

600810

DOE F 4600.1  
(7-81)

U.S. DEPARTMENT OF ENERGY  
**NOTICE OF FINANCIAL ASSISTANCE AWARD**  
(See Instructions on Reverse)

PL 95-91 and 97-256

Under the authority of Public Law \_\_\_\_\_ and  
subject to legislation, regulations and policies applicable to (cite legislative program title):

1. PROJECT TITLE Vale, Oregon, User Coupled Confirmation Drilling Project		2. INSTRUMENT TYPE <input type="checkbox"/> GRANT <input checked="" type="checkbox"/> COOPERATIVE AGREEMENT	
3. RECIPIENT (Name, address, zip code, area code and telephone no.) Renewable Energy, Inc. 6325 West 55th Ave. Arvada, Colorado 80002		4. INSTRUMENT NO. DE-FC07-83ID12196	5. AMENDMENT NO.
8. RECIPIENT PROJECT DIRECTOR (Name and telephone No.) Stephen M. Munson 303/421-8143		6. BUDGET PERIOD FROM: THRU:	7. PROJECT PERIOD FROM: THRU:
9. RECIPIENT BUSINESS OFFICER (Name and telephone No.) Same as block 8		10. TYPE OF AWARD <input checked="" type="checkbox"/> NEW <input type="checkbox"/> CONTINUATION <input type="checkbox"/> RENEWAL <input type="checkbox"/> REVISION <input type="checkbox"/> SUPPLEMENT	
11. DOE PROJECT OFFICER (Name, address, zip code, telephone No.) Susan M. Prestwich 208/526-1147 Idaho Operations Office 550 Second St., Idaho Falls, ID 83401		12. ADMINISTERED FOR DOE BY (Name, address, zip code, telephone No.) Kent R. Hastings 208/526-1510 U. S. Department of Energy Idaho Operations Office 550 Second Street Idaho Falls, Idaho 83401	

13. RECIPIENT TYPE

<input type="checkbox"/> STATE GOV'T	<input type="checkbox"/> INDIAN TRIBAL GOV'T	<input type="checkbox"/> HOSPITAL	<input checked="" type="checkbox"/> FOR PROFIT ORGANIZATION	<input type="checkbox"/> INDIVIDUAL
<input type="checkbox"/> LOCAL GOV'T	<input type="checkbox"/> INSTITUTION OF HIGHER EDUCATION	<input type="checkbox"/> OTHER NONPROFIT ORGANIZATION	<input checked="" type="checkbox"/> C <input type="checkbox"/> P <input type="checkbox"/> SP	<input type="checkbox"/> OTHER (Specify)

14. ACCOUNTING AND APPROPRIATIONS DATA				15. EMPLOYER I.D. NUMBER/SSN
a. Appropriation Symbol	b. B & R Number	c. FT/AFP/OC	d. CFA Number	

16. BUDGET AND FUNDING INFORMATION	
a. CURRENT BUDGET PERIOD INFORMATION	b. CUMULATIVE DOE OBLIGATIONS
(1) DOE Funds Obligated This Action \$ _____	(1) This Budget Period \$ _____
(2) DOE Funds Authorized for Carry Over \$ _____	[Total of lines a. (1) and a. (3)]
(3) DOE Funds Previously Obligated in this Budget Period \$ _____	(2) Prior Budget Periods \$ _____
(4) DOE Share of Total Approved Budget \$ _____	(3) Project Period to Date \$ _____
(5) Recipient Share of Total Approved Budget \$ _____	[Total of lines b. (1) and b. (2)]
(6) Total Approved Budget \$ _____	

17. TOTAL ESTIMATED COST OF PROJECT \$ 1,250,000

(This is the current estimated cost of the project. It is not a promise to award nor an authorization to expend funds in this amount.)

18. AWARD/AGREEMENT TERMS AND CONDITIONS

This award/agreement consists of this form plus the following:

a. Special terms and conditions (if grant) or schedule, general provisions, special provisions (if cooperative agreement)

b. Applicable program regulations (specify) \_\_\_\_\_ (Date) \_\_\_\_\_

c. DOE Assistance Regulations, 10 CFR Part-600, as amended, Subparts A and  B (Grants) or  C (Cooperative Agreements).

d. Application/proposal dated \_\_\_\_\_,  as submitted  with changes as negotiated

**DRAFT**  
FEB 17 1983

19. REMARKS

The Technical Representative of the DOE Project Office is Max R. Dolenc, EG&G Idaho, Inc. P. O. Box 1625, WCB E-3, Idaho Falls, Idaho 83415. Telephone (208) 526-0003.

20. EVIDENCE OF RECIPIENT ACCEPTANCE	21. AWARDED BY
_____ (Signature of Authorized Recipient Official) _____ (Date)	_____ (Signature) _____ (Date)
_____ (Name)	Kent R. Hastings (Name)
_____ (Title)	Contracting Officer (Title)

# INSTRUCTIONS

*(This form shall be completed in accordance with the following instructions. For any clarification or additional information that might be needed, consult the appropriate section of the DOE Financial Assistance Procedures Manual (DOE-FAPM).)*

Insert in the space provided, in the line which begins, "Under the Authority of Public Law . . ." the number and the name of the Public Law which authorizes this award. On the line below, enter the title of the pertinent program.

**Block 1** - Enter the project title as it appears in the SF-424 or equivalent application/proposal face sheet.

**Block 2** - Place a checkmark in the box beside the appropriate financial assistance instrument.

**Block 3** - Enter the name, address and telephone number of the applicant/proposer as it appears in the SF-424 or equivalent application/proposal face sheet.

**Block 4** - Enter the instrument number. (See DOE-FAPM.)

**Block 5** - Enter the appropriate amendment number. (See DOE-FAPM for guidance.)

**Block 6** - Enter the starting date and expiration date for the current budget period. If a budget period is being changed, enter the starting date and expiration date for the budget period, as changed.

**Block 7** - Enter the starting date and anticipated completion date for the project. If a project period is being changed, enter the starting date and anticipated completion date for the project period, as changed.

**Block 8** - Enter the name and telephone number of the individual designated by the applicant/proposer as the director of the project:

**Block 9** - Enter the name and telephone number of the individual designated by the applicant/proposer as the contact for all business matters.

**Block 10** - Place a checkmark in the box opposite the term which identifies the type of action being taken. (The terms are defined in the DOE-FAPM.)

**Block 11** - Enter the name, address and telephone number of the individual designated by the DOE program office as the project officer.

**Block 12** - Enter the name, address and telephone number of the individual/organization who will administer the agreement for DOE.

**Block 13** - Place a checkmark in the box beside the applicable recipient type. If the recipient is a for-profit organization also check one of the lower boxes as follows: "C" for Corporation, "P" for Partnership and "SP" for Sole Proprietorship. If the recipient is of a type not indicated place a checkmark in the box beside "Other," and identify the recipient type in the space provided.

**Block 14** - Enter where indicated, the appropriation symbol, B&R number, Fund Type (FT)/AFP Code (AFP)/Objective Class (OC) and CFA Number from the Procurement/Financial Assistance Request Authorization (DOE Form PR-799A). Completion of Block 14.d. is required only for awards made by Headquarters.

**Block 15** - Enter the applicant's/proposer's Federal Employer Identification No. from the SF-424 or equivalent application/proposal face sheet, or if the applicant/proposer is an individual, enter his/her social security number.

**Block 16** - Entries should be made as follows. (If no dollar entry is appropriate a zero should be entered to indicate there was no error of omission.)

**Line a.(1)** - Enter the amount of DOE funds obligated by this action.

**Line a.(2)** - Enter the amount of DOE funds not expended in prior budget period(s), if any, authorized by DOE for expenditure in the current budget period.

**Line a.(3)** - Enter the amount of DOE funds previously obligated in the current budget period.

**Line a.(4)** - Enter DOE's share of the total approved budget shown on Line a.(6).

**Line a.(5)** - Enter the recipient's share of the total approved budget shown on Line a.(6).

**Line a.(6)** - Enter the total approved budget for the current budget period. (Add the amounts in lines a.(4) and a.(5).)

**Line b.(1)** - Enter the amount of DOE funds obligated in the current budget period. (Add the amounts in lines a.(1) and a.(3).)

**Line b.(2)** - Enter the amount obligated by DOE in prior budget periods.

**Line b.(3)** - Enter the amount obligated by DOE in the project period to date. (Add the amounts in lines b.(1) and b.(2).)

**Block 17** - Must be completed for cooperative agreements. Contracting Officers may exercise discretion as to whether to complete it for grants. Enter in the blank provided, the amount which represents the current estimate of total funds and dollar value of in-kind contributions (both DOE and recipient shares) needed to carry out the entire project. Include all funds and contributions previously provided, those being provided by this action, and all anticipated future obligations and contributions of both parties.

**Block 18** - Complete as follows:

**Item a.** - No entry necessary.

**Item b.** - Enter the legal citation from the Code of Federal Regulations or Federal Register and the effective date for the program regulations applicable to the program under which the award is made.

**Item c.** - Mark the box beside B for grants or C for cooperative agreements.

**Item d.** - In the blank provided, enter the date of the application/proposal. (If SF-424 is used, see block 23c on page 1.) Place a checkmark in the appropriate box to indicate whether the application/proposal was accepted as submitted or with negotiated changes.

**Block 19** - Enter any explanation or advisory comments which are required for, or applicable to, this action.

**Block 20** - Will be completed by the recipient.

**Block 21** - The Contracting Officer shall sign and date the top line. His/her name and title should be entered on the next two lines. This box must be signed prior to forwarding to recipient.

SCHEDULE

ARTICLE I - STATEMENT OF JOINT OBJECTIVE

The purpose of this Cooperative Agreement between the United States Department of Energy (DOE or Government) and RENEWABLE ENERGY, INC. (Participant) is to drill, complete and test a geothermal production well to supply the energy requirements for cooking, distillation and by-product feed drying at a 4.5 million gallon per year fuel alcohol plant at Vale, Oregon. This action is authorized by Federal law and is in furtherance of the U. S. Government's objective to confirm low to moderate temperature hydrothermal resources. The Participant will receive the benefit of DOE's technical and financial support as further defined in this Schedule, and DOE will obtain data pertaining to the development and utilization of such resources.

ARTICLE II - THE PROJECT MANAGEMENT PLAN

A. The Participant's Responsibilities. The Participant shall furnish the materials, facilities, equipment, personnel, services, and all other necessary and related items to drill, complete and test a four to six thousand-foot geothermal production well. Requirements of the project are further set forth in Appendix B to this Agreement which is titled "PROJECT TASKS AND SCHEDULE," and in Appendix C which is titled, "FEDERAL ASSISTANCE REPORTING CHECKLIST," which are made a part hereof by this reference. The Participant shall provide the funding and reports as specifically provided for elsewhere in this Agreement, and obtain all necessary licenses and permits.

B. DOE's Responsibilities. DOE will provide a specified amount of financial assistance, and will monitor the project to observe the progress. In addition, DOE will act upon the Participant's requests for approval in those instances in which DOE's approval is required.

C. Predecessor Study. Prior to commencement of any work under this Agreement the Participant shall submit to DOE for review and evaluation all exploration data and findings gathered during the PRDA Study done under Cooperative Agreement No. DE-FC07-81ID12191. DOE and the Participant will review and discuss the data. Mutual agreements of both parties will be reached prior to proceeding to site selection and well drilling. The Contracting Officer must grant approval to proceed in writing before work under this Agreement may commence.

ARTICLE III - FINANCIAL SUPPORT

A. Estimated Cost. The total estimated cost of the work under this Agreement is One Million Two Hundred Fifty Thousand Dollars (\$1,250,000.00).

ARTICLE III - FINANCIAL SUPPORT (Cont'd)

B. DOE's Financial Support. Costs incurred for performance of this project shall be shared in accordance with the Cost Share Plan Appendix D to this Agreement. An amount equal to 90% of the estimated cost of the work in paragraph A. above is the maximum cost to DOE. The maximum cost is One Million One Hundred Twenty-Five Thousand Dollars (\$1,125,000.00).

C. Participant's Financial Support. All costs in excess of DOE's cost determined by the Cost Share Plan in Appendix D attached hereto or other provisions of this Agreement will be paid by the Participant. The estimated maximum cost to the Participant is One Million dollars (\$1,000,000.00) which is the total estimated cost of the project of One Million Two Hundred Fifty Thousand Dollars (\$1,250,000.00) less DOE's minimum 20% of the costs which are shared of Two Hundred Fifty Thousand Dollars (\$250,000.00).

D. Obligated Funds. The amount of funds presently obligated to this Agreement is One Million One Hundred Twenty-Five Thousand Dollars (\$1,125,000.00).

E. Allowable Costs. Costs shall constitute allowable costs as specified in Subpart 1-15.2 of the Federal Procurement Regulations (41 CFR 1-15) as may be modified by Subpart 9-15.2 of the DOE Procurement Regulations in effect on the date of this Agreement.

ARTICLE IV - METHOD OF PAYMENT

At any time or times prior to final payment under this Agreement, the Contracting Officer may have the costs incurred under this Agreement audited. DOE incremental payments will be made at the rate of 20% of the total, actual, allowable costs incurred. Invoices for payment may be submitted no more frequently than monthly. Such invoices or vouchers must be supported by a statement that the costs have been incurred and are allowable as defined in ARTICLE III of this Agreement. When the final milestone is achieved DOE and the Participant will determine the final payment, if any, by using Appendix D, Cost Share Plan. If the Contracting Officer finds, on the basis of audit or otherwise, that allowable costs as defined in ARTICLE III do not equal or exceed the amount of funds DOE has agreed to provide, total payments shall be reduced accordingly.

ARTICLE V - TERM OF AGREEMENT

The work under this Agreement shall be completed within fifteen months from the effective date of this Agreement, or within any extension of time as may be mutually agreed to in writing by the parties.

ARTICLE VI - PROJECT INFORMATION SYSTEM

The Participant shall furnish the reports and information identified in Appendix C. All reports after delivery to DOE shall be the sole property of the DOE. The Participant shall not claim that any report contains any trade secrets or commercial or financial information deemed by the Participant to be privileged or confidential, or that the Participant has any proprietary interest in any report.

ARTICLE VII - RESPONSIBLE PERSONS AND PERSONNEL

A. The Participant agrees to permit any specified DOE personnel to have necessary access to the Participant's and/or major subcontractor's facilities, personnel, and records pertaining to the project. Such DOE personnel may be used to assist the DOE Project Officer in carrying out his responsibilities.

B. (1) The DOE Project Officer under this Agreement, and the person who shall be the Participant's contact for all technical matters pertaining to this Agreement shall be the person named below or such other person as may be designated in writing by the Contracting Officer.

Susan M. Prestwich  
Energy and Technology Division  
Idaho Operations Office  
550 Second Street  
Idaho Falls, Idaho 83401  
Telephone: 208-583-1147

(2) The representative for the Participant for the purpose of this Agreement shall be the person named below or such other person as may be designated in writing by the Participant:

Stephen M. Munson, President  
Renewable Energy, Inc.  
6325 West 55th Avenue  
Arvada, Colorado 80002  
Telephone: 303-421-8143

ARTICLE VIII - ACQUISITION OF GOODS AND SERVICES

A. In furtherance of the work under this Agreement, each subcontract or purchase order for goods or services which, separately, exceeds \$25,000, shall require the written approval of the Contracting Officer. The Participant may request such approval by submitting to the Contracting Officer a copy of the proposed subcontractor. If the Contracting Officer fails to respond to the request for approval within ten (10) days after receiving such request, the Participant may award the subcontract or purchase order.

ARTICLE VIII - ACQUISITION OF GOODS AND SERVICES (Cont'd)

B. The subcontractors for the goods and services referred to in paragraph A. above, shall be selected competitively except those subcontractors who were specifically identified in the Participant's proposal.

ARTICLE IX - TERMINATION

A. It is the express intent of DOE and the Participant to fund their respective cost participation for the project, as such cost participation is set forth under Article III, of this Agreement, so as to provide continuity and completion of the project. If, notwithstanding this original intent, it becomes apparent to either party that incremental funding for its cost participation will not be available as needed, either in whole or in part, in order to provide continuity for the completion of work under this Agreement, each party agrees to promptly advise the other of such funding problem, and if practicable and consistent with their mutual interest at the time, the parties may attempt to cooperatively adjust the schedule and/or the content of the work towards best serving the objectives of this Agreement within the available committed and planned funding of each party.

B. Notwithstanding the foregoing, it is understood that DOE may at any time upon giving written notice to the Participant by the Contracting Officer terminate this Agreement for its convenience for any reason.

C. Also, notwithstanding the foregoing, it is understood that the Participant may at any time upon giving written notice to DOE terminate this Agreement for its convenience for reasonable cause. The Participant may not terminate for convenience after seventy-five percent (75%) of DOE's contribution to the project has been committed, and should such termination occur, it will constitute a breach of contract.

D. In the event of termination for convenience by either party, the parties will cooperate to reasonably phase-out the Participant's costs and cost commitments incurred prior to the termination. If the termination is for the convenience of the Government, the termination cost claim may include those costs provided for in paragraph G. of this Article X. If the termination is for the convenience of the Participant, the cost claim may include only those costs incurred prior to termination. In either case, the approved costs will be shared in accordance with the following: Prior to drilling and testing, should both parties agree not to proceed, then DOE will pay ninety percent (90%) of the allowable costs incurred. Should the Participant elect to terminate during drilling or testing of the well, then the percentage DOE shall pay will be negotiated. This percentage shall not be greater than ninety percent (90%) nor less than twenty percent (20%) of the allowable costs incurred at the time of termination; provided; however, that the total amount obligated by the Government under this Agreement shall not be exceeded.

ARTICLE IX - TERMINATION (Cont'd)

E. In the event of termination for convenience by either party, the Participant shall:

(1) Place no further orders or subcontracts for materials, services, or facilities intended to be invoiced to the Government for its contribution.

(2) Terminate all orders and subcontracts to the extent that they relate to the performance of work.

(3) Notwithstanding subparagraphs E.(1) and (2) above, the Participant has the right to proceed with such orders and subcontracts should it decide to continue performance of the work at its expense only.

F. After a termination for convenience by the Government, the Participant shall submit to the Contracting Officer its termination claim. Such claim shall be submitted promptly but in no event later than one (1) year from the effective date of termination unless one or more extensions in writing are granted by the Contracting Officer.

G. Termination claims:

(1) There shall be included therein the Government's share, as set forth in paragraph D., of the cost of settling and paying claims arising out of the termination of work under subcontracts or orders which are properly chargeable to this Agreement as determined by the Contracting Officer.

(2) There shall be included therein the reasonable costs of settlement, including accounting, legal, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the termination and settlement of subcontracts thereunder, together with reasonable storage, transportation, and other costs incurred in connection with the protection or disposition of termination inventory.

H. Costs claimed, agreed to, or determined pursuant to this article must constitute allowable costs as defined in Article VII, "Allowable Cost."

I. If in the opinion of DOE, the Participant fails to substantially perform under this Agreement and does not cure such failure within a reasonable time after written notice of such failure by the Contracting Officer, DOE may by written notice to the Participant terminate this Agreement. Such termination notice, signed by the Contracting Officer, shall be effective upon receipt by the Participant. The Government shall not be liable for the incurrence of any obligations under this Agreement from the date of the receipt of such termination notice. Upon any such

ARTICLE IX - TERMINATION (Cont'd)

termination, the Participant agrees to promptly, upon DOE's request, transfer to DOE all information resulting from the work performed to the date of the termination notice.

J. Except with respect to defaults of subcontractors, the Participant shall not be in default by reason of failure to substantially perform under this Agreement if such failure arises out of causes beyond the control and without the fault or negligence of the Participant. Such causes may include, but are not restricted to, acts of God or of the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather, but in every case the failure to perform must be beyond the control and without the fault or negligence of the Participant. If the failure to substantially perform is caused by the failure of a subcontractor to perform or make progress, and if such failure arises out of causes beyond the control of both the Participant and a subcontractor, and without the fault or negligence of either of them, the Participant shall not be deemed to be in default unless the supplies or services to be furnished by the subcontractor were reasonably obtainable from other sources. Upon request of the Participant, if the Contracting Officer shall determine that failure to perform was occasioned by any one or more of the aforementioned causes, this Agreement shall be revised accordingly. This provision does not preclude DOE from exercising its right to terminate for convenience.

K. As used in this article, the term "subcontractor" means subcontractor at any tier.

ARTICLE X - TITLE TO PROPERTY AND SITE RESTORATION

A. The Government will own and maintain title of all items of materials, supplies, and all tangible property purchased with Government funds provided under this Agreement. The property shall be managed in accordance with OMB Circular A-110, Attachment N, paragraph 6.d. The Government will determine disposition of such property at completion of the work under this Agreement or upon termination by either party and agrees that those costs incurred by the Participant in final disposition will be allowable costs.

B. The Participant agrees that the Government shall not be subject to any obligation to restore or rehabilitate any of the premises, facilities or equipment owned and/or leased by the Participant which are altered, improved or otherwise affected by this Agreement.

ARTICLE XI - INDEMNIFICATION

It is recognized that the Participant as title holder of the facilities to be constructed under this Agreement is responsible for the design, installation, operation, repair and maintenance of such facilities. The



ARTICLE XI - INDEMNIFICATION (Cont'd)

Government therefore will not be liable for payment of damages for injuries to any person, or loss of life or personal property, or loss suffered or sustained and arising from use or operation of the facilities which are a subject of this Agreement. The Participant agrees to indemnify and save the Government harmless from any and all claims, demands, damages, actions, costs, or charges against the Government arising as the result of the above-mentioned injuries, damages, or loss, except for any such damages or claims arising out of the negligent act of the Government, its employees or representatives in the course of their official duties.

ARTICLE XII - PUBLIC INFORMATION RELEASES

The parties agree that public disclosure or dissemination of new data or information arising out of the design, construction or operation of the project will be coordinated by the parties, it being understood that the intent of both the Participant and DOE is to release all data and information to the greatest practicable extent in order to achieve the objective of obtaining maximum public value from the results of this project. It is understood that the foregoing is not intended to afford either party the right to prevent a public release by the other; however, nothing in this article shall impair the rights of the parties set forth elsewhere in this Agreement, including but not necessarily limited to General Provisions 20. entitled "Patent Rights - Long Form."

The Participant shall provide DOE one copy of any news releases, information folders, brochures, advertisements, technical papers, and magazine or newspaper articles pertaining to work performed under this Agreement. The Participant shall advise the Contracting Officer in a timely manner of significant news media or public reactions to work performed under the Agreement.

ARTICLE XIII - ADDITIONAL AGREEMENT PROVISIONS

The below listed Appendices, attached hereto, are made a part hereof and set forth additional provisions of this Agreement:

- Appendix A: General Provisions for Cooperative Agreements
- Appendix B: Project Tasks and Schedule
- Appendix C: Federal Assistance Reporting Checklist
- Appendix D: Cost Share Plan

APPENDIX A

GENERAL PROVISIONS FOR

COOPERATIVE AGREEMENTS

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GENERAL PROVISIONS

COOPERATIVE AGREEMENT

1. ORDER OF PRECEDENCE

In the event of an inconsistency between provisions of this Agreement, the inconsistency shall be resolved by giving precedence as follows: (a) schedule; (b) statement of work (c) the general provisions; (d) other provisions of the Agreement, whether incorporated by reference or otherwise; (e) Participant's technical proposal, if incorporated in the Agreement by reference or otherwise.

2. DEFINITIONS

As used throughout this Agreement, the following terms shall have the meaning set forth below:

A. The term "head of the agency" or "Secretary" as used herein means the Secretary, the Deputy Secretary, or the Under Secretary.

B. The term "Contracting Officer" means the person executing this Agreement on behalf of the Government, and includes his successor or any duly authorized representative of any such person and the term includes, except as otherwise provided in this Agreement, the authorized representative of a Contracting Officer acting within the limits of his authority.

C. Except as otherwise provided in this Agreement, the term "subcontracts" includes purchase orders under this Agreement.

D. The term "DOE" means the U.S. Department of Energy.

E. The term "Contractor" means "Participant".

F. The terms "Contract" and "Agreement" mean "Cooperative Agreement".

3. INSPECTION

The Government, through any authorized representatives, has the right at all reasonable times, to inspect, or otherwise evaluate the work performed or being performed hereunder and the premises in which it is being performed. If any inspection, or evaluation is made by the Government on the premises of the Participant or a subcontractor, the Participant shall provide and shall require its subcontractors to provide all reasonable facilities and assistance for the safety and convenience of the Government representatives in the performance of their duties. All inspections and evaluations shall be performed in such a manner as will not unduly delay the work.

4. EXAMINATION OF RECORDS BY COMPTROLLER GENERAL

A. Recipient records. DOE and the Comptroller General of the United States, or any of their authorized representatives, shall have the right of access to any books, documents, papers, or other records of a recipient that are directly pertinent to the DOE financial assistance award in order to make audit, examination, excerpts, and transcripts.

B. Subrecipient records. DOE, the Comptroller General of the United States, and the recipient, or any of their authorized representatives, shall have the right of access to any books, documents, papers, or other records of a subrecipient which are directly pertinent to the financial assistance subaward, in order to make audit, examination, excerpts, and transcripts.

C. Contractor and subcontractor records. With respect to any negotiated contract or subcontract in excess of \$10,000 under a grant or cooperative agreement, DOE, the Comptroller General of the United States, the recipient and (if the contract was awarded under a financial assistance subaward) the subrecipient, or any of their authorized representatives shall have the right of access to any books, documents, papers, or other records of the contractor or subcontractor which are directly pertinent to that contract or subcontract, in order to make audit, examination, excerpts, and transcripts.

D. Duration of access right. The right of access may be exercised for as long as the applicable records are retained by the recipient, subrecipient, contractor, or subcontractor. (Minimum of three years after final payment.)

5. CONVICT LABOR

In connection with the performance of work under this Agreement, the Participant agrees not to employ any person undergoing sentence of imprisonment 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.

6. OFFICIALS NOT TO BENEFIT

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

7. COVENANT AGAINST CONTINGENT FEES

The Participant warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement 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 Participant for the purpose of securing business. For breach or violation of this warranty the Government shall have the right

7. COVENANT AGAINST CONTINGENT FEES (Cont'd)

to annul this Agreement without liability or in its discretion to deduct from the Agreement price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

8. NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT

A. The Participant 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 Agreement of which the Participant 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 Agreement or out of the use of any supplies furnished or work or services performed hereunder, the Participant shall furnish to the Government when requested by the Contracting Officer, all evidence and information in the possession of the Participant pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Participant has agreed to indemnify the Government.

C. This clause shall be included in all Agreements.

9. COMPETITION IN SUBCONTRACTING

The Participant shall select subcontractors (including suppliers) on a competitive basis to the maximum practicable extent consistent with the objectives and requirements of this Agreement.

10. AUDIT

A. The Participant shall maintain, and the Contracting Officer or his representative 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 anticipated to be incurred for the performance of this Agreement. Such right of examination shall include inspection at all reasonable times of the Participant's plants, or such parts thereof, as may be engaged in the performance of this Agreement.

B. The materials described above, shall be made available at the office of the Participant, at all reasonable times, for inspection, audit or reproduction, until the expiration of three (3) years from the date of final payment under this Agreement or such lesser time specified in Part 1-20 of the Federal Procurement Regulations (41 CFR Part 1-20) and for such lesser period, if any, as is required by applicable statute, or by other articles of this Agreement, or by subparagraphs B.(1) and (2) below:

10. AUDIT (Cont'd)

(1) If this Agreement is completely or partially terminated, the records relating to the work terminated shall be made available for a period of three (3) years from the date of any resulting final settlement.

(2) Records which relate to appeals under the "Disputes" clause of this Agreement, or litigation or the settlement of claims arising out of the performance of this Agreement, shall be made available until such appeals, litigation, or claims have been disposed of.

11. CLEAN AIR AND WATER

[Applicable only if the contract exceeds \$100,000 or the Contracting Officer has determined that orders under an indefinite quantity Agreement 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 Agreement is not otherwise exempt.]

A. The Participant 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 Agreement.

(2) That no portion of the work required by this Agreement will be performed in a facility listed on the Environmental Protection Agency list of violating facilities on the date when this Agreement was awarded unless and until the EPA eliminates the name of such facility or facilities from such listing.

(3) To use its best efforts to comply with clean air standards and clean water standards at the facilities in which the Agreement is being performed.

(4) To insert the substance of the provisions of this clause into any nonexempt subcontract, including this subparagraph 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).

11. CLEAN AIR AND WATER (Cont'd)

(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 or plan under Section 111(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 a 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 Agreement or subcontract. Where a location or site of operations contains or includes more than one building, plant, installation, or structure, the entire location shall be deemed to be a facility except where the Director, Office of Federal Activities, Environmental Protection Agency, determined that independent facilities are collocated in one geographical area.

12. PREFERENCE FOR U.S. FLAG AIR CARRIERS

A. It is the policy of the United States that all Federal agencies and Government contractors and subcontractors utilize U.S. flag air carriers for international air transportation of personnel and cargo.



12. PREFERENCE FOR U.S. FLAG AIR CARRIERS (Cont'd)

B. The Participant agrees to utilize U.S. flag air carriers to the maximum extent practicable in connection with the performance of this Agreement in the transportation by air of any personnel and cargo between the United States and a foreign country, or between foreign countries.

C. The terms used in this clause have the following meanings:

(1) "International air transportation" means transportation by air of personnel and cargo from the United States to a foreign country, between two or more foreign countries, and between a foreign country and the United States.

(2) "U.S. flag air carrier" means one of a class of air carriers holding a certificate of public convenience and necessity issued by the Civil Aeronautics Board, approved by the President, authorizing operations between the United States and/or its territories and one or more foreign countries.

(3) The term "United States" includes the fifty States, Commonwealth of Puerto Rico, possessions of the United States and the District of Columbia.

(4) "Practicable" includes (i) satisfactory servicing of agency programs, and (ii) timely deliveries at fair and reasonable prices.

D. The Participant shall include the substance of this clause, including this paragraph D. in each subcontract or purchase order hereunder which may involve air transportation between the United States and a foreign country or between foreign countries.

13. 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 day 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:

(i) procured, contracted for, or otherwise obtained for the agency's account; or

(ii) furnished to or for the account of any foreign nation without provision for reimbursement.

13. USE OF U.S. FLAG COMMERCIAL VESSELS (Cont'd)

(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 Participant 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 Agreement 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 Participant in the case of subcontractor bills of lading) and to the Division of National Cargo, Officer of Market Development, Maritime Administration, Washington, D.C. 20230.

(3) To insert the substance of the provisions of this clause in all contracts issued pursuant to this Agreement except for small purchases as defined in 41 CFR 1-3.6.

14. PERMITS AND LICENSES

Except as otherwise directed by the Contracting Officer, the Participant shall procure all necessary permits or licenses and abide by all applicable laws, regulations, and ordinances of the United States and of the State, territory, and political subdivision in which the work under this Agreement is performed.

15. REPORTING OF ROYALTIES

If any royalty payments are directly involved in the Agreement or are reflected in the Agreement price to the Government, the Participant agrees to report in writing to the Contracting Officer or Patent Counsel during the performance of this Agreement and prior to its completion or final settlement the amount of any royalties or other payments paid by it directly to others in connection with the performance of this Agreement 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 stop 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.

16. AUTHORIZATION AND CONSENT

The Government hereby gives its authorization and consent for all use and manufacture of any invention described in and covered by a patent of the United States in the performance of this Agreement or any part hereof or any amendment hereto or any subcontract hereunder (including all lower-tier subcontracts).

17. NONDISCRIMINATION IN FEDERALLY ASSISTED PROGRAMS

The Participant agrees that no person in the United States shall, on the ground of race, color or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity for which the Participant receives Federal financial assistance from DOE.

18. 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 materiel. The data may be graphic or pictorial delineations in media such as drawings or photographs, text in specifications or related performance or design type documents or computer software (including computer programs, computer software data bases, and computer software documentation). 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 Agreement administration.

18. RIGHTS IN TECHNICAL DATA - LONG FORM (Cont'd)

(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 Agreement, technical data which are specified to be delivered in the Agreement, technical data that may be called for under the "Additional Technical Data Requirements" article of the Agreement, if any, or technical data actually delivered in connection with the Agreement.

(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 Agreement 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 Agreement on any technical data furnished hereunder, if in response to a written inquiry by DOE concerning the propriety of the markings, the Participant fails to respond thereto within sixty (60) days or fails to substantiate the propriety of the markings. In either case DOE will notify the Participant of the action taken.

(iii) No rights under this Agreement in any technical data which are not contract data.

(2) The Participant shall have:

(i) The right to withhold proprietary data in accordance with the provisions of this clause.

18. RIGHTS IN TECHNICAL DATA - LONG FORM (Cont'd)

(ii) The right to use for its private purposes, subject to patent, security or other provisions of this Agreement, contract data it first produces in the performance of this Agreement provided the data requirements of this Agreement have been met as of the date of the private use of such data. The Participant 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 Participant 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 Participant shall not, without prior written authorization of the Contracting Officer, establish a claim to statutory copyright in any Agreement data first produced in the performance of the Agreement. To the extent such authorization is granted, the Government reserves for itself and others acting on its behalf a royalty-free, nonexclusive, irrevocable, worldwide license for Governmental purposes to publish, distribute, translate, duplicate, exhibit and perform any such data copyrighted by the Participant.

(2) The Participant agrees not to include in the technical data delivered under the Agreement any material copyrighted by the Participant 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 subparagraph 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 Participant 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 Participant to obtain from its subcontractors technical data and rights therein, on behalf of the Government, necessary to fulfill the Participant'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 Participant shall:

18. RIGHTS IN TECHNICAL DATA - LONG FORM (Cont'd)

(1) Promptly submit written notice to the Contracting Officer setting forth reasons for the subcontractor's 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 Agreement or any provision of this Agreement specifying the delivery of technical data, the Participant may withhold proprietary data from delivery, provided that the Participant furnishes in lieu of any such proprietary data so withheld, technical data disclosing the source, size, configuration, matting 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 "Participant Licensing" provisions of paragraph H.

F. Inspection Rights. Except as may be otherwise specified in this Agreement 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 Agreement, may inspect at the Participant's facility any proprietary data withheld under paragraph E. for the purposes of verifying that such data properly fell within the withholding provision of paragraph E., or for evaluating work performance.

19. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION

[This Agreement, to the extent that it is of a character specified in the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-333), is subject to the following provisions and to all other applicable provisions and exceptions of such Act and the regulations of the Secretary of Labor thereunder.]

A. Overtime Requirements. The Participant or contractor contracting for any part of the Agreement work, which may require or involve the employment of laborers, mechanics, apprentices, trainees, watchmen, and guards, shall require or permit any laborer, mechanic, apprentice, trainee, watchman, or guard, in any workweek in which he is employed on such work, to work in excess of eight (8) hours in any calendar day, or in excess of forty (40) hours in such workweek, on work subject to the provisions of the Contract Work Hours and Safety Standards Act, unless such laborer, mechanic, apprentice, trainee, watchman, or guard receives compensation at a rate not

19. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION  
(Cont'd)

less than one and one-half times his basic rate of pay for all such hours worked in excess of eight (8) hours in any calendar day, or in excess of forty (40) hours in such workweek, whichever is the greater number of overtime hours.

B. Violation; Liability for Unpaid Wages; Liquidated Damages. In the event of any violation of the provisions of paragraph A., the Participant and any subcontractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition, such Participant and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, 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 eight (8) hours or in excess of his standard workweek of forty (40) hours without payment of the overtime wages required by paragraph A.

C. Withholding for Unpaid Wages and Liquidated Damages. The Contracting Officer may withhold from the Government Prime Participant, from any moneys payable on account of work performed by the Participant or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Participant or subcontractor for unpaid wages and liquidated damages as provided in the provisions of paragraph B.

D. Subcontracts. The Participant shall insert paragraphs A. through D. of this clause in all contracts, and shall require their inclusion in all subcontracts of any tier.

E. Records. The Participant shall maintain payroll records containing the information specified in 29 CFR 516.2(a). Such records shall be preserved for three (3) years from the completion of the Agreement.

20. PATENT RIGHTS - LONG FORM

Note: This clause is applicable to Agreements with organizations other than small business firms and nonprofit organizations. DOE prime Participants shall use this clause when subcontracting with organizations other than small business firms and nonprofit organizations.

A. Definitions.

(1) "Subject Invention" means any invention or discovery of the Contractor conceived or first actually reduced to practice in the course of or under this contract, and includes any art, method, process, machine, manufacture, design, or composition of matter, or any new and useful improvement thereof, or any variety of plants, whether patented or unpatented under the Patent Laws of the United States of America or any foreign country.

20. PATENT RIGHTS - LONG FORM (Cont'd)

(2) "Contract" means any contract, grant, agreement, understanding, or other arrangement, which includes research, development, or demonstration work, and includes any assignment or substitution of parties.

(3) "States and domestic municipal governments" means the States of the United States, the District of Columbia, Puerto Rico, the Virgin Islands, American Samoa, Guam, the Trust Territory of the Pacific Islands, and any political subdivision and agencies thereof.

(4) "Government agency" includes an executive department, independent commission, board, office, agency, administration, authority, Government corporation, or other Government establishment of the Executive Branch of the Government of the United States of America.

(5) "To the point of practical application" means to manufacture in the case of a composition or product, to practice in the case of a process, or to operate in the case of a machine and under such conditions as to establish that the invention is being worked and that its benefits are reasonably accessible to the public.

(6) "Patent Counsel" means the DOE Patent Counsel assisting the procuring activity.

B. Allocation of Principal Rights.

(1) Assignment to the Government. The Contractor agrees to assign to the Government the entire right, title, and interest throughout the world in and to each Subject Invention, except to the extent that rights are retained by the Participant under subparagraph B.(2) and paragraph C. of this clause.

(2) Greater Rights Determinations. The Participant or the employee-inventor with authorization of the Participant may request greater rights than the nonexclusive license and the foreign patent rights provided in paragraph C. of this clause on identified inventions in accordance with 41 CFR 9-9.109-6. Such requests must be submitted to Patent Counsel (with notification by Patent Counsel to the Contracting Officer) at the time of the first disclosure pursuant to subparagraph E.(2) of this clause, or not later than nine (9) months after conception or first actual reduction to practice, whichever occurs first, or such longer period as may be authorized by Patent Counsel (with notification by Patent Counsel to the Contracting Officer) for good cause shown in writing by the Participant.



20. PATENT RIGHTS - LONG FORM (Cont'd)

C. Minimum Rights to the Contractor.

(1) Participant License. The Participant reserves a revocable, nonexclusive, paid-up license in each patent application filed in any country on a Subject Invention and any resulting patent in which the Government acquires title. The license shall extend to the Participant's domestic subsidiaries and affiliates, if any, within the corporate structure of which the Participant is a part and shall include the right to grant sublicenses of the same scope to the extent the Participant was legally obligated to do so at the time the contract was awarded. The license shall be transferable only with approval of DOE except when transferred to the successor of that part of the Participant's business to which the invention pertains.

(2) Revocation Limitations. The Participant's nonexclusive license retained pursuant to subparagraph C.(1) of this clause and sublicenses granted thereunder may be revoked or modified by DOE, either in whole or in part, only to the extent necessary to achieve expeditious practical application of the Subject Invention under DOE's published licensing regulations (10 CFR 781), and only to the extent an exclusive license is actually granted. This license shall not be revoked in that field of use and/or the geographical areas in which the Participant, or its sublicensee, has brought the invention to the point of practical application and continues to make the benefits of the invention reasonably accessible to the public, or is expected to do so within a reasonable time.

(3) Revocation Procedures. Before modification or revocation of the license or sublicense, pursuant to subparagraph C.(2) of this clause, DOE shall furnish the Participant a written notice of its intention to modify or revoke the license and any sublicense thereunder, and the Participant shall be allowed thirty (30) days, or such longer period as may be authorized by the Patent Counsel (with notification by Patent Counsel to the Contracting Officer) for good cause shown in writing by the Participant, after such notice to show cause why the license or any sublicense should not be modified or revoked. The Participant shall have the right to appeal, in accordance with 10 CFR 781, any decision concerning the modification or revocation of its license or any sublicense.

(4) Foreign Patent Rights. Upon written request to Patent Counsel (with notification by Patent Counsel to the Contracting Officer), in accordance with subparagraph E.(2)(i) of this clause, and subject to DOE security regulations and requirements, there shall be reserved to the Participant, or the employee-inventor with authorization of the Participant, the patent rights to a Subject Invention in any foreign country where the Government has elected not to secure such rights provided:

20. PATENT RIGHTS - LONG FORM (Cont'd)

(i) The recipient of such rights, when specifically requested by DOE and three (3) years after issuance of a foreign patent disclosing said Subject Invention, shall furnish DOE a report setting forth:

(A) The commercial use that is being made, or is intended to be made, of said invention, and

(B) The steps taken to bring the invention to the point of practical application or to make the invention available for licensing.

(ii) The Government shall retain at least an irrevocable, nonexclusive, paid-up license to make, use, and sell the invention throughout the world by or on behalf of the Government (including any Government agency) and States and domestic municipal Governments, unless the Secretary or his designee determines that it would not be in the public interest to acquire the license for the States and domestic municipal governments.

(iii) Subject to the rights granted in subparagraphs C.(1), (2), and (3) of this clause, the Secretary or his designee shall have the right to terminate the foreign patent rights granted in this subparagraph C.(4) in whole or in part unless the recipient of such rights demonstrates to the satisfaction of the Secretary or his designee that effective steps necessary to accomplish substantial utilization of the invention have been taken or within a reasonable time will be taken.

(iv) Subject to the rights granted in subparagraphs C.(1), (2), and (3) of this clause, the Secretary or his designee shall have the right, commencing four (4) years after foreign patent rights are accorded under this subparagraph C.(4), to require the granting of a nonexclusive or partially exclusive license to a responsible applicant or applicants, upon terms reasonable under the circumstances and in appropriate circumstances to terminate said foreign patent rights in whole or in part, following a hearing upon notice thereof to the public, upon a petition by an interested person justifying such hearing:

(A) If the Secretary or his designee determines, upon review of such material as he deems relevant, and after the recipient of such rights, or other interested person, has had the opportunity to provide such relevant and material information as the Secretary or his designee may require, that such foreign patent rights have tended substantially to lessen competition or to result in undue market concentration in any section of the United States in any line of commerce to which the technology relates; or

20. PATENT RIGHTS - LONG FORM (Cont'd)

(B) Unless the recipient of such rights demonstrates to the satisfaction of the Secretary or his designee at such hearing that the recipient has taken effective steps, or within a reasonable time thereafter is expected to take such steps, necessary to accomplish substantial utilization of the invention.

D. Filing of Patent Applications.

(1) With respect to each Subject Invention in which the Participant or the inventor requests foreign patent rights in accordance with subparagraph C.(4) of this clause, a request may also be made for the right to file and prosecute the U.S. application on behalf of the U.S. Government. If such request is granted, the Participant or inventor shall file a domestic patent application on the invention within six (6) months after the request for foreign patent rights is granted, or such longer period of time as may be approved by the Patent Counsel for good cause shown in writing by the requester. With respect to the invention, the requester shall promptly notify the Patent Counsel (with notification by Patent Counsel to the Contracting Officer) of any decision not to file an application.

(2) For each Subject Invention on which a domestic patent application is filed by the Participant or inventor, the Participant or inventor shall:

(i) Within two (2) months after the filing or within two (2) months after submission of the invention disclosure if the patent application previously has been filed, deliver to the Patent Counsel a copy of the application as filed including the filing date and serial number;

(ii) Within six (6) months after filing the application or within six (6) months after submitting the invention disclosure if the application has been filed previously, deliver to the Patent Counsel a duly executed and approved assignment to the Government, on a form specified by the Government;

(iii) Provide the Patent Counsel with the original patent grant promptly after a patent is issued on the application; and

(iv) Not less than thirty (30) days before the expiration of the response period for any action required by the Patent and Trademark Office, notify the Patent Counsel of any decision not to continue prosecution of the application.

20. PATENT RIGHTS - LONG FORM (Cont'd)

(3) With respect to each Subject Invention in which the Participant or inventor has requested foreign patent rights, the Participant or inventor shall file a patent application on the invention in each foreign country in which such request is granted in accordance with applicable statutes and regulations and within one of the following periods:

(i) Eight (8) months from the date of filing a corresponding United States application, or if such an application is not filed, six (6) months from the date the request was granted;

(ii) Six (6) months from the date a license is granted by the Commissioner of Patents and Trademarks to file the foreign patent application where such filing has been prohibited by security reasons; or

(iii) Such longer periods as may be approved by the Patent Counsel for good cause shown in writing by the Participant or inventor.

(4) Subject to the license specified in subparagraphs C.(1), (2) and (3) of this clause, the Participant or inventor agrees to convey to the Government, upon request, the entire right, title, and interest in any foreign country in which the Participant or inventor fails to have a patent application filed in accordance with subparagraph D.(3) of this clause, or decides not to continue prosecution or to pay any maintenance fees covering the invention. To avoid forfeiture of the patent application or patent the Participant or inventor shall, not less than sixty (60) days before the expiration period for any action required by any Patent Office, notify the Patent Counsel of such failure or decision, and deliver to the Patent Counsel the executed instruments necessary for the conveyance specified in this paragraph.

E. Invention Identification, Disclosures, and Reports.

(1) The Participant shall establish and maintain active and effective procedures to ensure that Subject Inventions are promptly identified and timely disclosed. These procedures shall include the maintenance of laboratory notebooks or equivalent records and any other records that are reasonably necessary to document the conception and/or the first actual reduction to practice of Subject Inventions, and records which show that the procedures for identifying and disclosing the inventions are followed. Upon request, the Participant shall furnish the Contracting Officer a description of these procedures so that he may evaluate and determine their effectiveness.

20. PATENT RIGHTS - LONG FORM (Cont'd)

(2) The Participant shall furnish the Patent Counsel (with notification by Patent Counsel to the Contracting Officer) on a DOE-approved form:

(i) A written report containing full and complete technical information concerning each Subject Invention within six (6) months after conception or first actual reduction to practice, whichever occurs first in the course of or under this contract, but in any event prior to any on sale, public use or public disclosure of such invention known to the Participant. The report shall identify the contract and inventor and shall be sufficiently complete in technical detail and appropriately illustrated by sketch or diagram to convey to one skilled in the art to which the invention pertains a clear understanding of the nature, purpose, operation, and to the extent known, the physical, chemical, biological, or electrical characteristics of the invention. The report should also include any request for foreign patent rights under subparagraph C.(4) of this clause and any request to file a domestic patent application under subparagraph D.(1) of this clause. However, such requests shall be made within the period set forth in subparagraph B.(2) of this clause. When an invention is reported under this subparagraph E.(2)(i), it shall be presumed to have been made in the manner specified in Section 9(a)(1) and (2) of 42 U.S.C. 5908 unless the Participant contends it was not so made in accordance with subparagraph G.(2)(ii) of this clause.

(ii) Upon request, but not more than annually, interim reports on a DOE-approved form listing Subject Inventions and subcontracts awarded containing a Patent Rights clause for that period and certifying that:

(A) The Participant's procedures for identifying and disclosing Subject Inventions as required by this paragraph E. have been followed throughout the reporting period;

(B) All Subject Inventions have been disclosed or that there are no such inventions; and

(C) All subcontracts containing a Patent Rights clause have been reported or that no such subcontracts have been awarded.

(iii) A final report on a DOE-approved form within three (3) months after completion of the contract work listing all Subject Inventions and all subcontracts awarded containing a Patent Rights clause and certifying that:

20. PATENT RIGHTS - LONG FORM (Cont'd)

(A) All Subject Inventions have been disclosed or that there were no such inventions; and

(B) All subcontracts containing a Patent Rights clause have been reported or that no such subcontracts have been awarded.

(3) The Participant shall obtain patent agreements to effectuate the provisions of this clause from all persons in its employ who perform any part of the work under this contract except nontechnical personnel, such as clerical employees and manual laborers.

(4) The Participant agrees that the Government may duplicate and disclose Subject Invention disclosures and all other reports and papers furnished or required to be furnished pursuant to this clause. If the Participant is to file a foreign patent application on a Subject Invention, the Government agrees, upon written request, to use its best efforts to withhold publication of such invention disclosures until the expiration of the time period specified in subparagraph D.(1) of this clause, but in no event shall the Government or its employees be liable for any publication thereof.

F. Publication. It is recognized that during the course of the work under this contract, the Participant or its employees may from time to time desire to release or publish information regarding scientific or technical developments conceived or first actually reduced to practice in the course of or under this contract. In order that public disclosure of such information will not adversely affect the patent interests of DOE or the Participant, patent approval for release or publication shall be secured from Patent Counsel prior to any such release or publication.

G. Forfeiture of Rights in Unreported Subject Inventions.

(1) The Participant shall forfeit to the Government, at the request of the Secretary or his designee, all rights in any Subject Invention which the Participant fails to report to Patent Counsel (with notification by Patent Counsel to the Contracting Officer) within six (6) months after the time the Participant:

(i) Files or causes to be filed a United States or foreign patent application thereon; or

(ii) Submits the final report required by subparagraph E.(2)(iii) of this clause, whichever is later.

(2) However, the Participant shall not forfeit rights in a Subject Invention if, within the time specified in (1)(i) or (1)(ii) of this paragraph G., the Participant:

20. PATENT RIGHTS - LONG FORM (Cont'd)

(i) Prepares a written decision based upon a review of the record that the invention was neither conceived nor first actually reduced to practice in the course of or under the contract and delivers the same to Patent Counsel (with notification by Patent Counsel to the Contracting Officer); or

(ii) Contending that the invention is not a Subject Invention the Participant nevertheless discloses the invention and all facts pertinent to this contention to the Patent Counsel (with notification by Patent Counsel to the Contracting Officer); or

(iii) Establishes that the failure to disclose did not result from the Participant's fault or negligence.

(3) Pending written assignment of the patent applications and patents on a Subject Invention determined by the Secretary or his designee to be forfeited (such determination to be a final decision under the "Disputes" clause of this contract), the Participant shall be deemed to hold the invention and the patent applications and patents pertaining thereto in trust for the Government. The forfeiture provision of this paragraph G. shall be in addition to and shall not supersede other rights and remedies which the Government may have with respect to Subject Inventions.

H. Examination of Records Relating to Inventions.

(1) The Contracting Officer or his authorized representative, until the expiration of three (3) years after final payment under this contract, shall have the right to examine any books (including laboratory notebooks), records, documents, and other supporting data of the Participant which the Contracting Officer or his authorized representative reasonably deems pertinent to the discovery or identification of Subject Inventions or to determine compliance with the requirements of this clause.

(2) The Contracting Officer or his authorized representative shall have the right to examine all books (including laboratory notebooks), records and documents of the Participant relating to the conception of first actual reduction to practice of inventions in the same field of technology as the work under this contract to determine whether any such inventions are Subject Inventions, if the Participant refuses or fails to:

(i) Establish the procedures of subparagraph E.(1) of this clause; or

(ii) Maintain and follow such procedures; or

20. PATENT RIGHTS - LONG FORM (Cont'd)

(iii) Correct or eliminate any material deficiency in the procedures within thirty (30) days after the Contracting Officer notifies the Participant of such a deficiency.

I. Withholding of Payment (Not Applicable to Subcontracts).

(1) Any time before final payment of the amount of this contract, the Contracting Officer may, if he deems such action warranted, withhold payment until a reserve not exceeding \$50,000 or five (5) percent of the amount of this contract, whichever is less, shall have been set aside if in his opinion the Participant fails to:

(i) Establish, maintain and follow effective procedures for identifying and disclosing Subject Inventions pursuant to subparagraph E.(1) of this clause; or

(ii) Disclose any Subject Invention pursuant to subparagraph E.(2)(i) of this clause; or

(iii) Deliver the interim reports pursuant to subparagraph E.(2)(ii) of this clause; or

(iv) Provide the information regarding subcontracts pursuant to subparagraph J.(5) of this clause; or

(v) Convey to the Government in a DOE-approved form the title and/or rights of the Government in each Subject Invention as required by this clause.

(2) The reserve or balance shall be withheld until the Contracting Officer has determined that the Participant has rectified whatever deficiencies exist and has delivered all reports, disclosures, and other information required by the clause.

(3) Final payment under this contract shall not be made by the Contracting Officer before the Participant delivers to Patent Counsel all disclosures of Subject Inventions and other information required by subparagraph E.(2)(i) of this clause, the final report required by subparagraph E.(2)(iii) of this clause, and Patent Counsel has issued a patent clearance certification to the Contracting Officer.

(4) The Contracting Officer may, in his discretion, decrease or increase the sums withheld up to the maximum authorized above. If the Participant is a nonprofit organization, the maximum amount that may be withheld under this paragraph shall not exceed \$50,000 or one percent (1%) of the amount of this contract, whichever is less. No amount shall be withheld under this paragraph while the amount specified by this paragraph is being withheld under other provisions of the contract. The



20. PATENT RIGHTS - LONG FORM (Cont'd)

withholding of any amount or subsequent payment thereof shall not be construed as a waiver of any rights accruing to the Government under this contract.

J. Subcontracts.

(1) For the purpose of this paragraph the term "Participant" means the party awarding a subcontract and the term "subcontractor" means the party being awarded a subcontract, regardless of tier.

(2) The Participant will include the clause entitled "Patent Rights (Small Business Firms and Non-profit Organizations)", as appropriate, suitably modified to identify the parties in all subcontracts, regardless of tier, for experimental, developmental, demonstration, or research work to be performed in the United States by a small business firm or a nonprofit organization. In all other subcontracts, regardless of tier, for experimental, developmental, demonstration, or research work, the contractor will include the Patent Rights (Long Form) clause (41 C.F.R. 9-9.107-5(a)) or the Patent Rights (Short Form) clause (41 C.F.R. 9-9.107-6), as appropriate, modified to identify the parties. In the event of refusal by a subcontractor to accept this clause, or if in the opinion of the Participant the clause is inconsistent with DOE's patent policies, the Participant:

(i) Shall promptly submit written notice to the Contracting Officer setting forth reasons for the subcontractor's refusal and other pertinent information which may expedite disposition of the matter; and

(ii) Shall not proceed with the subcontract without the written authorization of the Contracting Officer.

(3) Except as may be otherwise provided in this clause, the Participant shall not, in any subcontract or by using a subcontract as consideration therefor, acquire any rights in its subcontractor's Subject Invention for the Participant's own use (as distinguished from such rights as may be required solely to fulfill the Participant's contract obligations to the Government in the performance of this contract).

(4) All invention disclosures, reports, instruments, and other information required to be furnished by the subcontractor to DOE, under the provisions of a Patent Rights clause in any subcontract hereunder may, in the discretion of the Contracting Officer, be furnished to the Participant for transmission to DOE.

(5) The Participant shall promptly notify the Contracting Officer in writing upon the award of any subcontract containing a Patent Rights clause by identifying the subcontractor, the work to be performed under the subcontract, and the dates of award, and estimated completion. Upon the request of the Contracting Officer the Participant shall furnish a copy of the subcontract.

20. PATENT RIGHTS - LONG FORM (Cont'd)

(6) The Participant shall identify all Subject Inventions of the subcontractor of which it acquires knowledge in the performance of this contract and shall notify the Patent Counsel (with notification by Patent Counsel to the Contracting Officer) promptly upon the identification of the inventions.

(7) It is understood that the Government is a third party beneficiary of any subcontract clause granting rights to the Government in Subject Inventions, and the Participant hereby assigns to the Government all rights that the Participant would have to enforce the subcontractor's obligations for the benefit of the Government with respect to Subject Inventions. The Participant shall not be obligated to enforce the agreements of any subcontractor hereunder relating to the obligations of the subcontractor to the Government regarding Subject Inventions.

K. Background Patents.

(1) "Background Patent" means a domestic patent covering an invention or discovery which is not a Subject Invention and which is owned or controlled by the Participant at any time through the completion of this contract:

(i) Which the Participant, but not the Government, has the right to license to others without obligation to pay royalties thereon; and

(ii) Infringement of which cannot reasonably be avoided upon the practice of any specific process, method, machine, manufacture or composition of matter (including relatively minor modifications thereof) which is a subject of the research, development, or demonstration work performed under this contract.

(2) The Participant agrees to and does hereby grant to the Government a royalty-free, nonexclusive, license under any Background Patent for purposes of practicing a subject of this contract by or for the Government in research, development, and demonstration work only.

(3) The Participant also agrees that upon written application by DOE, it will grant to responsible parties for purposes of practicing a subject of this contract, nonexclusive licenses under any Background Patent on terms that are reasonable under the circumstances. If, however, the Participant believes that exclusive or partially exclusive rights are necessary to achieve expeditious commercial development or utilization, then a request may be made to DOE for DOE approval of such licensing by the Participant.

20. PATENT RIGHTS - LONG FORM (Cont'd)

(4) Notwithstanding the foregoing subparagraph K.(3), the Participant shall not be obligated to license any Background Patent if the Participant demonstrates to the satisfaction of the Secretary or his designee that:

(i) A competitive alternative to the subject matter covered by said Background Patent is commercially available or readily introducible from one or more other sources; or

(ii) The Participant or its licensees are supplying the subject matter covered by said Background Patent in sufficient quantity and at reasonable prices to satisfy market needs, or have taken effective steps or within a reasonable time are expected to take effective steps to so supply the subject matter.

L. Atomic Energy.

(1) No claim for pecuniary award or compensation under the provisions of the Atomic Energy Act of 1954, as amended, shall be asserted by the Participant or its employees with respect to any invention or discovery made or conceived in the course of or under this contract.

(2) Except as otherwise authorized in writing by the Contracting Officer, the Participant will obtain patent agreements to effectuate the provisions of subparagraph L.(1) of this clause from all persons who perform any part of the work under this contract, except nontechnical personnel, such as clerical employees and manual laborers.

M. Limitation of Rights. Nothing contained in this Patent Rights clause shall be deemed to give the Government any rights with respect to any invention other than a Subject Invention except as set forth in the Patent Rights clause of this contract with respect to Background Patents and the Facilities License.

21. FLOOD INSURANCE

The Participant shall comply with the flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973, Public Law 93-234, 87 Stat. 975, approved December 31, 1978, Section 102(a) requires the purchase of flood insurance in communities where such insurance is available as a condition for the receipt of any Federal financial assistance for construction or acquisition purposes for use in any area that has been identified by the Secretary of the Department of Housing and Urban Development as an area having special flood hazards and provisions prescribed by the Federal Insurance Administration in 24 CFR Chapter X, Subchapter B., will be complied with.

22. UTILIZATION OF LABOR SURPLUS AREA CONCERNS

A. It is the policy of the Government to award contracts to labor surplus area concerns that agree to perform substantially in labor surplus areas, where this can be done consistent with the efficient performance of the Agreement and at prices no higher than are obtainable elsewhere. The Participant agrees to use its best efforts to place its subcontracts in accordance with this policy.

B. In complying with paragraph A. of this clause and with paragraph B. of the clause of this Agreement entitled "Utilization of Small Business Concerns Owned and Controlled by Socially and Economically Disadvantaged Individuals," the Participant in placing its subcontracts shall observe the following order of preference: (1) small business concerns that are labor surplus area concerns, (2) other small business concerns, and (3) other labor surplus area concerns.

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

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

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

23. LABOR SURPLUS AREA SUBCONTRACTING PROGRAM

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

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

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

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

23. LABOR SURPLUS AREA SUBCONTRACTING PROGRAM (Cont'd)

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

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

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

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

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

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

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

24. DISPUTES

A. Except as otherwise provided in this Agreement, any dispute concerning a question of fact arising under this Agreement 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 Participant. The decision of the Contracting Officer shall be final and conclusive unless within 60 days from date of receipt of such copy, the Participant mails, or delivers a written notice of appeal to the Department of Energy Financial Assistance Appeals Board in accordance with 10 CFR Part 1024 (See Rule 1). The decision of the Department of Energy Financial Assistance Appeals Board shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or

24. DISPUTES (Cont'd)

capricious, or arbitrary, or so grossly erroneous as necessary to imply bad faith, or not supported by substantial evidence. In connection with any appeal proceeding under this clause, the Participant shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, the Participant shall proceed diligently with the performance of the Agreement and in accordance with the Contracting Officer's decision.

B. This "Disputes Clause" does not preclude consideration of law questions in connection with decisions provided for in paragraph A. above; provided, that nothing in this Agreement shall be construed as making final the decision of any administrative official, representative, or board, based on a question of law.

25. PATENT INDEMNITY

The Participant shall indemnify the Government and its officers, agents, and employees against liability, including costs, for infringement of U.S. Letter 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) resulting from the Participant's: (a) furnishing or supplying standard parts or components which have been sold or offered for sale to the public on the commercial open market; or (b) utilizing its normal practices or methods which normally are or have been used in providing goods and services in the commercial open market, in the performance of the Agreement; or (c) utilizing any parts, components, practices, or methods to the extent to which the Participant has secured indemnification from liability. The foregoing indemnity shall not apply unless the Participant 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 claimed infringement which is settled without the consent of the Participant, unless required by final decree of a court of competent jurisdiction or to an infringement resulting from addition to or change in such supplies or components furnished or construction work performed for which addition or change was made subsequent to delivery or performance by the Participant.

26. BUY AMERICAN ACT

A. In acquiring end products, the Buy American Act (41 U.S. Code 10a-d) provides that the Government give preference to domestic source end products. For the purpose of this clause:

(1) "Components" means those clauses, materials, and supplies which are directly incorporated in the end products;

26. BUY AMERICAN ACT (Cont'd)

(2) "End products" means those clauses, materials, and supplies which are acquired under this contract for public use; and

(3) "A domestic source end product" means (i) an unmanufactured end product which has been mined or produced in the United States, and (ii) an end product manufactured in the United States if the cost of the components thereof which are mined, produced, or manufactured in the United States exceeds 50 percent of the costs of all its components. For the purpose of this subparagraph A.(3)(ii), components of foreign origin of the same type or kind as the products referred to in subparagraphs B.(2) or (3) of this clause shall be treated as components mined, produced, or manufactured in the United States.

B. The Participant agrees that there will be used under this contract only domestic source end products, except end products:

(1) Which are for use outside the United States;

(2) Which the Government determines are not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality;

(3) As to which the head of the agency determines the domestic preference to be inconsistent with the public interest; or

(4) As to which the head of the agency determines the cost to the Government to be unreasonable. (The foregoing requirements are administered in accordance with Executive Order No. 10582, dated December 17, 1954.)

Note: DOE-PR 9-6.105 sets forth the listing of supplies excepted from the Buy American Act.

27. PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA

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

A. The Participant furnished cost or pricing data which was not accurate, complete and current as certified in the Participant's Certificate of Current Cost or Pricing Data;

B. A subcontractor, pursuant to the article of this Agreement 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;

27. PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA (Cont'd)

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

D. The Participant or a subcontractor or prospective subcontractor furnished any data, not within paragraphs A., B. or C. above, which was not accurate as submitted; the price or cost shall be reduced accordingly and the Agreement shall be modified in writing as may be necessary to reflect such reduction. However, any reduction in the Agreement 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 mark-up) by which the actual subcontract, or actual cost to the Participant if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Participant: provided, the actual subcontract price was not affected by defective cost or pricing data.

(Note: Since the Agreement 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 Participant may wish to include a clause in each subcontract requiring the subcontractor to appropriately indemnify the Participant. 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 its lower-tier subcontractors.)

28. SUBCONTRACTOR COST OR PRICING DATA

A. The Participant shall require subcontractors hereunder to submit, actually or by specific identification in writing, 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.

B. The Participant shall require subcontractors to certify, in substantially the same form as that used in the certificate by the Prime Participant to the Government, that to the best of their knowledge and belief,



28. SUBCONTRACTOR COST OR PRICING DATA (Cont'd)

the cost and pricing data submitted under paragraph A. above is accurate, complete and current as of the date of agreement on the negotiated price of the subcontract or subcontract change or modification.

C. The Participant shall insert the substance of this clause including this paragraph C. in each subcontract hereunder which exceeds \$100,000 when entered into except where the price thereof 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. In each such excepted subcontract hereunder in excess of \$100,000, the Participant shall insert the substance of the following clause:

SUBCONTRACTOR COST AND PRICING DATA -PRICE ADJUSTMENTS

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 Agreement 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 Agreement modifications.

B. The Participant shall require subcontractors hereunder to submit, actually or by specific identification in writing, cost or pricing data under the following circumstances:

(1) Prior to 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 Participant shall require subcontractors to certify, in substantially the same form as that used in the certificate by the Prime Participant to the Government, that to the best of their knowledge and belief the cost and pricing data submitted under paragraph 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 Participant shall insert the substance of this clause including this paragraph D. in each subcontract hereunder which exceeds \$100,000 when entered into.

29. ADDITIONAL TECHNICAL DATA REQUIREMENTS

A. In addition to the technical data specified elsewhere in this Agreement to be delivered, the Contracting Officer may at any time during the Agreement performance or within one year after final payment call for the Participant to deliver any technical data first produced or specifically used in the performance of this Agreement except technical data pertaining to items of standard commercial design.

B. The provisions of the "Rights in Technical Data" clause included in this Agreement are applicable to all technical data called for under this Additional Technical Data Requirements clause. Accordingly, nothing contained in this clause shall require the Participant 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 Participant will be compensated for appropriate costs for converting such data into the prescribed form, for reproduction, and for delivery.

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

A. It is the policy of the United States and the Department of Energy 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 DOE.

B. The Participant hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with the efficient performance of this Agreement. The Participant further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the Department of Energy as may be necessary to determine the extent of the Participant's compliance with this clause.

C. As used in this Agreement, the term "small business concern" shall mean a small business as defined pursuant to Section 3 of the Small Business Act (15 U.S.C. 632) and relevant regulations promulgated pursuant thereto.

The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall mean a small business concern:

- (1) 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

30. UTILIZATION OF SMALL BUSINESS CONCERNS AND SMALL BUSINESS CONCERNS OWNED AND CONTROLLED BY SOCIALLY AND ECONOMICALLY DISADVANTAGED INDIVIDUALS  
(Cont'd)

(2) Whose management and daily business operations are controlled by one or more of such individuals.

The Participant 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. Subcontractors shall provide a notarized statement to the Participant certifying their status as either a small business concern or a small business concern owned and controlled by socially and economically disadvantaged individuals.

31. UTILIZATION OF WOMEN-OWNED BUSINESS CONCERNS

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 Participant agrees to use its best efforts to carry out this policy in the award of subcontracts to the fullest extent consistent with the efficient performance of this Agreement. As used in this Agreement, 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" means all women business owners.

APPENDIX B

PROJECT TASKS AND SCHEDULE

Summary

The purpose of this Cooperative Agreement is to complete the necessary exploration to site, drill, complete and test a four to six thousand-foot deep geothermal production well to supply the energy requirements for a fuel alcohol plant. DOE will share the cost of this resource confirmation project with the Participant. Each party's cost share will be determined by the negotiated Cost Share Plan set forth in Appendix D to this Agreement. The work to be performed under this agreement is set forth by the following tasks.

Task 1 - Project Management

- A. The Participant shall manage the project in a prudent manner consistent with successfully completing these project tasks. Management controls shall include technical assessment, budget assessment and schedule assessment. Approval authority will be the basis for much of the project management. DOE will communicate with Mr. Stephen M. Munson, or his designated representative, for matters concerning this project.
- B. In addition to close general coordination with DOE, the Participant shall make immediate and full disclosure of problem areas to DOE, if necessary, so that timely corrective action may be taken with DOE support.
- C. The Participant shall prepare and submit to DOE in accordance with Appendix C, "Federal Assistance Reporting Checklist," a Milestone Plan including a management plan within thirty (30) working days of award of this agreement. All reports after delivery to DOE shall be the sole property of DOE. The Participant shall not claim that any report contains any trade secrets or commercial or financial information deemed by the Participant to be privileged or confidential, or that the Participant has any proprietary interest in any report.

- Deliverable - Milestone Plan

Task 2 - Environmental/Institutional

- A. The Participant shall submit within 60 days of award and have approved an Environmental Report in accordance with the "Environmental Guidelines Handbook" provided by DOE. The Environmental Report shall address all "site-specific" information relating to this project. Excluding any questions or clarification, the environmental report should be approved by DOE within 2 weeks of receipt from the Participant.

- Deliverable - Environmental Report  
- Milestone #1

Task 2 - Environmental/Institutional (Cont'd)

- B. The Participant shall provide such information during the process of the project to all Federal, State and local agencies as are required by such agencies to drill, construct, test and complete a geothermal well.

Task 3 - Site Selection

- A. The Participant shall provide to DOE, prior to drilling the production well, all available data and the rationale used by the Participant for site selection and the basis for well parameters, i.e., well depth, anticipated flow and temperature requirements.

- B. DOE and the Participant will review and discuss the data. Mutual agreement of both parties will be reached concerning the need for additional data prior to site selection agreement, and mutual written agreement is required to proceed with the next task.

- Deliverable - Exploration & Site Selection Data Report
- Decision Point - Site Selection
- Milestone #2

- C. The Participant shall provide to DOE a well location survey to the nearest geodetic marker of any and all wells and gradient holes involved in this project.

- Deliverable - Well location surveys

Task 4 - Drilling and Logging

- A. The Participant shall provide for necessary drilling supervision services.

- B. The Participant shall prepare and submit to DOE for review and concurrence, a detailed Drilling and Well Completion Plan based on the preliminary drilling program, updated to incorporate any data generated since proposal submission. This plan must include all aspects of the drilling phase; well construction; testing during drilling, well completion, and support.

- C. The Participant shall prepare and submit to DOE, for review and concurrence, bid specifications for drilling subcontractor selection.

- D. DOE shall provide concurrence or request modifications to the Drilling and Well Completion Plan and the Bid Specifications. Mutual agreement of both parties to the Drilling and Well Completion Plan will constitute the scope of work during drilling. Any change in scope of the agreed upon drilling plan will require the mutual concurrence supported by a written modification to the Drilling Plan.

Task 4 - Drilling and Logging (Cont'd)

- Deliverables - Drilling and Well Completion Plan; Drilling Bid Specifications
  - Milestone #3
- E. The Participant with support from appropriate consultants shall select a drilling subcontractor. The proposed subcontract must be submitted for DOE review and approval.
- Deliverable - Drilling Subcontract
  - Milestone #4 - Drilling Subcontract Approved
- F. The Participant shall design and erect a job sign in good taste and of appropriate construction at the facility, which will define the project objective and identify the Participants in the project. The sign should:
- (1) Include appropriate recognition of the roles of the principal parties involved in work performed under this Agreement.
  - (2) Avoid statements or implications that the Department of Energy endorses any process or product arising out of the contract, without advance approval of the Contracting Officer.
- G. The Participant shall supervise the drilling of the production well, in accordance with the detailed Drilling and Well Completion Plan and specifications. Periodically, the Participant and DOE shall confer, to coordinate decisions concerning the drilling operation in a timely manner.
- H. The Participant shall call DOE's Technical Representative each morning to provide a daily drilling report and shall transmit a written copy of the report daily to DOE.
- Deliverable - Daily Drilling Report
- I. The Participant shall collect fluid samples, cutting samples, well logs, bottom hole and gradient temperature data and perform all other tests consistent with industry practice and the Drilling and Well Completion Plan. Strata suitable for reinjection will be noted during drilling.
- J. All data concerning the well shall be forwarded by the Participant to DOE as soon as they are acquired in order to minimize the time required for DOE review. The Participant and DOE shall discuss and review the data. A mutual written agreement between the parties will be reached prior to proceeding with the next task.

Task 4 - Drilling and Logging (Cont'd)

- Decision point - to proceed with flow testing and determine disposal requirements
- Deliverables - Logs, Well cuttings, Fluid sample analysis
- Milestone #5

Task 5 - Flow Testing

- A. The Participant shall provide the necessary flow testing services.
- B. The Participant shall carry out a comprehensive well and reservoir test program. The Participant shall prepare a Well Test Plan and submit it to DOE for review and approval twenty (20) working days prior to testing. Mutual agreement of the parties to the Well Test Plan will constitute the scope of work during well testing. Any change in scope of the agreed upon plan will require mutual concurrence of the parties and the Well Test Plan shall be modified accordingly.
  - Deliverable - Well Test Plan
  - Milestone #6
- C. The Participant shall call reports to DOE's Technical Representative each morning during testing.
- D. The Participant shall assimilate the test data during the well test and estimate reservoir yield and production life.
- E. The Participant shall prepare well testing and other available data and forward it to DOE.
- F. The parties shall analyze the well test results.
- G. A mutual, written agreement between DOE and the Participant must be reached to determine a suitable course of action for completion of this project.
  - Deliverables - Daily Reports Testing Data
  - Decision Point - Completion of Project
  - Milestone #7

Task 6 - Determination of Cost Share

- A. The basis for determination of the cost shares shall be the variable Cost Share Plan contained in Appendix D of the Cooperative Agreement.
- B. DOE and the Participant shall review all well test results and incurred project costs and determine the appropriate cost share ratios by use of the Cost Share Plan in Appendix D.
  - Deliverables - Final Cost Report
  - Milestone #8

SUMMARY OF

MILESTONES AND DELIVERABLES

Deliverables	<ol style="list-style-type: none"><li>1. Milestone Plan including management plan</li><li>2. Environmental Report</li></ol>
Milestone #1	Environmental Report Approval
Deliverable	Exploration and Site Selection Data Report
Milestone #2	Site Selection Agreement
Deliverables	<ol style="list-style-type: none"><li>1. Well Location Surveys</li><li>2. Drilling and Well Completion Plan</li><li>3. Bid Specifications</li></ol>
Milestone #3	Approved Drilling and Well Completion Plan and Bid Specifications
Deliverable	Drilling Subcontract
Milestone #4	Drilling Subcontract Approval
Deliverables	<ol style="list-style-type: none"><li>1. Daily Drilling Reports (both verbal and written)</li><li>2. Well logs</li><li>3. Well cuttings</li><li>4. Fluid sample analysis</li><li>5. Other pertinent data gathered during drilling for determination of flow testing parameters</li></ol>
Milestone #5	Completion of Drilling
Deliverables	Well Test Plan Approval
Milestone #6	Well Test Plan Approval
Deliverables	Daily Testing Reports (both verbal and written) Testing Data
Milestone #7	Flow Testing Completion
Deliverables	Final Cost Report
Milestone #8	Determination of Cost Share



U.S. DEPARTMENT OF ENERGY  
**FEDERAL ASSISTANCE REPORTING CHECKLIST**

FORM EIA-459A  
(10/80)

FORM APPROVED  
OMB NO. 1900-0127

1. Identification Number: DE-FC07-83ID12196	2. Program/Project Title: Vale, Oregon UCCDP		
3. Recipient: Renewable Energy, Inc.			
4. Reporting Requirements:	Frequency	No. of Copies	Addressees
<b>PROGRAM/PROJECT MANAGEMENT REPORTING</b>			
<input checked="" type="checkbox"/> Federal Assistance Milestone Plan	0		
<input type="checkbox"/> Federal Assistance Budget Information Form			
<input checked="" type="checkbox"/> Federal Assistance Management Summary Report	M		
<input checked="" type="checkbox"/> Federal Assistance Program/Project Status Report	M		
<input checked="" type="checkbox"/> Financial Status Report, OMB Form 269	F		
<b>TECHNICAL INFORMATION REPORTING</b>			
<input checked="" type="checkbox"/> Notice of Energy RD&D	0		
<input type="checkbox"/> Technical Progress Report			
<input checked="" type="checkbox"/> Topical Report	A		
<input checked="" type="checkbox"/> Final Technical Report	F		
<p><b>FREQUENCY CODES AND DUE DATES:</b></p> <p>A - As Necessary; within 5 calendar days after events.  F - Final; 90 calendar days after the performance of the effort ends.  Q - Quarterly; within 30 days after end of calendar quarter or portion thereof.  O - One time after project starts; within 30 days after award.  X - Required with proposals or with the application or with significant planning changes.  Y - Yearly; 30 days after the end of program year. (Financial Status Reports 90 days).  S - Semiannually; within 30 days after end of program fiscal half year.  M - Monthly; within 15 days after end of the calendar month.</p>			
<p>5. Special Instructions:</p> <p>See attached Report Distribution List for number of copies and addressess.</p> <p>Topical Reports are to be prepared and submitted as required by Attachment B of this Agreement. Those reports include:</p> <ol style="list-style-type: none"> <li>1. Environmental Evaluation</li> <li>2. Exploration and Site Selection Data Report</li> <li>3. Drilling and Well Completion Plan</li> <li>4. Well Test Plan</li> <li>5. Daily Drilling and Well Testing Data Reports</li> </ol>			
6. Prepared by: (Signature and Date)	7. Reviewed by: (Signature and Date)		



U.S. DEPARTMENT OF ENERGY  
IDAHO OPERATIONS OFFICE  
**REPORT DISTRIBUTION LIST**

DE-FC07-83ID12196

Federal Assistance Milestone Plan  
 Federal Assistance Budget Information Form  
 Federal Assistance Management Summary Report  
 Financial Status Report, OMB Form 269  
 Notice of Energy RD&D  
 Technical Progress Report  
 Topical Report  
 Final Technical Report

Addressees	Number of Report Copies										
	1	2	3	4	5	6	7	8	9	10	11
U. S. Department of Energy Idaho Operations Office 550 Second Street Idaho Falls, Idaho 83401  Attn: S. M. Prestwich Energy & Technology Division  Attn: K. R. Hastings Contracts Management Division  Attn: E. G. Jones Financial Management Division  EG&G Idaho, Inc. P. O. Box 1625, WCB E-3 Idaho Falls, ID 83415  Attn: Max Dolenc  U. S. Department of Energy Technical Information Center P. O. Box 62 Oak Ridge, TN 37830  University of Utah Research Institute 420 Chipeta Way, Suite 120 Salt Lake City, UT 84108  Attn: Jon Zeisloft	1	1	1	1	1	1	1	1	1	1	1

Special Instructions

\* Includes one camera-ready copy.

APPENDIX D

COST SHARE PLAN

The DOE cost share in percent of total, allowable costs for conditions shown is:

	Temp (°F)	<u>Flow (gpm)</u>								
		240	280	320	360	400	440	480	520	560
Geothermal	235°F	90	87	83	80	77	73	70	66	63
	245°F	86	81	78	73	70	65	60	57	52
Water Temperature °F	255°F	81	77	72	68	64	59	54	52	46
	265°F	75	71	66	61	57	51	46	42	37
	275°F	71	66	60	56	50	45	41	35	30
	285°F	66	60	56	50	44	38	34	28	22
	295°F	60	56	50	43	37	32	26	20	20
	305°F	56	50	43	37	32	25	20	20	20
	315°F	50	44	37	32	25	20	20	20	20

The Participant shall pay all project costs not paid by DOE.

DOE's cost share for temperatures and flowrates falling between the values in the above matrix will be found by Linear Extrapolation according to the following formula rounded to the nearest whole percent:

EXTRAPOLATION MATRIX

		<u>Flow Rate</u>		
		<u>QL</u>	<u>QX</u>	<u>QH</u>
Temperature	TL	P11	P1X	P12
	TX	PX1	PXX	PX2
	TH	P21	P2X	P22

TX = Well temperature from well test data

QX = Well flow rate from well test data

TL, TH, QL, QH, P11, P12, P21, P22 = Matrix values found adjacent to the temperature and flow rate test data

PXX = Extrapolated DOE cost share in percent

$$PX1 = P11 + A (P21 - P11)$$

$$PX2 = P12 + A (P22 - P12)$$

$$P1X = P11 + B (P12 - P11)$$

$$P2X = P21 + B (P22 - P21)$$

$$PXXT = P1X + A (P2X - P1X)$$

$$PXXQ = PX1 + B (PX2 - PX1)$$

$$PXX = (PXXQ + PXXT)/2$$

$$A = (TX - TL)/(TH - TL)$$

$$B = (QX - QL)/(QH - QL)$$