for lectures.	_____	_____	_____	_____
2. Presented information in an organized and interesting manner.	_____	_____	_____	_____
3. Achieved lecture goals and learning objectives.	_____	_____	_____	_____
4. Spoke clearly and audibly.	_____	_____	_____	_____
5. Encouraged discussion and student questions.	_____	_____	_____	_____
6. Answered questions clearly and completely.	_____	_____	_____	_____
7. Stimulated interest in the class.	_____	_____	_____	_____
8. Used visual aids and other course materials effectively.	_____	_____	_____	_____
9. Was familiar with and used the student's training manual.	_____	_____	_____	_____
10. Presentation was at the appropriate technical level for the target audience.	_____	_____	_____	_____

PART F - WRITTEN COMMENTS

A. What did you like best or find most helpful about this course?

B. What did you like least about this course?

C. What subject might be added or expanded?

D. What subject might be deleted or discussed in less detail?

E. Additional comments:
