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INVITATION NO. DE-FB04-81AL17109

DATE: May 15, 1981

*Add 1 June 3, 1981*

S P E C I F I C A T I O N S

FOR

SHENANDOAH SOLAR TOTAL ENERGY PROJECT  
HIGH TEMPERATURE FLUID THERMAL INSULATION  
INDUSTRIAL PARK  
SHENANDOAH, GEORGIA

DEPARTMENT OF ENERGY  
ALBUQUERQUE OPERATIONS OFFICE  
P. O. BOX 5400  
ALBUQUERQUE, NEW MEXICO

LOCKWOOD GREENE ENGINEERS, Inc.  
P. O. BOX 491  
SPARTANBURG, SOUTH CAROLINA 29304

9052A

ID 1

**DRAWING AND SPECIFICATION TRANSMITTAL**  
**LOCKWOOD GREENE ENGINEERS, INC.**

SPARTANBURG, SOUTH CAROLINA 29304  
P.O. BOX 491 (803)582-2351

TO Sandia Dept. Of Energy  
P.O. Box 1139  
Newnan, GA 30264

DATE 4/1/81  
JOB NO. 80520.01  
JOB NAME Sandia Labs

TRANSMITTAL NO.  
SHEET OF  
ORDER NO.

ATTN: Mr. Bob Hunke

WE ARE SENDING YOU THE FOLLOWING DATA xxx HEREWITH \_\_\_\_\_ UNDER SEPARATE COVER

QUAN.	DOCUMENT NO.	REV. NO.	DESCRIPTION	VENDOR	CODE
1			Addendum No. 1 for Shenandoah Solar Total Energy Project High Temperature Fluid Insulation - Dated: April 2, 1981  Drawings Listed In Addendum		

CODE FOR

LOCKWOOD GREENE DOCUMENTS

- A - INFORMATION
- B - REVIEW
- C - APPROVAL
- D - REVISED DWG. (SEE REVISION)

- E - BID
- F - CONSTRUCTION
- G - PURCHASING
- H -

VENDOR DOCUMENTS

- K - NO CORRECTIONS NOTED
- L - MAKE CORRECTIONS NOTED
- M - REVISE AND RESUBMIT
- N - REJECTED (SEE REMARKS)

COPIES TO	QUAN	TRANS ONLY	CODE	COPIES TO	QUAN	TRANS ONLY	CODE
Heery & Heery	2			Atlanta Bldrs. Exchange	1		
Mr. Earl Rush	2			F.W. Dodge Atlanta	1		
Mr. George Pappas	1			F.W. Dodge Macon	1		
Mr. R.J. Bercik	1			F.W. Dodge Birmingham	1		
Mr. C. Herring	1			F.W. Dodge Montgomery	1		

REMARKS

F.W. Dodge Columbus 1  
Birmingham Builders Exchange 1

PLEASE ACKNOWLEDGE RECEIPT BY IMMEDIATE RETURN OF SIGNED COPY OF THIS TRANSMITTAL

RECEIVED BY \_\_\_\_\_ DATE \_\_\_\_\_ TRANSMITTED BY George Leonard

## BIDDERS LIST

80520-01

Sandia Labs

MCCORD INSULATION CO INC  
PO BOX 32032  
DECATUR GA 30032

1 set

TWG INC  
2723 ELTON ST  
ALBANY GA 31707

1 set

PUBLIC SERVICE CONT. INC  
PO BOX 2014  
HATTIESBURG MISS 39401

1 Set

CAROLCO INSULATION  
2921 WEST WATERS AVENUE  
TAMPA FL 33614

1 Set

CENTRAL MECHANICAL  
PO BOX 15345  
AUSTIN TX 78761

1 Set

PERMA-PIPE  
ATTN MR RUSSELL ZDON  
7720 LEHIGH AVENUE  
NILES IL 60648

1 Set

A T F CONSTRUCTION CO INC  
PO BOX 8031  
COLUMBUS GA 31908  
ATTN MR JOHNNY A BAXLEY

1 set

DHR INC  
1055 THOMAS JEFFERSON ST NW  
SUITE 414  
WASHINGTON DC 70007

1 set

ACE CONTRACTING CO  
PO BOX 6794 LAKEWOOD STA  
ATLANTA GA 30315

3 sets

ATF CONST CO  
PO BOX 3031  
COLUMBUS GA 31908

1 set

GANTT INSULATION INC  
PO BOX 3047  
MACON GA 31205

1 set

DEPARTMENT OF ENERGY  
ALBUQUERQUE OPERATIONS OFFICE  
POST OFFICE BOX 5400  
ALBUQUERQUE, NEW MEXICO 87115

INVITATION NO: DE-FB04-81AL-16339

SHENANDOAH SOLAR TOTAL ENERGY PROJECT HIGH TEMPERATURE FLUID INSULATION  
INDUSTRIAL PARK, SHENANDOAH, GEORGIA

The following revisions shall be incorporated into the specifications and drawings for this Project:

SECTION 01600. LIST OF DRAWINGS

This Section has been revised. Delete Section dated 2-6-81 and replace with revised Section dated 4-2-81. A copy of this revised Section is attached to this Addendum.

B. DRAWINGS:

Revised Drawings

The following drawings have been revised with revision date of 3-31-81 and accompany this Addendum.

<u>Drawing Number</u>	<u>Revision Number</u>
M-507	1

Additional Drawings

The following drawings have been added to this package and are now included in the project.

<u>Drawing Number</u>	<u>Revision</u>
M-515	0
M-516	0

C. BID OPENING DATE: April 16, 1981

D. OTHER TERMS AND CONDITIONS: All other terms and conditions of the specifications and drawings remain unchanged.

ALL BIDDERS MUST ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPACE PROVIDED IN THE BID FORM, OR SEPARATELY, IN WRITING, PRIOR TO THE BID OPENING IN THE SAME MANNER AS PROVIDED FOR MODIFICATIONS TO BIDS. FAILURE TO ACKNOWLEDGE RECEIPT OF AN ADDENDUM MAY BE CAUSE FOR REJECTION OF THE BID.

("End of Addendum")

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01600. LIST OF DRAWINGS

01601 DRAWINGS.

Drawings which constitute a part of the contract documents are as listed in this Section 01600.

<u>Drawing Number</u>	<u>Revision Number</u>	<u>Title</u>
M-500	0	Collector Field Piping Plan
M-501	0	Collector Field Piping Sections & Details
M-502	0	Collector Field Piping Details
M-503	0	Collector Field Piping Sections & Details
M-504	0	Collector Field Piping Sections & Details
M-505	0	Collector Field Piping Sections & Details
M-507	1	Mechanical Equipment Area Piping Plan
M-508	0	Mechanical Equipment Area Piping Plan
M-509	0	Mechanical Equipment Area Piping Sections & Details
M-510	0	Mechanical Equipment Area Piping Isometric & Details
M-511	0	Mechanical Equipment Area Sections & Details
M-515	0	Instrumentation Installation Details
M-516	0	Instrumentation Installation Details

V.  
WU AGT NEWN

WU INFOMASTER 1-018099A163 06/12/81  
ICS IPMACAD ATL  
ZCZC 02111 06-12 0315P EDT  
TLX 804351 WU AGT NEWN  
BT

1-014961C163019 06/12/81  
TLX LG ENG INC SPA  
019 SPARTANBURG SC JUNE 12, 1981  
PMS MR. R. W. HUNKE  
SANDIA LABORATORIES  
C/O P O BOX 1139  
NEWNAN GA 30264

RE: (80007.03) SHENANDOAH SOLAR TOTAL ENERGY PROJECT  
HIGH TEMPERATURE FLUID THERMAL INSULATION  
BID INVITATION NO: DE-FB04-81AL-17109  
ADDENDUM NO. 32

THE FOLLOWING DRAWINGS AND DATA: M-412-2, M-413-1, M-507-3,  
S-9-3 AND S-10-2 ARE BEING FORWARDED UNDER SEPARATE COVER AS  
ADDENDUM NO. 3 TO PROVIDE ADDITIONAL INFORMATION DETAILS FOR PIPE  
SUPPORTS AND EQUIPMENT IDENTIFICATION IN THE MECHANICAL AREA.  
THIS ADDENDUM CLARIFIES THE NEED FOR THE FOLLOWING CALCIUM  
SILICATE SUPPORTS (CLASS II), PER SECTION 1 ON DRAWING M-501 AND  
ON DRAWING M-507 FOR HTF-1 AND HTF-2 LINES IN THE MECHANICAL  
EQUIPMENT AREA OF DRAWING M-507.

QUANTITY EACH	PIPE SIZE INCHES	INSULATION THICKNESS INCHES
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1	3	4.0
14	4	4.5
12	4	6.0
9	1-1/2	4.5

LOCKWOOD GREENE ENGINEERS, INC.  
809436 LG ENG INC SPA

R. J. BERCIK

1304 EST

NNNN  
1422 EST

WU AGT NEWN

M

WU AGT NEWN

WU ATL F

JUNE 11 04 29

AAB143(1509)(1-020331B162-001)PD 06/11/81 1307

ICS IPMAAAA ATL

SUSPECTED DUPLICATE: 1-015451A162 AAD 111 ICS IPMACAC ATL  
02791 06-11 0200P EDT

PMS ATLANTA GA

BT

1-014473C162019 06/11/81

TLX LG ENG INC SPA

019 SPARTANBURG SC JUNE 11, 1981

PMS MR. R. W. HUNKE

SANDIA LABORATORIES

C/O P O BOX 1139

NEWNAN GA 30264

RE: (80007.03) SHENANDOAH SOLAR TOTAL ENERGY PROJECT  
HIGH TEMPERATURE FLUID THERMAL INSULATION  
BID INVITATION NO: DE-FB04-81AL-17109  
ADDENDUM NO. 2

- ITEM 1. REFER TO PARA. 2.02.C. THIS NOW READS AS FOLLOWS:  
ALL EQUIPMENT, FITTINGS, VALVES AND PIPING SHALL BE COVERED  
WITH 0.016 INCH THICK CORRUGATED ALUMINUM JACKET.
- ITEM 2. REFER TO DRAWINGS M-515-0 AND M-516-0, NOTE IN LOWER RIGHT  
CORNER: CHANGE THE INSULATION CLASS TO READ CLASS V (FIVE)  
DID READ CLASS II (TWO).

LOCKWOOD GREENE ENGINEERS, INC.  
809436 LG ENG INC SPA

R. J. BERCIK

western union

Telex/TWX

western union



BIDDERS LIST  
80520.01  
Sandia Labs

✓ MCCORD INSULATION CO INC  
P O BOX 32032 1 Set  
DECATUR GA 30032

✓ TWG INC  
2623 ELTON ST 1 Set  
ALBANY GA 31707

PUBLIC SERVICE CONT. INC  
P O BOX 2014 1 Set  
HATTIESBURG MISS 39401

CAROLCO INSULATION  
2921 WEST WATERS AVE. 1 Set  
TAMPA FLA 33614

CENTRAL MECHANICAL  
P O BOX 15345 1 Set  
AUSTIN TEXAS 78761

PERMA-PIPE  
ATTN MR RUSSEL ZDON 1 Set  
7720 LEHIGH AVENUE  
NILES ILL 60648

✓ A T F CONSTRUCTION CO INC 1 Set  
P O BOX 8031  
COLUMBUS GA 31908  
ATTN MR JOHNNY A BAXLEY

DHR INC  
1055 THOMAS JEFFERSON ST NW  
SUITE 414 1 Set  
WASHINGTON DC 70007

ACE CONTRACTING CO  
P O BOX 6794  
LAKEWOOD STATION 1 Set  
ATLANTA GA 30315

✓ A T F CONSTRUCTION CO  
P O BOX 3031 1 Set  
COLUMBUS GA 31908

✓ GANTT INSULATION INC  
P O BOX 3047 1 Set  
MACON GA 31205

✓ NORTH BROTHERS CO  
P O BOX 125557 1 Set  
ATLANTA GA 30348  
ATTN CLAUDE HAMES

✓ STARR DAVIS COMPANY  
6669 PEACHTREE IND. BLVD. 1 Set  
SUITE H  
NORCROSS GA 30092

✓ HAMCOCK PLUMBING COMPANY  
P O BOX 5085 1 Set  
MACON GA 31203

✓ SINGLETON ENTERPRISES  
P O BOX 19864 STA. N 1 Set  
ATLANTA GA 30325

INSTA FOAM PRODUCTS  
1500 CEDARWOOD DRIVE 1 Set  
JOLIET ILL 60435

ROY SNYDER & SON MECH.  
P O BOX 218 1 Set  
MORRISTOWN TENN 37814

AC & S  
120 N LIME STREET 1 Set  
LANCASTER PA 12603

DEPARTMENT OF ENERGY  
ALBUQUERQUE OPERATIONS OFFICE  
POST OFFICE BOX 5400  
ALBUQUERQUE, NEW MEXICO 87115

INVITATION NO: DE-FB04-81AL-17109

SHENANDOAH SOLAR TOTAL ENERGY PROJECT HIGH TEMPERATURE FLUID INSULATION  
INDUSTRIAL PARK, SHENANDOAH, GEORGIA

The following revisions shall be incorporated into the specifications and  
drawings for this Project:

Revised

SECTION 01600. LIST OF DRAWINGS

This Section has been revised. Delete Section dated 6-3-81 and replace  
with revised Section dated 6-11-81. A copy of this revised Section is  
attached to this Addendum.

A. DRAWINGS:

Revised Drawings

The following drawings have been revised with revision date of 6-11-81  
and accompany this Addendum.

<u>Drawing Number</u>	<u>Revision Number</u>
S-9	3
S-10	2
M-412	3
M-413	1
M-507	3

B. BID OPENING DATE: June 18, 1981.

C. OTHER TERMS AND CONDITIONS: All other terms and conditions of the  
specifications and drawings remain unchanged.

ALL BIDDERS MUST ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPACE  
PROVIDED IN THE BID FORM, OR SEPARATELY, IN WRITING, PRIOR TO THE BID  
OPENING IN THE SAME MANNER AS PROVIDED FOR MODIFICATIONS TO BIDS.  
FAILURE TO ACKNOWLEDGE RECEIPT OF AN ADDENDUM MAY BE CAUSE FOR  
REJECTION OF THE BID.

("End of Addendum")

DEPARTMENT OF ENERGY  
ALBUQUERQUE OPERATIONS OFFICE  
POST OFFICE BOX 5400  
ALBUQUERQUE, NEW MEXICO 87115

INVITATION NO: DE-FB04-81AL-17109

SHENANDOAH SOLAR TOTAL ENERGY PROJECT HIGH TEMPERATURE FLUID INSULATION  
INDUSTRIAL PARK, SHENANDOAH, GEORGIA

The following revisions shall be incorporated into the specifications and  
drawings for this Project:

Revised

1 Equal Employment Opportunity Pages EO-1, EO-2 and EO-4

SECTION 01600. LIST OF DRAWINGS

This Section has been revised. Delete Section dated 2-6-81 and replace  
with revised Section dated 6-3-81. A copy of this revised Section is  
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A. DRAWINGS:

Revised Drawings

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and accompany this Addendum.

<u>Drawing Number</u>	<u>Revision Number</u>
M-500	1
M-505	1
M-507	2
M-509	1
M-510	1

B. BID OPENING DATE: June 18, 1981.

C. OTHER TERMS AND CONDITIONS: All other terms and conditions of the  
specifications and drawings remain unchanged.

ALL BIDDERS MUST ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPACE  
PROVIDED IN THE BID FORM, OR SEPARATELY, IN WRITING, PRIOR TO THE BID  
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DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01600. LIST OF DRAWINGS

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M-508	0	Mechanical Equipment Area Piping Plan
M-509	1	Mechanical Equipment Area Piping Sections & Details
M-510	1	Mechanical Equipment Area Piping Isometric & Details
M-511	0	Mechanical Equipment Area Sections & Details
M-515	0	Instrumentation Installation Details
M-516	0	Instrumentation Installation Details
S-9	3	Equipment Area Pipe Support Plan
S-10	2	Pipe Support
M-412	3	Mechanical Equipment Area Pipe Supports Plan
M-413	1	Mechanical Equipment Area Pipe Support Details

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01600. LIST OF DRAWINGS

01601 DRAWINGS

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M-510	1	Mechanical Equipment Area Piping Isometric & Details
M-511	0	Mechanical Equipment Area Sections & Details
M-515	0	Instrumentation Installation Details
M-516	0	Instrumentation Installation Details

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION  
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Timetables	Goals for Minority participation for each trade	Goals for female participation in each trade
Until further notice	19.5%	6.9%

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These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the names, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.
  4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is Newnan, Coweta County, Georgia.
- 
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- 
-

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.



INVITATION NO. DE-FB04-81AL17109

DATE: May 15, 1981

S P E C I F I C A T I O N S

FOR

SHENANDOAH SOLAR TOTAL ENERGY PROJECT  
HIGH TEMPERATURE FLUID THERMAL INSULATION  
INDUSTRIAL PARK  
SHENANDOAH, GEORGIA

DEPARTMENT OF ENERGY  
ALBUQUERQUE OPERATIONS OFFICE  
P. O. BOX 5400  
ALBUQUERQUE, NEW MEXICO

LOCKWOOD GREENE ENGINEERS, Inc.  
P. O. BOX 491  
SPARTANBURG, SOUTH CAROLINA 29304

## SPECIFICATIONS

	<u>PAGES</u>
<b>I. <u>INVITATION DOCUMENTS</u></b>	
Invitation for Bids (SF-20, January 1961)	ID-3
Instructions to Bidders (SF-22, February 1978) and Supplement to SF-22	ID-4-8
<b>II. <u>BID DOCUMENTS</u></b>	
Bid Form (SF-21, February 1979)	BD-1-2
Representations and Certifications (SF-19B, June 1976) and Supplement to SF 19-B	BD-3-11
<b>III. <u>GENERAL PROVISIONS (SF-23A, APRIL 1975) AND SUPPLEMENT TO SF 23-A</u></b>	See General Provisions Index
<b>IV. <u>LABOR PROVISIONS</u></b>	
Labor Standards Provisions (SF-19A, January 1979) and Supplement to SF 19-A	LP1-3
Rates of Wages	1
<b>V. <u>EQUAL OPPORTUNITY PROVISIONS</u></b>	
Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)	E01-2
Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)	E03-9
<b>VI. <u>TECHNICAL PROVISIONS</u></b>	See Technical Provisions Index

STANDARD FORM 20  
JANUARY 1961 EDITION  
GENERAL SERVICES ADMINISTRATION  
FED. PROC. REG. (41 CFR) 1-16.401

## REFERENCE

Invitation No.:  
DE-FB04-81A17109

**INVITATION FOR BIDS**  
**(CONSTRUCTION CONTRACT)**

## DATE

May 15, 1981

## NAME AND LOCATION OF PROJECT

Shenandoah Solar Total Energy Project  
High Temperature Fluid Thermal  
Insulation  
Shenandoah, Georgia

## DEPARTMENT OR AGENCY

U. S. Department of Energy  
Albuquerque Operations Office  
Post Office Box 5400  
Albuquerque, New Mexico 87115

## BY (Issuing office)

U. S. Department of Energy  
Post Office Box 5400  
Albuquerque, New Mexico 87115

**Scaled bids in Original Only for the work described herein will be received until**

June 18, 1981, 1:00 p.m., Local Time

**at** (See Directions for Submitting Bids, Bid Form SF-21)

**and at that time publicly opened.**

**Information regarding bidding material, bid guarantee, and bonds**

A bid guarantee in a form specified in the Instructions to Bidders, SF-22, in a penal sum of not less than 20% of the total bid price will be required with each bid if the bid price is in excess of \$25,000.00. If surety bond is submitted, it shall be on a U.S. Standard Form 24.

**Wage Determination**

The wage rates set forth are the minimum rates which may be paid to the classifications of laborers and mechanics designated therein pursuant to the Davis-Bacon Act (Act of March 3, 1931, as amended; 40 U.S.C. 276a et seq.). DOE does not represent that said minimum rates do now, nor that they will at any time in the future, prevail in the locality of the work for such laborers or mechanics; nor that such mechanics or laborers are or will be obtainable at said rates for work under this contract; nor that said rates represent the most recent wage determination by the Secretary of Labor with respect to such classifications of laborers or mechanics in the locality of the work.

**Description of work**

Work includes providing and installation of thermal insulation for High Temperature Fluid (750°F). This work will consist of insulating piping, tanks, pumps, control valves and other high temperature fluid devices.

## INSTRUCTIONS TO BIDDERS

### (CONSTRUCTION CONTRACT)

**1. Explanations to Bidders.**—Any explanation desired by a bidder regarding the meaning or interpretation of the invitation for bids, drawings, specifications, etc., must be requested in writing and with sufficient time allowed for a reply to reach bidders before the submission of their bids. Any interpretation made will be in the form of an amendment of the invitation for bids, drawings, specifications, etc., and will be furnished to all prospective bidders. Its receipt by the bidder must be acknowledged in the space provided on the Bid Form (Standard Form 21) or by letter or telegram received before the time set for opening of bids. Oral explanations or instructions given before the award of the contract will not be binding.

**2. Conditions Affecting the Work.**—Bidders should visit the site and take such other steps as may be reasonably necessary to ascertain the nature and location of the work, and the general and local conditions which can affect the work or the cost thereof. Failure to do so will not relieve bidders from responsibility for estimating properly the difficulty or cost of successfully performing the work. The Government will assume no responsibility for any understanding or representations concerning conditions made by any of its officers or agents prior to the execution of the contract, unless included in the invitation for bids, the specifications, or related documents.

**3. Bidder's Qualifications.**—Before a bid is considered for award, the bidder may be requested by the Government to submit a statement regarding his previous experience in performing comparable work, his business and technical organization, financial resources, and plant available to be used in performing the work.

**4. Bid Guarantee.**—Where a bid guarantee is required by the invitation for bids, failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

A bid guarantee shall be in the form of a firm commitment, such as a bid bond, postal money order, certified check, cashier's check, irrevocable letter of credit or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Bid guarantees, other than bid bonds, will be returned (a) to unsuccessful bidders as soon as practicable after the opening of bids, and (b) to the successful bidder upon execution of such further contractual documents and bonds (including any necessary coinsurance or reinsurance agreements) as may be required by the bid as accepted.

If the successful bidder, upon acceptance of his bid by the Government within the period specified therein for acceptance (sixty days if no period is specified) fails to execute such further contractual documents, if any, and give such bond(s) (including any necessary coinsurance or reinsurance agreements) as may be required by the terms of the bid as accepted within the time specified (ten days if no period is specified) after receipt of the forms by him, his contract may be terminated for default. In such event he shall be liable for any cost of procuring the work which exceeds the amount of his bid, and the bid guarantee shall be available toward offsetting such difference.

**5. Preparation of Bids.**—(a) Bids shall be submitted on the forms furnished, or copies thereof, and must be manually signed. If erasures or other changes appear on the forms, each erasure or change must be initialed by the person signing the bid. Unless specifically authorized in the invitation for bids, telegraphic bids will not be considered.

(b) The bid form may provide for submission of a price or prices for one or more items, which may be lump sum bids, alternate prices, scheduled items resulting in a bid on a unit of construction or a combination thereof, etc. Where the bid form explicitly requires that the bidder bid on all items, failure to do so will disqualify the bid. When submission of a price on all items is not required, bidders should insert the words "no bid" in the space provided for any item on which no price is submitted.

(c) Unless called for, alternate bids will not be considered.

(d) Modification of bids already submitted will be considered if received at the office designated in the invitation for bids by the time set for opening of bids. Telegraphic modifications will be considered, but should not reveal the amount of the original or revised bid.

**6. Submission of Bids.**—Bids must be sealed, marked, and addressed as directed in the invitation for bids. Failure to do so may result in a premature opening of, or a failure to open, such bid.

**7. Withdrawal of Bids.**—Bids may be withdrawn by written or telegraphic request received from bidders prior to the time set for opening of bids. (See par. 8 regarding late withdrawals.)

**8. Late Bids, Modifications of Bids, or Withdrawal of Bids.—**(a) Any bid received at the office designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made and either:

(1) It was sent by registered or certified mail not later than the fifth calendar day prior to the date specified for the receipt of bids (e.g., a bid submitted in response to a solicitation requiring receipt of bids by the 20th of the month must have been mailed by the 15th or earlier); or

(2) It was sent by mail (or telegram if authorized) and it is determined by the Government that the late receipt was due solely to mishandling by the Government after receipt at the Government installation.

(b) Any modification or withdrawal of a bid is subject to the same conditions as in (a), above. A bid may also be withdrawn in person by a bidder or his authorized representative, provided his identify is made known and he signs a receipt for the bid, but only if the withdrawal is made prior to the exact time set for receipt of bids.

(c) The only acceptable evidence to establish:

(1) The date of mailing of a late bid, modification, or withdrawal sent either by registered or certified mail is the U.S. Postal Service postmark on both the envelope or wrapper and on the original receipt from the U.S. Postal Service. If neither postmark shows a legible date, the bid, modification, or withdrawal shall be deemed to have been mailed late. (The term "postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed on the date of mailing by employees of the U.S. Postal Service. Therefore, offerors should request the postal clerk to place a hand cancellation bull's-eye

"postmark" on both the receipt and the envelope or wrapper.)

(2) The time of receipt at the Government installation is the time-date stamp of such installation on the bid wrapper or other documentary evidence of receipt maintained by the installation.

(d) Notwithstanding (a) and (b) of this provision, a late modification of an otherwise successful bid which makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.

NOTE: The term "telegram" includes mailgrams.

**9. Public Opening of Bids.—**Bids will be publicly opened at the time set for opening in the invitation for bids. Their content will be made public for the information of bidders and others interested, who may be present either in person or by representative.

**10. Award of Contract.—**(a) Award of contract will be made to that responsible bidder whose bid, conforming to the invitation for bids is most advantageous to the Government, price and other factors considered.

(b) The Government may, when in its interest, reject any or all bids or waive any informality in bids received.

(c) The Government may accept any item or combination of items of a bid, unless precluded by the invitation for bids or the bidder includes in his bid a restrictive limitation.

**11. Contract and Bonds.—**The bidder whose bid is accepted will, within the time established in the bid, enter into a written contract with the Government and, if required, furnish performance and payment bonds on Government standard forms in the amounts indicated in the invitation for bids or the specifications.

SUPPLEMENT TO STANDARD FORM 22, INSTRUCTIONS TO BIDDERS  
(February 1978 Edition)

12. INFORMATION REGARDING BUY AMERICAN ACT

- (a) The Buy American Act (41 U.S.C. 10a-10d) generally requires that only domestic construction material be used in the performance of this contract. (See the clause entitled "Buy American" in Standard Form 23A, General Provisions, Construction Contract.) This requirement does not apply to the following construction materials or components:

Antimony  
Asbestos  
Bauxite  
Chrome ore or chromite  
Cobalt  
Cork  
Graphite  
Jute and jute burlaps  
Logs, veneer and lumber from balsa, greenheart, lignum vitae, mahogany, and teak.  
Mica  
Nickel  
Rubber, crude and latex

- (b) (1) Furthermore, bids or proposals offering use of additional non-domestic construction material may be acceptable for award if the Government determines that use of comparable domestic construction material is impracticable or would unreasonably increase the cost or that domestic construction material (in sufficient and reasonably available commercial quantities and of a satisfactory quality) is unavailable. Reliable evidence shall be furnished justifying such use of additional nondomestic construction material.
- (2) Where it is alleged that the use of domestic construction material would unreasonably increase the cost:
- (i) data shall be included, based on a reasonable canvass of suppliers, demonstrating that the cost of each such domestic construction material would exceed by more than 6 percent the cost of comparable nondomestic construction material. (All costs of delivery to the construction site shall be included, as well as any applicable duty.)

- (ii) for evaluation purposes, 6 percent of the cost of all additional nondomestic construction material, which qualifies under paragraph (i), above, will be added to the bid or proposal.
- (3) When offering additional nondomestic construction material, bids or proposals may also offer, at stated prices, any available comparable domestic construction materials, so as to avoid the possibility that failure of a nondomestic construction material to be acceptable, under (b)(1), above, will cause rejection of the entire bid.

13. INFORMATION REGARDING BIDDERS

Each bidder shall have the following information (completed in all respects) on file with the Contracting Officer prior to award of this contract:

- (a) Standard Government Form No. 129 - Bidders Mailing List Application.
- (b) Data on Plant to be used on construction jobs.
- (c) Experience Data.

Forms for submission of above information are available from the Contracts & Procurement Division, U.S. Department of Energy, P. O. Box 5400, Albuquerque, New Mexico 87115, or the issuing office.

Any substantial change in status of, or information concerning the bidder shall be submitted to the Contracting Officer promptly. The data submitted by the bidder will be considered by the Contracting Officer in determining whether the low bidder is sufficiently responsible and experienced in work of the nature provided for in this project and able to successfully complete the work in a timely fashion.

14. BONDS

- (a) Payment Bond

The Contractor shall furnish either (i) good and sufficient surety or sureties acceptable to the Government for the protection of persons furnishing material or labor in connection with the performance of the work under this contract on U.S. Standard Form No. 25A, or (ii) in lieu thereof, to deposit for this purpose one of the types of security listed in Federal Procurement Regulation (41 CFR 1-10.204). The penal sum of such security shall be 50% of the contract price or estimated contract price. If this contract is in excess of \$1 million dollars but not more than \$5 million dollars the penal sum shall be 40% of the contract price or estimated contract price. When the contract price is more than \$5 million dollars, the penal sum shall be \$2,500,000.

(b) Performance Bond

The Contractor shall furnish either (i) a performance bond with good and sufficient surety or sureties acceptable to the Government in connection with the performance of the work under this contract on U.S. Standard Form No. 25, or (ii) in lieu thereof, to deposit for this purpose one of the types of security listed in Federal Procurement Regulation (41 CFR) 1-10.204. Unless otherwise specified in Division 1, the penal sum of such performance bond shall be 100% of the contract price (or estimated contract price).

(c) Date of Bond

Any bonds or other securities required hereunder will be dated as of the same or later date than the date of the contract and will be furnished by the Contractor to the Government at the time the contract is executed.

15. PREPARATION OF BIDS

The sealed envelope submitted by each bidder shall contain only one each of the following documents. Complete all documents.

- (a) Bid Form (Standard Form 21). Acknowledge all addendum on the Bid Form.
- (b) Representations and Certifications (Standard Form 19B), including Supplement to SF 19B.
- (c) Bid Guarantee in accordance with Paragraph 4 of Instructions to Bidders.

If not provided separately, the Standard Forms 19B and 21 shall be removed from a bound set of these specifications. The bidder may submit, with the bid, the information requested by paragraph 14, above.

16. SITE INSPECTION

Bidders may visit the site at anytime during daylight hours. Site is located in the Shenandoah Industrial Park adjacent to and east of the Bleyle Plant.

Technical inquiries may be directed to:

Name R. W. Hunke

Address: P. O. Box 1139, Newnan, Georgia 30264 Telephone 404-253-0218



<b>BID FORM (Construction Contract)</b>		REFERENCE Invitation No.: DE-FB04-81AL17109
Read the instructions to Bidders (Standard Form 22). This form is to be submitted in Original Only		DATE OF INVITATION May 15, 1981
NAME AND LOCATION OF PROJECT Shenandoah Solar Total Energy Project - High Temperature Fluid Thermal Insulation Industrial Park Shenandoah, Georgia	BIDDER'S NAME AND ADDRESS (include ZIP Code) (Type or print)	
	TELEPHONE NUMBER (include Area Code)	DATE

**TO:** Solar Total Energy Project  
Shenandoah, Georgia  
Post Office Box 1139  
Newnan, Georgia 30264

(See Reverse of Form)

In compliance with the above-dated invitation for bids, the undersigned hereby proposes to perform all work for construction of the Solar Total Energy Project - High Temperature Fluid Thermal Insulation to be located in Shenandoah, Georgia.

in strict accordance with the General Provisions (Standard Form 23-A), Labor Standards Provisions Applicable to Contracts in Excess of \$2,000 (Standard Form 19-A), specifications, schedules, drawings, and conditions, for the following amount(s)

The Lump Sum of \$ \_\_\_\_\_

The undersigned agrees that, upon written acceptance of this bid, mailed or otherwise furnished within \_\_\_\_\_ calendar days (45\*\* calendar days unless a different period is inserted by the bidder) after the date of opening of bids, he will within 15 calendar days (unless a longer period is allowed) after receipt of the prescribed forms, execute Standard Form 23, Construction Contract, and give performance and payment bonds\*, as required, on Government standard forms with good and sufficient surety. The undersigned further agrees that, when reinsurance agreements are contemplated, all necessary reinsurance agreements will be on Government forms and will be executed and submitted with the bonds. However, when an additional period of 45 days (not to exceed 45 calendar days) is authorized by the procuring activity, reinsurance agreements may be submitted within such period after the execution of the bond.

\*Performance and payment bonds shall be furnished when (1) the contract award resulting from this bid exceeds \$25,000, or (2) bonds are specifically required by the Invitation for Bids (Standard Form 20).

The undersigned agrees, if awarded the contract, to commence the work within 10 calendar days after the date of receipt of notice to proceed, and to complete the work within 200 calendar days after the date of receipt of notice to proceed.

\*\*Bids acceptance period. Bids offering less than 45 days for acceptance by the Government from the date set for opening will be considered nonresponsive and will be rejected.

RECEIPT OF AMENDMENTS: The undersigned acknowledges receipt of the following amendments of the invitation for bids, drawings, and/or specifications, etc. (Give number and date of each):

AMENDMENT NO.					
DATE					
AMENDMENT NO.					
DATE					

The representations and certifications on the accompanying STANDARD FORM 19-B are made a part of this bid.

ENCLOSED IS BID GUARANTEE, CONSISTING OF		IN THE AMOUNT OF
NAME OF BIDDER (Type or print)		FULL NAME OF ALL PARTNERS (Type or print)
BUSINESS ADDRESS (Type or print (include "ZIP Code"))		
BY (Signature in ink. Type or print name under signature)		
TITLE (Type or print)		

DIRECTIONS FOR SUBMITTING BIDS: Envelopes containing bids, guarantec, etc., must be sealed, marked, and addressed as follows:

Mailed bids shall be sent to the address shown on the front of the Bid Form. Hand carried bids will be accepted on the day of the bid opening from 12:00 noon (Local Time) until the bid opening at the Holiday Inn, Main Meeting Room, Intersection Hwy. 1-85 & US29, Newnan, Georgia 32063.

**REPRESENTATIONS AND CERTIFICATIONS****(Construction and Architect-Engineer Contract)****(For use with Standard Forms 19, 21 and 252)**

REFERENCE (Enter same No.(s) as on SF 19, 21 and 252)

Invitation No.:  
DE-FB04-81AL17109

NAME AND ADDRESS OF BIDDER (No., Street, City, State, and ZIP Code)

DATE OF BID

*In negotiated procurements, "bid" and "bidder" shall be construed to mean "offer" and "offeror."*

The bidder makes the following representations and certifications as a part of the bid identified above. (Check appropriate boxes.)

**1. SMALL BUSINESS**

He  is,  is not, a small business concern. (A small business concern for the purpose of Government procurement is a concern, including its affiliates, which is independently owned and operated, is not dominant in the field of operations in which it is bidding on Government contracts, and can further qualify under the criteria concerning number of employees, average annual receipts, or other criteria as prescribed by the Small Business Administration. For additional information see governing regulations of the Small Business Administration (13 CFR Part 121)).

**2. MINORITY BUSINESS ENTERPRISE**

He  is,  is not a minority business enterprise. A minority business enterprise is defined as a "business, at least 50 percent of which is owned by minority group members or, in case of publicly owned businesses, at least 51 percent of the stock of which is owned by minority group members." For the purpose of this definition, minority group members are Negroes, Spanish-speaking American persons, American-Orientals, American-Indians, American-Eskimos, and American-Aleuts."

**3. CONTINGENT FEE**

(a) He  has,  has not, employed or retained any company or person (other than a full-time bona fide employee working solely for the bidder) to solicit or secure this contract, and (b) he  has,  has not, paid or agreed to pay any company or person (other than a full-time bona fide employee working solely for the bidder) any fee, commission, percentage or brokerage fee, contingent upon or resulting from the award of this contract; and agrees to furnish information relating to (a) and (b) above as requested by the Contracting Officer. (For interpretation of the representation, including the term "bona fide employee," see Code of Federal Regulations, Title 41, Subpart 1-1.5.)

**4. TYPE OF ORGANIZATION**

He operates as an  individual,  partnership,  joint venture,  corporation, incorporated in State of .....

**5. INDEPENDENT PRICE DETERMINATION**

(a) By submission of this bid, each bidder certifies, and in the case of a joint bid each party thereto certifies as to his own organization, that in connection with this procurement:

(1) The prices in this bid have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;

(2) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, in the case of a bid, or prior to award, in the case of a proposal, directly or indirectly to any other bidder or to any competitor; and

(3) No attempt has been made or will be made by the bidder to induce any other person or firm to submit or not to submit a bid for the purpose of restricting competition.

(b) Each person signing this bid certifies that:

(1) He is the person in the bidder's organization responsible within that organization for the decision as to the prices being bid herein and that he has not participated, and will not participate, in any action contrary to (a)(1) through (a)(3) above; or

(2) (i) He is not the person in the bidder's organization responsible within that organization for the decision as to the prices being bid herein but that he has been authorized in writing to act as agent for the persons responsible for such decision in certifying that such persons have not participated, and will not participate, in any action contrary to (a)(1) through (a)(3) above, and as their agent does hereby so certify; and (ii) he has not participated, and will not participate, in any action contrary to (a)(1) through (a)(3) above.

(c) This certification is not applicable to a foreign bidder submitting a bid for a contract which requires performance or delivery outside the United States, its possessions, and Puerto Rico.

(d) A bid will not be considered for award where (a)(1), (a)(3), or (b) above, has been deleted or modified. Where (a)(2) above, has been deleted or modified, the bid will not be considered for award unless the bidder furnishes with the bid a signed statement which sets forth in detail the circumstances of the disclosure and the head of the agency, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

**NOTE.**—Bids must set forth full, accurate, and complete information as required by this invitation for bids (including attachments). The penalty for making false statements in bids is prescribed in 18 U.S.C. (1001).

THE FOLLOWING NEED BE CHECKED ONLY IF BID EXCEEDS \$10,000 IN AMOUNT.

#### 6. EQUAL OPPORTUNITY

He  has,  has not, participated in a previous contract or subcontract subject to the Equal Opportunity Clause herein, the clause originally contained in Section 301 of Executive Order No. 10925, or the clause contained in Section 201 of Executive Order No. 11114; he  has,  has not, filed all required compliance reports; and representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained prior to subcontract awards.

(The above representations need not be submitted in connection with contracts or subcontracts which are exempt from the equal opportunity clause.)

#### 7. PARENT COMPANY AND EMPLOYER IDENTIFICATION NUMBER

Each bidder shall furnish the following information by filling in the appropriate blocks:

(a) Is the bidder owned or controlled by a parent company as described below?  Yes  No. (For the purpose of this bid, a parent company is defined as one which either owns or controls the activities and basic business policies of the bidder. To own another company means the parent company must own at least a majority (more than 50 percent) of the voting rights in that company. To control another company, such ownership is not required; if another company is able to formulate, determine, or veto basic business policy decisions of the bidder, such other company is considered the parent company of the bidder. This control may be exercised through the use of dominant minority voting rights, use of proxy voting, contractual arrangements, or otherwise.)

(b) If the answer to (a) above is "Yes," bidder shall insert in the space below the name and main office address of the parent company.

NAME OF PARENT COMPANY	MAIN OFFICE ADDRESS (No., Street, City, State, and ZIP Code)
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(c) Bidder shall insert in the applicable space below, if he has no parent company, his own Employer's Identification Number (E.I. No.) (Federal Social Security Number used on Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941), or, if he has a parent company, the E.I. No. of his parent company.

EMPLOYER IDENTIFICATION NUMBER OF	 PARENT COMPANY	BIDDER
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#### 8. CERTIFICATION OF NONSEGREGATED FACILITIES

(Applicable to (1) contracts, (2) subcontracts, and (3) agreements with applicants who are themselves performing federally assisted construction contracts, exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause.)

By the submission of this bid, the bidder, offeror, applicant, or subcontractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The bidder, offeror, applicant, or subcontractor agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. He further agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause; that he will retain such certifications in his files; and that he will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

#### NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES

A Certification of Nonsegregated Facilities must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

#### 9. CLEAN AIR AND WATER

(Applicable if the bid or offer exceeds \$100,000, or the contracting officer has determined that orders under an indefinite quantity contract in any year will exceed \$100,000, or a facility to be used has been the subject of a conviction under the Clean Air Act (42 U.S.C. 1857c-8(c)(1)) or the Federal Water Pollution Control Act (33 U.S.C. 1319(c)) and is listed by EPA, or is not otherwise exempt.)

The bidder or offeror certifies as follows:

(a) Any facility to be utilized in the performance of this proposed contract has , has not , been listed on the Environmental Protection Agency List of Violating Facilities.

(b) He will promptly notify the contracting officer, prior to award, of the receipt of any communication from the Director, Office of Federal Activities, Environmental Protection Agency, indicating that any facility which he proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities.

(c) He will include substantially this certification, including this paragraph (c), in every nonexempt subcontract.

SUPPLEMENT TO STANDARD FORM 19B,

REPRESENTATIONS AND CERTIFICATIONS, June 1976 EDITION

10. AFFIRMATIVE ACTION PROGRAM

The bidder (or offeror) represents that (a) he (\_\_\_\_\_) has developed and has on file (\_\_\_\_\_) has not developed and does not have on file at each establishment affirmative action programs as required by the rules and regulations of the Secretary of Labor (41 CFR 60-1), or (b) he (\_\_\_\_\_) has not previously had contracts subject to the written affirmative action program requirement of the rules and regulations of the Secretary of Labor.

The bidder (or offeror) agrees that he will make good faith efforts to adhere to the affirmative action plan set forth in this invitation for bids. Prior to the award of a construction contract resulting from this Invitation for Bids, the Contracting Officer shall determine in accordance with FPR 1-1.1203 and 1-12.803 that the prospective contractor appears to be able to conform to the requirements of the Equal Opportunity clause and the applicable Affirmative Action Program.

11. WOMAN-OWNED BUSINESS

(The following representation is required in all bids in excess of \$10,000.)

Concern is (\_\_\_\_\_) is not (\_\_\_\_\_) a woman-owned business.

A woman-owned business is a business which is, at least, 51 percent owned, controlled, and operated by a woman or women. Controlled is defined as exercising the power to make policy decisions. Operated is defined as actively involved in the day-to-day management.

For the purpose of this definition, businesses which are publicly owned, joint-stock associations, and business trusts are excepted. Exempted businesses may voluntarily represent that they are, or are not, woman-owned if this information is available.

12. PERCENT OF FOREIGN CONTENT

The offeror/contractor will represent (as an estimate), immediately after the award of a contract, the percent of the foreign content of the item or service being procured expressed as a percent of the contract award price (accuracy within plus or minus 5 percent is acceptable).

13. ALTERATION TO STANDARD FORM 19B

Paragraph 7 of SF-19B is amended to include a new subsection (d).

(d) DUN AND BRADSTREET DATA UNIVERSAL NUMBERING SYSTEM (DUNS)

(Applicable only to contracts exceeding \$10,000.) The offeror/contractor is requested to furnish its DUNS number, if one has been assigned.

DUNS Number \_\_\_\_\_.

The government will obtain the number for the contractor who has not been assigned a number. There is no charge to the contractor for assignment of a DUNS number for purposes of Government contracts.

14. SMALL AND SMALL DISADVANTAGED BUSINESS CERTIFICATION

- (A) The offeror ( ) contractor ( ) certifies that he is ( ) is not ( ) a small business concern as defined in accordance with Section 3 of the Small Business Act (15 U.S.C. 632).
- (B) The offeror ( ) contractor ( ) certifies that he is a small business (as set forth in (A.) above) and is ( ) is not ( ) owned and controlled by socially and economically disadvantaged individuals. Such a firm is defined as one:
- (i) which is at least 51 per centum owned by one or more such individuals or, in the case of publicly owned business, at least 51 per centum of the stock is owned by such individuals,
  - (ii) whose management and daily business operations are controlled by one or more such individuals, and
  - (iii) which certifies concerning said ownership and control in accordance with section (C) below.
- (C) The offeror ( ) contractor ( ) certifies that he is ( ) is not ( ) a minority individual(s) in accordance with (C)(i) below or that he is ( ) is not ( ) socially and economically disadvantaged in accord with section (C) (ii) or (C) (iii). Socially and economically disadvantaged individuals are defined as:
- (i) United States citizens who are Black Americans, Hispanic Americans, Native Americans, or other specified minorities;
  - (ii) any other individual found to be disadvantaged pursuant to section 8(a) of the Small Business Act (15 U.S.C. 637); or
  - (iii) any other individual defined as socially, and economically disadvantaged, for purposes relating to other sections of the Small Business Act.

No solicitation may be properly considered without this certification and no award may be made without it being executed.

15. CERTIFICATION REGARDING SUBCONTRACTING AND PLANS

Subcontracting Representation

- (A) The offeror ( ) contractor ( ) represents that the following conditions prevail which determine whether the firm shall be required to submit a subcontracting plan for small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals:
- (i) he is ( ) a small business as defined in accordance with Section 3 of the Small Business Act (15 U.S.C. 632);
  - (ii) Subcontracting possibilities are not ( ) offered with respect to this contract;
  - (iii) the contract, including all subcontracts thereunder, will be performed entirely outside of the United States, its territories and possessions, the District of Columbia and the Commonwealth of Puerto Rico and is therefore not covered ( );
  - (iv) the contract, including all prior modifications and/or extensions of which this award is a part and all projected future actions, shall not ( ) exceed \$1,000,000 (if solely for construction of a public facility) or \$500,000 otherwise; and
  - (v) the contract is for services which are personal in nature and is therefore not covered ( ).
- (B) The offeror ( ) contractor ( ) represents that he is ( ) is not ( ) required to submit plans for subcontracting with small and small disadvantaged businesses because he has properly executed one or more of the above representations.
- (C) the offeror ( ) contractor ( ) certifies that he will submit ( ) a Subcontracting Plan in accordance with the terms and conditions specified unless exempted by (A) above, and that he will ( ) will not ( ) require it of all appropriate subcontractors unless they certify that they are exempt.

Failure to execute this representation will be deemed a minor informality and the offeror will be permitted to correct the omission prior to award.

16. CERTIFICATION - WAGE AND PRICE STANDARDS (1979 JAN)

(Applicable to awards in excess of \$5 million, and awards of indefinite delivery type contracts under which cumulative orders are expected to exceed \$5 million.)

- (a) By submission of this bid or offer, the bidder or offeror certifies that he is in compliance with the Wage and Price Standards issued by the Council on Wage and Price Stability (6 CFR Part 705, Appendix, and Part 706).
- (b) The clause entitled, "Certification - Wage and Price Standards," set forth elsewhere in this solicitation, shall be incorporated in any resulting contract except where waived by agency head involved.

17. PRINCIPAL PLACE OF PERFORMANCE

Following is the name and location of the principal plant or place of business where the item(s) will be produced or supplied from stock or where the services will be performed.

\_\_\_\_\_  
(Name of plant or place of business)

18. SOLICITATION NOTICE - SMALL BUSINESS AND SMALL DISADVANTAGED BUSINESS SUBCONTRACTING PLAN (ADVERTISED), FPR TR50/2, 06/01/80; 45FR35809, 05/28/80

- (a) This provision does not apply to small business concerns.
- (b) The term "subcontract" means any agreement (other than one involving an employer-employee relationship) entered into by a Federal Government prime contractor or subcontractor calling for supplies or services required for the performance of the original contract or subcontract.
- (c) The bidder acknowledges that it is aware of the subcontracting plan requirement in this provision; and if selected for award, will submit within the time specified by the Contracting Officer a subcontracting plan that will afford the maximum practicable opportunity to participate in the performance of the contract to small and small disadvantaged concerns, and will include:
  - (1) Percentage goals (expressed in terms of percentage of total planned subcontracting dollars) for the utilization as subcontractors of small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals; (For the purposes of the subcontracting plan, the Contractor may include all purchases which contribute to the performance of the contract, including a proportionate share of products, services, etc., whose costs are normally allocated as indirect or overhead costs.)
  - (2) As part of its establishment of percentage goals the apparent successful bidder shall also include in its subcontracting plan:



- (i) A statement of: total dollars planned to be subcontracted; total dollars planned to be subcontracted to small business; and total dollars planned to be subcontracted to small disadvantaged business.
  - (ii) A description of the principal product and service areas to be subcontracted and an identification of those areas where it is planned to use small business subcontractors, and small disadvantaged business subcontractors.
- (3) The name of an individual within the employ of the bidder who will administer the bidder's subcontracting program and a description of the duties of such individual.
- (4) A description of the efforts the bidder will take to assure that small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals will have an equitable opportunity to compete for subcontracts.
- (5) Assurances that the bidder will include the clause entitled, "Utilization of Small Business Concerns and Small Business Concerns Owned and Controlled by Socially and Economically Disadvantaged Individuals" in all subcontracts which offer further subcontracting opportunities and to require all subcontractors (except small business concerns) which receive subcontracts in excess of \$500,000, or in the case of a contract for the construction of any public facility, \$1,000,000, to adopt and comply with a plan similar to the plan agreed to by the bidder.
- (6) Assurances that the bidder will submit such periodic reports and cooperate in any studies or surveys as may be required by the contracting agency or the Small Business Administration in order to determine the extent of compliance by the bidder with the subcontracting plan.
- (7) A recitation of the types of records the successful bidder will maintain to demonstrate procedures which have been adopted to comply with the requirements and goals set forth in the plan, including the establishment of source lists of small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals; and efforts to identify and award subcontracts to such small business concerns. The records shall include at least the following (these records may be maintained on a plant-wide or company-wide basis unless otherwise indicated):
  - (i) Small and disadvantaged business source lists, guides and other data identifying small and disadvantaged business vendors.

- (ii) Organizations contacted for small and disadvantaged business sources.
- (iii) On a contract-by-contract basis, records on all subcontract solicitations over \$100,000, indicating on each solicitation whether small business was solicited, and if not why not; whether small disadvantaged business was solicited, and if not why not; and reasons for the failure of solicited small business or small disadvantaged business to receive the subcontract award.
- (iv) Records to support other outreach efforts:
  - o Contacts with minority and small business trade associations.
  - o Contacts with business development organizations.
  - o Attendance at small and minority business procurement conferences and trade fairs.
- (v) Records to support internal activities to guide and encourage buyers:
  - o Workshops, seminars, training programs.
  - o Monitoring activities to evaluate compliance.
- (vi) On a contract-by-contract basis, records to support award data submitted to the Government to include name and address of subcontractor.

(d) The bidder understands that:

- (1) It agrees to carry out the Government's policy to provide the maximum practicable opportunity for small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals to participate in the performance of the contract, consistent with its efficient performance.
- (2) If it does not submit a subcontracting plan within the time limits prescribed by the contracting agency, it will be ineligible to be awarded the contract.
- (3) Prior compliance of the bidder with other such subcontracting plans under previous contracts will be considered by the Contracting Officer in determining the responsibility of the offeror for award of the contract.
- (4) It is the bidder's responsibility to develop a subcontracting plan with respect to both small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals and that each such aspect of the plan will be judged independently of the other.

- (e) The failure of any contractor or subcontractor to comply in good faith with:
- (1) The clause entitled "Utilization of Small Business Concerns and Small Business Concerns Owned and Controlled by Socially and Economically Disadvantaged Individuals."
  - (2) The terms of any subcontracting plan required by this Small Business and Small Disadvantaged Business Subcontracting Plan (Advertised) provision, will be a material breach of the contract or subcontract.
- (f) Commercial Products. If a commercial product (defined below) is offered, the required subcontracting plan may relate to the company's or division's production generally (both for commercial and noncommercial products) rather than solely to the item being procured under the Government contract. In such cases, the Contractor shall be required to submit one company-wide, annual plan to be reviewed for approval by the first agency with which it enters into a prime contract (which requires a subcontracting plan) during the fiscal year, or by another agency satisfactory to the Contracting Officer. The approved plan will remain in effect for the company's entire fiscal year for all of the company's or division's commercial products.

The term "commercial products" means products in regular production sold in substantial quantities to the general public and/or industry at established market or catalog prices. A product which, in the opinion of the Contracting Officer, differs only insignificantly from the Contractor's commercial product may be regarded for the purpose of this clause as a commercial product.

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# GENERAL PROVISIONS

## (Construction Contract)

### 1. DEFINITIONS

(a) The term "head of the agency" or "Secretary" as used herein means the Secretary, the Under Secretary, any Assistant Secretary, or any other head or assistant head of the executive or military department or other Federal agency; and the term "his duly authorized representative" means any person or persons or board (other than the Contracting Officer) authorized to act for the head of the agency or the Secretary.

(b) The term "Contracting Officer" as used herein means the person executing this contract on behalf of the Government and includes a duly appointed successor or authorized representative.

### 2. SPECIFICATIONS AND DRAWINGS

The Contractor shall keep on the work a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy either in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at his own risk and expense. The Contracting Officer shall furnish from time to time such detail drawings and other information as he may consider necessary, unless otherwise provided.

### 3. CHANGES

(a) The Contracting Officer may, at any time, without notice to the sureties, by written order designated or indicated to be a change order, make any change in the work within the general scope of the contract, including but not limited to changes:

(1) In the specifications (including drawings and designs);

(2) In the method or manner of performance of the work;

(3) In the Government-furnished facilities, equipment, materials, services, or site; or

(4) Directing acceleration in the performance of the work.

(b) Any other written order or an oral order (which terms as used in this paragraph (b) shall include direction, instruction, interpretation, or determination) from the Contracting Officer, which causes any such change, shall be treated as a change order under this clause, provided that the Contractor gives the Contracting Officer written notice stating the date, circumstances, and source of the order and that the Contractor regards the order as a change order.

(c) Except as herein provided, no order, statement, or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment hereunder.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any order, an equitable adjustment shall be made and the contract modified in writing accordingly: *Provided, however,* That except for claims based on defective specifications, no claim for any change under (b) above shall be allowed for any costs incurred more than 20 days before the Contractor gives written notice as therein required: *And provided further,* That in the case of defective specifications for which the Government is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with such defective specifications.

(e) If the Contractor intends to assert a claim for an equitable adjustment under this clause, he must, within 30 days after receipt of a written change order under (a) above or the furnishing of a written notice under (b) above, submit to the Contracting Officer a written statement setting forth the general nature and monetary extent of such claim,

unless this period is extended by the Government. The statement of claim hereunder may be included in the notice under (b) above.

(f) No claim by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment under this contract.

### 4. DIFFERING SITE CONDITIONS

(a) The Contractor shall promptly, and before such conditions are disturbed, notify the Contracting Officer in writing of: (1) Subsurface or latent physical conditions at the site differing materially from those indicated in this contract, or (2) unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in this contract. The Contracting Officer shall promptly investigate the conditions, and if he finds that such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under this contract, whether or not changed as a result of such conditions, an equitable adjustment shall be made and the contract modified in writing accordingly.

(b) No claim of the Contractor under this clause shall be allowed unless the Contractor has given the notice required in (a) above; provided, however, the time prescribed therefor may be extended by the Government.

(c) No claim by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment under this contract.

### 5. TERMINATION FOR DEFAULT—DAMAGES FOR DELAY—TIME EXTENSIONS

(a) If the Contractor refuses or fails to prosecute the work or any separable part thereof, with such diligence as will insure its completion within the time specified in this contract, or any extension thereof, or fails to complete said work within such time, the Government may, by written notice to the Contractor, terminate his right to proceed with the work or such part of the work as to which there has been delay. In such event the Government may take over the work and prosecute the same to completion, by contract or otherwise, and may take possession of and utilize in completing the work such materials, appliances, and plant as may be on the site of the work and necessary therefor. Whether or not the Contractor's right to proceed with the work is terminated, he and his sureties shall be liable for any damage to the Government resulting from his refusal or failure to complete the work within the specified time.

(b) If fixed and agreed liquidated damages are provided in the contract and if the Government so terminates the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the Government in completing the work.

(c) If fixed and agreed liquidated damages are provided in the contract and if the Government does not so terminate the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until the work is completed or accepted.

(d) The Contractor's right to proceed shall not be so terminated nor the Contractor charged with resulting damage if:

(1) The delay in the completion of the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, acts of the public enemy, acts of the Government in either its sovereign or contractual capacity, acts of another contractor in the performance of a contract with the Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and such subcontractors or suppliers; and

(2) The Contractor, within 10 days from the beginning of any such delay (unless the Contracting Officer grants a

under the contract), notifies the Contracting Officer in writing of the causes of delay.

The Contracting Officer shall ascertain the facts and the extent of the delay and extend the time for completing the work when, in his judgment, the findings of fact justify such an extension, and his findings of fact shall be final and conclusive on the parties, subject only to appeal as provided in Clause 6 of these General Provisions.

(e) If, after notice of termination of the Contractor's right to proceed under the provisions of this clause, it is determined for any reason that the Contractor was not in default under the provisions of this clause, or that the delay was excusable under the provisions of this clause, the rights and obligations of the parties shall, if the contract contains a clause providing for termination for convenience of the Government, be the same as if the notice of termination had been issued pursuant to such clause. If, in the foregoing circumstances, this contract does not contain a clause providing for termination for convenience of the Government, the contract shall be equitably adjusted to compensate for such termination and the contract modified accordingly; failure to agree to any such adjustment shall be a dispute concerning a question of fact within the meaning of the clause of this contract entitled "Disputes."

(f) The rights and remedies of the Government provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

(g) As used in Paragraph (d) (1) of this clause, the term "subcontractors or suppliers" means subcontractors or suppliers at any tier.

## 6. DISPUTES

(a) Except as otherwise provided in this contract, any dispute concerning a question of fact arising under this contract which is not disposed of by agreement shall be decided by the Contracting Officer, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor. The decision of the Contracting Officer shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Contractor mails or otherwise furnishes to the Contracting Officer a written appeal addressed to the head of the agency involved. The decision of the head of the agency or his duly authorized representative for the determination of such appeals shall be final and conclusive. This provision shall not be pleaded in any suit involving a question of fact arising under this contract as limiting judicial review of any such decision to cases where fraud by such official or his representative or board is alleged: *Provided, however*, That any such decision shall be final and conclusive unless the same is fraudulent or capricious or arbitrary or so grossly erroneous as necessarily to imply bad faith or is not supported by substantial evidence. In connection with any appeal proceeding under this clause, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of his appeal. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the contract and in accordance with the Contracting Officer's decision.

(b) This Disputes clause does not preclude consideration of questions of law in connection with decisions provided for in paragraph (a) above. Nothing in this contract, however, shall be construed as making final the decision of any administrative official, representative, or board on a question of law.

## 7. PAYMENTS TO CONTRACTOR

(a) The Government will pay the contract price as herein-after provided.

(b) The Government will make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates approved by the Contracting Officer. If requested by the Contracting Officer, the Contractor shall furnish a breakdown of the total contract price showing the amount included therein for each principal category of the work, in such detail as requested, to provide a basis for determining progress payments. In the preparation of estimates the Contracting Officer, at his discretion, may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site may also be taken into consideration (1) if such consideration is specifically authorized by the contract and (2) if the Contractor furnishes satisfactory evidence that he has acquired title to such material and that it will be utilized on the work covered by this contract.

(c) In making such progress payments, there shall be retained 10 percent of the estimated amount until final com-

pletion and acceptance of the contract work. However, if the Contracting Officer, at any time after 50 percent of the work has been completed, finds that satisfactory progress is being made, he may authorize payment in full of each progress payment for work performed beyond the 50 percent stage of completion. Also, whenever the work is substantially complete, the Contracting Officer, if he considers the amount retained to be in excess of the amount adequate for the protection of the Government, at his discretion, may release to the Contractor all or a portion of such excess amount. Furthermore, on completion and acceptance of each separate building, public work, or other division of the contract, on which the price is stated separately in the contract, payment may be made therefor without retention of a percentage.

(d) All material and work covered by progress payments made shall thereupon become the sole property of the Government, but this provision shall not be construed as relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work, or as waiving the right of the Government to require the fulfillment of all of the terms of the contract.

(e) Upon completion and acceptance of all work, the amount due the Contractor under this contract shall be paid upon the presentation of a properly executed voucher and after the Contractor shall have furnished the Government with a release of all claims against the Government arising by virtue of this contract, other than claims in stated amounts as may be specifically excepted by the Contractor from the operation of the release. If the Contractor's claim to amounts payable under the contract has been assigned under the Assignment of Claims Act of 1940, as amended (31 U.S.C. 203, 41 U.S.C. 15), a release may also be required of the assignee.

## 8. ASSIGNMENT OF CLAIMS

(a) Pursuant to the provisions of the Assignment of Claims Act of 1940, as amended (31 U.S.C. 203, 41 U.S.C. 15), if this contract provides for payments aggregating \$1,000 or more, claims for moneys due or to become due the Contractor from the Government under this contract may be assigned to a bank, trust company, or other financing institution, including any Federal lending agency, and may thereafter be further assigned and reassigned to any such institution. Any such assignment or reassignment shall cover all amounts payable under this contract and not already paid, and shall not be made to more than one party, except that any such assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in such financing. Unless otherwise provided in this contract, payments to an assignee of any moneys due or to become due under this contract shall not, to the extent provided in said Act, as amended, be subject to reduction or setoff. (The preceding sentence applies only if this contract is made in time of war or national emergency as defined in said Act; and is with the Department of Defense, the General Services Administration, the Energy Research and Development Administration, the National Aeronautics and Space Administration, the Federal Aviation Administration, or any other department or agency of the United States designated by the President pursuant to Clause 4 of the proviso of section 1 of the Assignment of Claims Act of 1940, as amended by the Act of May 15, 1951, 65 Stat. 41.)

(b) In no event shall copies of this contract or of any plans, specifications, or other similar documents relating to work under this contract, if marked "Top Secret," "Secret," or "Confidential," be furnished to any assignee of any claim arising under this contract or to any other person not entitled to receive the same. However, a copy of any part or all of this contract so marked may be furnished, or any information contained therein may be disclosed, to such assignee upon the prior written authorization of the Contracting Officer.

## 9. MATERIAL AND WORKMANSHIP

(a) Unless otherwise specifically provided in this contract, all equipment, material, and articles incorporated in the work covered by this contract are to be new and of the most suitable grade for the purpose intended. Unless otherwise specifically provided in this contract, reference to any equipment, material, article, or patented process, by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition, and the Contractor may, at his option, use any equipment, material, article, or process, which, in the judgment of the Contracting Officer, is equal to that named. The Contractor shall furnish to the Contracting Officer for his approval the name of the manufacturer, the model number,



and other identifying data and information respecting the performance, capacity, nature, and rating of the machinery and mechanical and other equipment which the Contractor contemplates incorporating in the work. When required by this contract or when called for by the Contracting Officer, the Contractor shall furnish the Contracting Officer for approval full information concerning the material or articles which he contemplates incorporating in the work. When so directed, samples shall be submitted for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles installed or used without required approval shall be at the risk of subsequent rejection.

(b) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may, in writing, require the Contractor to remove from the work any employee the Contracting Officer deems incompetent, careless or otherwise objectionable.

#### 10. INSPECTION AND ACCEPTANCE

(a) All work (which term includes but is not restricted to materials, workmanship, and manufacture and fabrication of components) shall be subject to inspection and test by the Government at all reasonable times and at all places prior to acceptance. Any such inspection and test is for the sole benefit of the Government and shall not relieve the Contractor of the responsibility of providing quality control measures to assure that the work strictly complies with the contract requirements. No inspection or test by the Government shall be construed as constituting or implying acceptance. Inspection or test shall not relieve the Contractor of responsibility for damage to or loss of the material prior to acceptance, nor in any way affect the continuing rights of the Government after acceptance of the completed work under the terms of paragraph (f) of this clause, except as hereinabove provided.

(b) The Contractor shall, without charge, replace any material or correct any workmanship found by the Government not to conform to the contract requirements, unless in the public interest the Government consents to accept such material or workmanship with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(c) If the Contractor does not promptly replace rejected material or correct rejected workmanship, the Government (1) may, by contract or otherwise, replace such material or correct such workmanship and charge the cost thereof to the Contractor, or (2) may terminate the Contractor's right to proceed in accordance with the clause of this contract entitled "Termination for Default—Damages for Delay—Time Extensions."

(d) The Contractor shall furnish promptly, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspection and test as may be required by the Contracting Officer. All inspection and test by the Government shall be performed in such manner as not unnecessarily to delay the work. Special, full size, and performance tests shall be performed as described in this contract. The Government reserves the right to charge to the Contractor any additional cost of inspection or test when material or workmanship is not ready at the time specified by the Contractor for inspection or test or when reinspection or retest is necessitated by prior rejection.

(e) Should it be considered necessary or advisable by the Government at any time before acceptance of the entire work to make an examination of work already completed, by removing or tearing out same, the Contractor shall, on request, promptly furnish all necessary facilities, labor, and material. If such work is found to be defective or nonconforming in any material respect, due to the fault of the Contractor or his subcontractors, he shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, an equitable adjustment shall be made in the contract price to compensate the Contractor for the additional services involved in such examination and reconstruction and, if completion of the work has been delayed thereby, he shall, in addition, be granted a suitable extension of time.

(f) Unless otherwise provided in this contract, acceptance by the Government shall be made as promptly as practicable after completion and inspection of all work required by this contract, or that portion of the work that the Contracting Officer determines can be accepted separately. Acceptance shall be final and conclusive except as regards latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Government's rights under any warranty or guarantee.

#### 11. SUPERINTENDENCE BY CONTRACTOR

The Contractor, at all times during performance and until the work is completed and accepted, shall give his personal superintendence to the work or have on the work a competent superintendent, satisfactory to the Contracting Officer and with authority to act for the Contractor.

#### 12. PERMITS AND RESPONSIBILITIES

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any applicable Federal, State, and municipal laws, codes, and regulations, in connection with the prosecution of the work. He shall be similarly responsible for all damages to persons or property that occur as a result of his fault or negligence. He shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others. He shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire construction work, except for any completed unit of construction thereof which theretofore may have been accepted.

#### 13. CONDITIONS AFFECTING THE WORK

The Contractor shall be responsible for having taken steps reasonably necessary to ascertain the nature and location of the work, and the general and local conditions which can affect the work or the cost thereof. Any failure by the Contractor to do so will not relieve him from responsibility for successfully performing the work without additional expense to the Government. The Government assumes no responsibility for any understanding or representations concerning conditions made by any of its officers or agents prior to the execution of this contract, unless such understanding or representations by the Government are expressly stated in the contract.

#### 14. OTHER CONTRACTS

The Government may undertake or award other contracts for additional work, and the Contractor shall fully cooperate with such other contractors and Government employees and carefully fit his own work to such additional work as may be directed by the Contracting Officer. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other contractor or by Government employees.

#### 15. SHOP DRAWINGS

(a) The term "shop drawings" includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the Contractor to explain in detail specific portions of the work required by the contract.

(b) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate his approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate his approval or disapproval of the shop drawings and if not approved as submitted shall indicate his reasons therefor. Any work done prior to such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (c) below.

(c) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation(s), he shall issue an appropriate contract modification, except that, if the variation is minor and does not involve a change in price or in time of performance, a modification need not be issued.

#### 16. USE AND POSSESSION PRIOR TO COMPLETION

The Government shall have the right to take possession of or use any completed or partially completed part of the work. Prior to such possession or use, the Contracting Officer shall furnish the Contractor an itemized list of work remaining to be performed or corrected on such portions of the project as are to be possessed or used by the Government, provided that failure to list any item of work shall not relieve the Contractor of responsibility for compliance with the terms of the

contract. Such possession or use shall not be deemed an acceptance of any work under the contract. While the Government has such possession or use, the Contractor, notwithstanding the provisions of the clause of this contract entitled "Permits and Responsibilities," shall be relieved of the responsibility for the loss or damage to the work resulting from the Government's possession or use. If such prior possession or use by the Government delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment in the contract price or the time of completion will be made and the contract shall be modified in writing accordingly.

#### 17. SUSPENSION OF WORK

(a) The Contracting Officer may order the Contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as he may determine to be appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted by an act of the Contracting Officer in the administration of this contract, or by his failure to act within the time specified in this contract (or if no time is specified, within a reasonable time), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by such unreasonable suspension, delay, or interruption and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent (1) that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor or (2) for which an equitable adjustment is provided for or excluded under any other provision of this contract.

(c) No claim under this clause shall be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of such suspension, delay, or interruption, but not later than the date of final payment under the contract.

#### 18. TERMINATION FOR CONVENIENCE OF THE GOVERNMENT

If not physically incorporated elsewhere, the clause in Section 1-3.703 of the Federal Procurement Regulations, or paragraph 7-602.29 (a) of the Armed Services Procurement Regulation, as applicable, in effect on the date of this contract is hereby incorporated by reference as fully as if set forth at length herein.

#### 19. PAYMENT OF INTEREST ON CONTRACTORS' CLAIMS

(a) If an appeal is filed by the Contractor from a final decision of the Contracting Officer under the Disputes clause of this contract, denying a claim arising under the contract, simple interest on the amount of the claim finally determined owed by the Government shall be payable to the Contractor. Such interest shall be at the rate determined by the Secretary of the Treasury pursuant to Public Law 92-41, 85 Stat. 97, from the date the Contractor furnishes to the Contracting Officer his written appeal under the Disputes clause of this contract, to the date of (1) a final judgment by a court of competent jurisdiction, or (2) mailing to the Contractor of a supplemental agreement for execution either confirming completed negotiations between the parties or carrying out a decision of a board of contract appeals.

(b) Notwithstanding (a) above, (1) interest shall be applied only from the date payment was due, if such date is later than the filing of appeal; and (2) interest shall not be paid for any period of time that the Contracting Officer determines the Contractor has unduly delayed in pursuing his remedies before a board of contract appeals or a court of competent jurisdiction.

#### 20. PRINCIPLE OF ADJUSTMENTS

When costs are a factor in any determination of a contract price adjustment pursuant to the Changes clause or any other provision of this contract, such costs shall be in accordance with the contract cost principles and procedures in Part 1-15 of the Federal Procurement Regulations, (41 CFR 1-15) or Section XV of the Armed Services Procurement Regulation, as applicable, which are in effect on the date of this contract.

#### 21. PATENT INDEMNITY

Except as otherwise provided, the Contractor agrees to indemnify the Government and its officers, agents, and em-

ployees against liability, including costs and expenses, for infringement upon any Letters Patent of the United States (except Letters Patent issued upon an application which is now or may hereafter be, for reasons of national security, ordered by the Government to be kept secret or otherwise withheld from issue) arising out of the performance of this contract or out of the use or disposal by or for the account of the Government of supplies furnished or construction work performed hereunder.

#### 22. ADDITIONAL BOND SECURITY

If any surety upon any bond furnished in connection with this contract becomes unacceptable to the Government, or if any such surety fails to furnish reports as to his financial condition from time to time as requested by the Government, or if the contract price is increased to such an extent that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer, the Contractor shall promptly furnish such additional security as may be required from time to time to protect the interests of the Government and of persons supplying labor or materials in the prosecution of the work contemplated by this contract.

#### 23. EXAMINATION OF RECORDS BY COMPTROLLER GENERAL

(a) This clause is applicable if the amount of this contract exceeds \$10,000 and was entered into by means of negotiation, including small business restricted advertising, but is not applicable if this contract was entered into by means of formal advertising.

(b) The contractor agrees that the Comptroller General of the United States or any of his duly authorized representatives shall, until the expiration of 3 years after final payment under this contract or such lesser time specified in either Appendix M of the Armed Services Procurement Regulation or the Federal Procurement Regulations Part 1-20, as appropriate, have access to and the right to examine any directly pertinent books, documents, papers, and records of the contractor involving transactions related to this contract.

(c) The Contractor further agrees to include in all his subcontracts hereunder a provision to the effect that the subcontractor agrees that the Comptroller General of the United States or any of his duly authorized representatives shall, until the expiration of 3 years after final payment under the subcontract or such lesser time specified in either Appendix M of the Armed Services Procurement Regulation or the Federal Procurement Regulations Part 1-20, as appropriate, have access to and the right to examine any directly pertinent books, documents, papers, and records of such subcontractor, involving transactions related to the subcontract. The term "subcontract" as used in this clause excludes (1) purchase orders not exceeding \$10,000 and (2) subcontracts or purchase orders for public utility services at rates established for uniform applicability to the general public.

(d) The periods of access and examination described in (b) and (c), above, for records which relate to (1) appeals under the "Disputes" clause of this contract, (2) litigation or the settlement of claims arising out of the performance of this contract, or (3) costs and expenses of this contract as to which exception has been taken by the Comptroller General or any of his duly authorized representatives, shall continue until such appeals, litigation, claims, or exceptions have been disposed of.

#### 24. BUY AMERICAN

(a) *Agreement.* In accordance with the Buy American Act (41 U.S.C. 10a-10d), and Executive Order 10582, December 17, 1954 (3 CFR, 1954-58 Comp., p. 230), as amended by Executive Order 11051, September 27, 1962 (3 CFR, 1959-63 Comp., p. 635), the Contractor agrees that only domestic construction material will be used (by the Contractor, subcontractors, materialmen, and suppliers) in the performance of this contract, except for nondomestic material listed in the contract.

(b) *Domestic construction material.* "Construction material" means any article, material, or supply brought to the construction site for incorporation in the building or work. An unmanufactured construction material is a "domestic construction material" if it has been mined or produced in the United States. A manufactured construction material is a "domestic construction material" if it has been manufactured in the United States and if the cost of its components which have been mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. "Component" means any article, material, or supply directly incorporated in a construction material.

(c) *Domestic component.* A component shall be considered to have been "mined, produced, or manufactured in the

United States" (regardless of its source in fact) if the article, material, or supply in which it is incorporated was manufactured in the United States and the component is of a class or kind determined by the Government to be not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality.

#### 25. EQUAL OPPORTUNITY

(The following clause is applicable unless this contract is exempt under the rules, regulations, and relevant orders of the Secretary of Labor (41 CFR, ch. 60).)

During the performance of this contract, the Contractor agrees as follows:

(a) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this Equal Opportunity clause.

(b) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(c) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency Contracting Officer, advising the labor union or workers' representative of the contractor's commitments under this Equal Opportunity clause, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(e) The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In the event of the Contractor's noncompliance with the Equal Opportunity clause of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended, in whole or in part, and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(g) The Contractor will include the provisions of paragraphs (a) through (f) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: *Provided, however*, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

#### 26. COVENANT AGAINST CONTINGENT FEES

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty the Government shall have the right to annul this contract without liability or in its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

#### 27. OFFICIALS NOT TO BENEFIT

No member of or delegate to Congress or resident Commissioner shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

#### 28. CONVICT LABOR

In connection with the performance of work under this contract, the Contractor agrees not to employ any person undergoing sentence of imprisonment at hard labor except as provided by Public Law 89-176, September 10, 1965 (18 U.S.C. 4082(c)(2)) and Executive Order 11755, December 29, 1973.

#### 29. UTILIZATION OF SMALL BUSINESS CONCERNS

(a) It is the policy of the Government as declared by the Congress that a fair proportion of the purchases and contracts for supplies and services for the Government be placed with small business concerns.

(b) The Contractor agrees to accomplish the maximum amount of subcontracting to small business concerns that the Contractor finds to be consistent with the efficient performance of this contract.

#### 30. UTILIZATION OF MINORITY BUSINESS ENTERPRISES

(a) It is the policy of the Government that minority business enterprises shall have the maximum practicable opportunity to participate in the performance of Government contracts.

(b) The Contractor agrees to use his best efforts to carry out this policy in the award of his subcontracts to the fullest extent consistent with the efficient performance of this contract. As used in this contract, the term "minority business enterprise" means a business, at least 50 percent of which is owned by minority group members or, in case of publicly-owned businesses, at least 51 percent of the stock of which is owned by minority group members. For the purposes of this definition, minority group members are Negroes, Spanish-speaking American persons, American-Orientals, American-Indians, American-Eskimos, and American-Aleuts. Contractors may rely on written representations by subcontractors regarding their status as minority business enterprises in lieu of an independent investigation.

#### 31. FEDERAL, STATE, AND LOCAL TAXES

(a) Except as may be otherwise provided in this contract, the contract price includes all applicable Federal, State and local taxes and duties.

(b) Nevertheless, with respect to any Federal excise tax or duty on the transactions or property covered by this contract, if a statute, court decision, written ruling, or regulation takes effect after the contract date, and—

(1) Results in the Contractor being required to pay or bear the burden of any such Federal excise tax or duty or increase in the rate thereof which would not otherwise have been payable on such transactions or property, the contract price shall be increased by the amount of such tax or duty or rate increase: *Provided*, That the Contractor if requested by the Contracting Officer, warrants in writing that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the contract price as a contingency reserve or otherwise; or

(2) Results in the Contractor not being required to pay or bear the burden of, or in his obtaining a refund or drawback of, any such Federal excise tax or duty which would otherwise have been payable on such transactions or property or which was the basis of an increase in the contract price, the contract price shall be decreased by the amount of the relief, refund, or drawback, or that amount shall be paid to the Government, as directed by the Contracting Officer. The contract price shall be similarly decreased if the Contractor, through his fault or negligence or his failure to follow instructions of the Contract-

ing Officer, is required to pay or bear the burden of, or does not obtain a refund or drawback of, any such Federal excise tax or duty.

(c) No adjustment pursuant to paragraph b above will be made under this contract unless the aggregate amount thereof is or may reasonably be expected to be over \$100.00.

(d) As used in paragraph b above, the term "contract date" means the date set for the bid opening, or if this is a negotiated contract, the date of this contract. As to additional supplies or services procured by modification to this contract, the term "contract date" means the date of such modification.

(e) Unless there does not exist any reasonable basis to sustain an exemption, the Government, upon request of the

Contractor, without further liability, agrees, except as otherwise provided in this contract, to furnish evidence appropriate to establish exemption from any tax which the Contractor warrants in writing was excluded from the contract price. In addition, the Contracting Officer may furnish evidence to establish exemption from any tax that may, pursuant to this Clause, give rise to either an increase or decrease in the contract price. Except as otherwise provided in this contract, evidence appropriate to establish exemption from duties will be furnished only at the discretion of the Contracting Officer.

(f) The Contractor shall promptly notify the Contracting Officer of matters which will result in either an increase or decrease in the contract price, and shall take action with respect thereto as directed by the Contracting Officer.

SUPPLEMENT TO SF 23-A GENERAL PROVISIONS  
(CONSTRUCTION CONTRACTS)

The following additional articles and provisions are added to Standard Form 23A:

32. ALTERATIONS AND ADDITIONS

The following alterations in or additions to the provisions of SF-23A, General Provisions, of this contract were made prior to execution of the contract by the parties.

1. Definitions (DOE PR 9-7.602-1 (Sep 77)). The following paragraphs are added to this clause:

- (c) The term "DOE" or "Department" and "Secretary" mean, respectively, "Department of Energy" and "Secretary of Energy" or any duly authorized representative of the "Department" or the Secretary," including the Contracting Officer except for the purpose of deciding an appeal under the article entitled "Disputes." Similarly, the terms "ERDA," "USERDA," "Administrator," "Administration," or "Energy Research and Development Administration" mean, respectively, "DOE," "Secretary," "Department" or "Department of Energy."
- (d) Wherever in the specifications or upon the drawings the words "directed," "required," "approved," "accepted," or words of like import are used, it means the direction, requirement, approval, acceptability of or to the Contracting Officer.

6. DISPUTES

(FPR 1-7.102-12  
45FR31037 5/9/80  
DOE APL80-13 5/23/80)

(NOTE: The following clause shall be included in all contracts subject to the Contract Disputes Act unless (1) exempted by the head of the Agency under 41 U.S.C. 603(c), or (2) modified in accordance with FPR 1-1.318:)

- (a) This contract is subject to the Contract Disputes Act of 1978 (Pub. L. 95-563).
- (b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved in accordance with this clause.
- (c) (1) As used herein, "claim" means a written demand or assertion by one of the parties seeking, as a legal right, the payment of money, adjustment or interpretation of contract terms, or other relief, arising under or relating to this contract.

- (2) A voucher, invoice, or request for payment that is not in dispute when submitted is not a claim for the purposes of the Act. However, where such submission is subsequently not acted upon in a reasonable time, or disputed either as to liability or amount, it may be converted to a claim pursuant to the Act.
  - (3) A claim by the Contractor shall be made in writing and submitted to the Contracting Officer for decision. A claim by the Government against the Contractor shall be subject to a decision by the Contracting Officer.
  - (d) For contractor claims of more than \$50,000, the Contractor shall submit with the claim a certification that the claim is made in good faith; the supporting data are accurate and complete to the best of the Contractor's knowledge and belief; and the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable. The certification shall be executed by the Contractor if an individual. When the Contractor is not an individual, the certification shall be executed by a senior company official in charge at the Contractor's plant or location involved, or by an officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs.
  - (e) For contractor claims of \$50,000 or less, the Contracting Officer must render a decision within 60 days. For contractor claims in excess of \$50,000, the Contracting Officer must decide the claim within 60 days or notify the Contractor of the date when the decision will be made.
  - (f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.
  - (g) The authority of the Contracting Officer under the Act does not extend to claims or disputes which by statute or regulation other agencies are expressly authorized to decide.
  - (h) Interest on the amount found due on a contractor claim shall be paid from the date the claim is received by the Contracting Officer until the date of payment.
  - (i) Except as the parties may otherwise agree, pending final resolution of a claim by the Contractor arising under the contract, the Contractor shall proceed diligently with the performance of the contract in accordance with the Contracting Officer's decision.
7. Payments to Contractor (FPR 1-7.602-7, revised May 1979). Delete paragraph (c) and (e) and substitute the following therefor:

- (c) In making such progress payments there shall be retained 10 percent of the estimated amount until final completion and acceptance of the contract work. However, if the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, he may authorize such payment to be made in full without retention of a percentage. Also, whenever the work is substantially complete, the Contracting Officer shall retain an amount he considers adequate for protection of the Government and, at his discretion, may release to the Contractor all or a portion of any excess amount. Furthermore, on completion and acceptance of each separate building, public work, or other division of the contract, on which the price is stated separately in the contract, payment may be made therefor without retention of a percentage.
- (e) If Miller Act (40 U.S.C. 270a-270e) performance or payment bonds are required under this contract, the Government shall pay to the Contractor the total premiums paid by the contractor to obtain the bonds. This payment shall be paid at one time to the contractor together with the first progress payment otherwise due after the contractor has (1) furnished the bonds (including coinsurance and reinsurance agreements, when applicable), (2) furnished evidence of full payment to the surety company, and (3) submitted a request for such payment. The payment by the Government of the bond premiums to the contractor shall not be made as increments of the individual progress payments and shall not be in addition to the contract price.

Add new paragraph (f) as follows:

- (f) Upon completion and acceptance of all work, the amount due the Contractor under this contract shall be paid upon the presentation of a properly executed voucher and after the Contractor has furnished the Government with a release of all claims against the Government, arising by virtue of this contract, other than claims in stated amounts as may be specifically excepted by the Contractor from the operation of the release. If the Contractor's claim to amounts payable under the contract has been assigned under the Assignment of Claims Act of 1940, as amended (31 U.S.C. 203, 41 U.S.C. 15), a release may also be required of the assignee.

9. Materials and Workmanship. Insert the following sentence after the second sentence of subsection (a):

A Contractor is not prohibited from furnishing such an "equal" item merely because in the technical specifications a trade name or make or catalog number is used without the words "or equal." These words will be implied unless the technical specification expressly provides "no substitutes."

10. Inspection and Acceptance (ALPI 9-16, Oct 76). Add the following paragraph (g):

(g) The work will be conducted under the general direction of the Contracting Officer and is subject to inspection by his duly appointed inspectors to insure strict compliance with the terms of the contract. No inspector is authorized to change any provision of the plans and specifications, nor shall the presence or absence of any inspector relieve the Contractor from any requirements of the contract. The "Architect-Engineer" has the authority to inspect the work for quality and compliance with the plans and specifications; establish lines, grades and controls for the work; and to recommend changes to the Contracting Officer pursuant to the clause of the General Provisions entitled "Changes." The facility operating contractor may perform architect-engineer inspection services. No interpretation of this contract or direction shall be binding upon the Government unless it is in writing and signed by the Contracting Officer.

18. Termination for Convenience of the Government (FPR 1-8.703, Mar 1972). Delete the clause and substitute the following:

- (a) The performance of work under this contract may be terminated by the Government in accordance with this clause in whole, or from time to time in part, whenever the Contracting Officer shall determine that such termination is in the best interest of the Government. Any such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying that the termination is made under this General Provision and the extent to which performance of work under the contract is terminated, and the date upon which such termination becomes effective.
- (b) After receipt of a Notice of Termination and except as otherwise directed by the Contracting Officer, the Contractor shall:
- (1) Stop work under the contract on the date and to the extent specified in the Notice of Termination;
  - (2) Place no further orders or subcontracts for materials, services, or facilities, except as may be necessary for completion of such portion of the work under the contract as is not terminated;
  - (3) Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination;
  - (4) Assign to the Government, in the manner, at the times, and to the extent directed by the Contracting Officer, all of the right, title, and interest of the Contractor under the orders and subcontracts so terminated, in



which case the Government shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;

- (5) Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Contracting Officer to the extent he may require, which approval or ratification shall be final for all the purposes of this clause;
- (6) Transfer title to the Government and deliver in the manner, at the time, and to the extent, if any, directed by the Contracting Officer, (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced as a part of, or acquired in connection with the performance of, the work terminated by the Notice of Termination, and (ii) the completed or partially completed plans, drawings, information, and other property which, if the contract had been completed, would have been required to be furnished to the Government;
- (7) Use his best efforts to sell, in the manner, at the times, to the extent, and at the price or prices directed or authorized by the Contracting Officer, any property of the types referred to in (6) above; provided, however, that the Contractor (i) shall not be required to extend credit to any purchaser, and (ii) may acquire any such property under the conditions prescribed and at a price or prices approved by the Contracting Officer; and provided further, that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the Government to the Contractor under this contract or shall otherwise be credited to the price or cost of the work covered by this contract or paid in such other manner as the Contracting Officer may direct;
- (8) Complete performance of such part of the work as shall not have been terminated by the Notice of Termination; and
- (9) Take such action as may be necessary, or as the Contracting Officer may direct, for the protection and preservation of the property related to this contract which is in the possession of the Contractor and in which the Government has or may acquire an interest.

At any time after expiration of the plant clearance period, as defined in Subpart 1-8.1 of the Federal Procurement Regulations (41 CFR 1-8.1), as the definition may be amended from time to time, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of any or all items of

termination inventory not previously disposed of, exclusive of items the disposition of which has been directed or authorized by the Contracting Officer, and may request the Government to remove such items or enter into a storage agreement covering them. Not later than fifteen (15) days thereafter, the Government will accept title to such items and remove them or enter into a storage agreement covering the same; provided, that the list submitted shall be subject to verification by the Contracting Officer upon removal of the items or, if the items are stored, within forty-five (45) days from the date of submission of the list, and any necessary adjustment to correct the list as submitted shall be made prior to final settlement.

(c) After receipt of a Notice of Termination, the Contractor shall submit to the Contracting Officer his termination claim in the form and with the certification prescribed by the Contracting Officer. Such claims shall be submitted promptly but in no event later than one year from the effective date of termination, unless one or more extensions in writing are granted by the Contracting Officer upon request of the Contractor made in writing within such one-year period or authorized extension thereof. However, if the Contracting Officer determines that the facts justify such action, he may receive and act upon any such termination claim at any time after such one-year period or extension thereof. Upon failure of the Contractor to submit his termination claim within the time allowed, the Contracting Officer may, subject to any review required by DOE's procedures in effect as of the date of execution of this contract, determine, on the basis of information available to him, the amount, if any, due the Contractor by reason of the termination and shall thereupon pay to the Contractor the amount so determined.

(d) Subject to the provisions of paragraph (c) and subject to any review required by DOE's procedures in effect as of the date of execution of this contract, the Contractor and the Contracting Officer may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or partial termination of work pursuant to this clause, which amount or amounts may include a reasonable allowance for profit on work done; provided, that such agreed amount or amounts, exclusive of settlement costs, shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of the work not terminated. The contract shall be amended accordingly, and the Contractor shall be paid the agreed amount. Nothing in paragraph (e) of this clause, prescribing the amount to be paid to the Contractor in the event of failure of the Contractor and the Contracting Officer to agree upon the whole amount to be paid to the Contractor by reason of the termination of work pursuant to this clause, shall be deemed to limit, restrict, or otherwise determine or affect the amount or amounts which may be agreed upon to be paid to the Contractor pursuant to this paragraph (d).

(e) In the event of the failure of the Contractor and the Contracting Officer to agree, as provided in paragraph (d), upon the whole amount to be paid to the Contractor by reason of the termination of work pursuant to this clause, the Contracting Officer shall, subject to any review required by DOE's procedures in effect as of the date of execution of this contract, determine, on the basis of information available to him, the amount, if any, due to the Contractor by reason of the termination and shall pay to the Contractor the amounts determined as follows:

- (1) With respect to all contract work performed prior to the effective date of the Notice of Termination, the total (without duplication of any items) of
  - (i) The cost of such work;
  - (ii) The cost of settling and paying claims arising out of the termination of work under subcontracts or orders as provided in paragraph (b)(5) above, exclusive of the amounts paid or payable on account of supplies or materials delivered or services furnished by the subcontractor prior to the effective date of the Notice of Termination of work under this contract, which amounts shall be included in the cost on account of which payment is made under (i) above; and
  - (iii) A sum, as profit on (i), above, determined by the Contracting Officer pursuant to Federal Procurement Regulation 1-8.303 (41 CFR 1-8.303), in effect as of the date of execution of this contract, to be fair and reasonable; provided, however, that if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, no profit shall be included or allowed under this subdivision (iii) and an appropriate adjustment shall be made reducing the amount of the settlement to reflect the indicated rate of loss; and
- (2) The reasonable cost of the preservation and protection of property incurred pursuant to paragraph (b)(9); and any other reasonable cost incidental to termination of work under this contract, including expense incidental to the determination of the amount due to the Contractor as the result of the termination of work under this contract.

The total sum to be paid to the Contractor under (1) above shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not terminated. Except for normal spoilage, and except to the extent that the Government shall

have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor under (1) above, the fair value as determined by the Contracting Officer, of property which is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government, or to a buyer pursuant to paragraph (b)(7).

- (f) Cost claimed, agreed to, or determined pursuant to paragraphs (c), (d), and (e) of this clause shall be in accordance with the contract cost principles and procedures in Part 1-15 of the Federal Procurement Regulations (41 CFR 1-15) as implemented by Part 9-15 of the DOE Procurement Regulations (41 CFR 9-15), in effect on the date of this contract.
- (g) The Contractor shall have the right of appeal, under the clause of this contract entitled "Disputes," from any determination made by the Contracting Officer under paragraph (c) or (e) above, except that, if the Contractor has failed to submit his claim within the time provided in paragraph c. above, and has failed to request extension of such time, he shall have no such right of appeal. In any case where the Contracting Officer has made a determination of the amount due under paragraph (c) or (e) above, the Government shall pay to the Contractor the following: (1) if there is no right of appeal hereunder or if no timely appeal has been taken, the amount so determined by the Contracting Officer, or (2) if an appeal has been taken, the amount finally determined on such appeal.
- (h) In arriving at the amount due the Contractor under this clause there shall be deducted (1) all unliquidated advance or other payments on account theretofore made to the Contractor, applicable to the terminated portion of this contract, (2) any claim which the Government may have against the Contractor in connection with this contract, and (3) the agreed price for, or the proceeds of sale of, any materials, supplies, or other things kept by the Contractor or sold, pursuant to the provisions of this clause, and not otherwise recovered by or credited to the Government.
- (i) If the termination hereunder be partial, prior to the settlement of the terminated portion of this contract, the Contractor may file with the Contracting Officer a request in writing for an equitable adjustment of the price or prices specified in the contract relating to the continued portion of the contract (the portion not terminated by the Notice of Termination), and such equitable adjustment as may be agreed upon shall be made in such price or prices; however, nothing contained herein shall limit the right of the Government and the Contractor to agree upon the amount or amounts to be paid to the Contractor for the completion of the continued portion of the contract when said contract does not contain an established contract price for such continued portion.

(j) The Government may from time to time, under such terms and conditions as it may prescribe, make partial payments and payments on account against costs incurred by the Contractor in connection with the terminated portion of this contract whenever in the opinion of the Contracting Officer the aggregate of such payments shall be within the amount to which the Contractor will be entitled hereunder. If the total of such payments is in excess of the amount finally agreed or determined to be due under this clause, such excess shall be payable by the Contractor to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury pursuant to Pub. L. 92-41 (50 U.S.C. App. 1215 (b)(2) for the Renegotiation Board for the period from the date such excess payment is received by the Contractor to the date on which such excess is repaid to the Government; provided, however, that no interest shall be charged with respect to any such excess payment attributable to a reduction in the Contractor's claim by reason of retention or other disposition, of termination inventory until ten days after the date of such retention or disposition, or such later date as determined by the Contracting Officer by reason of the circumstances.

(k) Unless otherwise provided for in this contract, or by applicable statute, the Contractor, from the effective date of termination and for a period of three years after final settlement under this contract, shall preserve and make available to the Government at all reasonable times at the office of the Contractor, but without direct charge to the Government, all his books, records, documents, and other evidence bearing on the costs and expenses of the Contractor under this contract and relating to the work terminated hereunder, or, to the extent approved by the Contracting Officer, photographs, microphotographs, or other authentic reproductions thereof.

19. Payment of Interest on Contractors' Claims is deleted in its entirety.
20. Pricing of Adjustments (ALPI 9-16, Oct 76). Delete the clause and substitute the following:

When costs are a factor in any determination of a contract price adjustment pursuant to the Changes clause or any other provision of this contract, such costs shall be in accordance with the contract cost principles and procedures in Part 1-15 of the Federal Procurement Regulations (41 CFR 1-15) as supplemented or modified by DOE-PR 9-15 (41 CFR 9-15) in effect on the date of this contract.

21. Patent Indemnity (DOE-PR 9-9.103-1). Delete the clause and substitute the following:

If the amount of this contract is in excess of \$10,000 the contractor shall indemnify the Government and its officers, agents, and employees against liability, including costs, for infringement of any United States letters patent (except) U. S. letters patent issued upon an application which is now or may hereafter be kept secret or otherwise withheld from issue by order of the Government) arising out of the manufacture or delivery of supplies or out of construction, alteration, modification, or repair of real property (hereinafter referred to as "construction work") under this contract, or out of the use or disposal by or for the account of the Government of such supplies or construction work. The foregoing indemnity shall not apply unless the contractor shall have been informed as soon as practicable by the Government of the suit or action alleging such infringement, and shall have been given such opportunity as is afforded by applicable laws, rules, or regulations to participate in the defense thereof; and further, such indemnity shall not apply to: (a) an infringement resulting from compliance with specific written instructions of the Contracting Officer directing a change in the supplies to be delivered or in the materials or equipment to be used, or directing a manner of performance of the contract not normally used by the contractor; (b) an infringement resulting from addition to or change in, such supplies or components furnished or construction work performed which addition or change was made subsequent to delivery or performance by the contractor; or (c) a claimed infringement which is settled without the consent of the contractor, unless required by final decree of a court of competent jurisdiction.

23. Examination of Records by Comptroller General (DOE-PR 9-7.103-3, June 79). The following change is made to this clause:

Substitute the words "unless the DOE authorizes their prior disposition" for the words "or such lesser time specified in either Appendix M of the Armed Services Procurement Regulation or the Federal Procurement Regulations Part 1-20, as appropriate" in paragraphs (b) and (c).

The following paragraph is added to this clause:

- (e) Nothing in this contract shall be deemed to preclude an audit by the General Accounting Office of any transaction under this contract.

25. Equal Opportunity, is deleted in its entirety and the following substituted therefor:

EQUAL OPPORTUNITY

(The following clause is applicable unless this contract is exempt under the rules, regulations, and relevant orders of the Secretary of Labor (41 CFR, Ch. 60).)

During the performance of this contract, the Contractor agrees as follows:

- (a) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.
- (b) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- (c) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Contracting Officer, advising the labor union or workers' representative of the Contractor's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (d) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (e) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by DOE and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (f) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (g) The Contractor will include the provisions of Subparagraphs a. through g. in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued

pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the Government to enter into such litigation to protect the interests of the Government."

28. Convict Labor (FPR 1-12.204, June 1974). Delete the words "at hard labor."
29. Utilization of Small Business Concerns is deleted in its entirety.
30. Utilization of Minority Business Enterprises is deleted in its entirety.

33. CONFLICT PROVISIONS (ALPI 9-16, Oct 76)

- (a) Except as otherwise provided in the event of conflict between the provisions of Division I and these General Provisions the provisions in Division I shall govern. In case of conflict between the provisions of Division I and of the specifications or the drawings, the provisions of Division I shall govern.
- (b) Unless otherwise specifically provided, the latest revisions (current at the time of the invitation date which is specified in the Invitation for Bids, SF 20), of specifications, publications or standards of the Federal Government, technical societies, or testing organizations included in these specifications by reference, shall govern. In case of conflict between any document incorporated in this contract by reference and any express provisions of this contract the latter shall govern.

34. AUDIT (FPR 1-3.814-2, May 76)

- (a) General. The Contracting Officer or his representatives shall have the audit and inspection rights described in the applicable paragraphs b., c., and d. below.
- (b) Examination of Costs. If this is a cost-reimbursement type, incentive, time and materials, labor hour, or price redeterminable contract, or any combination thereof, the Contractor shall maintain, and the Contracting Officer or his representatives shall have the right to examine books, records, documents, and other evidence and accounting procedures and practices, sufficient to reflect properly all direct and indirect costs of whatever nature claimed to have been incurred and costs of whatever nature claimed to have been incurred and anticipated to be incurred for the performance of this contract. Such right of examination shall include inspection at all reasonable times of the Contractor's plants, or such parts thereof, as may be engaged in the performance of this contract.



- (c) Cost or Pricing Data. If the Contractor submitted cost or pricing data in connection with the pricing of this contract or any change or modification thereto, unless such pricing was based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation, the Contracting Officer or his representatives who are employees of the United States Government shall have the right to examine all books, records, documents and other data of the Contractor related to the negotiation, pricing or performance of such contract, change or modification, for the purpose of evaluating the accuracy, completeness and currency of the cost or pricing data submitted. Additionally, in the case of pricing any change or modification exceeding \$100,000 to formally advertised contracts, the Comptroller General of the United States or his representatives who are employees of the United States Government shall have such rights. The right of examination shall extend to all documents necessary to permit adequate evaluation of the cost or pricing data submitted, along with the computations and projects used therein.
- (d) Availability. The materials described in b. and c. above, shall be made available at the office of the Contractor, at all reasonable times, for inspection, audit or reproduction, until the expiration of 3 years from the date of final payment under this contract or such lesser time specified in Part 1-20 of the Federal Procurement Regulations (41 CFR Part 1-20) and for such longer period, if any, as is required by applicable statute, or by other clauses of this contract, or by (1) and (2) below:
- (1) If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for a period of 3 years from the date of any resulting final settlement.
  - (2) Records which relate to appeals under the "Disputes" clause of this contract, or litigation or the settlement of claims arising out of the performance of this contract, shall be made available until such appeals, litigation, or claims have been disposed of.
- (e) The Contractor shall insert a clause containing all the provisions of this clause, including this paragraph e., in all subcontracts hereunder except altered as necessary for proper identification of the contracting parties and the Contracting Officer under the Government prime contract.

35. RENEGOTIATION (DOE-PR 9-7.102.51, Sep 77)

If this contract is subject to the Renegotiation Act of 1951, as amended, the following provisions shall apply:

- (a) This contract is subject to the Renegotiation Act of 1951 (50 U.S.C. App. 1211, et seq.), as amended, and to any subsequent act of Congress providing for the renegotiation of contracts. Nothing

contained in this clause shall impose any renegotiation obligation with respect to this contract or any subcontract hereunder which is not imposed by an act of Congress heretofore or hereafter enacted. Subject to the foregoing, this contract shall be deemed to contain all the provisions required by section 104 of the Renegotiation Act of 1951, and by any such other act, without subsequent contract amendment specifically incorporating such provisions.

- (b) The Contractor agrees to insert the provisions of this clause, including this paragraph (b), in all subcontracts, as that term is defined in section 103 g. of the Renegotiation Act of 1951, as amended.

36. PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA - PRICING ADJUSTMENTS  
(FPR 1-3.814-1(b), Jan 74)

- (a) This clause shall become operative only with respect to any modification of this contract which involves aggregate increases and/or decreases in costs plus applicable profits in excess of \$100,000 unless the modification is priced on the basis of adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation. The right to price reduction under this clause is limited to defects in data relating to such modification.
- (b) If any price, including profit or fee, negotiated in connection with any price adjustment under this contract was increased by any significant sums because:
- (1) The Contractor furnished cost or pricing data which was not accurate, complete and current as certified in the Contractor's Certificate of Current Cost or Pricing Data;
  - (2) A subcontractor, pursuant to the clause of this contract entitled "Subcontractor Cost or Pricing Data" or "Subcontractor Cost or Pricing Data - Price Adjustments" or any subcontract clause therein required, furnished cost or pricing data which was not accurate, complete and current as certified in the subcontractor's Certificate of Current Cost or Pricing Data;
  - (3) A subcontractor or prospective subcontractor furnished cost or pricing data which was required to be accurate, complete and current and to be submitted to support a subcontract cost estimate furnished by the Contractor but which was not accurate, complete and current as of the date certified in the Contractor's Certificate of Current Cost of Pricing Data; or
  - (4) The Contractor or a subcontractor or prospective subcontractor furnished any data, not within (1), (2) or (3) above, which was not accurate, as submitted:

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

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

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

37. SUBCONTRACTOR COST OR PRICING DATA - PRICE ADJUSTMENTS (FPR 1-3.814-3(b), May 76)

- (a) Paragraphs b. and c. of this clause shall become operative only with respect to any modification made pursuant to one or more provisions of this contract which involves aggregate increases and/or decreases in costs plus applicable profits expected to exceed \$100,000. The requirements of this clause shall be limited to such modifications.
- (b) The Contractor shall require subcontractors hereunder to submit cost or pricing data under the following circumstances:
- (1) Prior to the award of any subcontract the amount of which is expected to exceed \$100,000 when entered into;
  - (2) Prior to the pricing of any subcontract modification which involves aggregate increases and/or decreases in costs plus applicable profits expected to exceed \$100,000; except where the price is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation.

- (c) The Contractor shall require subcontractors to certify that to the best of their knowledge and belief the cost or pricing data submitted under (b) above is accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract change or modification.
- (d) The Contractor shall insert the substance of this clause including this paragraph d. in each subcontract which exceeds \$100,000.

38. NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (FPR 1-7.203-3)

- (a) Whenever the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice thereof, including all relevant information with respect thereto, to the Contracting Officer.
- (b) The Contractor agrees to insert the substance of this clause, including this paragraph (b), in any subcontract hereunder as to which a labor dispute may delay the timely performance of this contract; except that each such subcontract shall provide that in the event its timely performance is delayed or threatened by delay by any actual or potential labor dispute, the subcontractor shall immediately notify his next higher tier subcontractor, or the Prime Contractor, as the case may be, of all relevant information with respect to such disputes.

39. AFFIRMATIVE ACTION FOR HANDICAPPED WORKERS (FR 10-2-78)

- (a) The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified handicapped individuals without discrimination based upon their physical or mental handicap in all employment practices such as the following: employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.
- (b) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Rehabilitation Act of 1973.
- (c) In the event of the Contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.
- (d) The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Director, provided by or through the Contracting Officer. Such notices shall state the Contractor's obligation

under the law to take affirmative action to employ and advance in employment qualified handicapped employees and applicants for employment, and the rights of applicants and employees.

- (e) The Contractor will notify each labor union or representative of workers with which he has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Rehabilitation Act of 1973, and is committed to take affirmative action to employ and advance in employment physically and mentally handicapped individuals.
- (f) The Contractor will include the provisions of this clause in every subcontract or purchase order of \$2,500 or more unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 503 of the Act, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Director, Office of Federal Contract Compliance Programs, may direct to enforce such provisions, including action for noncompliance.

40. AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA  
(FR 10-2-78)

- (a) The Contractor will not discriminate against any employee or applicant for employment because he or she is a disabled veteran or veteran of the Vietnam era in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified disabled veterans and veterans of the Vietnam era without discrimination based upon their disability or veterans status in all employment practices such as the following: employment upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.
- (b) The Contractor agrees that all suitable employment openings of the Contractor which exist at the time of the execution of this contract and those which occur during the performance of this contract, including those not generated by this contract and including those occurring at an establishment of the Contractor other than the one wherein the contract is being performed but excluding those of independently operated corporate affiliates, shall be listed at an appropriate local office of the State employment service system wherein the opening occurs. The Contractor further agrees to provide such reports to such local office regarding employment openings and hires as may be required. State and local government agencies holding Federal contracts of \$10,000 or more shall also list all their suitable openings with the appropriate office of the State employment service, but are not required to provide those reports set forth in Paragraphs (d) and (e).

- (c) Listing of employment openings with the employment service system pursuant to this article shall be made at least concurrently with the use of any other recruitment source or effort and shall involve the normal obligations which attach to the placing of a bona fide job order, including the acceptance of referrals of veterans and nonveterans. The listing of employment openings does not require the hiring of any particular job applicant or from any particular group of job applicants, and nothing herein is intended to relieve the Contractor from any requirements in Executive Orders or regulations regarding nondiscrimination in employment.
- (d) The reports required by Paragraph (b) of this clause shall include, but not be limited to, periodic reports which shall be filed at least quarterly with the appropriate local office or, where the contractor has more than one hiring location in a State, with the central office of that State employment service. Such reports shall indicate for each hiring location (1) the number of individuals hired during the reporting period, (2) the number of nondisabled veterans of the Vietnam era hired, (3) the number of disabled veterans of the Vietnam era hired, and (4) the total number of disabled veterans hired. The reports should include covered veterans hired for on-the-job training under 38 U.S.C. 1787. The Contractor shall submit a report within 30 days after the end of each reporting period wherein any performance is made on this contract identifying data for each hiring location. The Contractor shall maintain at each hiring location copies of the reports submitted until the expiration of one year after final payment under the contract, during which time these reports and related documentation shall be made available, upon request, for examination by any authorized representatives of the Contracting Officer or of the Secretary of Labor. Documentation would include personnel records respecting job openings, recruitment, and placement.
- (e) Whenever the Contractor becomes contractually bound to the listing provisions of this clause, it shall advise the employment service system in each State where it has establishments of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these provisions and has so advised the State system, there is no need to advise the State system of subsequent contracts. The Contractor may advise the State system when it is no longer bound by this contract clause.
- (f) This clause does not apply to the listing of employment openings which occur and are filled outside the 50 States, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands.
- (g) The provisions of Paragraphs (b), (c), (d), and (e) of this clause do not apply to openings which the Contractor proposes to fill from within its own organization or to fill pursuant to a customary and traditional employer-union hiring arrangement. This exclusion does not apply to a particular opening once an employer decides to consider applicants outside of its own organization or employer-union arrangement for that opening.

(h) As used in this clause:

- (1) "All suitable employment openings" includes, but is not limited to, openings which occur in the following job categories: production and non-production; plant and office; laborers and mechanics; supervisory and nonsupervisory; technical; and executive, administrative, and professional openings that are compensated on a salary basis of less than \$25,000 per year. This term includes full-time employment, temporary employment of more than 3 days' duration, and part-time employment. It does not include openings which the Contractor proposes to fill from within his own organization or to fill pursuant to a customary and traditional employer-union hiring arrangement nor openings in an educational institution which are restricted to students of that institution. Under the most compelling circumstances an employment opening may not be suitable for listing, including such situations where the needs of the Government cannot reasonably be otherwise supplied, where listing would be contrary to national security, or where the requirement of listing would otherwise not be for the best interest of the Government.
  - (2) "Appropriate office of the State employment service system" means the local office of the Federal/State national system of public employment offices with assigned responsibility for serving the area where the employment opening is to be filled, including the District of Columbia, Guam, Puerto Rico, and the Virgin Islands.
  - (3) "Openings which the Contractor proposes to fill from within his own organization" means employment openings for which no consideration will be given to persons outside the Contractor's organization (including any affiliates, subsidiaries, and the parent companies) and includes any openings which the Contractor proposes to fill from regularly established "recall" lists.
  - (4) "Openings which the Contractor proposes to fill pursuant to a customary and traditional employer-union hiring arrangement" means employment openings which the Contractor proposes to fill from union halls, which is part of the customary and traditional hiring relationship which exists between the Contractor and representatives of its employees.
- (i) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.
  - (j) In the event of the Contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

- (k) The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices in a form to be prescribed by the Director, provided by or through the Contracting Officer. Such notice shall state the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era for employment, and the rights of applicants and employees.
- (l) The Contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by terms of the Vietnam Era Veteran's Readjustment Assistance Act, and is committed to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era.
- (m) The Contractor will include the provisions of this article in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to the Act, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance."

#### 41. USE OF U.S. FLAG COMMERCIAL VESSELS

- (a) The Cargo Preference Act of 1954 (Public Law 664, August 26, 1954, 68 Stat. 832, 46 U.S.C. 1241(b)), requires that Federal departments or agencies shall transport at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) of equipment, materials, or commodities which may be transported on ocean vessels on privately owned United States flag commercial vessels. Such transportation shall be accomplished whenever:
  - (1) Any equipment, materials, or commodities, within or outside the United States, which may be transported by ocean vessel, are:
    - (A) Procured, contracted for, or otherwise obtained for the agency's account; or
    - (B) Furnished to or for the account of any foreign nation without provision for reimbursement.
  - (2) Funds or credits are advanced or the convertibility of foreign currencies is guaranteed in connection with furnishing such equipment, materials, or commodities which may be transported by ocean vessel.

NOTE. This requirement does not apply to small purchases as defined in 41 CFR 1-3.6 or to cargoes carried in the vessels of the Panama Canal Company.



(b) The contractor agrees as follows:

- (1) To utilize privately owned United States flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved whenever shipping any equipment, material, or commodities under the conditions set forth in (a) above pursuant to this contract to the extent such vessels are available at fair and reasonable rates for United States flag commercial vessels.

NOTE. Guidance regarding fair and reasonable rates for United States flag vessels may be obtained from the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, D.C. 20230; Area Code 202, phone 377-3449.

- (2) To furnish, within 15 working days following the date of loading for shipments originating within the United States or within 25 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill of lading in English for each shipment of cargo covered by the provisions in (a) above to both the Contracting Officer (through the prime contractor in the case of subcontractor bills of lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, D.C. 20230.
- (3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract except for small purchases as defined in 41 CFR 1-3.6.

42. CLEAN AIR AND WATER (FPR 1-1.2302-2, Aug 75)

(Applicable if the contract exceeds \$100,000, or the Contracting Officer has determined that orders under an indefinite quantity contract in any one year will exceed \$100,000, or a facility to be used has been the subject of a conviction under the Clean Air Act (42 U.S.C. 1857c-8(c)(1)) or the Federal Water Pollution Control Act (33 U.S.C. 1319(c)) and is listed by EPA, or the contract is not otherwise exempt.)

(a) The Contractor agrees as follows:

- (1) To comply with all the requirements of Section 114 of the Clean Air Act, as amended (42 U.S.C. 1857, et seq. as amended by Public Law 91-604) and section 308 of the Federal Water Pollution Control Act (33 U.S.C. 1251, et seq., as amended by Public Law 92-500), respectively, relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in section 114 and section 308 of the Air Act and the Water Act, respectively, and all regulations and guidelines issued thereunder before the award of this contract.

- (2) That no portion of the work required by this prime contract will be performed in a facility listed on the Environmental Protection Agency List of Violating Facilities on the date when this contract was awarded unless and until the EPA eliminates the name of such facility or facilities from such listing.
  - (3) To use his best efforts to comply with clean air standards and clean water standards at the facility in which the contract is being performed.
  - (4) To insert the substance of the provisions of this clause into any nonexempt subcontract, including this paragraph (a)(4).
- (b) The terms used in this clause have the following meanings:
- (1) The term "Air Act" means the Clean Air Act, as amended (42 U.S.C. 1857, et seq., as amended by Public Law 91-604).
  - (2) The term "Water Act" means Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, et seq. as amended by Public Law 92-500).
  - (3) The term "clean air standards" means any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, or other requirements which are contained in, issued under, or otherwise adopted pursuant to the Air Act or Executive Order 11738, an applicable implementation plan as described in section 110(d) of the Clean Air Act (42 U.S.C. 1857c-5(d), an approved implementation procedure of plan under section 11(c) or section 111(d), respectively, of the Air Act (42 U.S.C. 1857c-6(c) or (d)), or an approved implementation procedure under section 112(d) of the Air Act (42 U.S.C. 1857c-7(d)).
  - (4) The term "clean water standards" means any enforceable limitation, control, condition, prohibition, standard, or other requirement which is promulgated pursuant to the Water Act or contained in a permit issued to a discharger by the Environmental Protection Agency or by a State under an approved program, as authorized by section 402 of the Water Act (33 U.S.C. 1342), or by local government to ensure compliance with pretreatment regulations as required by section 307 of the Water Act (33 U.S.C. 1317).
  - (5) The term "compliance" means compliance with clean air or water standards. Compliance shall also mean compliance with a schedule or plan ordered or approved by a court of competent jurisdiction, the Environmental Protection Agency or an air or water pollution control agency in accordance with the requirements of the Air Act or Water Act and regulations issued pursuant thereto.

- (6) The term "facility" means any building, plant, installation, structure, mine, vessel or other floating craft, location, or site of operations, owned, leased, or supervised by a contractor or subcontractor, to be utilized in the performance of a contract or subcontract. Where a location or site of operations contains or includes more than one building, plant, installation, or structure, the entire location or site shall be deemed to be a facility except where the Director, Office of Federal Activities, Environmental Protection Agency, determines that independent facilities are collocated in one geographical area.

43. SAFETY AND HEALTH (DOE-PR) 9-50.704-2, Jun 79)

- (a) The Contractor shall take all reasonable precautions in the performance of the work under this contract to protect the safety and health of employees and of members of the public and shall comply with all applicable safety and health regulations and requirements (including reporting requirements) of DOE. The Contracting Officer shall notify in writing, the contractor of any noncompliance with the provisions of this clause and the corrective action to be taken. After receipt of such notice, the contractor shall immediately take such corrective action. The contractor shall submit a management program and implementation plan to the Contracting Officer for review and approval within 30 days after the date of award of this contract. In the event that the contractor fails to comply with said regulations or requirements of DOE, the Contracting Officer may, without prejudice to any other legal or contractual rights of DOE, issue an order stopping all or any part of the work; thereafter, a start order for resumption of the work may be issued at the discretion of the Contracting Officer. The contractor shall make no claim for an extension of time or for compensation or damages by reason of, or in connection with, such work stoppage.
- (b) For the purposes of this Contract, the "health, safety, and fire protection regulations and requirements of "DOE" are:
- (1) the Secretary of Labor's "Safety and Health Regulations for Construction," 29 CFR 1926, and the Secretary of Labor's "Occupational Safety and Health Standards," 29 CFR 1910, in effect on the effective date of this Contract. (It is recognized that 29 CFR 1910 and 29 CFR 1926 sometimes both treat the same specific health or safety concern. In such cases the requirements of 29 CFR 1926 shall govern.); and
  - (2) such other provisions as may be contained in this Contract relating to health, safety and fire protection.
- (c) The Contractor shall include the provisions of this article in all of its subcontracts involving performance of work at the site. However, such provision in the subcontracts shall not relieve the Contractor of its obligation to assure compliance with the provisions of this article for all aspects of the work.

- (d) The Contractor shall, prior to commencing site work under this contract, submit to the Contracting Officer a descriptive outline of his safety program (including the operations of subcontractors) encompassing aspects of safety, accident prevention and fire protection.
- (e) The Contractor shall immediately notify the Contracting Officer of any personal injury resulting in lost work days and any loss or damage to Government property.
- (f) In addition to the reporting requirements of 29 CFR Part 1926, the Contractor shall submit DOE Form No. 101 (Supervisor's Report of Occupational Injury or Illness), DOE Form No. 102-A (Quarterly Tabulation of Contractor Occupational Injuries and Illnesses), and DOE Form 102-B (Quarterly Tabulation of Fire, Motor Vehicle Accident, and Other Property Damage Experience) for the duration of the contract. The DOE Form 102-A and DOE Form 102-B shall be submitted to the Contracting Officer by the 25th day of the last month, of each quarter (i.e., March 25, June 25, September 25, and December 25).

44. USE OF EXPLOSIVES (ALPI 9-16, Oct 76)

The use of explosives is not permitted, unless conditions for their use and the Contractor's liability therefor are expressly stated in the Technical Provisions, or unless such use is authorized in writing by the Contracting Officer with express conditions concerning use and liability.

45. SECURITY (DOE-PR 9-50.704-1, Jun 79)

- (a) Contractor's Duty to Safeguard Restricted Data, Formerly Restricted Data, and Other Classified Information. The Contractor shall, in accordance with the Department of Energy's security regulations and requirements, be responsible for safeguarding Restricted Data, Formerly Restricted Data, and other classified information and protecting against sabotage, espionage, loss, and theft, the classified documents and material in the Contractor's possession in connection with the performance of work under this contract. Except as otherwise expressly provided in this contract, the Contractor shall, upon completion or termination of this contract, transmit to DOE any classified matter in the possession of the Contractor or any person under the Contractor's control in connection with performance of this contract. If retention by the Contractor of any classified matter is required after the completion or termination of the contract and such retention is approved by the Contracting Officer, the Contractor will complete a certificate of possession to be furnished to the Department of Energy specifying the classified matter to be retained. The certification shall identify the items and types or categories of matter retained, the conditions governing the retention of the matter and the period of retention, if known. If the retention is approved by the Contracting Officer, the security provisions of the contract will continue to be applicable to the matter retained.

- (b) Regulations. The Contractor agrees to conform to all security regulation and requirements of DOE.
- (c) Definition of Restricted Data. The term "Restricted Data," as used in this clause, means all data concerning (1) design, manufacture, or utilization of atomic weapons; (2) the production of special nuclear material; or (3) the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to section 142 of the Atomic Energy Act of 1954.
- (d) Definition of Formerly Restricted Data. The term "Formerly Restricted Data," as used in this clause, means all data removed from the Restricted Data category under section 142 d. of the Atomic Energy Act of 1954, as amended.
- (e) Security Clearance of Personnel. The Contractor shall not permit any individual to have access to Restricted Data, Formerly Restricted Data, or other classified information, except in accordance with the Atomic Energy Act of 1954, as amended, and DOE's regulations or requirements applicable to the particular type or category of classified information to which access is required.
- (f) Criminal Liability. It is understood that disclosure of Restricted Data, Formerly Restricted Data, or other classified information relating to the work or services ordered hereunder to any person not entitled to receive it, or failure to safeguard any Restricted Data, Formerly Restricted Data, or any other classified matter that may come to the Contractor or any person under the Contractor's control in connection with work under this contract, may subject the Contractor, its agents, employees, or subcontractors to criminal liability under the laws of the United States. (See the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq.; 18 U.S.C. 793 and 794; and Executive Order 11652, as amended.)
- (g) Subcontracts and Purchase Orders. Except as otherwise authorized in writing by the Contracting Officer, the Contractor shall insert provisions similar to the foregoing in all subcontracts and purchase orders under this contract.

46. GOVERNMENT PROPERTY (FPR Vol. 45, January 3, 1980)

- (a) The Government shall deliver to the Contractor, for use in connection with and under the terms of this contract, the property described as Government-furnished property in the Specifications, together with such related data and information as the Contractor may request and as may reasonably be required for the intended use of such property (hereinafter referred to as "Government-furnished property"). The delivery or performance dates for the supplies or services to be furnished by the Contractor under this contract are based upon the expectation that Government-furnished property suitable for use (except for such property furnished "as is") will be delivered to the Contractor at the times stated in the Specifications or, if not so stated, in sufficient time to enable

the contractor to meet such delivery or performance dates. In the event that Government-furnished property is not delivered to the Contractor by such time or times, the Contracting Officer shall, upon timely written request made by the Contractor, make a determination of the delay, if any, occasioned the Contractor thereby, and shall equitably adjust the delivery or performance dates or the contract price, or both, and any other contractual provision affected by any such delay, in accordance with the procedures provided for in the clause of this contract entitled "Changes." Except for Government-furnished property furnished "as is," in the event the Government-furnished property is received by the Contractor in a condition not suitable for the intended use the Contractor shall, upon receipt thereof, notify the Contracting Officer of such fact and, as directed by the Contracting Officer, either (1) return such property at the Government's expense or otherwise dispose of the property, or (2) effect repair or modification, in accordance with the procedures provided for in the clause of this contract entitled "Changes." The foregoing provisions for adjustment are exclusive and the Government shall not be liable to suit for breach of contract by reason of any delay in delivery of Government-furnished property or delivery of such property in a condition not suitable for its intended use.

- (b) (1) By notice in writing, the Contracting Officer may (i) decrease the property provided or to be provided by the Government under this contract, or (ii) substitute other Government-owned property for property to be provided by the Government, or to be acquired by the Contractor for the Government, under this contract. The Contractor shall promptly take such action as the Contracting Officer may direct with respect to the removal and shipping of property covered by such notice.
- (2) In the event of any decrease in or substitution of property pursuant to subparagraph (i), above, or any withdrawal of authority to use property provided under any other contract or lease, which property the Government had agreed in the Specifications to make available for the performance of this contract, the Contracting Officer, upon the written request of the Contractor (or, if the substitution of property causes a decrease in the cost of performance, on his own initiative), shall equitably adjust such contractual provisions as may be affected by the decrease, substitution, or withdrawal, in accordance with the procedures provided for in the "Changes" clause of this contract.
- (c) Title to all property furnished by the Government shall remain in the Government. In order to define the obligations of the parties under this clause, title to each item of facilities, special test equipment, and special tooling (other than that subject to a "Special Tooling" clause) acquired by the Contractor for the Government pursuant to this contract shall pass to and vest in the Government when its use in the performance of this contract commences, or upon payment therefor by the Government, whichever is

earlier, whether or not title previously vested. All Government-furnished property, together with all property acquired by the Contractor title to which vests in the Government under this paragraph, is subject to the provisions of this clause and is hereinafter collectively referred to as "Government property." Title to Government property shall not be affected by the incorporation or attachment thereof to any property not owned by the Government, nor shall such Government property, or any part thereof, be or become a fixture or lose its identity as personalty by reason of affixation to any realty.

- (d) The Contractor shall be responsible for and accountable for all Government property provided under this contract. The Contractor shall establish and maintain a system to control, protect, preserve, and maintain all Government property in accordance with applicable provisions of the DOE Property Management Regulations (DOE-PMR) 41 CFR 109-60 as in effect on the date of the contract. This system shall, upon request by the Contracting Officer, be submitted for review and, if satisfactory, approved in writing by the Contracting Officer. The Contractor shall maintain and make available such records as are required by the approved system and must account for all property until relieved of responsibility therefor in accordance with written instructions of the Contracting Officer.
- (e) The Government property shall, unless otherwise provided herein or approved by the Contracting Officer, be used only for the performance of this contract.
- (f) The Contractor shall maintain and administer, in accordance with sound industrial practice and with applicable provisions of DOE-PMR 109-60, a program for the utilization, maintenance, repair, protection, and preservation of Government property so as to assure its full availability and usefulness for the performance of this contract. In the event that any damage occurs to Government property the risk of which has been assumed by the Government under this contract, the Government shall replace such items or the Contractor shall make such repair of the property as the Government directs: Provided, however, That if the Contractor cannot effect such repair within the time required, the Contractor shall dispose of such property in the manner directed by the Contracting Officer. The contract price includes no compensation to the Contractor for the performance of any repair or replacement for which the Government is responsible, and an equitable adjustment will be made in any contractual provisions affected by such repair or replacement of Government property made at the direction of the Government, in accordance with the procedures provided for in the "Changes" clause of this contract. Any repair or replacement for which the Contractor is responsible under the provisions of this contract shall be accomplished by the Contractor at his own expense.
- (g) Unless otherwise provided in this contract, the Contractor assumes the risk of, and shall be responsible for, any loss of or damage to Government property provided under this contract upon its delivery

to him or upon passage of title thereto to the Government as provided in paragraph (c) hereof, except for reasonable wear and tear and except to the extent that such property is consumed in the performance of this contract.

- (h) The Government, and any persons designated by it, shall at all reasonable times have access to the premises wherein any Government property is located, for the purpose of inspecting the Government property.
- (i) Upon the completion of this contract, or at such earlier dates as may be fixed by the Contracting Officer, the Contractor shall submit, in a form acceptable to the Contracting Officer, inventory schedules covering all items of Government property not consumed in the performance of this contract (including any resulting scrap) or not theretofore delivered to the Government, and shall prepare for shipment, delivery f.o.b. origin, or dispose of the Government property, as may be directed or authorized by the Contracting Officer. The net proceeds of any such disposal shall be credited to the contract price or shall be paid in such manner as the Contracting Officer may direct.
- (j) Unless otherwise provided herein, the Government:
  - (1) May abandon any Government property in place, and thereupon all obligations of the Government regarding such abandoned property shall cease; and
  - (2) Has no obligation to the Contractor with regard to restoration or rehabilitation of the Contractor's premises, neither in case of abandonment (paragraph (j)(1), above), disposition on completion of need or of the contract (paragraph (i), above), nor otherwise, except for restoration or rehabilitation costs which are properly included in an equitable adjustment under paragraph (b), above.
- (k) All communications issued pursuant to this clause shall be in writing.

47. WORK FORCES - WORK PERIODS (ALPI 9-16, Oct 76)

- (a) The Contractor shall furnish sufficient forces, construction plant, and equipment, and shall work such hours, including night shifts, overtime operations and Sunday and holiday work as may be necessary, to insure the prosecution of the work in accordance with the approved progress schedule. Before commencing work, the Contractor shall furnish a program of shifts, hours, and days per week to be worked and the approximate number of persons per shift. The Contractor shall notify the Contracting Officer 48 hours in advance of any change to the program.
- (b) If, in the opinion of the Contracting Officer, the Contractor falls behind the progress schedule, the Contractor shall take such steps as may be necessary to improve his progress, and the Contracting



Officer may require him to increase the number of shifts, or overtime operations, days of work, or the amount of construction plant, or all of them, and to submit for approval such supplementary schedules or schedules in chart form as may be deemed necessary to demonstrate the manner in which the agreed rate of progress will be regained, all without additional cost to the Government.

- (c) Failure of the Contractor to comply with the requirements of this provision shall be grounds for determination by the Contracting Officer that the Contractor is not prosecuting the work with such diligence as will insure completion of the contract within the time specified (see the clause of the General Provisions entitled "Termination for Default - Damages for Delay - Time Extensions").

48. SCHEDULES, BREAKDOWNS, SUBCONTRACTS, PAYMENT (ALPI 9-16, Oct 76)

(Refer to the clause of the General Provisions entitled "Payments to Contractor.")

- (a) Progress Schedule. Within fifteen (15) days after receipt of Notice to Proceed, the Contractor shall submit a progress schedule to the Contracting Officer for his approval.
  - (1) The schedule will be in the form, detail and number prescribed by the Contracting Officer. It will be revised by the Contractor from time to time to reflect all changes in contract work and adjustments in time, money, or both that are approved by the Contracting Officer.
  - (2) A "Critical Path" type of schedule will be acceptable if accompanied by sufficient information and back-up data to satisfy the Contracting Officer.
  - (3) The schedule will show the date of the commencement of work on each pertinent phase or item of construction (including interruptions in existing utility service), the percentage of scheduled completion at the end of each week, and the date of completion of each such phase or item of the work. If a Critical Path type schedule is used, the percentage of completion for each phase or item on the schedule will be shown at the end of each week.
  - (4) The progress schedule will indicate labor, materials and equipment actually incorporated into the work (construction in place). No progress will be indicated for materials and equipment on the site but not incorporated in the work.
- (b) Breakdown of Bid. Within fifteen (15) days after receipt of Notice to Proceed, the Contractor shall submit a bid breakdown (in the form, detail and number prescribed by the Contracting Officer), totaling the contract price, to the Contracting Officer for his approval.

- (1) The breakdown will correspond to the phases or items indicated in the progress schedule showing separate amounts for labor, materials and equipment necessary to complete the work, including quantities and unit prices as requested by the Contracting Officer.
- (2) Mobilization, preparatory work, cost of bonds, overhead and profit will be included in each of the several items to which they are applicable and will not be stated as separate items.
- (3) The Contracting Officer shall have the right to revise the breakdown submitted, prior to his approval, if, in his opinion the items indicated do not conform to their true value. The breakdown will be revised at the same time revisions become necessary in the progress schedule.

(c) Subcontracts

- (1) Unless otherwise instructed by the Contracting Officer, the Contractor shall submit in writing within fifteen (15) days after receipt of the Notice to Proceed the names of all subcontractors, and lower tier subcontractors involving on-site labor, together with a summary of the extent, character, and dollar amount of the work to be done by each subcontractor. The Contractor shall, upon the request of the Contracting Officer, furnish the Contracting Officer with a copy or copies of all subcontracts for performance of the work under this contract.
- (2) Immediately after issuance of the Notice to Proceed, and any time thereafter, the Contracting Officer may request submittal of purchase orders or subcontracts for materials or equipment (including those issued by subcontractors) with priority ratings extended when applicable. The submittal to the Contracting Officer shall be made immediately after the Contractor receives confirmation of the various items. The promised date(s) of shipment, point(s) of delivery, quantity and name of items to be furnished and unit prices will be clearly indicated. The date each purchase order or subcontract is placed will be furnished to the Contracting Officer.

(d) Changes Affecting Delivery

The Contracting Officer will be notified immediately of any changes or circumstances which would affect timely delivery of any item.

(e) Basis for Payment

- (1) Progress payments will be computed on a basis of the percentage of completion of the work in place, multiplied by the lump-sum contract price, the percentage of completion representing the ratio of the value of that portion of the work completed to the total price, as determined by the application of prices shown in the approved breakdown of bid.

(2) No payment(s) will be made to the Contractor until the breakdown of bid and the progress schedule have been submitted to and approved by the Contracting Officer.

(f) Fire Protection During Construction-Payment Withholding. Whenever the Technical Provisions require fire protection during construction, the Contracting Officer may withhold payment until the fire protection system is in operation.

49. STORAGE AND WORK AREAS (ALPI 9-16, October 1976)

- (a) Warehouse, shop, and office facilities and stockpile areas will be provided by the Contractor at his own expense. If the Contracting Officer designates locations on the site for this purpose, the Contractor may erect structures, install utilities, and establish storage areas as may be necessary to prosecute the work under the contract. All the above structures and facilities shall remain the property of the Contractor and, unless otherwise authorized by the Contracting Officer, shall be removed from the property of the Government at the Contractor's expense upon completion of the work or when directed by the Contracting Officer. Government premises shall be made available for use by the Contractor without cost except as otherwise stated in the Technical Provisions, whenever such use will not interfere with other uses of the Government or its contractors.
- (b) Only materials, appliances, and plans to be used for the performance of the contract work may be stored in stockpile areas or in warehouses and shop facilities (whether erected by the Contractor or not) located on Government-controlled land. If the Contractor abandons the performance of the contract work or if the Contractor's right to proceed is terminated pursuant to the clause of General Provisions entitled "Termination for Default - Damages for Delay - Time Extensions," the Contractor shall hold and save the Government and its officers and agents free and harmless from any liability of any nature or kind, arising from the Government's entry into such stockpile areas, warehouses, or shop facilities and from the Government's taking possession of and utilizing such materials, appliances, and plant in completing the contract work.
- (c) All operations of the Contractor, including storage of construction materials and equipment, upon Government premises shall be confined to areas authorized or approved by the Contracting Officer. No unauthorized or unwarranted entry upon or passage through, or storage or disposal of materials shall be made upon Government premises. The Contractor shall hold and save the Government, its officers and agents free and harmless from liability of any nature or kind arising from any use, trespass, or damage occasioned by his operations on premises of third persons.
- (d) The Contractor shall, under regulations prescribed by the Contracting Officer, use only established roadways or construct and use such temporary roadways as may be authorized. Where materials are transported in the prosecution of the work, vehicles shall not

be loaded beyond the loading capacity recommended by the manufacturer of the vehicles or prescribed by any applicable Federal, state, or local law or regulation. When it is necessary to cross curbs or sidewalks or to operate heavily loaded vehicles on surfaced streets, sidewalks or developed areas, protection against damage shall be provided by the Contractor, and any damaged roads, curbs, sidewalks or developed areas shall be repaired by, or at the expense of the Contractor.

- (e) The Contractor shall provide and maintain during the entire period covered by this contract a weather-tight bulletin board approximately 3 feet high by 5 feet long. It shall be mounted in a conspicuous place, as approved by the Contracting Officer, accessible to all employees of the Contractor and subcontractors. The bulletin board will remain the property of the Contractor. All Government posters or notices, the contract Davis-Bacon wage rate decision, contractor safety programs, and any publications in the interest of workmen shall be displayed.

50. UTILITIES (ALPI 9-16, October 1976)

- (a) Water, Electricity and Gas. Except as otherwise stated in the Technical Provisions, water, electricity and gas will be furnished to the Contractor without charge. In the event the Contracting Officer determines such utilities are not available, the Contractor will furnish his own utilities as may be necessary from other sources at no additional cost to the Government.
- (b) Temporary Utility Service. The Contractor shall install and maintain, at his own expense, all temporary utility connections to existing distribution systems. Such connections will be made only at locations approved by the Contracting Officer. The temporary lines and connection will be furnished, installed, connected and maintained by the Contractor in a workmanlike manner, satisfactory to the Contracting Officer, and furnished with acceptable protective devices necessary to prevent damage to the Government property. Inspection and acceptance by the Contracting Officer will not relieve the Contractor from liability for any damage caused by the Contractor's negligence in installing or maintaining such temporary utility service. The utility services shall be restored to their original condition, unless otherwise authorized by the Contracting Officer, at the expense of the Contractor, when the temporary connections are removed.
- (c) Telephone. All telephones required by the Contractor shall be furnished at his own expense.
- (d) Interruptions to Utility Service. Certain portions of the work may require interruptions to utility services. No outage will be permitted without prior consent of the Contracting Officer. All outages shall be held to a minimum in number and duration. Specific requirements shall be as set forth in various technical sections. All utilities tie-in costs and premium time shall be included in the total contract price.

51. CLEANUP, SALVAGE AND DISPOSAL OF WASTE MATERIALS (ALPI 9-16, October 76)

- (a) The Contractor shall at all times keep the work site, including storage areas used by him, free from accumulations of waste material, slush, trash or rubbish, and prior to completion of work remove any such accumulation from and about the premises, and from and about all tools, scaffolding, equipment, and construction. Upon completion of contract work the Contractor shall leave the work and premises in a condition satisfactory to the Contracting Officer.
- (b) Salvaged materials shall be handled as provided in the Technical Provisions.
- (c) The Contractor shall be responsible for the removal and disposal of all scrap and waste materials at no additional cost to the Government. The Government, subject to availability thereof, may provide a dumping ground for scrap and waste materials.

Burning of waste material is not permitted.

52. EXISTING INSTALLATION PROTECTION AND REPAIR (ALPI 9-16, Oct 76)

- (a) Existing Installation Protection. The Contractor shall be responsible for any damage to existing installations (such as structures and underground utilities) which are indicated in the specifications or drawings (or the existence of which the Contractor knew or should have known) that occurs as a result of the fault or negligence of the Contractor or his subcontractors in the performance of this contract. If the Contracting Officer determines that installations, materials, equipment, supplies, and work performed are not adequately protected by the Contractor, necessary protective action may be taken by the Contracting Officer, and the cost thereof will be charged to the Contractor.
- (b) Existing Installation Repair.
  - (1) Existing installations which are damaged as a result of the fault or negligence of the Contractor or his subcontractors shall be repaired by the Contractor as directed by the Contracting Officer without cost to the Government.
  - (2) Existing installations which are damaged by the Contractor or his subcontractors without fault or negligence on the part of either shall be repaired by the Contractor if and as directed by the Contracting Officer, and such directions by the Contracting Officer shall be deemed a change order within the meaning of the clause of the General Provisions entitled "Changes."

53. WARRANTIES (ALPI 9-16, Oct 76)

- (a) The Contractor warrants all work covered by this contract (including all machinery and equipment, parts and assemblies thereof) against failure caused by omissions of materials, defective materials or poor workmanship, or improper workmanship for a period of one year from the date of acceptance of the completed work. All roofing and flashing work specified herein shall be warranted for a period of two years. The Contractor's warranty with respect to work repaired or replaced hereunder shall run for one year from the date of such repair or replacement. The Contractor shall obtain for the benefit of the Government any warranties and guarantees obtainable from manufacturers, sellers or subcontractors.
- (b) Upon completion of the construction, the Contractor shall deliver to the Contracting Officer, in duplicate, copies of manufacturers' catalog information data covering all fixtures and equipment installed. This information shall be supplied in a bound file for each building or structure, with the location of each item noted. The manufacturers' catalog data shall include full identification of the equipment or fixture, capacities, current characteristics, dimensions and identification of replacement parts. Operating instructions for installed equipment shall be furnished and conspicuously mounted by the Contractor at places designated.

54. TESTING (ALPI 9-16, Oct 76)

Unless specifically stated to the contrary, all testing performed under this contract will be paid for by the contractor and performed by him or, where testing by a testing organization is called for or required, by an organization approved by the Contracting Officer. Unless waived in writing by the Contracting Officer, all such tests shall be made in the presence of the Contracting Officer. When such presence is so waived, sworn statements, in triplicate, of the tests made and the results thereof shall be furnished to the Contracting Officer as soon as possible after the tests are made.

55. NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (DOE 9-9.104 June 79)

The provisions of this clause shall be applicable only if the amount of this contract exceeds \$10,000.

- (a) The contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the contractor has knowledge.
- (b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed hereunder, the contractor shall furnish to the Government when requested by the Contracting

Officer, all evidence and information in possession of the contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the contractor has agreed to indemnify the Government.

(c) This clause shall be included in all subcontracts.

56. UTILIZATION OF SMALL BUSINESS CONCERNS AND SMALL BUSINESS CONCERNS OWNED AND CONTROLLED BY SOCIALLY AND ECONOMICALLY DISADVANTAGED INDIVIDUALS

FPR Temp Reg 50/2  
45FR35809 5/28/80  
DOE APL 80-11 5/28/80

(Applicable if the contract exceeds \$10,000)

- (a) It is the policy of the United States that small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals shall have the maximum practicable opportunity to participate in the performance of contracts let by any Federal agency.
- (b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with the efficient performance of this contract. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the Small Business Administration or the contracting agency which may be necessary to determine the extent of the Contractor's compliance with this clause.
- (c) (1) As used in this contract, the term "small business concern" shall mean a small business as defined pursuant to Section 3 of the Small Business Act and in relevant regulations promulgated pursuant thereto.
- (2) The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall mean a small business concern--
- (i) which is at least 51 per centum owned by one or more socially and economically disadvantaged individuals; or in the case of any publicly owned business, at least 51 per centum of the stock of which is owned by one or more socially and economically disadvantaged individuals; and
- (ii) whose management and daily business operations are controlled by one or more of such individuals.

The Contractor shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, and other minorities, or any other individual found to be disadvantaged by the Small Business Administration pursuant to Section 8(a) of the Small Business Act.

- (d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as a small business concern or a small business concern owned and controlled by socially and economically disadvantaged individuals.

57. SUBCONTRACTING PLAN FOR SMALL BUSINESS CONCERNS AND SMALL BUSINESS CONCERNS OWNED AND CONTROLLED BY SOCIALLY AND ECONOMICALLY DISADVANTAGED INDIVIDUALS

- (a) The Contractor agrees to comply in good faith with the Small and Small Disadvantaged Business Concerns Subcontracting Plan which is hereby incorporated in and made a part of this contract. In this connection, the Contractor shall:
- (1) Use his best efforts to attain such percentage goals as may be set forth in the plan.
  - (2) Designate an individual who will: (i) Maintain liaison with the Government on matters relating to small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals; (ii) Monitor compliance with the clause entitled, "Utilization of Small Business Concerns and Small Business Concerns Owned and Controlled by Socially and Economically Disadvantaged Individuals"; and (iii) Administer the Contractor's plan.
  - (3) Provide adequate and timely consideration of the potentialities of small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals in all "make-or-buy" decisions.
  - (4) Assure that small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals will, consistent with efficient performance of the contract, have the maximum practicable opportunity to compete for subcontracts, particularly by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation of such concerns. Where the Contractor's lists of potential subcontractors which are small business and small business concerns owned and controlled by socially and economically disadvantaged individuals are excessively long, reasonable effort shall be made to give all such concerns an opportunity to compete over a period of time.
  - (5) Maintain records showing: (i) Whether each subcontractor is a small business concern or a small business concern owned and controlled by socially and economically disadvantaged individuals; and (ii) Procedures which have been adopted to comply with the plan and the policies set forth in this clause.



- (6) Notify the Contracting Officer before soliciting bids, quotations, or proposals on any subcontract (including purchase orders) in excess of \$10,000 if: (i) no small business concern or small business concern owned and controlled by socially and economically disadvantaged individuals is to be solicited, and (ii) The Contracting Officer's consent to the subcontract is required by a "Subcontracts" clause in this contract. Such notification will state the Contractor's reasons for nonsolicitation of small business and small business concerns owned and controlled by socially and economically disadvantaged individuals and will be given as early in the procurement cycle as possible so that the Contracting Officer may suggest potentially qualified small business concerns or small business concerns owned and controlled by socially and economically disadvantaged individuals. In no case will the procurement action be held up when to do so would, in the Contractor's judgment, delay performance under the contract and the Contractor's notification shall specify that he is proceeding with the solicitation.
  - (7) Include the "Utilization of Small Business Concerns and Small Business Concerns Owned and Controlled by Socially and Economically Disadvantaged Individuals" clause in all subcontracts over \$10,000 which offer further subcontracting opportunities.
  - (8) Cooperate in any studies or surveys of the Contractor's subcontracting procedures and practices as may be required by the Department of Energy or the Small Business Administration.
  - (9) Submit quarterly reports of subcontracting to small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals on such forms as may be specified elsewhere in this contract.
- (b) The Contractor agrees that failure to comply in good faith with the clause entitled, "Utilization of Small Business Concerns and Small Business Concerns Owned and Controlled by Socially and Economically Disadvantaged Individuals," or the terms of the subcontracting plan incorporated into the contract will be a material breach of the contract and the contract may be terminated in whole or, in part, for default.
- (c) The Contractor further agrees to insert in all subcontracts hereunder (except those with small business concerns) which contain the clause entitled, "Utilization of Small Business Concerns and Small Business Concerns Owned and Controlled by Socially and Economically Disadvantaged Individuals," which offer further subcontracting opportunities, and which may exceed \$1,000,000 in the case of a subcontract for the construction of any public

facility or in excess of \$500,000 in the case of all other subcontracts, provisions which shall conform substantially to the language of this clause, including this paragraph (c), and to notify the Contracting Officer of the names of such subcontractors.

- (d) The provisions of this clause shall not apply to small business concerns.

58. CERTIFICATION--WAGE AND PRICE STANDARDS (1979 JAN)

- (a) The Contractor hereby certifies that, as of the date of this action, it is in compliance with the Wage and Price Standards issued by the Council on Wage and Price Stability (6 CFR 705, Appendix, and Part 706).
- (b) If it is later determined after notice and opportunity to be heard, that the Contractor was willfully not in compliance with such standards as of the date of this certification, then this contract may be terminated in accordance with the provisions of the clause entitled "Termination for Default or Convenience of the Government."
- (c) Should the Government determine that termination for default would not be in the public interest, the Contractor agrees that it will accept an equitable reduction of cost allowance and fee, as appropriate under the circumstances.
- (d) The Contractor shall require a Certification-Wage and Price Standards limited to (a) above, as a condition of award of any first tier subcontract which exceeds \$5 million. The Contractor further agrees that should any price adjustment in subcontract prices result from the operation of this provision as to subcontracts, it will advise the Contracting Officer and an equitable adjustment of the contract price will be made. The operation of this provision in any subcontract shall not excuse the Contractor from performance of this contract in accordance with its terms and conditions. Any waiver or relaxation of the certification requirements with respect to such first-tier subcontractors can only be made by the agency head involved.

59. SOCIALLY AND ECONOMICALLY DISADVANTAGED BUSINESS (DOE Procurement Letter 79-5 dtd 2-2-79)

The term "Socially and Economically Disadvantaged Business" is to be substituted for the term "Minority Business" in all procurement regulations and references.

60. WOMEN-OWNED BUSINESS CONCERNS SUBCONTRACTING PROGRAM (OVER \$500,000 or \$1,000,000 FOR CONSTRUCTION OF ANY PUBLIC FACILITY)

45FR31034 5/09/80  
DOE APL 80-12 5/28/80

(NOTE: The following clause shall be included in all contracts, amendments or modifications expected to exceed \$500,000 or in the case of contracts for the construction of any public facility, \$1,000,000 which require the UTILIZATION OF WOMEN-OWNED BUSINESS CONCERNS clause.)

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

- (6) Cooperate in any studies and surveys of the Contractor's women-owned business concerns procedures and practices that the Contracting Officer may from time-to-time conduct.
- (7) Submit periodic reports of subcontracting to women-owned business concerns with respect to the records referred to in subparagraph (4) above, in such form and manner and at such time (not more often than quarterly) as the Contracting Officer may prescribe.
- (b) The Contractor further agrees to insert, in any subcontract hereunder which may exceed \$500,000 or \$1,000,000 in the case of contracts for the construction of any public facility and which offers substantial subcontracting possibilities, provisions which shall conform substantially to the language of this clause, including this paragraph (b), and to notify the Contracting Officer of the names of such subcontractors.
- (c) The Contractor further agrees to require written certification by its subcontractors that they are bona fide women-owned and controlled business concerns in accordance with the definition of a women-owned business concern as set forth in the UTILIZATION OF WOMEN-OWNED BUSINESS CONCERNS clause at the time of submission of bids or proposals.

61. UTILIZATION OF WOMEN-OWNED BUSINESS CONCERNS (OVER \$10,000)

45FR31034 05/09/80  
DOE APL 80-12 05/28/80

(NOTE: The following clause is applicable to all contracts expected to exceed \$10,000 except (i) contracts which, including all subcontracts thereunder, are to be performed entirely outside the United States, its possessions, Puerto Rico and the Trust Territory of the Pacific Islands, and (ii) contracts for services which are personal in nature.)

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

62. AUTHORIZATION AND CONSENT

Provisions of Authorization and Consent are set forth on page GP56.

63. REPORTING OF ROYALTIES

If this contract is in an amount which exceeds \$10,000 and if any royalty payments are directly involved in the contract or are reflected in the contract price to the Government, the Contractor agrees to report in writing to the Patent Counsel (with notification by Patent Counsel to the Contracting Officer) during the performance of this contract and prior to its completion or final settlement, the amount of any royalties or other payments paid or to be paid by it directly to others in connection with the performance of this contract together with the names and addresses of licensors to whom such payments are made and either the patent numbers involved or such other information as will permit the identification of the patents or other basis on which the royalties are to be paid. The approval of DOE of any individual payments or royalties shall not estop the Government at any time from contesting the enforceability, validity or scope of, or title to, any patent under which a royalty or payments are made.

64. ADDITIONAL TECHNICAL DATA REQUIREMENTS

- (a) In addition to the technical data specified elsewhere in this contract to be delivered, the Contracting Officer may at any time during the contract performance or within one year after final payment call for the Contractor to deliver any technical data first produced or specifically used in the performance of this contract, except technical data pertaining to items of standard commercial design.
- (b) The provisions of the "Rights in Technical Data" clause included in this contract are applicable to all technical data called for under this "Additional Technical Data Requirements" clause. Accordingly, nothing contained in this clause shall require the Contractor to actually deliver any technical data, the delivery of which is excused by paragraph (e) of the "Rights in Technical Data" clause.
- (c) When technical data are to be delivered under this clause, the Contractor will be compensated for appropriate costs for converting such data into the prescribed form for reproduction, and for delivery.

65. RIGHTS IN TECHNICAL DATA--LONG FORM

- (a) Definitions.

- (1) "Technical Data" means recorded information regardless of form or characteristic, of a scientific or technical nature. It may, for example, document research, experimental, developmental, or demonstration, or engineering work, or be usable or used to define a design or process, or to procure, produce, support, maintain, or operate material. The data may be graphic or pictorial delineations in media such as drawings of photographs, text in specifications or related performance or design-type documents or computer software or printouts. Examples of technical data include research and engineering data, engineering drawings, and associated lists, specifications, standards, process sheets, manuals, technical reports, catalog item identification, and related information. Technical data as used herein does not include financial reports, cost analyses, and other information incidental to contract administration.
- (2) "Proprietary Data" means technical data which embody trade secrets developed at private expense, such as design procedures or techniques, chemical composition of materials, or manufacturing methods, processes, or treatments, including minor modifications thereof, provided that such data:
  - (i) are not generally known or available from other sources without obligation concerning their confidentiality.
  - (ii) have not been made available by the owner to others without obligation concerning its confidentiality; and
  - (iii) are not already available to the Government without obligation concerning their confidentiality.
- (3) "Contract Data" means technical data first produced in the performance of the contract, technical data which are specified to be delivered under the contract, technical data that may be called for under the "Additional Technical Data Requirements" clause of the contract, if any, or technical data actually delivered in connection with the contract.
- (4) "Unlimited Rights" means rights to use, duplicate, or disclose technical data, in whole or in part, in any manner and for any purpose whatsoever, and to permit others to do so.

(b) Allocation of Rights.

- (1) The Government shall have:
  - (i) unlimited rights in contract data except as otherwise provided below with respect to proprietary data.

- (ii) the right to remove, cancel, correct or ignore any marking not authorized by the terms of this contract on any technical data furnished hereunder, if in response to a written inquiry by DOE concerning the proprietary nature of the markings, the contractor fails to respond thereto within 60 days or fails to substantiate the proprietary nature of the markings. In either case DOE will notify the Contractor of the action taken.
  - (iii) no rights under this contract in any technical data which are not contract data.
- (2) The Contractor shall have:
- (i) The right to withhold proprietary data in accordance with the provisions of this clause; and
  - (ii) The right to use for its private purposes, subject to patent, security or other provisions of this contract, contract data it first produces in the performance of this contract, provided the data requirements of this contract have been met as of the date of the private use of such data. The Contractor agrees that to the extent it receives or is given access to proprietary data or other technical, business or financial data in the form of recorded information from DOE or a DOE contractor or subcontractor, the Contractor shall treat such data in accordance with any restrictive legend contained thereon, unless use is specifically authorized by prior written approval of the Contracting Officer.
- (3) Nothing contained in this "Rights in Technical Data" clause shall imply a license to the Government under any patent or be construed as affecting the scope of any licenses or other rights otherwise granted to the Government under any patent.
- (c) Copyrighted Material.
- (1) The Contractor shall not, without prior written authorization of the Contracting Officer, establish a claim to statutory copyright in any contract data first produced in the performance of the contract. To the extent such authorization is granted, the Government reserves for itself and others acting on its behalf a royalty-free, non-exclusive, irrevocable, world-wide license for Governmental purposes to publish, distribute, translate, duplicate, exhibit and perform any such data copyrighted by the Contractor.

- (2) The Contractor agrees not to include in the technical data delivered under the contract any material copyrighted by the Contractor and not to knowingly include any material copyrighted by others without first granting or obtaining at no cost a license therein for the benefit of the Government of the same scope as set forth in paragraph (c)(1) above. If such royalty-free license is unavailable and the Contractor nevertheless determines that such copyrighted material must be included in the technical data to be delivered, rather than merely incorporated therein by reference, the Contractor shall request the written authorization of the Contracting Officer to include such copyrighted material in the technical data without a license.

(d) Subcontracting.

It is the responsibility of the Contractor to obtain from its subcontractors technical data and rights therein, on behalf of the Government, necessary to fulfill the Contractor's obligations to the Government with respect to such data. In the event of refusal by a subcontractor to accept a clause affording the Government such rights, the Contractor shall:

- (1) Promptly submit written notice to the Contracting Officer setting forth reasons for the subcontractor refusal and other pertinent information which may expedite disposition of the matter; and
- (2) Not proceed with the subcontract without the written authorization of the Contracting Officer.

(e) Withholding of Proprietary Data.

Notwithstanding the inclusion of the "Additional Technical Data Requirements" clause in this contract or any provision of this contract specifying the delivery of technical data, the Contractor may withhold proprietary data from delivery, provided that the Contractor furnishes in lieu of any such proprietary data, so withheld technical data disclosing the source, size, configuration, mating and attachment characteristics, functional characteristics and performance requirements ("Form, Fit and Function" data., e.g., specification control drawings, catalog sheets, envelope drawings, etc.) or a general description of such proprietary data where "Form, Fit and Function" data are not applicable. The Government shall acquire no rights to any proprietary data so withheld except that such data shall be subject to the "inspection rights" provisions of paragraph (f), and, if included, the "limited rights in proprietary data" provisions of paragraph (g) and the "Contractor licensing" provisions of paragraph (h).



(f) Inspection Rights.

Except as may be otherwise specified in this contract for specific items of proprietary data which are not subject to this paragraph, the Contracting Officer's representatives, at all reasonable times up to three (3) years after final payment under this contract, may inspect at the Contractor's facility any proprietary data withheld under paragraph (e) and not furnished under paragraph (g) for the purposes of verifying that such data properly fell within the withholding provision of paragraph (e), or for evaluating work performance.

(g) Limited Rights in Proprietary Data.

Except as may be otherwise specified in this contract as technical data which are not subject to this paragraph, the Contractor shall, upon written request from the Contracting Officer at any time prior to three (3) years after final payment under this contract, promptly deliver to the Government any proprietary data" withheld pursuant to paragraph (e) of the "Rights in Technical Data" clause of this contract. The following legend and no other is authorized to be affixed on any "proprietary data" delivered pursuant to this provision, provided the "proprietary data" meets the conditions for initial withholding under paragraph (e) of the "Rights in Technical Data" clause. The Government will thereafter treat the "proprietary data" in accordance with such legend.

LIMITED RIGHTS LEGEND

This "proprietary data," furnished under Contract No. \_\_\_\_\_ with the United States Department of Energy (and Purchase Order No. \_\_\_\_\_ if applicable) may be duplicated and used by the Government with the express limitations that the "proprietary data" may not be disclosed outside the Government or be used for purposes of manufacture without prior permission of the Contractor, except that further disclosure or use may be made solely for the following purposes:

- (a) This "proprietary data" may be disclosed for evaluation purposes under the restriction that the proprietary data be retained in confidence and not be further disclosed;
- (b) This "proprietary data" may be disclosed to other contractors participating in the Government's program of which this contract is a part for information or use in connection with the work performed under their contracts and under the restriction that the "proprietary data" be retained in confidence and not be further disclosed; or

- (c) This "proprietary data" may be used by the Government or others on its behalf for emergency repair or overhaul work under the restriction that the "proprietary data" be retained in confidence and not be further disclosed.

This legend shall be marked on any reproduction of this data in whole or in part.

- (h) Contractor Licensing.

Except as may be otherwise specified in this contract as technical data not subject to this paragraph, the Contractor agrees that upon written application by DOE, it will grant to the Government and responsible third parties, for purposes of practicing a subject of this contract, a nonexclusive license in any contract data which are proprietary data on terms and conditions reasonable under the circumstances including appropriate provisions for confidentiality; provided, however, the Contractor shall not be obligated to license any data if the Contractor demonstrates to the satisfaction of the Head of the Agency or his designee that:

- (1) Such data are not essential to the manufacture or practice of hardware designed or fabricated, or processes developed, under this contract;
- (2) Such data, in the form of results obtained by their use, have a commercially competitive alternative available or readily introduceable from one or more other sources;
- (3) Such data, in the form of results obtained by their use, are being supplied by the Contractor or its licensees in sufficient quantity and at reasonable prices to satisfy market needs, or the Contractor or its licensees have taken effective steps or within a reasonable time are expected to take effective steps to so supply such data in the form or results obtained by its use; or
- (4) Such data, in the form of results obtained by their use, can be furnished by another firm skilled in the art of manufacturing items or performing processes of the same general type and character necessary to achieve the contract results.

CLAUSE 62 - AUTHORIZATION AND CONSENT

The Government hereby gives its authorization and consent (without prejudice to any rights of indemnification) for all use and manufacture, in the performance of this contract or any part hereof or any amendment hereto or any subcontractor hereunder (including any lower-tier subcontract), of any invention described in and covered by a patent of the United States (a) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (b) utilized in the machinery, tools or methods, the use of which necessarily results from compliance by the Contractor or the using subcontractor with (i) specifications or written provisions now or hereafter forming a part of this contract, or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clauses, if any, included in this contract or any subcontract hereunder (including all lower-tier subcontracts), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted.

**LABOR STANDARDS PROVISIONS**  
**Applicable to Contracts in Excess of \$2,000**

**1. DAVIS-BACON ACT (40 U.S.C. 276a-276a-7)**

(a) All mechanics and laborers employed or working directly upon the site of the work shall be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Copeland Regulations, 29 CFR Part 3), the full amounts due at time of payment computed at wage rates not less than the aggregate of the basic hourly rates and the rates of payments, contributions, or costs for any fringe benefits contained in the wage determination decision of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor or subcontractor and such laborers and mechanics. A copy of such wage determination decision shall be kept posted by the Contractor at the site of the work in a prominent place where it can be easily seen by the workers. The term "mechanics and laborers" shall be deemed to include apprentices and trainees not covered by an approved program as provided by the Apprentices and Trainees clause of this contract.

(b) The Contractor may discharge his obligation under this clause to workers in any classification for which the wage determination decision contains:

(1) Only a basic hourly rate of pay, by making payment at not less than such basic hourly rate, except as otherwise provided in the Copeland Regulations (29 CFR Part 3); or

(2) Both a basic hourly rate of pay and fringe benefits payments, by making payment in cash, by irrevocably making contributions pursuant to a fund, plan, or program for, and/or by assuming an enforceable commitment to bear the cost of, bona fide fringe benefits contemplated by the Davis-Bacon Act, or by any combination thereof. Contributions made, or costs assumed, on other than a weekly basis shall be considered as having been constructively made or assumed during a weekly period to the extent that they apply to such period. Where a fringe benefit is expressed in a wage determination in any manner other than as an hourly rate and the Contractor pays a cash equivalent or provides an alternative fringe benefit, he shall furnish information with his payrolls showing how he determined that the cost incurred to make the cash payment or to provide the alternative fringe benefit is equal to the cost of the wage determination fringe benefit. In any case where the Contractor provides a fringe benefit different from any contained in the wage determination, he shall similarly show how he arrived at the hourly rate shown therefor. In the event of disagreement between or among the interested parties as to an equivalent of any fringe benefit, the Contracting Officer shall submit the question, together with his recommendation, to the Secretary of Labor for final determination.

(c) The assumption of an enforceable commitment to bear the cost of fringe benefits, or the provision of any fringe benefits not expressly listed in section 1(b)(2) of the Davis-Bacon Act or in the wage determination decision forming a part of the contract, may be considered as payment of wages only with the approval of the Secretary of Labor pursuant to a written request by the Contractor. The Secretary of Labor may require the Contractor to set aside assets, in a separate account, to meet his obligations under any unfunded plan or program.

(d) The Contracting Officer shall require that any class of laborers or mechanics, including apprentices and trainees, which is not listed in the wage determination decision and which is to be employed under the contract shall be classified or reclassified conformably to the wage determination decision, and shall report the action taken to the Secretary of Labor. If the interested parties cannot agree on the proper classification or reclassification of a particular class of laborers or mechanics, including apprentices and trainees to be used, the Contracting Officer shall submit the question, together with his recommendation, to the Secretary of Labor for final determination. Apprentices and trainees may be added under this clause only where they are employed pursuant to an apprenticeship or trainee program meeting the requirements of the Apprentices and Trainees clause below.

(e) In the event it is found by the Contracting Officer that any laborer or mechanic, including apprentices and trainees, employed by the Contractor or any subcontractor directly on the site of the

work covered by this contract has been or is being paid at a rate of wages less than the rate of wages required by paragraph (a) of this clause, or by the Apprentices and Trainees clause of this contract, the Contracting Officer may (1) by written notice to the Government Prime Contractor terminate his right to proceed with the work, or such part of the work as to which there has been a failure to pay said required wages, and (2) prosecute the work to completion by contract or otherwise, whereupon such Contractor and his sureties shall be liable to the Government for any excess costs occasioned the Government thereby.

(f) Paragraphs (a) through (e) of the clause shall apply to this contract to the extent that it is (1) a prime contract with the Government subject to the Davis-Bacon Act, or (2) a subcontract also subject to the Davis-Bacon Act under such prime contract.

**2. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT—OVERTIME COMPENSATION (40 U.S.C. 327-333).**

*This contract is subject to the Contract Work Hours and Safety Standards Act and to the applicable rules, regulations, and interpretations of the Secretary of Labor.*

(a) The Contractor shall not require or permit any laborer or mechanic, including apprentices, trainees, watchmen, and guards, in any workweek in which he is employed on any work under this contract to work in excess of 8 hours in any calendar day or in excess of 40 hours in such workweek on work subject to the provisions of the Contract Work Hours and Safety Standards Act unless such laborer or mechanic, including apprentices, trainees, watchmen, and guards, receives compensation at a rate not less than 1½ times his basic rate of pay for all such hours worked in excess of 8 hours in any calendar day or in excess of 40 hours in such workweek, whichever is the greater number of overtime hours. The "basic rate of pay," as used in this clause, shall be the amount paid per hour exclusive of the Contractor's contribution or cost for fringe benefits, and any cash payment made in lieu of providing fringe benefits, or the basic hourly rate contained in the wage determination, whichever is greater.

(b) In the event of any violation of the provisions of paragraph (a), the Contractor shall be liable to any affected employee for any amounts due, and to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including an apprentice, trainee, watchman, or guard, employed in violation of the provisions of paragraph (a) in the sum of \$10 for each calendar day on which such employee was required or permitted to be employed on such work in excess of 8 hours or in excess of the standard workweek of 40 hours without payment of the overtime wages required by paragraph (a).

**3. APPRENTICES AND TRAINEES**

(a) Apprentices shall be permitted to work at less than the predetermined rate for the work they performed (1) when they are employed and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or (2) if a person is employed in his first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen in any craft classification shall not be greater than the ratio permitted to the contractor as to his entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not a trainee as defined in paragraph (b) of this clause or who is not registered or otherwise employed as stated above, shall be paid the wage rate determined by the Secretary of Labor for the classification of work he actually performed. The Contractor or subcontractor shall furnish to the Contracting Officer written evidence of the registration of his

program and apprentices as well as the appropriate ratios and wage rates (expressed in percentages of the journeymen hourly rates) for the area of construction, prior to using any apprentices on the contract work. The wage rate paid apprentices shall be not less than the appropriate percentage of the journeymen's rate contained in the applicable wage determination.

(b) Trainees shall be permitted to work at less than the predetermined rate for the work performed when they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification, by the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training. The term "trainee" means a person registered and receiving on-the-job training in a construction occupation under a program which has been approved in advance by the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, as meeting its standards for on-the-job training programs and which has been so certified by the Bureau. The ratio of trainees to journeymen on this contract shall not be greater than the ratio permitted under the plan approved by the Bureau of Apprenticeship and Training. Every trainee must be paid at not less than the rate specified in the approved program for his level of progress. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Bureau of Apprenticeship and Training shall be paid not less than the wage rate determined by the Secretary of Labor for the classification of work he actually performed. The Contractor or subcontractor shall furnish the Contracting Officer written evidence of the certification of his program, the registration of the trainees, and the ratios and wage rates prescribed in that program. In the event the Bureau of Apprenticeship and Training withdraws approval of a training program, the Contractor shall no longer utilize trainees at less than the applicable predetermined rate for work performed until an acceptable program is approved.

(c) The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of this contract.

(d) If at any time the Bureau of Apprenticeship and Training determines, after opportunity for a hearing, that the standards of a training program have not been complied with, or that such a program fails to provide adequate training for participants, the Contractor shall not utilize trainees at less than the predetermined rate for the classification of work actually performed until an acceptable program is approved. If the Contractor brings an appeal pursuant to 29 CFR 5.17 within 30 days of his receipt of a certified letter withdrawing the Bureau of Apprenticeship and Training's approval, the effect of the withdrawal of approval of the program will be delayed until a decision is rendered on the appeal pursuant to 29 CFR 5.17.

#### 4. PAYROLLS AND BASIC RECORDS

(a) The Contractor shall maintain payrolls and basic records relating thereto during the course of the work and shall preserve them for a period of 3 years thereafter for all laborers and mechanics, including apprentices, trainees, watchmen, and guards working at the site of the work. Such records shall contain the name and address of each such employee, his correct classification, rate of pay (including rates of contributing for or costs assumed to provide fringe benefits), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Contractor has obtained approval from the Secretary of Labor as provided in paragraph (c) of the clause entitled "Davis-Bacon Act", he shall maintain records which show the commitment, its approval, written communication of the plan or program to the laborers or mechanics affected, and the costs anticipated or incurred under the plan or program.

(b) The Contractor shall submit weekly a copy of all payrolls to the Contracting Officer. The Government Prime Contractor shall be responsible for the submission of copies of payrolls of all subcontractors. The copy shall be accompanied by a statement signed by the Contractor indicating that the payrolls are correct and complete, that the wage rates contained therein are not less than those determined by the Secretary of Labor, and that the classifications set forth for each laborer or mechanic, including

apprentices and trainees conform with the work he performed. Submission of the "Weekly Statement of Compliance" required under this contract and the Copeland Regulations of the Secretary of Labor (29 CFR Part 3) shall satisfy the requirement for submission of the above statement. The Contractor shall submit also a copy of any approval by the Secretary of Labor with respect to fringe benefits which is required by paragraph (c) of the clause entitled "Davis-Bacon Act". Contractors employing apprentices or trainees under approved programs shall include a notation of the first weekly certified payrolls submitted to the contracting agencies that their employment is pursuant to an approved program and shall identify the program.

(c) The Contractor shall make the records required under this clause available for inspection by authorized representatives of the Contracting Officer and the Department of Labor, and shall permit such representatives to interview employees during working hours on the job.

**NOTE:** Watchmen and guards appear on payroll records only for purposes of the Contract Work Hours and Safety Standards Act.

#### 5. COMPLIANCE WITH COPELAND REGULATIONS

The Contractor shall comply with the Copeland Regulations of the Secretary of Labor (29 CFR Part 3) which are incorporated herein by reference.

#### 6. WITHHOLDING OF FUNDS

(a) The Contracting Officer may withhold or cause to be withheld from the Government Prime Contractor so much of the accrued payments or advances as may be considered necessary (1) to pay laborers and mechanics, including apprentices, trainees, watchmen, and guards employed by the Contractor or any subcontractor on the work the full amount of wages required by the contract, and (2) to satisfy any liability of the Contractor and any subcontractor for liquidated damages under paragraph (b) of the clause entitled "Contract Work Hours and Safety Standards Act—Overtime Compensation."

(b) If the Contractor or any subcontractor fails to pay any laborer, mechanic, apprentice, trainee, watchman, or guard employed or working on the site of work, all or part of the wages required by the contract, the Contracting Officer may, after written notice to the Government Prime Contractor, take such action as may be necessary to cause suspension of any further payments or advances until such violations have ceased.

#### 7. SUBCONTRACTS

The Contractor agrees to insert the clauses hereof entitled "Davis-Bacon Act," "Contract Work Hours and Safety Standards Act—Overtime Compensation," "Apprentices and Trainees," "Payrolls and Basic Records," "Compliance with Copeland Regulations," "Withholding of Funds," "Subcontracts," and "Contract Termination—Debarment" in all subcontracts. The term "Contractor" as used in such clauses in any subcontract shall be deemed to refer to the subcontractor except in the phrase "Government Prime Contractor."

#### 8. CONTRACT TERMINATION—DEBARMENT

A breach of the clauses hereof entitled "Davis-Bacon Act," "Contract Work Hours and Safety Standards Act—Overtime Compensation," "Apprentices and Trainees," "Payrolls and Basic Records," "Compliance with Copeland Regulations," "Withholding of Funds," and "Subcontracts" may be grounds for termination of the contract, and for debarment as provided in 29 CFR 5.6.

#### 9. DISPUTES CONCERNING LABOR STANDARDS

Disputes arising out of the labor standards provisions of this contract shall be subject to the Disputes clause except to the extent such disputes involve the meaning of classifications or wage rates contained in the wage determination decisions of the Secretary of Labor or the applicability of the labor provisions of this contract which questions shall be referred to the Secretary of Labor in accordance with the procedures of the Department of Labor.

## SUPPLEMENT TO STANDARD FORM 19-A,

## LABOR STANDARDS PROVISIONS, JANUARY 1979 EDITION

## 10. WAGE DETERMINATION (DOE 9-7.604-52 dtd 6-79)

The wage rates set forth are the minimum rates which may be paid to the classifications of laborers and mechanics designated therein pursuant to the Davis-Bacon Act (Act of March 3, 1931, as amended; 40 U.S.C. 276a et seq.). DOE does not represent that said minimum rates do now, nor that they will at any time in the future, prevail in the locality of the work for such laborers or mechanics; nor that such mechanics or laborers are or will be obtainable at said rates for work under this contract; nor that said rates represent the most recent wage determination by the Secretary of Labor with respect to such classifications of laborers or mechanics in the locality of the work.

81-6A-74

Coweta County, Georgia

BUILDING CONSTRUCTION:

Basic Hourly Rates	Fringe Benefits Payments			
	N & F	Pensions	Vacation	Education and/or Appr. Tr.
Bricklayers	\$11.60	.75	.67	.30
Carpenters & Soft floor layers	11.75	.70	.55	.02
Cement masons	9.45	.60	.80	
Electricians	12.95	.70	1.38	of 18
Glaziers	12.00	.90	.63	.11
Ironworkers	12.35	.70	.97	.87
Laborers	5.87			
Millwrights	12.10	.70	.55	.10
Painters:				
Brush & Roller	11.60	.65	.90	.05
Paperhanger	11.85	.65	.90	.05
Spray	12.60	.65	.90	.05
Plumbers & Pipefitters	12.95	1.00	.85	.11
Roofers	6.84			
Sheet metal workers	8.53			
Welders - Rate for craft.				
<u>Power Equipment Operators:</u>				
Backhoe	7.57			
Bulldozer	11.05	.63	.75	.09
Crane	11.62	.63	.75	.09
Front end loader	11.05	.63	.75	.09
Motor grader	11.05	.63	.75	.09
Scraper	11.05	.63	.75	.09

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5 (a) (1) (ii)).

NOTICE OF MODIFICATION

Industrial Relations Division  
 to US Dept. of Energy  
 P. O. Box 5400  
 Albuquerque, New Mexico 87115

DATE OF THIS MODIFICATION 4-13-81	MODIFICATION NO. 1
DECISION NO. 81-GA-74	EXPIRES 7-6-81
COUNTY Coweta	STATE Georgia

DESCRIPTION OF WORK  
 Large scale solar power system experiment  
 to power a clothing manufacturing firm.  
 High temp. insulation on pipes and tanks.

Upon review of current data, changes as noted below are hereby directed. The rates in the enumerated wage determination decision, as amended by previous modifications, and as modified herein, are to be considered prevailing (or, in the case of the Federal Airport Act, as the minimum) in accordance with applicable law.

ARE:

Basic Hourly Rates	Fringe Benefits Payments				
	H R V	Pensions	Vacation	Acc. TR.	Others

ARTIST WORKERS

\$12.70	.65	1.00		.10
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*Anthony J. Fontana*  
 Director  
 Division of Government  
 Contract Wage Determinations  
 Wage and Hour Division



NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION  
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

<u>Timetables</u>	<u>Goals for Minority participation for each trade</u>	<u>Goals for female participation in each trade</u>
For Duration of Contract	19.5%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply to goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the names, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.
4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is Shenandoah, Georgia

STANDARD FEDERAL EQUAL EMPLOYMENT  
OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATION  
(EXECUTIVE ORDER 11246)

1. As used in these specifications:

- a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
- b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
- c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
- d. "Minority" includes:
  - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
  - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
  - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent or the Pacific Islands); and
  - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification);

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
- a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
  - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
  - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
  - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and

employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
- p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even through the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.



13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

TECHNICAL PROVISIONS

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DIVISION 1 GENERAL REQUIREMENTS

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DIVISION 15 MECHANICAL

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DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01100. SPECIAL CONTRACT REQUIREMENTS

01101 SCOPE OF WORK, PERFORMANCE BY CONTRACTOR

This contract covers the furnishing of all plant, labor, equipment, supplies and materials and performing all work in strict accordance with the terms of the contract.

01102 CONTRACT DRAWINGS AND SPECIFICATIONS

The Contractor will be furnished, without charge, ten sets of drawings and specifications. The drawings which constitute a part of the contract documents are as indexed in Section 01600.

01103 STATE LIEN STATUTES

State lien statutes are not applicable to construction contracts of the Federal Government; therefore, Preliminary Notices to the Government will not be acknowledged. The Miller Act (40 USC 270a-270d) may provide a remedy for unpaid persons of firms furnishing labor and/or materials in the prosecution of the work provided for in Government contracts.

01104 MILESTONE SCHEDULE

Contractor may have access to the site 45 calendar days after receipt of notice to proceed.

01105 WEEKLY PROGRESS MEETINGS

Throughout the performance of this contract, weekly progress meetings will be conducted by DOE at the Field Project Office. The Contractor and appropriate subcontractors shall attend the meetings. The operating Contractor (Sandia Corporation) and the Construction Inspection may also be represented at the meetings.

At each meeting, the Contractor shall submit a current status report covering construction activities and the purchase of materials. The status report shall include, but shall not be limited to, the log of submittals and the purchasing record.

01106 OTHER PROJECT PARTICIPANTS

As ultimate user of the facility, Sandia Laboratories is vitally concerned with the manner in which the contract work is performed and the Contracting Officer will draw upon Sandia Laboratories to aid him. Additionally, a Construction Inspector shall be designated by the Government to oversee the contract work.

References in the Technical Specifications to "Owner" shall mean the "Government". In addition, the Contracting Officer is the only authorized representative of the Government who may make approvals, act in submittals and give direction to the Contractor. Accordingly, all references to "Architect-Engineer" in the Technical Specifications shall mean the "Contracting Officer".

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01340. SUBMITTALS

01341 GENERAL (See General Provision 15)

- a. Shop drawings, catalog data, material lists, installation instructions and maintenance instructions shall be submitted for materials in accordance with the requirements of the specifications within the time specified unless otherwise directed by the Contracting Officer. The submittal shall include a typewritten list showing each item and manufacturer for approval.
- b. The Contractor shall submit to the Contracting Officer, for review, copies as required by the Contracting Officer, of descriptive submittals (as described in paragraph a., above) for all items he proposes to use in the project, complete, containing all required detailed information. After approval has been indicated on each copy by appropriate signature, stamp and date, two (2) or more copies will be retained by the Contracting Officer and the balance will be returned to the Contractor.
- c. Approval of descriptive submittals will not relieve the Contractor of the responsibility for correcting any errors which may exist or for meeting requirements of the specifications. No partial submittals will be accepted.
- d. If required, samples and descriptive data shall be submitted within the time specified in these specifications or, if no time is specified, within a reasonable time before use to permit inspection and testing; and shall be shipped prepaid and delivered as specified in these specifications and shall be properly marked to show the name of the material, trade name of manufacturer, place of origin, name and location of work where the material represented by the sample is to be used, and name of Contractor submitting the sample. Samples not subject to destructive tests may be retained until completion of the work but thereafter will be returned to the Contractor, if he so requested in writing, at his own expense. Failure of any samples to pass the specified requirements will be sufficient cause for refusal to consider further any samples from the same manufacturer whose materials failed to pass the tests. Written authorization of the Contracting Officer is required for inclusion into the work of items proposed to be substituted in lieu of those specified or referenced. (See the Clause of the General Provisions entitled "Materials and Workmanship.") The opinion of the Contracting Officer relating to the equality of items shall be final. Any changes required in the details and dimensions indicated on the drawings as a result of approved substitution shall be properly made, as approved by the Contracting Officer and at the expense of the Contractor. If the Contractor fails to submit for approval the required data within the specified time in accordance with the preceding paragraph,

the Contracting Officer will select a complete line of materials and/or equipment. If the Contractor submits for inclusion in the work materials and/or equipment not in accordance with the specifications, the Contracting Officer will have the right to reject them and select a full line of materials. The selection made by the Contracting Officer will be final and binding and the items shall be furnished and installed by the Contractor without change in the contract price.

- e. This Provision shall be deemed superseded to the extent of conflict, if any, between this Provision and any provision in the technical sections of the specifications.

01342      SPECIFIC REQUIREMENTS

- a. The contractor shall submit all forms, data, information, certificates, schedules, etc., as required in other sections of the specifications.
- b. The contractor shall provide submittals in a timely manner to cause no delay in the work. Contractor must schedule submissions to permit Contracting Officer a review period of not less than fifteen days. All submittals shall be accompanied by a preprinted form provided by the Government.
- c. Unless otherwise specified in technical specifications, contractor shall submit either one sepia and two prints or six prints of all shop drawings. Contractor shall submit six prints or copies of catalog data, material lists, installation instructions and maintenance instructions.

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01500. TEMPORARY FACILITIES

01501 TEMPORARY FACILITIES

Contractor shall provide, install and maintain in safe condition all facilities and services necessary for temporary water and power supply. This obligation includes the signing of necessary contracts with utility companies, payment for cost of utilities consumed and payment for all maintenance and service fees. Contractor shall remove all temporary facilities upon completion of the work.

BVH:mp/664  
80520.01  
2-6-81

01500-1

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01600. LIST OF DRAWINGS

01601 DRAWINGS

Drawings which constitute a part of the contract documents are as listed in this Section 01600.

<u>Drawing Number</u>	<u>Revision Number</u>	<u>Title</u>
M-500	0	Collector Field Piping Plan
M-501	0	Collector Field Piping Sections & Details
M-502	0	Collector Field Piping Details
M-503	0	Collector Field Piping Sections & Details
M-504	0	Collector Field Piping Sections & Details
M-505	0	Collector Field Piping Sections & Details
M-507	1	Mechanical Equipment Area Piping Plan
M-508	0	Mechanical Equipment Area Piping Plan
M-509	0	Mechanical Equipment Area Piping Sections & Details
M-510	0	Mechanical Equipment Area Piping Isometric & Details
M-511	0	Mechanical Equipment Area Sections & Details
M-515	0	Instrumentation Installation Details
M-516	0	Instrumentation Installation Details

*addendum 1 June 3, 1981*



DIVISION 15 - MECHANICAL

SECTION 15041. HIGH TEMPERATURE FLUID PIPE AND EQUIPMENT INSULATION

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. This specification shall cover the furnishing of all materials, labor, equipment and accessories necessary for the installation of the insulation as herein specified. Insulation shall be installed in strict accordance with this specification, all applicable drawings and manufacturer's recommendations and instructions.

1.02 QUALITY ASSURANCE:




- A. Before any insulation is applied, all equipment and piping shall be thoroughly cleaned, tested and made tight. All systems requiring a hydrostatic test shall have the test completed and approved by the Contracting Officer before the insulation is applied. Insulation shall be applied to metal and pipe surfaces only when these surfaces are completely dry. Any insulation that is wet from condensation, rain or other source shall be removed and new insulation installed.
- B. All insulation shall be installed according to the manufacturer's recommendations, and Detail Drawings. Workmanship shall be first-class in every respect. Joints shall be tightly butted, and the covering shall be applied tight and smooth, the insulation shall be cut and fitted neatly around irregular surfaces. Jacket seams shall be cut with a sharp knife or scissors, not ripped, and the seam applied to the least conspicuous side. Where finish coats of sealer, vapor barrier or other fluid materials are sprayed, painted or troweled on, these coats shall be applied to the full thickness specified and shall be uniform without ridges, pigtails, bubbles or holidays. The Contractor is hereby forewarned that non-compliance of the specifications, substitution of materials without that approval, and failure to follow insulation material manufacturer's recommendations will result in disapproval of the insulation work. Insulation shall be applied only by mechanics skilled in the trade, and continuous supervision of the mechanics by a competent foreman is mandatory. In specific locations, installation must be per drawing details.
- C. Certain kinds of quality of materials are specified. Approval by the Contracting Officer must be obtained for the particular item that the Contractor proposes to use before purchase orders are placed by the Contractor.

CEH:mp/650

80007.03





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 Rev. 5-21-81



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## PART 2 - PRODUCTS



### 2.01 DEFINITION OF CLASS II INSULATION:

-  A. Class II insulation shall be 13 pounds per cubic foot, with a maximum k factor of 0.50 Btu-inch/hour-sq. foot-°F, at 425°F mean temperature difference, hydrous calcium silicate, 1200°F Maximum Temperature Rating, with mineral fiber reinforcing, consisting entirely of inorganic material. Insulation to be furnished in curved segments or flat blocks. Jacket shall be corrugated aluminum, 0.016 inch thick having 2" minimum longitudinal lap and joints sealed with insulation mastic, secured with 3/8" aluminum band at 8" O.C. with one band at each joint.
-   
 B. On horizontal lines, the longitudinal seams of metal jackets are to be placed so as to drain. On vertical lines, butt straps on metal jackets are to be sealed to drain, and jacket laps, if any, are also to be installed to drain.
-  C. Class II insulation shall be applied per the drawing details; and at supports.

### 2.02 DEFINITION CLASS V INSULATION:

-  A. Class V insulation shall be fiberglass insulation having a maximum k factor of 0.56 BTU/hr-sq.ft.-deg. F/in. at 425°F mean temperature difference. The insulation shall have a maximum temperature rating not less than 850°F. (Certain-Teed 850 or equal). The insulation is to be furnished in curved segments or flat blocks.
- B. The insulation shall be applied over clean dry pipe or equipment with all joints butted firmly together. All open joints or voids shall be filled and smoothed with insulating cement.
-  C. All equipment and piping shall be covered with 0.016 inch thick corrugated aluminum jacket.  

Aluminum jacket to be banded on 8 inch centers.

On horizontal piping and equipment, the longitudinal seams of metal jackets are to be placed so as to drain. On vertical equipment, butt straps on metal jackets are to be sealed to drain, and jacket laps, if any, are also to be installed to drain.
- D. Fittings shall be insulated with mitered sections and secured in place with wire.
-   
 E. Protruding metal parts (such as manholes and valve stems) and all seams, laps, open ends, joints, etc. shall be thoroughly insulated and sealed. Valves shall be completely insulated and covered with

only stem exposed. All unions, strainers, control valves, bodies, etc. shall be completely insulated and covered. Fabricate covering so that insulation can be removed for servicing equipment without destroying the covering.



F. Some Syltherm<sup>TM</sup> Piping (1-1/2" and smaller) in the collector field will be nested, as indicated on the drawings. There are to be no direct paths of heat flow from the hot tubing to the cooler tubing, such as a longitudinal seams. The center cavity must be filled with as much insulation as is possible.

Note:

All insulation thicknesses applied to piping, either nested or main header, shall be done in two layers. These layers are to be installed in a staggered method such that no circumferential or longitudinal seam are to be matched on either layer and therefore no direct path of heat flow from the hot surface to the cold surface.



G. Class V insulation shall be applied as follows:

Equipment:

<u>Equipment Number</u>	<u>Equipment Name</u>	<u>Insulation Thickness</u>
HE-202	Solar Steam Generator	12"
P-6001 & 6002	Collector Field Circ. Pumps	4"
P-7001	Syltherm <sup>TM</sup> Heater Circ. Pump	4"
P-7110	Steam Generator Supply Pump	4"
T-111	Make-Up/Conditioning Tank	18"
T-103	Small Thermal Energy Storage Tank	18"



Tubing: (Single lines only - not nested.)

TUBE SIZE                      INSULATION THICKNESS (INCHES)  
AS A FUNCTION OF OPERATING  
TEMPERATURE

<u>Outside Diameter</u>	<u>550°F (HTF-2)</u>	<u>750°F (HTF-1)</u>
0.50	2.5	3.5
0.625	2.5	3.5
0.75	2.5	3.5
1.00	2.5	3.5
1.25	3.0	4.0

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Piping: (Single lines only - not nested.)

<u>Pipe Size</u> <u>Nominal</u>	<u>550°F</u> <u>(HTF-2)</u>	<u>750°F</u> <u>(HTF-1)</u>
1.50	3.5	4.5
2.00	3.5	<u>5.0</u>
<u>2.50</u>	4.0	5.0
3.00	4.0	5.5
3.50	4.5	<u>5.5</u>
4.00	4.5	6.0

PART 3 - EXECUTION

3.01 INSTALLATION:

A. Piping and equipment aboveground are to be tested and cleaned before insulation commences. Surfaces to be insulated are to be clean, and dry, and the insulation contractor shall not proceed until surface is in proper condition. Insulation is to be clean, dry, and undamaged at time of application, and insulation is to be applied only under ambient conditions suitable for the materials to be installed, and with provision for protecting the work until complete and dry. The HTF piping is not to be painted or primed under any circumstance.

B. All insulation shall fit the surface of pipe or equipment, and all joints shall be tightly butted. All insulation is to be installed by the full broken joint method, and necessary cuts are to be accurately made by saw or knife. Cloth shall be cut, where necessary, with scissors or sharp knife. Finishes shall be applied uniformly and shall not have ridges, pigtails, bubbles or holidays.



C. During installation and use, adhesives and sealants designed for use at 850°F or above must be used in fabricating fittings or sealing joints.

End of Section