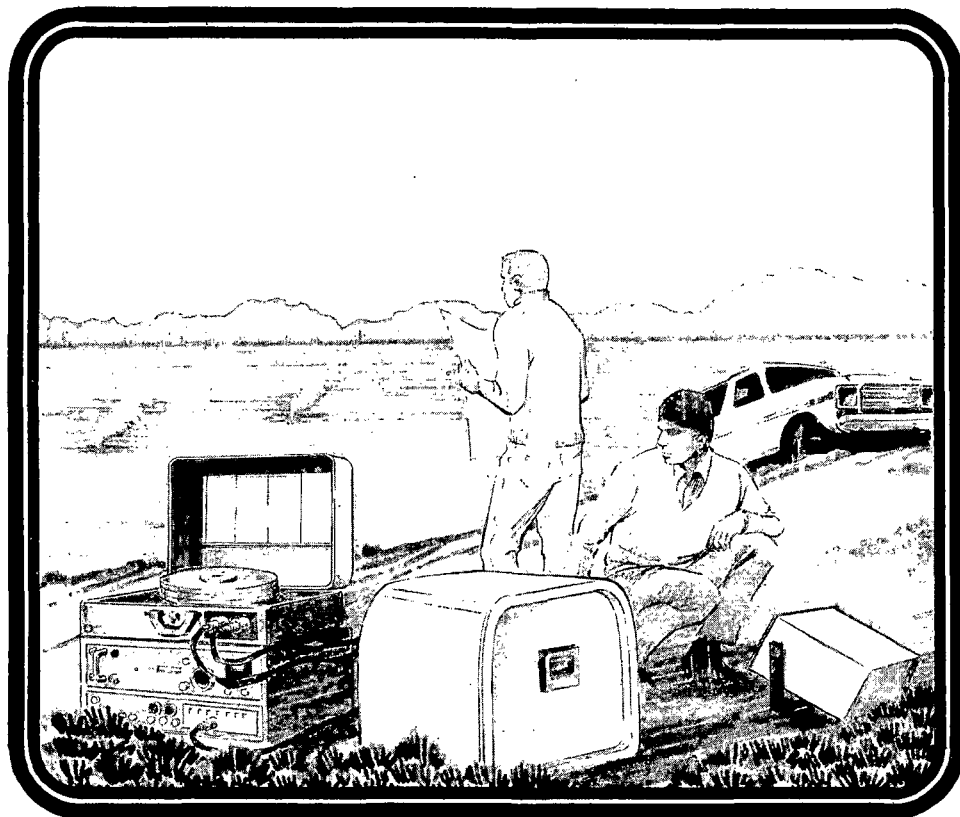


CR

NIELSON 6500669

Department of Energy
Idaho Operations Office

Methods for Improving Geothermal Exploration and Assessment Technology



Closing Date: August 7, 1980

Solicitation for Cooperative Agreement Proposals DE-SC07-80ID12144



Department of Energy
Idaho Operations Office
550 Second Street
Idaho Falls, Idaho 83401

JUN 2 3 1980

Subject: MICROEARTHQUAKE SURVEY AND ANALYSIS SOLICITATION FOR
COOPERATIVE AGREEMENT PROPOSALS NO. DE-SC07-80ID12144

Prospective Proposers:

The purpose of this Executive Summary Letter is to summarize the salient elements of this solicitation. It is not an integral part of the attached Solicitation for Cooperative Agreement Proposals (SCAP) which is a self-contained, stand-alone document. In the event of any conflict between the Executive Summary Letter and that of the SCAP, the language of the SCAP will prevail.

The Department of Energy (DOE), Idaho Operations Office, desires to receive and consider for financial support, proposals for developing and/or advancing technology for the detection and/or delineation of geothermal resources. The proposals must relate to the evaluation of the potential usefulness of microearthquake surveys as a geothermal exploration technique. This document solicits improvements in hypocenter locations using calibration explosions and improved P and S wave velocity models. In addition, it solicits refinements of fault plane solutions, seismic moment and stress drop determinations.

Proposals from individuals, corporations, companies, educational institutions, nonprofit institutions and others, including state and local governments will be considered. Proposals from Federal agencies and/or laboratories owned, operated, or under the cognizance of the Federal Government, or institutions or individuals participating in evaluating proposals or the administration of this Solicitation for Cooperative Agreement Proposals (SCAP) will not be considered for selection and should not be submitted.

There will not be a pre-proposal conference.

Telephone inquiries concerning this SCAP will not be accepted.

Proposals should be prepared in accordance with the instructions in Section III - Instructions for Preparation of Proposals. Five (5) copies of the proposal should be addressed to:


Department of Energy
Idaho Operations Office
Room HQ 117
550 Second Street
Idaho Falls, Idaho 83401

Attn: Kent R. Hastings

Proposals must be received at the above address by 4:00 p.m., local time, August 7, 1980. Late proposals, modifications of proposals and withdrawals of proposals will be handled in accordance with the Federal Procurement Regulations 1-3.802-1. To facilitate more effective handling, please place the following identification on the outside of the package containing your proposal:

"Proposal for Microearthquake Survey and Analysis SCAP
No. DE-SC07-80ID12144 To be Opened by Addressee Only".

Very truly yours,



Nell W. Fraser, Director
Contracts Management Division

UNITED STATES DEPARTMENT OF ENERGY

IDAHO OPERATIONS OFFICE

GEOHERMAL ENERGY PROGRAM

SOLICITATION FOR COOPERATIVE AGREEMENT PROPOSALS (SCAP)

DE-SC07-80ID12144

MICROEARTHQUAKE SURVEY AND ANALYSIS

Closing Date: August 7, 1980

TABLE OF CONTENTS

	<u>Page</u>
I. DESCRIPTION OF PROPOSED PROJECT -----	1
A. Introduction and Background -----	1
B. Technical Description -----	1
II. QUALIFICATION CRITERIA -----	4
III. INSTRUCTIONS FOR PREPARATION OF PROPOSALS -----	5
IV. PROPOSAL EVALUATION AND SELECTION -----	10
A. Preliminary Evaluation -----	10
B. Comprehensive Evaluation -----	10
V. OTHER PERTINENT INFORMATION -----	14
A. Proposal Submission -----	14
B. Proposals Received After Closing Date -----	14
C. Period of Validity of Proposals -----	14
D. Proposal Preparation Costs -----	14
E. Patents and Proprietary Information -----	14
F. Public Information -----	16
G. Other -----	16
H. Reporting and Program Review -----	16
I. Proposal Check List -----	17
J. Elaborate Proposals -----	17

APPENDICES

- A. REFERENCES
- B. SAMPLE COVER PAGE FOR PROPOSAL
- C. CONTRACT PRICING PROPOSAL (GSA OPTIONAL FORM 60)
- D. FEDERAL ASSISTANCE STANDARD FORM 424
- E. REPRESENTATIONS AND CERTIFICATIONS
- F. FEDERAL PROCUREMENT REGULATIONS SECTION 1-3.802-1

TABLE OF CONTENTS

APPENDICES (CONT'D)

- G. DRAFT COOPERATIVE AGREEMENT
- H. REPORTING REQUIREMENTS (FORM 537)
- I. CHECK LIST FOR PROPOSERS

UNITED STATES DEPARTMENT OF ENERGY
IDAHO OPERATIONS OFFICE

MICROEARTHQUAKE SURVEY AND ANALYSIS

SOLICITATION FOR COOPERATIVE AGREEMENT PROPOSALS (SCAP)
NO. DE-SC07-80ID12144

I. DESCRIPTION OF PROPOSED PROJECT

A. INTRODUCTION AND BACKGROUND

The U.S. Department of Energy (DOE) is soliciting proposals in response to this Solicitation for Cooperative Agreement Proposals (SCAP No. DE-SC07-80ID12144) which specifically address methods for improving geothermal exploration technology for the detection and/or delineation of convective hydrothermal systems.

DOE expects to award a Cooperative Agreement in which DOE's contribution is not to exceed \$100,000. Any submission that proposes costs in excess of the above limit will not be considered. DOE reserves the right to reject any or all proposals.

DOE has contracted with the Earth Science Laboratory of the University of Utah Research Institute for assistance in establishing the existing technology and the needs for improving that technology in the areas of geothermal exploration. UURI conducted a series of meetings of technical working groups concerned with (a) structure, stratigraphy and igneous processes, (b) thermal methods, (c) seismic methods, (d) electrical and electromagnetic methods, (e) water-rock interactions, and (f) exploration architecture. Each working group consisted of researchers and industrial users in an attempt to ensure that state-of-the-art methods would be recognized and reflect the immediate needs of industry. The working groups met at Marina Del Rey, California in May 1979. A final report entitled Program Review Geothermal Exploration and Assessment Technology Program (Nielson, 1979) was published in December 1979 (See Appendix A). This SCAP addresses the need for improved exploration technology as discussed in the above report.

B. TECHNICAL DESCRIPTION - MICROEARTHQUAKE SURVEY AND ANALYSIS

1. Introduction

Microearthquake surveys are often used as an exploration method by the geothermal industry. The occurrence of microearthquakes in a previously defined target area is considered a favorable indicator for the presence of a geothermal system, since this indicates active tectonism and the probability of open fractures. The implied permeability is an important ingredient for a producing geothermal system.

The accurate delineation of microearthquake hypocenters should indicate active fault zones, the type and style of faulting and the orientation of principle stresses along the faults. Several rock properties such as P and S wave velocity structure, velocity anistropy, Poisson's ratio, and amplitude attenuation may be determined from properly recorded field data. These may in turn be interpreted to determine fracture porosity, possible rock temperature, and degree of saturation.

Several problems have been identified with the microearthquake method as a key geothermal exploration technique. Most important of these are: 1) the episodic nature of microearthquake occurrence; 2) the fact that not all known geothermal systems are seismically active and not all active seismic areas are related to geothermal systems. In addition several possible survey defects have been identified: 1) inaccurate hypocenter location in areas of complex or unknown velocity distribution; 2) poorly defined fault plane solutions; 3) inadequate dynamic range and band width of data for estimating source parameters and attenuation; and 4) incompleteness of data for determining b-slopes of geothermal areas and surrounding regions.

The purpose of this SCAP is to evaluate the potential usefulness of microearthquake surveys as an exploration method by improving hypocenter locations using calibration explosions and improved P and S wave velocity models and in the refinement of fault plane solutions, seismic moment and stress drop determinations. It is anticipated that state-of-the-art digital microearthquake recording systems will be required to obtain data of sufficient quality to warrant these refined data interpretations.

The results will also contribute to answering basic questions about geothermal seismicity, such as:

- 1) What is the relation between seismicity and hydro-thermal activity?
- 2) Are there any special characteristics that discriminate earthquakes in geothermal areas from earthquakes outside geothermal areas?

2. Statement of Work

DOE invites proposals which seek to improve both the usefulness and cost-effectiveness of passive seismic methods as a geothermal exploration technique. A detailed microearthquake survey will be conducted over a geothermal prospect using a network of digital seismographs operating for a minimum of 3 months. A mobile network of 9 or more 3-component stations with 12-bit

digital data recording (200 samples/sec, sensitivity 10^{-8} m at 50 Hz) and interstation spacing of 4 km or less is required. The network configuration may be changed during the experiment to provide optimal coverage. Station locations shall be determined with an accuracy of 30 m or better. Arrival times should be read to 10 mS for P and, if possible, for S. Interstation clock timing should be correct to 5 mS. Availability of computer facilities for rapid processing of digital data is required.

Three calibration shots of approximate size 200 lb shall be fired in boreholes (about 30 m deep) within the network. These explosions will serve as master events in an inversion of selected microearthquake arrival-times for locations. P and S spectra are to be analyzed to determine moment, corner frequency, and attenuation (Q). A table shall list time and location of each event, standard errors of location, magnitude, moment, source dimension, and stress drop.

Magnitude-moment relation and recurrence relation (b value) shall be determined. The minimum number of earthquakes analyzed will be on the order of 100. All digital data gathered in this experiment shall be available for further analysis by DOE contractors and other interested parties. Maps and cross-sections will be prepared showing distribution of microearthquakes, velocity structure, areas of high or low Q and regions of high or low stress drop. Zones of hydrothermal alteration, exploration wells, and other relevant geologic or geophysical information will be displayed on the same scale as the seismic data. Focal mechanism data will be compared with available data on local and regional tectonics. The crustal model will be interpreted with respect to properties of interest in geothermal exploration, e.g., fracturing, temperature, pore fluid, etc. A report presenting all data and critically analyzing the use of microearthquakes as a geothermal exploration tool is required.

The proposal shall contain a description of the proposed site, evidence of sufficient seismic activity to qualify for this study, and a description of all surface and subsurface geophysical information that verifies the geothermal potential of the study site. Note that pertinent geophysical data substantiating subsurface structural evidence must be incorporated in the final report for this study.

The proposal shall contain proof of access and consent from the land owner/lease holder to perform this study.

A detailed description of proposed research methods shall be included in the proposal. A description of equipment and facilities to be used for this study shall be described.

A specific plan for transferring the developed technology to potential users shall be included in the proposal. The plan should recognize the needs for timeliness.

II. QUALIFICATION CRITERIA

To qualify for consideration under this SCAP the proposer must meet certain qualification criteria. Prior to the detailed evaluation each proposal will undergo a preliminary review to assure that the following qualification criteria are satisfied:

- A. The proposal must propose to share the cost of the project.
- B. The requested funding from DOE cannot exceed the specified amount of \$100,000.
- C. The proposer must not be a Federal agency and/or laboratory owned, operated or under the cognizance of the Federal Government.
- D. The proposal must be valid for 90 days after the closing date of the SCAP.
- E. The proposal must address the technical scope of work as outlined in the SCAP.

III. INSTRUCTIONS FOR PREPARATION OF PROPOSALS

Each proposal should be specific and concise; five (5) copies of each proposal should be provided. In order to facilitate orderly and expeditious review of proposals, proposers are to follow the format given below.

A. FORMAT

1. Cover Page - Appendix B in this SCAP provides a general format and the specific information which should appear on the cover page.

Identify the original proposal copy (i.e., original signature) as "Original Copy No. 1," and consecutively number remaining copies; i.e., 2 through 5.

Specify the title and SCAP number on the cover page of the proposal.

The signature of an authorized representative of the proposing organization should appear on the cover page of the proposal or in an authorizing transmittal letter.

2. Abstract - A concise abstract of less than 250 words summarizing the proposed study is to be included at the beginning of the proposal.
3. Table of Contents - The proposal is to include a table of contents, with page numbers, to facilitate locating the elements outlined in these guidelines.
4. Statement of Work - The proposer shall submit a Statement of Work, not to exceed two pages, which defines the proposed technology development.
5. Technical Requirements

The following information is to be provided as part of the technical portion of the proposal.

a. Technical Description

- 1) Approach and Innovation - Provide a narrative detailed plan of the approach to be followed in the proposed effort. Information in this section should amplify and detail the program

outline given in the Statement of Work and should include:

- a) procedures,
 - b) concepts and assumptions,
 - c) limitations,
 - d) timetables of key milestones,
 - e) summary of relevant research, with a bibliography of related work which forms the basis for the proposed research,
 - f) expected accomplishments or research results,
 - g) any additional information that will aid in the evaluation of the soundness and innovativeness of the proposal.
- 2) Feasibility - Provide information concerning the technical feasibility of the research proposal as it pertains to the geothermal resource. Include the overall economics of using the proposed technology as compared with economics of using the current technology.
 - 3) Cost-Effectiveness - Describe the ways in which the technical approach outlined in the proposal is anticipated to improve cost-effectiveness in the detailed exploration of geothermal resources.

b. Qualifications and Capabilities

- 1) Personnel Capabilities - List all key personnel who will be involved in the proposed effort and describe their functions, responsibilities, and manhours to be devoted to this project. The biographies of key personnel should include a list of publications as an indication of related experience.
- 2) Company Capabilities
 - a) Describe any experiences or capabilities of the organization that relate to the proposed project.

- b) Provide information that would demonstrate past experience and ability to plan and manage similar tasks.
- c) Describe company facilities that would be used for this work.

c. Project Management Plan

- 1) Management Approach - Provide an organization chart of the proposer's organization and identify the level at which the work is to be performed and the interrelationships of the organization segments involved in this project. If it is to be a team effort, identify each of the participating organizations and/or individuals and level of involvement, and illustrate how the various team members will relate to each other.

- 2) Schedule - Provide a milestone chart for the entire project. The major events which are judged to be critical should be discussed.

The work schedule should show an integration of the work, time, and resources necessary to complete the project on time. This work schedule is necessary for meaningful progress reporting and may be included in contract documents. A variety of formats may be used, but the duration and sequence of activities and time of principal events are to be included.

- 3) Technology Transfer Plan - A specific plan for transferring the developed technology to potential users such as industry, government agencies, and academic institutions should be included in the proposal. The plan should recognize the need to timeliness.

6. Business/Cost Requirements

a. Organization Information

- 1) Provide financial data of the organization and available financial resources. Annual financial statements (balance sheet and income and expense statement) for the past year should be attached for proposers, subcontractors, and consulting firms.

- 2) Provide a brief description of the proposing entity (entities), including size, type of business, history, and discussion of ownership and/or controlling interest.
- b. Cost Sharing - Provide a detailed description and estimated monetary value of all contributions to the project by each participant; i.e., cost-sharing by organization team members and DOE. Note that "cost sharing" is not limited to monetary investment. For the purpose of this SCAP, "cost sharing" is defined as any beneficial service, such as manpower, equipment, technology, patents, consultants, and computer time.
- c. Project Pricing Proposal - Cost data of the business proposal must be submitted on GSA Optional Form 60 (Appendix C) with the support data noted in the footnotes and instructions thereto. The "Detailed Description of Cost Elements," Items 1 through 13 on the GSA Optional Form 60, should be delineated in sufficient detail to permit evaluation of the unit costs of each element; for example, number of hours and base labor rate for each classification of labor, method of computation and application bases of different overhead pools. The proposer may append as many supporting schedules for each element of cost as required to detail fully the total cost of the project (not just the DOE share).

If the proposal is to be a team arrangement, a principal participant should be designated with other members shown as "Consultants" (cost element number 8 on the Form 60). Each such consultant should submit a supplementary Form 60 prepared in the same manner as the principal participant. Line 15 of each supplementary Form 60 should be carried forward to Item 8 on the principal participant's Form 60 and shown as a line item.

Note that no fee shall be paid the Participant under a Cooperative Agreement resulting from this SCAP.

- d. Project Budget by Task - Provide a summary by major functional tasks detailed in the project milestone chart. Assign cost and time to each task to permit evaluation. The total cost of all tasks should be the Total Project Cost (not just the DOE share).
- e. Other Contracts - Provide a listing of current or recent (within the last two years) Government contracts or other contracts by the proposer(s) in this or related fields. Include the name of the sponsoring agency or

firm, contract number, amount of contract, subject area of contract, name and telephone number of the Government or other contracting officer.

- f. Other Required Forms - The form "Representations and Certifications" composing Appendix E of this SCAP should be completed and signed by the proposer and submitted as part of the business section of the proposal. Also complete the Financial Assistance Standard Form 424 which is Appendix D.
 - g. Agreement Terms and Conditions - The proposer must agree in principle to accept all standard provisions appropriate to the particular type of award made. Any exceptions to the standard provisions should be identified and the rationale for the exceptions provided. A copy of a sample Cooperative Agreement containing required provisions has been included in this SCAP (See Appendix G).
7. Appendices - Include all appendable material pertinent to the proposal.

IV. PROPOSAL EVALUATION AND SELECTION

A. PRELIMINARY EVALUATION

In order to be considered for a comprehensive evaluation of the proposal, each proposal must meet the qualification criteria in Section II.

If the proposal does not meet these requirements, a comprehensive evaluation will not be made. The proposer will be informed why the proposal cannot be considered further under this SCAP.

B. COMPREHENSIVE EVALUATION

Proposals will be evaluated against the Technical, Project Management Plan, Qualifications and Capabilities, and Business Criteria as outlined in Section III, Instructions for Preparation of Proposals.

Evaluation criteria will be weighted in the following manner. The Technical Criteria are weighted three times as much as the Business/Cost criteria. Within the Technical criteria category, Criterion a. is one and one half times as much as Criterion c., and slightly more than Criterion b. Within the Business/Cost criteria category, Criterion a. is almost twice as much as c., and slightly more than b. Criteria c., d., and e. are equal.

1. Technical Criteria

a. Technical Approach

- 1) Objectives - Extent to which proposed project would address objectives stated in the technical scope of work as outlined in the Technical Description.
- 2) Technical Approach and Innovation.
- 3) Technical Feasibility.
- 4) Cost-Effectiveness - Potential contribution to improving cost-effectiveness of geothermal exploration.

b. Qualifications and Capabilities

1) Personnel:

- a) extent of relevant experience/training or proposed key technical/management personnel;
- b) demonstration of knowledge of pertinent technical and relevant research related to the proposed program.

2) Company Capabilities

c. Project Management Plan

- 1) Management Approach.
- 2) Schedule - as defined by a feasible work schedule and realistic milestones.
- 3) Adequacy of plan for timely transfer of technology to industry.

2. Business/Cost Criteria

a. Organization Information - The organization information will be evaluated to determine the:

- 1) financial responsibility (status or condition) of the proposer(s);
- 2) adequacy of their resources or the ability to obtain such resources to finance the non-DOE share of the entire project;
- 3) ability to account adequately for the project cost and schedule,
- 4) adequacy of the proposing entity to accomplish the project considering its size, type of business, and history.

b. Cost Sharing - The degree of cost sharing proposed will be considered in the evaluation.

c. Project Pricing Proposal - The proposal will be evaluated for reasonableness of cost elements in the Optional Form 60.

- d. Project Budget by Task - The proposal will be evaluated for reasonableness of costs for each task.
- e. Other Contracts - The information included on other contracts will be evaluated to identify:
 - 1) a satisfactory record of performance;
 - 2) that existing business commitments will not prevent, delay, or otherwise adversely affect completion of the work proposed in this SCAP;
 - 3) a satisfactory record of integrity and business ethics.

V. OTHER PERTINENT INFORMATION

A. PROPOSAL SUBMISSION

Five (5) copies of the proposal shall be received at the following address on or before 4:00 p.m. local prevailing time on August 7, 1980.

Handcarried

Department of Energy
Idaho Operations office
Room HQ 117
550 Second Street
Idaho Falls, ID 83401

Mailed

Department of Energy
Idaho Operations Office
Room HQ 117
550 Second Street
Idaho Falls, ID 83401

Attn: Kent R. Hastings

B. PROPOSALS RECEIVED AFTER CLOSING DATE

Proposals received after the closing date will be processed in accordance with Federal Procurement Regulations Section 1-3.802-1, see Appendix F.

C. PERIOD OF VALIDITY OF PROPOSALS

Proposals must be valid for not less than 90 days from the closing date.

D. PROPOSAL PREPARATION COSTS

This SCAP does not obligate the Government to pay any costs incurred in the preparation and submission of proposals, nor to enter into a cooperative agreement or other arrangements with the proposers.

E. PATENTS AND PROPRIETARY INFORMATION

1. Treatment of Proposal Information

Proposals submitted in response to this SCAP may include technical data and other data, including trade secrets and/or privileged or confidential commercial or financial information, which the proposer does not want disclosed to the public or used by the Government for any purpose other than proposal evaluation. To protect such data the proposer must specifically identify each page including each line or paragraph thereof containing the data to be protected and mark the cover sheet of the proposal with the following notice:

NOTICE

The data contained in pages _____ of this proposal have been submitted in confidence and contain trade secrets and/or privileged or confidential commercial or financial information, and such data shall be used or disclosed only for evaluation purposes, provided that if an agreement is made as a result of or in connection with the submission of this proposal, the Government shall have the right to use or disclose the data herein to the extent provided in the agreement. This restriction does not limit the Government's right to use or disclose data which it obtains without restriction from any source, including the proposer.

References to the above notice on the cover sheet should be placed on each page to which the notice applies. Data, or abstracts of data, marked with this notice will be retained in confidence and used by DOE or its designated representative(s), including Government contractors and consultants solely for the purpose of evaluating the proposal. The data so marked will not otherwise be disclosed or used without the proposer's prior written permission except to the extent provided in any resulting cooperative agreement, or to the extent required by law. The restriction contained in the notice does not limit the Government's right to use or disclose any data contained in the proposal if it is obtainable from any source, including the proposer, without restriction. Although it is DOE's policy to treat all proposals as confidential, the Government assumes no liability for disclosure or use of unmarked data for any purpose.

2. Evaluation of Proposals

DOE may use personnel from other Federal agencies or DOE Contractors in the evaluation of the proposals. Assurances will be obtained from all evaluators that DOE's commitments are met relating to the proprietary nature of any proposal information.

3. Inventions

Any agreement resulting from proposals submitted under this SCAP will provide for the assignment to the Government of the entire right, title, and interest throughout the world in and to any inventions or discoveries conceived or first actually reduced to practice in the course of or under the agreement, except that the contractor shall retain a revocable, non-exclusive, paid-up license in any such invention.

The proposer, however, has the right in accordance with applicable statutes and DOE regulations to request in advance or within 30 days after the effective date of the agreement, a waiver of all or any part of the rights of the United States in such inventions. To request such a waiver, the proposer should request a waiver application form from DOE after notification of award and prior to execution of an agreement. The decision as to whether such a waiver will be granted is a DOE administrative action, and should not be considered as a contractual action which must be accomplished prior to execution of an agreement.

4. Rights in Technical Data

The "Rights in Technical Data" clause which is contained in the Sample Cooperative Agreement which accompanies this SCAP as Appendix G, defines the respective rights of the parties in data in any agreement which might arise out of this SCAP. As stated in this clause, Proprietary Data is not to be included as part of the work under any agreement arising out of this SCAP nor in any report arising out of this SCAP. If the proposer believes that it is necessary to submit proprietary information as part of its work under any such agreement, he should specifically note the type of information in his proposal so that the contracting officer can determine whether such proprietary information should be submitted as part of the work under the agreement. In the absence of a specific request for proprietary information by the contracting officer, no such information or data shall be provided under the agreement.

F. PUBLIC INFORMATION

The executed agreements and all information provided by DOE by reason of the agreements will be public information.

G. OTHER

DOE reserves the right not to support any or all proposals, in whole or in part, and may require proposals to be clarified or supplemented to the extent considered necessary either through additional written submissions or oral presentations.

H. REPORTING AND PROGRAM REVIEW

The proposal should provide for at least one review of progress on the programmatic, administrative, and financial status of the research within the duration of the agreement. A brief

narrative monthly report will also be required. A final product will be due within 60 days of completion of the agreement. See Appendix H, Form 537.

I. PROPOSAL CHECK LIST

A proposal check list is provided as Appendix I for your convenience.

J. ELABORATE PROPOSALS

Elaborate proposals or other presentations are neither solicited nor desired.

APPENDIX A

REFERENCES

Nielson, D. L. (ed), 1979, Program Review Geothermal Exploration and Assessment Technology Program Including Report on the Reservoir Engineering Technical Advisory Group: University of Utah Research Institute Earth Sciences Lab Report No. 29, 128 p.

APPENDIX B

FORMAT FOR DOE SCAP PROPOSAL COVER PAGE

Proposal Copy # / of 5

Submitted to the Department of Energy
Idaho Operations Office

Solicitation for Cooperative Agreement proposals
SCAP No. DE-SC07-80ID12144

MICROEARTHQUAKE SURVEY AND ANALYSIS

Name of Organization (including Branch, Title, if any)

Address of Organization

Zip Code

Title of Proposed Project

Funding Requested from DOE \$ _____ Total Project Cost \$ _____

Proposed Duration (in weeks) _____ Proposed Starting Date _____

Name of Principal Investigator _____

Position and Title _____

Telephone (with area code) _____

Approval _____

Signature

Title

Name (Typed)

Date

APPENDIX C

CONTRACT PRICING PROPOSAL <i>(RESEARCH AND DEVELOPMENT)</i>				Office of Management and Budget Approval No. 29-RO184	
This form is for use when (i) submission of cost or pricing data (see FPR 1-3.807-3) is required and (ii) substitution for the Optional Form 59 is authorized by the contracting officer.				PAGE NO.	NO. OF PAGES
				NAME OF OFFEROR	
HOME OFFICE ADDRESS					
DIVISION(S) AND LOCATION(S) WHERE WORK IS TO BE PERFORMED		TOTAL AMOUNT OF PROPOSAL		GOV'T SOLICITATION NO.	
DETAIL DESCRIPTION OF COST ELEMENTS					
1. DIRECT MATERIAL <i>(Itemize on Exhibit A)</i>			EST COST (\$)	TOTAL EST COST ¹	REFER-ENCE ²
a. PURCHASED PARTS					
b. SUBCONTRACTED ITEMS					
c. OTHER—(1) RAW MATERIAL					
(2) YOUR STANDARD COMMERCIAL ITEMS					
(3) INTERDIVISIONAL TRANSFERS <i>(At other than cost)</i>					
TOTAL DIRECT MATERIAL					
2. MATERIAL OVERHEAD ¹ <i>(Rate % X \$ base =)</i>					
3. DIRECT LABOR <i>(Specify)</i>		ESTIMATED HOURS	RATE/HOUR	EST COST (\$)	
TOTAL DIRECT LABOR					
4. LABOR OVERHEAD <i>(Specify Department or Cost Center)¹</i>		O.H. RATE	X BASE =	EST COST (\$)	
TOTAL LABOR OVERHEAD					
5. SPECIAL TESTING <i>(Including field work at Government installations)</i>				EST COST (\$)	
TOTAL SPECIAL TESTING					
6. SPECIAL EQUIPMENT <i>(If direct charge) (Itemize on Exhibit A)</i>					
7. TRAVEL <i>(If direct charge) (Give details on attached Schedule)</i>				EST COST (\$)	
a. TRANSPORTATION					
b. PER DIEM OR SUBSISTENCE					
TOTAL TRAVEL					
8. CONSULTANTS <i>(Identify—purpose—rate)</i>				EST COST (\$)	
TOTAL CONSULTANTS					
9. OTHER DIRECT COSTS <i>(Itemize on Exhibit A)</i>					
TOTAL DIRECT COST AND OVERHEAD					
11. GENERAL AND ADMINISTRATIVE EXPENSE <i>(Rate % of cost element Nos.)¹</i>					
12. ROYALTIES ¹					
13.					
TOTAL ESTIMATED COST					
14. FEE OR PROFIT					
TOTAL ESTIMATED COST AND FEE OR PROFIT					
15.					

INSTRUCTIONS TO OFFERORS

1. The purpose of this form is to provide a standard format by which the offeror submits to the Government a summary of incurred and estimated costs (and attached supporting information) suitable for detailed review and analysis. Prior to the award of a contract resulting from this proposal the offeror shall, under the conditions stated in FPR 1-5.807-3 be required to submit a Certificate of Current Cost or Pricing Data (See FPR 1-5.807-3(h) and 1-5.807-4).

2. In addition to the specific information required by this form, the offeror is expected, in good faith, to incorporate in and submit with this form any additional data, supporting schedules, or substantiation which are reasonably required for the conduct of an appropriate review and analysis in the light of the specific facts of this procurement. For effective negotiations, it is essential that there be a clear understanding of:

- a. The existing, verifiable data.
- b. The judgmental factors applied in projecting from known data to the estimate, and
- c. The contingencies used by the offeror in his proposed price.

In short, the offeror's estimating process itself needs to be disclosed.

3. When attachment of supporting cost or pricing data to this form is impracticable, the data will be described (with schedules as appropriate), and made available to the contracting officer or his representative upon request.

4. The formats for the "Cost Elements" and the "Proposed Contract Estimate" are not intended as rigid requirements. These may be presented in different format with the prior approval of the Contracting Officer if required for more effective and efficient presentation. In all other respects this form will be completed and submitted without change.

5. By submission of this proposal the offeror grants to the Contracting Officer, or his authorized representative, the right to examine, for the purpose of verifying the cost or pricing data submitted, those books, records, documents and other supporting data which will permit adequate evaluation of such cost or pricing data, along with the computations and projections used therein. This right may be exercised in connection with any negotiations prior to contract award.

FOOTNOTES

1. Enter in this column those necessary and reasonable costs which in the judgment of the offeror will properly be incurred in the efficient performance of the contract. When any of the costs in this column have already been incurred (e.g., on a letter contract or change order), describe them on an attached supporting schedule. Identify all sales and transfers between your plants, divisions, or organizations under a common control, which are included at other than the lower of cost to the original transferor or current market price.

2. When space in addition to that available in Exhibit A is required, attach separate pages as necessary and identify in this "Reference" column the attachment in which the information supporting the specific cost element may be found. No standard format is prescribed; however, the cost or pricing data must be accurate, complete and current, and the judgment factors used in projecting from the data to the estimates must be stated in sufficient detail to enable the Contracting Officer to evaluate the proposal. For example, provide the basis used for pricing materials such as by vendor quotations, shop estimates, or invoice prices; the reason for use of overhead rates which depart significantly from experienced rates (reduced volume, a planned major re-arrangement, etc.); or justification for an increase in labor rates (anticipated wage and salary increases, etc.). Identify and explain any contingencies which are included in the proposed price, such as anticipated costs of rejects and defective work, or anticipated technical difficulties.

3. Indicate the rates used and provide an appropriate explanation. Where agreement has been reached with Government representatives on the use of forward pricing rates, describe the nature of the agreement. Provide the method of computation and application of your overhead expense, including cost breakdown and showing trends and budgetary data as necessary to provide a basis for evaluation of the reasonableness of proposed rates.

4. If the total cost entered here is in excess of \$250, provide on a separate page the following information on each separate item of royalty or license fee: name and address of licensor; date of license agreement; patent numbers, patent application serial numbers, or other basis on which the royalty is payable; brief description, including any part or model numbers of each contract item or component on which the royalty is payable; percentage or dollar rate of royalty per unit; unit price of contract item; number of units; and total dollar amount of royalties. In addition, if specifically requested by the contracting officer, a copy of the current license agreement and identification of applicable claims of specific patents shall be provided.

5. Provide a list of principal items within each category indicating known or anticipated source, quantity, unit price, competition obtained, and basis of establishing source and reasonableness of cost.

CONTINUATION OF EXHIBIT A—SUPPORTING SCHEDULE AND REPLIES TO QUESTIONS II AND V

APPENDIX D

OMB Approval No. 29-RO218

FEDERAL ASSISTANCE		2. APPLI- CANT'S APPLI- CATION	a. NUMBER	3. STATE APPLICA- TION IDENTI- FIER	a. NUMBER																				
1. TYPE OF ACTION <input type="checkbox"/> PREAPPLICATION <input type="checkbox"/> APPLICATION (Mark appropriate box) <input type="checkbox"/> NOTIFICATION OF INTENT (Opt.) <input type="checkbox"/> REPORT OF FEDERAL ACTION			b. DATE Year month day 19		b. DATE Year month day ASSIGNED 19																				
		4. LEGAL APPLICANT/RECIPIENT a. Applicant Name : b. Organization Unit : c. Street/P.O. Box : d. City : e. County : f. State : g. ZIP Code: h. Contact Person (Name & telephone No.) :			5. FEDERAL EMPLOYER IDENTIFICATION NO.																				
7. TITLE AND DESCRIPTION OF APPLICANT'S PROJECT					6. PRO. GRAM (From Federal Catalog) a. NUMBER : b. TITLE :																				
			10. AREA OF PROJECT IMPACT (Names of cities, counties, States, etc.)			8. TYPE OF APPLICANT/RECIPIENT A-State H-Community Action Agency B-Interstate I-Higher Educational Institution C-Substate J-Indian Tribes D-District K-Other (Specify): E-City F-School District G-Special Purpose District Enter appropriate letter <input type="checkbox"/>																			
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">13. PROPOSED FUNDING</td> <td colspan="2">14. CONGRESSIONAL DISTRICTS OF:</td> </tr> <tr> <td>a. FEDERAL \$.00</td> <td>a. APPLICANT</td> <td>b. PROJECT</td> </tr> <tr> <td>b. APPLICANT .00</td> <td></td> <td></td> </tr> <tr> <td>c. STATE .00</td> <td>16. PROJECT START DATE Year month day</td> <td>17. PROJECT DURATION Months</td> </tr> <tr> <td>d. LOCAL .00</td> <td>19</td> <td></td> </tr> <tr> <td>e. OTHER .00</td> <td>18. ESTIMATED DATE TO BE SUBMITTED TO FEDERAL AGENCY ▶</td> <td>Year month day</td> </tr> <tr> <td>f. TOTAL \$.00</td> <td>19</td> <td></td> </tr> </table>						13. PROPOSED FUNDING	14. CONGRESSIONAL DISTRICTS OF:		a. FEDERAL \$.00	a. APPLICANT	b. PROJECT	b. APPLICANT .00			c. STATE .00	16. PROJECT START DATE Year month day	17. PROJECT DURATION Months	d. LOCAL .00	19		e. OTHER .00	18. ESTIMATED DATE TO BE SUBMITTED TO FEDERAL AGENCY ▶	Year month day	f. TOTAL \$.00	19
			13. PROPOSED FUNDING	14. CONGRESSIONAL DISTRICTS OF:																					
a. FEDERAL \$.00	a. APPLICANT	b. PROJECT																							
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c. STATE .00	16. PROJECT START DATE Year month day	17. PROJECT DURATION Months																							
d. LOCAL .00	19																								
e. OTHER .00	18. ESTIMATED DATE TO BE SUBMITTED TO FEDERAL AGENCY ▶	Year month day																							
f. TOTAL \$.00	19																								
20. FEDERAL AGENCY TO RECEIVE REQUEST (Name, City, State, ZIP code)			12. TYPE OF APPLICATION A-New C-Revision E-Augmentation B-Renewal D-Continuation Enter appropriate letter <input type="checkbox"/>																						
			15. TYPE OF CHANGE (For 12a or 12e) A-Increase Dollars F-Other (Specify): B-Decrease Dollars C-Increase Duration D-Decrease Duration E-Cancellation Enter appropriate letter(s) <input type="checkbox"/>																						
22. THE APPLICANT CERTIFIES THAT a. To the best of my knowledge and belief, data in this preapplication/application are true and correct, the document has been duly authorized by the governing body of the applicant and the applicant will comply with the attached assurances if the assistance is approved. b. If required by OMB Circular A-95 this application was submitted, pursuant to instructions therein, to appropriate clearinghouses and all responses are attached: (1) <input type="checkbox"/> (2) <input type="checkbox"/> (3) <input type="checkbox"/>			21. REMARKS ADDED <input type="checkbox"/> Yes <input type="checkbox"/> No																						
			23. CERTIFYING REPRESENTATIVE a. TYPED NAME AND TITLE b. SIGNATURE c. DATE SIGNED Year month day 19																						
24. AGENCY NAME			25. APPLICATION RECEIVED Year month day 19																						
26. ORGANIZATIONAL UNIT			27. ADMINISTRATIVE OFFICE																						
29. ADDRESS			28. FEDERAL APPLICATION IDENTIFICATION																						
31. ACTION TAKEN <input type="checkbox"/> a. AWARDED <input type="checkbox"/> b. REJECTED <input type="checkbox"/> c. RETURNED FOR AMENDMENT <input type="checkbox"/> d. DEFERRED <input type="checkbox"/> e. WITHDRAWN			32. FUNDING a. FEDERAL \$.00 b. APPLICANT .00 c. STATE .00 d. LOCAL .00 e. OTHER .00 f. TOTAL \$.00																						
33. ACTION DATE ▶ 19 Year month day			34. STARTING DATE 19 Year month day																						
35. CONTACT FOR ADDITIONAL INFORMATION (Name and telephone number)			35. ENDING DATE 19 Year month day																						
38. FEDERAL AGENCY A-95 ACTION a. In taking above action, any comments received from clearinghouses were considered. If agency response is due under provisions of Part 1, OMB Circular A-95, it has been or is being made.			37. REMARKS ADDED <input type="checkbox"/> Yes <input type="checkbox"/> No																						
38. FEDERAL AGENCY A-95 ACTION b. FEDERAL AGENCY A-95 OFFICIAL (Name and telephone no.)																									

SECTION I - APPLICANT/RECIPIENT DATA

SECTION II - CERTIFICATION

SECTION III - FEDERAL AGENCY ACTION

GENERAL INSTRUCTIONS

This is a multi-purpose standard form. First, it will be used by applicants as a required facesheet for pre-applications and applications submitted in accordance with Federal Management Circular 74-7. Second, it will be used by Federal agencies to report to Clearinghouses on major actions taken on applications reviewed by clearinghouses in accordance with OMB Circular A-95. Third, it will be used by Federal agencies to notify States of grants-in-aid awarded in accordance with Treasury Circular 1082. Fourth, it may be used, on an optional basis, as a notification of intent from applicants to clearinghouses, as an early initial notice that Federal assistance is to be applied for (clearinghouse procedures will govern).

APPLICANT PROCEDURES FOR SECTION I

Applicant will complete all items in Section I. If an item is not applicable, write "NA". If additional space is needed, insert an asterisk "*", and use the remarks section on the back of the form. An explanation follows for each item:

- | Item | Item | | |
|--------|---|---|---|
| 1. | Mark appropriate box. Pre-application and application guidance is in FMC 74-7 and Federal agency program instructions. Notification of intent guidance is in Circular A-95 and procedures from clearinghouse. Applicant will not use "Report of Federal Action" box. | D. Insurance. Self explanatory.
E. Other. Explain on remarks page. | |
| 2a. | Applicant's own control number, if desired. | 10. | Governmental unit where significant and meaningful impact could be observed. List only largest unit or units affected, such as State, county, or city. If entire unit affected, list it rather than subunits. |
| 2b. | Date Section I is prepared. | 11. | Estimated number of persons directly benefiting from project. |
| 3a. | Number assigned by State clearinghouse, or if delegated by State, by areawide clearinghouse. All requests to Federal agencies must contain this identifier if the program is covered by Circular A-95 and required by applicable State/areawide clearinghouse procedures. If in doubt, consult your clearinghouse. | 12. | Use appropriate code letter. Definitions are:
A. New. A submittal for the first time for a new project.
B. Renewal. An extension for an additional funding/budget period for a project having no projected completion date, but for which Federal support must be renewed each year.
C. Revision. A modification to project nature or scope which may result in funding change (increase or decrease).
D. Continuation. An extension for an additional funding/budget period for a project the agency initially agreed to fund for a definite number of years.
E. Augmentation. A requirement for additional funds for a project previously awarded funds in the same funding/budget period. Project nature and scope unchanged. |
| 3b. | Date applicant notified of clearinghouse identifier. | 13. | Amount requested or to be contributed during the first funding/budget period by each contributor. Value of in-kind contributions will be included. If the action is a change in dollar amount of an existing grant (a revision or augmentation), indicate only the amount of the change. For decreases enclose the amount in parentheses. If both basic and supplemental amounts are included, breakout in remarks. For multiple program funding, use totals and show program breakouts in remarks. Item definitions: 13a, amount requested from Federal Government; 13b, amount applicant will contribute; 13c, amount from State, if applicant is not a State; 13d, amount from local government, if applicant is not a local government; 13e, amount from any other sources, explain in remarks. |
| 4a-4h. | Legal name of applicant/recipient, name of primary organizational unit which will undertake the assistance activity, complete address of applicant, and name and telephone number of person who can provide further information about this request. | 14a. | Self explanatory. |
| 5. | Employer identification number of applicant as assigned by Internal Revenue Service. | 14b. | The district(s) where most of actual work will be accomplished. If city-wide or State-wide, covering several districts, write "city-wide" or "State-wide." |
| 6a. | Use Catalog of Federal Domestic Assistance number assigned to program under which assistance is requested. If more than one program (e.g., joint-funding) write "multiple" and explain in remarks. If unknown, cite Public Law or U.S. Code. | 15. | Complete only for revisions (item 12c), or augmentations (item 12e). |
| 6b. | Program title from Federal Catalog. Abbreviate if necessary. | | |
| 7. | Brief title and appropriate description of project. For notification of intent, continue in remarks section if necessary to convey proper description. | | |
| 8. | Mostly self-explanatory. "City" includes town, township or other municipality. | | |
| 9. | Check the type(s) of assistance requested. The definitions of the terms are:
A. Basic Grant. An original request for Federal funds. This would not include any contribution provided under a supplemental grant.
B. Supplemental Grant. A request to increase a basic grant in certain cases where the eligible applicant cannot supply the required matching share of the basic Federal program (e.g., grants awarded by the Appalachian Regional Commission to provide the applicant a matching share).
C. Loan. Self explanatory. | | |

- | | |
|---|--|
| <p>Item</p> <p>16. Approximate date project expected to begin (usually associated with estimated date of availability of funding).</p> <p>17. Estimated number of months to complete project after Federal funds are available.</p> <p>18. Estimated date preapplication/application will be submitted to Federal agency if this project requires clearinghouse review. If review not required, this date would usually be same as date in item 2b.</p> | <p>Item</p> <p>19. Existing Federal identification number if this is not a new request and directly relates to a previous Federal action. Otherwise write "NA".</p> <p>20. Indicate Federal agency to which this request is addressed. Street address not required, but do use ZIP.</p> <p>21. Check appropriate box as to whether Section IV of form contains remarks and/or additional remarks are attached.</p> |
|---|--|

APPLICANT PROCEDURES FOR SECTION II

Applicants will always complete items 23a, 23b, and 23c. If clearinghouse review is required, item 22b must be fully completed. An explanation follows for each item:

- | | |
|---|--|
| <p>Item</p> <p>22b. List clearinghouses to which submitted and show in appropriate blocks the status of their responses. For more than three clearinghouses, continue in remarks section. All written comments submitted by or through clearinghouses must be attached.</p> <p>23a. Name and title of authorized representative of legal applicant.</p> | <p>Item</p> <p>23b. Self explanatory.</p> <p>23c. Self explanatory.</p> <p>Note: Applicant completes only Sections I and II. Section III is completed by Federal agencies.</p> |
|---|--|

FEDERAL AGENCY PROCEDURES FOR SECTION III

If applicant-supplied information in Sections I and II needs no updating or adjustment to fit the final Federal action, the Federal agency will complete Section III only. An explanation for each item follows:

- | | |
|---|---|
| <p>Item</p> <p>24. Executive department or independent agency having program administration responsibility.</p> <p>25. Self explanatory.</p> <p>26. Primary organizational unit below department level having direct program management responsibility.</p> <p>27. Office directly monitoring the program.</p> <p>28. Use to identify non-award actions where Federal grant identifier in item 30 is not applicable or will not suffice.</p> <p>29. Complete address of administering office shown in item 26.</p> <p>30. Use to identify award actions where different from Federal application identifier in item 28.</p> <p>31. Self explanatory. Use remarks section to amplify where appropriate.</p> <p>32. Amount to be contributed during the first funding/budget period by each contributor. Value of in-kind contributions will be included. If the action is a change in dollar amount of an existing grant (a revision or augmentation), indicate only the amount of change. For decreases, enclose the amount in parentheses. If both basic and supplemental amounts are included, breakout in remarks. For multiple program funding, use totals and show program breakouts in remarks. Item definitions: 32a, amount awarded by Federal Government; 32b, amount applicant will contribute; 32c, amount from State, if applicant is not a State; 32d, amount from local government if applicant is not a local government; 32e, amount from any other sources, explain in remarks.</p> <p>33. Date action was taken on this request.</p> <p>34. Date funds will become available.</p> | <p>Item</p> <p>35. Name and telephone no. of agency person who can provide more information regarding this assistance.</p> <p>36. Date after which funds will no longer be available.</p> <p>37. Check appropriate box as to whether Section IV of form contains Federal remarks and/or attachment of additional remarks.</p> <p>38. For use with A-95 action notices only. Name and telephone of person who can assure that appropriate A-95 action has been taken—if same as person shown in item 35, write "same". If not applicable, write "NA".</p> <p><i>Federal Agency Procedures—special considerations</i></p> <p>A. <i>Treasury Circular 1082 compliance.</i> Federal agency will assure proper completion of Sections I and III. If Section I is being completed by Federal agency, all applicable items must be filled in. Addresses of State Information Reception Agencies (SCIRA's) are provided by Treasury Department to each agency. This form replaces SF 240, which will no longer be used.</p> <p>B. <i>OMB Circular A-95 compliance.</i> Federal agency will assure proper completion of Sections I, II, and III. This form is required for notifying all reviewing clearinghouses of major actions on all programs reviewed under A-95. Addresses of State and areawide clearinghouses are provided by OMB to each agency. Substantive differences between applicant's request and/or clearinghouse recommendations, and the project as finally awarded will be explained in A-95 notifications to clearinghouses.</p> <p>C. <i>Special note.</i> In most, but not all States, the A-95 State clearinghouse and the (TC 1082) SCIRA are the same office. In such cases, the A-95 award notice to the State clearinghouse will fulfill the TC 1082 award notice requirement to the State SCIRA. Duplicate notification should be avoided.</p> |
|---|---|

APPENDIX E

REPRESENTATIONS AND CERTIFICATIONS

[Instructions: Check or complete all appropriate boxes or blanks.]

The proposer makes the following representations and certifications:

1. SMALL AND SMALL DISADVANTAGED BUSINESS CERTIFICATION

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

2. CONTINGENT FEE

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

3. TYPE OF ORGANIZATION

It operates as an () individual, () partnership, () joint venture, () corporation, incorporated in State of _____.

4. EQUAL OPPORTUNITY

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

5. AFFIRMATIVE ACTION COMPLIANCE PROGRAM

The offeror represents that (a) it () has developed and has on file, () has not developed and does not have on file, at each establishment an affirmative action program as required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or (b) () has not previously had contracts subject to written affirmative action program requirements of the rules and regulations of the Secretary of Labor because (check as applicable):

_____ offeror does not have 50 or more employees

_____ offeror has not had a Government prime contract or subcontract of \$50,000 or more.

6. CERTIFICATION OF NONSEGREGATED FACILITIES

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

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATION OF NONSEGREGATED FACILITIES

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

7. PARENT COMPANY AND EMPLOYER IDENTIFICATION NUMBER

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

- a. Is the proposer owned or controlled by a parent company as described below? () Yes () No. (For the purpose of this proposal, a parent company is defined as one which either owns or controls the activities and basic business policies of the proposer. To own another company means the parent company must own at least a majority (more than 50 percent) of the voting rights in that company. To control another company, such ownership is not required; if another company

is able to formulate, determine or veto basic business policy decisions of the proposer, such other company is considered the parent company of the proposer. This control may be exercised through the use of dominant minority voting rights, use of proxy voting, contractual arrangements, or otherwise.)

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

Name of Parent Company: _____

Main Office Address (No., Street, City, State and Zip Code)

- c. Proposer shall insert in the applicable space below, if it has no parent company, its own Employer's Identification Number (E.I. No.) (Federal Social Security Number used on Employer's Quarterly Federal Tax Return, U. S. Treasury Department Form 941), or if it has a parent company, the E.I. No. of its parent company.

Employer Identification Number of Parent Company: _____

8. CLEAN AIR AND WATER CERTIFICATION

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

The bidder or offeror certifies as follows:

- (a) Any facility to be utilized in the performance of this proposed contract has (), has not (), been listed on the Environmental Protection Agency List of Violating Facilities.
- (b) It will promptly notify the Contracting Officer, prior to award, of the receipt of any communication from the Director, Office of

Federal Activities, Environmental Protection Agency, indicating that any facility which it proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities.

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

9. WOMAN-OWNED BUSINESS

Concern is is not a woman-owned business.

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

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

10. PERCENT OF FOREIGN CONTENT

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

Signed by _____

(Title)

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

APPENDIX F

FEDERAL PROCUREMENT REGULATIONS
Section 1-3.802-1

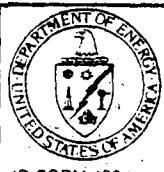
LATE PROPOSALS, MODIFICATIONS OF PROPOSALS, AND WITHDRAWALS OF PROPOSALS

- A. Any proposal received at the office designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made, and:
- (1) It was sent by registered or certified mail not later than the fifth calendar day prior to the date specified for receipt of offers (e.g., an offer submitted in response to a solicitation requiring receipt of offers by the 20th day of the month must have been mailed by the 15th or earlier);
 - (2) It was sent by mail (or telegram if authorized) and it is determined by the Government that the late receipt was due solely to mishandling by the Government after receipt at the Government installation; or
 - (3) It is the only proposal received.
- B. Any modification of a proposal, except a modification resulting from the Contracting Officer's request for "best and final" offer, is subject to the same conditions as in (a)(1) and (a)(2) of this provision.
- C. A modification resulting from the Contracting Officer's request for "best and final" offer received after the time and date specified in the request will not be considered unless received before award and the late receipt is due solely to mishandling by the Government after receipt at the Government installation.
- D. The only acceptable evidence to establish:
- (1) The date of mailing of a late proposal or modification sent either by registered mail or certified mail is the U.S. Postal Service postmark on the wrapper or on the original receipt from the U.S. Postal Service. If neither postmark shows a legible date, the proposal or modification of proposal shall be deemed to have been mailed late. [The term "postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed on the date of mailing by employees of the U.S. Postal Service.]

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

- E. Notwithstanding A., B. and C. of this provision, a late modification of an otherwise successful proposal which makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.
- F. Proposals may be withdrawn by written or telegraphic notice received at any time prior to award. Proposals may be withdrawn in person by an offeror or his authorized representative, provided his identity is made known and he signs a receipt for the proposal prior to award.

APPENDIX G
DRAFT
COOPERATIVE AGREEMENT



U.S. DEPARTMENT OF ENERGY
IDAHO OPERATIONS OFFICE
COOPERATIVE AGREEMENT

ID FORM-182
(Rev. 05-80)

Ref: CMD PURSUANT TO AUTHORITY OF PL 93-410, PL 93-438,
PL 93-473, PL 93-577, and PL 95-91

1.a. Agreement No. DE-SC07-80ID1214	1.b. Modification No.								
2. Agreement Period From: _____ To: _____									
3. Participant Name and Address									
4. Participant Type <input type="checkbox"/> Educational <input type="checkbox"/> Nonprofit <input type="checkbox"/> State or Local Government <input type="checkbox"/> Profit									
5. Project Title	6. Project Will be Conducted per See Article _____								
	7. Technical Reports Are Required See Article _____								
8. Principal Investigator(s) or Program Director(s) Name and Address	9. DOE Program Officer (Name and Address) Margaret A. Widmayer Energy and Technology Division DOE-550 Second Street, Id. Falls, Id. 83401 Telephone No. 208-526-1466								
10. Accounting and Appropriation Data	11. Method of Payment <input type="checkbox"/> % At Award, <input type="checkbox"/> % When Requested, 5% Upon <input type="checkbox"/> Letter of Credit Receipt of Final Report <input type="checkbox"/> Reimbursement <input type="checkbox"/> Other (specify) See Article _____								
12. Submit Vouchers to Director, Contracts Management Division, DOE, 550 Second Street Idaho Falls, Idaho 83401									
13. Funding Sources <table border="0"> <thead> <tr> <th>Source</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>DOE:</td> <td>\$ _____</td> </tr> <tr> <td>Participant:</td> <td>\$ _____</td> </tr> <tr> <td>Total Funding:</td> <td>\$ _____</td> </tr> </tbody> </table>	Source	Amount	DOE:	\$ _____	Participant:	\$ _____	Total Funding:	\$ _____	14. Remarks:
Source	Amount								
DOE:	\$ _____								
Participant:	\$ _____								
Total Funding:	\$ _____								
15. Amount Obligated By This Action: \$									
16. DOE Issuing Office (Name and Address) Idaho Operations Office 550 Second Street Idaho Falls, Idaho 83401									
17. DOE Contracting Officer Signature of Contracting Officer _____ (Date) _____ Name (typed) _____ Telephone No. _____	18. Participant Acceptance By _____ (Date) _____ Signature of Authorized Official Name (typed) _____ Title _____								

SCHEDULE

ARTICLE I - STATEMENT OF JOINT OBJECTIVE

The purpose of this Cooperative Agreement between the United States Department of Energy (DOE or Government) and _____ (Participant) is to develop methods for improving geothermal exploration and assessment technology. This action is authorized by Federal law and is in furtherance of the U.S. Government's objective to stimulate geothermal energy development. Both the Participant and DOE will obtain data pertaining to the improved technology.

ARTICLE II - THE PROJECT MANAGEMENT PLAN

A. Participant's Responsibilities. The Participant shall furnish the materials, facilities, equipment, personnel, services, and all other necessary and related items for the investigation. The work includes all that is necessary to provide a complete investigation and preparation of data and other information concerning investigation. Requirements of the project are further set forth in Appendix B to this Agreement which is titled "PROJECT TASKS, SCHEDULE BACKGROUND, AND REPORTING REQUIREMENTS" and which is 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.

ARTICLE III - FINANCIAL SUPPORT

A. Estimated Cost. The total estimated cost of the work under this Agreement is _____ Dollars (\$ _____). If at any time the Participant has reason to believe that this or any revised estimate is in error by more than ten percent (10%), the Participant shall so notify DOE in writing and provide DOE with a new estimate.

B. DOE's Financial Support. The total cost to DOE for all the work under this project is _____ Dollars (\$ _____), and under no circumstances will DOE's support exceed this amount. This limitation includes termination costs, if any.

C. Participant's Financial Support. All costs in excess of the _____ Dollars (\$ _____) to be provided by DOE, will be borne by the Participant. The estimated cost to the Participant is _____ Dollars (\$ _____).

D. Obligated Funds. The amount of funds presently obligated to this Agreement by DOE is _____ Dollars (\$ _____).

ARTICLE IV - METHOD OF PAYMENT

A. DOE will make incremental payments by Treasury check to the Participant in the amounts set forth below at such times as the specified milestones are achieved and upon receipt of invoices or vouchers and a cost statement from the Participant. Such invoices or vouchers must be supported by a statement that the costs are allowable as defined in ARTICLE VIII of this Agreement.

B. At any time or times prior to final payment under this Agreement, the Contracting Officer may have the costs incurred under this Agreement audited. The total of DOE payments cannot exceed the total, actual, allowable costs incurred. If the Contracting Officer finds, on the basis of audit or otherwise, that allowable costs as defined in ARTICLE VIII do not equal or exceed the amount of funds DOE has agreed to provide, total payments shall be reduced accordingly.

C. As more definitive project cost and schedule data become available, the parties may review the milestone and payment schedule and, by written agreement, make adjustments. Under no circumstances, however, will DOE's costs exceed the amounts provided for in ARTICLE III.

ARTICLE V - TERM OF THE AGREEMENT

The work under this Agreement shall be completed by _____ or within any extension of time as may be mutually agreed to in writing by the parties.

ARTICLE VI - PROJECT INFORMATION SYSTEM

Reporting Requirements. The Participant shall furnish to DOE the reports and information identified in Appendix B.

ARTICLE VII - RESPONSIBLE PERSONS AND PERSONNEL

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

B. (1) The Program Officer for DOE 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:

Margaret A. Widmayer
Energy & Technology Division
Department of Energy
550 Second Street
Idaho Falls, Idaho 83401
Telephone Number (208) 526-1466

ARTICLE VII - RESPONSIBLE PERSONS AND PERSONNEL (Cont'd)

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

ARTICLE VIII - ALLOWABLE COST

(An appropriate allowable cost article will be inserted depending on Participant's type of business.)

ARTICLE IX - 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 _____, 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 subcontract document along with justification for the selection 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.

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 X - 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.

ARTICLE X - TERMINATION (Cont'd)

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: _____ percent (____) Government and _____ percent (____) Participant; provided; however, that the total amount obligated by the Government under this Agreement shall not be exceeded.

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.

ARTICLE X - TERMINATION (Cont'd)

(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 VIII, "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 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 XI - 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 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 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 Provision 19. entitled "Patent Rights."

APPENDIX A - GENERAL PROVISIONS

COOPERATIVE AGREEMENTS

TABLE OF CONTENTS

	<u>Title</u>	<u>Page</u>
1.	DEFINITIONS.....	1
2.	INSPECTION.....	1
3.	ASSIGNMENT OF CLAIMS.....	1
4.	EXAMINATION OF RECORDS BY COMPTROLLER GENERAL.....	2
5.	CONVICT LABOR.....	3
6.	OFFICIALS NOT TO BENEFIT.....	3
7.	COVENANT AGAINST CONTINGENT FEES.....	3
8.	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT..	3
9.	COMPETITION IN SUBCONTRACTING.....	4
10.	AUDIT AND RECORDS.....	4
11.	CLEAN AIR AND WATER.....	5
12.	PREFERENCE FOR U.S. FLAG AIR CARRIERS.....	6
13.	USE OF U.S. FLAG COMMERCIAL VESSELS.....	7
14.	PERMITS AND LICENSES.....	8
15.	REPORTING OF ROYALTIES.....	8
16.	ORDER OF PRECEDENCE.....	9
17.	AUTHORIZATION AND CONSENT.....	9
18.	CIVIL RIGHTS.....	9
19.	PATENT RIGHTS - LONG FORM.....	9
20.	ADDITIONAL TECHNICAL DATA REQUIREMENTS.....	22
21.	RIGHTS IN TECHNICAL DATA - LONG FORM.....	22

TABLE OF CONTENTS (Cont'd)

	<u>Title</u>	<u>Page</u>
22.	PATENT INDEMNITY.....	26
23.	CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION.....	26
24.	FLOOD INSURANCE.....	27

ADDITIONAL GENERAL PROVISIONS

25.	DISPUTES.....	28
26.	UTILIZATION OF SMALL BUSINESS CONCERNS AND SMALL BUSINESS CONCERNS OWNED AND CONTROLLED BY SOCIALLY AND ECONOMICALLY DISADVANTAGED INDIVIDUALS.....	29
27.	UTILIZATION OF LABOR SURPLUS AREA CONCERNS.....	30

APPENDIX A

GENERAL PROVISIONS

COOPERATIVE AGREEMENTS

1. DEFINITIONS

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

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

B. The term "Contracting Officer" means the person executing this Agreement on behalf of the Government, and any other officer or civilian employee who is a properly designated Contracting Officer; 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 "subcontract" includes purchase orders under this Agreement.

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

2. 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.

3. ASSIGNMENT OF CLAIMS

A. Pursuant to the provisions of the Assignment of Claims Act of 1940, as amended (31 U.S.C. 203, 41 U.S.C. 15), if this Agreement provides for payments aggregating \$1,000 or more, claims for moneys due or to become due the Participant from the Government under this Agreement may be assigned to a bank, trust company, or other financing institution, including any Federal lending agency,

3. ASSIGNMENT OF CLAIMS (Cont'd)

and may thereafter be further assigned and reassigned to any such institution. Any such assignment or reassignment shall cover all amounts payable under this Agreement and not already paid, and shall not be made to more than one party, except that any such assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in such financing. Unless otherwise provided in this Agreement, payments to assignee of any moneys due or to become due under this Agreement shall not, to the extent provided in said Act, as amended, be subject to reduction or setoff. (The preceding sentence applies only if this Agreement is made in time of war or national emergency as defined in said Act and is with the Department of Defense, the General Services Administration, the Department of Energy, the National Aeronautics and Space Administration, the Federal Aviation Administration, or any other department or agency of the United States designated by the President pursuant to Clause 4 of the provision of Section 1 of the Assignment of Claims Act of 1940, as amended by the Act of May 15, 1951, 65 Stat. 41).

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

4. EXAMINATION OF RECORDS BY COMPTROLLER GENERAL

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

B. The Participant agrees that the Comptroller General of the United States or any of his duly authorized Government employees shall, until the expiration of three (3) years after final payment under this Agreement, unless DOE authorizes their prior disposition, have access to and the right to examine any directly pertinent books, documents, papers, and records of the Participant involving transactions related to this Agreement.

C. The Participant further agrees to include in all its subcontracts hereunder a provision to the effect that the subcontractor agrees that the Comptroller General of the United States or any of his duly authorized Government employees shall, until the expiration of three (3) years after final payment under the subcontract, unless the DOE authorizes their prior disposition, have access to and the right to examine any directly pertinent books, documents, papers, and records of such subcontractor, involving transactions related to the subcontract. The term "subcontract" as used in this clause excludes (1) purchase orders not exceeding \$10,000 and (2) subcontracts or purchase orders for public utility services at rates established for uniform applicability to the general public.

4. EXAMINATION OF RECORDS BY COMPTROLLER GENERAL (Cont'd)

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

E. Nothing in this Agreement shall be deemed to preclude an audit by the General Accounting Office of any transaction under this Agreement.

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 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

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

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.

8. NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (Cont'd)

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 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 Subcontracts.

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 the Agreement.

10. AUDIT AND RECORDS

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 Title 41, Code of Federal Regulations Part 1-20 and for such lesser period, if any, as is required by applicable statute, or by other clauses of this Agreement, or by subparagraphs B.(1) and (2) below:

(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 Agreement exceeds \$10,000 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 Pub. L. 91-604) and section 308 of the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq., as amended by Pub. L. 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 facility 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 P. L. 91-604).

(2) The term "Water Act" means Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by P. L. 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. 1857(c)-6(c) or (d)], or an approved implementation procedure under section 112(d) of the Air Act [42 U.S.C. 1857c-7(d)].

11. CLEAN AIR AND WATER (Cont'd)

(4) The term "clean water standards" means any enforceable limitation, control, condition, prohibition, standard, or other requirement which is promulgated pursuant to the Water Act or contained in a permit issued to a discharger by the Environmental Protection Agency or by a State under an approved program, as authorized by section 402 of the Water Act (33 U.S.C. 1342), or by local government to ensure compliance with pretreatment regulations as required by section 307 of the Water Act (33 U.S.C. 1317).

(5) The term "compliance" means compliance with clean air or water standards. Compliance shall also mean compliance with a schedule or plan ordered or approved by a court of competent jurisdiction, the Environmental Protection Agency or an air or water pollution control agency in accordance with the requirements of the Air Act or Water Act and regulations issued pursuant thereto.

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

12. PREFERENCE FOR U. S. FLAG AIR CARRIERS

A. Pub. L. 93-623 requires that all Federal agencies and Government contractors and subcontractors will use U.S. flag air carriers for international air transportation of personnel (and their personal effects) or property to the extent service by such carriers is available. It further provides that the Comptroller General of the United States shall disallow any expenditure from appropriated funds for international air transportation on other than a U.S. flag air carrier in the absence of satisfactory proof of the necessity therefor.

B. The Participant agrees to utilize U.S. flag air carriers for international air transportation of personnel (and their personal effects) or property to the extent service by such carriers is available.

C. In the event that the Participant selects a carrier other than a U.S. flag air carrier for international air transportation, he will include a certification on vouchers involving such transportation which is essentially as follows:

CERTIFICATION OF UNAVAILABILITY OF U.S. FLAG AIR CARRIERS

I hereby certify that transportation service for personnel (and their personal effects) or property by certificated air carrier was unavailable for the following reasons: (state reasons).

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

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

(1) "International air transportation" means transportation of persons (and their personal effects) or property by air between a place in the United States and a place outside thereof or between two places both of which are outside 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.

E. The Participant shall include the substance of this clause, including this paragraph E., in each subcontract or purchase hereunder which may involve international air transportation.

13. USE OF U.S. FLAG COMMERCIAL VESSELS

A. The Cargo Preference Act of 1954 [Pub. L. 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.

(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.

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

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 subcontracts 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 this Agreement is in an amount which exceeds \$10,000 and 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 or to be paid by it directly to others in connection with

15. REPORTING OF ROYALTIES (Cont'd)

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. ORDER OF PRECEDENCE

In the event of an inconsistency between the 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; and (e) Participant's technical proposal, if incorporated in the Agreement by reference or otherwise.

17. 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 contract hereunder (including any lower-tier subcontract).

18. CIVIL RIGHTS

No person shall on the ground of race, color, national origin, sex, handicap, or age be excluded from participation in, be denied the benefits of, be subjected to discrimination under, or be denied employment, where the main purpose of the program or activity is to provide employment or when the delivery of program services is affected by the recipient's employment practices, in connection with any program or activity receiving Federal assistance from the DOE.

19. PATENT RIGHTS - LONG FORM

A. Definitions.

(1) "Subject Invention" means any invention or discovery of the Participant conceived or first actually reduced to practice in the course of or under this Agreement, 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.

(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.

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

(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.

(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.

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

B. Allocation of Principal Rights.

(1) Assignment to the Government. The Participant 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.

C. Minimum Rights to the Participant.

(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.

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

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 Agreement 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:

19. 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

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

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

(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;

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

(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.

(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.

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

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.

(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 Agreement, 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 Agreement 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 article 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;

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

(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 Agreement work listing all Subject Inventions and all subcontracts awarded containing a Patent Rights clause and certifying that:

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

(B) All subcontracts containing a Patent Rights article 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 Agreement 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 Agreement, 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 Agreement. 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

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

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:

(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 Agreement 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 Agreement), 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 Agreement, shall have the right to examine any books (including laboratory notebooks), records, documents, and other supporting data

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

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 Agreement 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

(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 Agreement, the Contracting Officer may, if he deems such action warranted, withhold payment until a reserve not exceeding \$50,000 or 5 percent of the amount of this Agreement, 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.

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

(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 Agreement 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 1 percent of the amount of this Agreement, 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 Agreement. The withholding of any amount or subsequent payment thereof shall not be construed as a waiver of any rights accruing to the Government under this Agreement.

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) Unless otherwise authorized or directed by the Contracting Officer, the Participant shall include the Patent Rights clause of 41 CFR 9-9.107-5(a) or 41 CFR 9-9.107-6 as appropriate, modified to identify the parties in any subcontract hereunder having as a purpose the conduct of research, development, or demonstration work. In the event of refusal by a subcontractor to accept this clause, or if in the opinion of the Participant this 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.

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

(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 Agreement obligations to the Government in the performance of this Agreement).

(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 him a copy of the subcontract.

(6) The Participant shall identify all Subject Inventions of the subcontractor of which it acquires knowledge in the performance of this Agreement 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 Agreement:

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

(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 Agreement.

(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 Agreement 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 Agreement, 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.

(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

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

asserted by the Participant or its employees with respect to any invention or discovery made or conceived in the course of or under this Agreement.

(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 Agreement, 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 article of this Agreement with respect to Background Patents and the Facilities License.

20. 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 (1) 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.

21. 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

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

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.

(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" clause 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 contract data except as otherwise provided below with respect to proprietary data.

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

(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 Agreement data.

(2) The Participant shall have:

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

(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,

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

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 Participant 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 contractors 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 an article affording the Government such rights, the Participant shall:

(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 contract 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, mating and attachment characteristics, functional characteristics and performance requirements ("Form, Fit and Function" data, e.g., specification control drawings, catalog sheets, envelope drawings, etc.) or a general description of such proprietary data where "Form, Fit and Function" data are not applicable. The Government shall acquire no rights to any proprietary data so withheld except that such data shall be subject to the "Inspection Rights" provisions of paragraph F., and if included, the "Limited Rights in Proprietary Data" provisions of paragraph G. and the "Participant Licensing" provisions of paragraph H.

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

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. and not furnished under paragraph G. for the purposes of verifying that such data properly fell within the withholding provision of paragraph E., or for evaluating work performance.

22. PATENT INDEMNITY

The Participant shall indemnify the Government and its officers, agents, and employees against liability, including costs, for infringement of U.S. Letters Patent (except U.S. Letters Patent issued upon an application which is now or may hereafter be kept secret or otherwise withheld from issue by order of the Government) 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.

23. 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.]

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

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 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 contractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition, such Participant and contractor 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 contractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Participant or contractor 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 subcontracts, 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.

24. 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, 1976, Section 102(a) requires, on and after March 2, 1975, the Purchase of flood insurance in communities where such insurance is available as a condition for the receipt of any Federal

24. FLOOD INSURANCE (Cont'd)

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.

ADDITIONAL GENERAL PROVISIONS

25. DISPUTES

A. This Agreement is subject to the Contract Disputes Act of 1978 (41 U.S.C. 601, et seq.). If a dispute arises relating to the Agreement, the Participant may submit a claim to the Contracting Officer who shall issue a written decision on the dispute in the manner specified in DAR 1-314 (FPR 1-1.318).

B. "Claim" means:

- (1) A written request submitted to the Contracting Officer;
- (2) For payment of money, adjustment of Agreement terms, or other relief;
- (3) Which is in dispute or remains unresolved after a reasonable time for its review and disposition by the Government; and
- (4) For which a Contracting Officer's decision is demanded.

C. In the case of disputed requests or amendments to such requests for payment exceeding \$50,000, or with any amendment causing the total request in dispute to exceed \$50,000, the Participant shall certify, at the time of submission as a claim, as follows:

I certify that the claim is made in good faith, that the supporting data are accurate and complete to the best of my knowledge and belief; and that the amount requested accurately reflects the Agreement adjustment for which the Participant believes the Government is liable.

(Participant's Name) _____

(Title) _____

D. The Government shall pay the Participant interest:

25. DISPUTES (Cont'd)

(1) On the amount found due on claims submitted under this clause;

(2) At the rates fixed by the Secretary of the Treasury, under the Renegotiation Act, Public Law 92-41;

(3) From the date the Contracting Officer receives the claim, until the Government makes payment.

E. The decision of the Contracting Officer shall be final and conclusive and not subject to review by any forum, tribunal, or Government agency unless an appeal or action is timely commenced within the times specified by the Contract Disputes Act of 1978.

F. The Participant shall proceed diligently with performance of this Agreement, pending final resolution of any request for relief, claim, appeal or action related to the contract, and comply with any decision of the Contracting Officer.

26. 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, including §1-1.701 of the Federal Procurement Regulations. 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

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

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

27. UTILIZATION OF LABOR SURPLUS AREA CONCERNS

(The following clause is applicable if this Agreement exceeds \$10,000.00)

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.

APPENDIX B

PROJECT TASKS, SCHEDULE BACKGROUND, AND REPORTING REQUIREMENTS

Project tasks and schedule will be included in the Cooperative Agreement as negotiated. Reports will be submitted in accordance with the attached Form DOE-CR-537.

APPENDIX H
U. S. DEPARTMENT OF ENERGY
REPORTING REQUIREMENTS CHECKLIST

DOE Form CR-537
(1-78)

(See Instructions on Reverse)

FORM APPROVED
OMB NO. 38R-0190

1. IDENTIFICATION	2. OBLIGATION INSTRUMENT:
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3. REPORTING REQUIREMENTS

A. PROJECT MANAGEMENT	Frequency	B. TECHNICAL INFORMATION REPORTING	Frequency
1. <input type="checkbox"/> Management Plan		1. <input checked="" type="checkbox"/> Notice of Energy RD&D Project (SSIE)	O
2. <input type="checkbox"/> Milestone Schedule & Status Report		2. <input checked="" type="checkbox"/> Technical Progress Report	Q
3. <input type="checkbox"/> Cost Plan		3. <input checked="" type="checkbox"/> Topical Report	Y
4. <input type="checkbox"/> Manpower Plan		4. <input checked="" type="checkbox"/> Final Technical Report	F
5. <input checked="" type="checkbox"/> Contract Management Summary Report	M	C. PMS/MINI-PMS 1. Cost Performance Report <input type="checkbox"/> Format 1 WBS <input type="checkbox"/> Format 2 Functional <input type="checkbox"/> Format 3 Baseline <input type="checkbox"/> Format 5 Problem Analysis 2. <input type="checkbox"/> Cost/Schedule Status Report 3. <input type="checkbox"/> Management Control System Description 4. <input type="checkbox"/> Summary System Description 5. <input type="checkbox"/> WBS Dictionary	
6. <input checked="" type="checkbox"/> Project Status Report	M		
7. <input type="checkbox"/> Cost Management Report			
8. <input type="checkbox"/> Manpower Management Report			
9. <input checked="" type="checkbox"/> Conference Record	A		
10. <input checked="" type="checkbox"/> Hot Line Report	A		

FREQUENCY CODES:

A - As Required	Q - Quarterly
C - Contract Change	S - Semi-Annually
F - Final (End of Contract)	X - Mandatory for Delivery with Proposals/Bid
M - Monthly	Y - Yearly or Upon Contract Renewal
O - One Time (Soon After Contract Award)	

4. SPECIAL INSTRUCTIONS

Submit all reports to the DOE Program Officer at Idaho Operations Office (ID) as indicated below:

A.5 and 6 - Six copies are due at ID within fifteen days after end of the calendar month.

B.1 - Two copies are due at ID within fifteen days after Cooperative Agreement Award.

B.2 - Six copies are due at ID within fifteen days after end of the calendar quarter.

B.3 - Six copies are due not less than forty-five days prior to completion of the yearly term.

B.4 - Submit in draft forty-five days prior to completion date of Cooperative Agreement. After thirty days for DOE review, submit eleven copies including one camera-ready copy.

5. ATTACHED HEREWITH:

<input type="checkbox"/> Report Distribution List	<input type="checkbox"/>
<input type="checkbox"/> WBS/Reporting Category	<input type="checkbox"/>

6. PREPARED BY (Signature and date):	7. REVIEWED BY (Signature and date):
--------------------------------------	--------------------------------------

REPORTING REQUIREMENTS CHECKLIST

PURPOSE

A checklist to identify and communicate additional reporting requirements which are not otherwise set forth in the General Purpose clauses of DOE contracts and agreements. It will be included as part of the contract or agreement. This form will be completed for each proposed contract or agreement and can be modified as required in Special Instructions to adapt it to a specific situation.

INSTRUCTIONS

Item 1 - Enter the title as indicated in the Procurement Request, Interagency Agreement, or initiating memorandum.

Item 2 - Enter the identification number of the Procurement Request or Interagency Agreement, the date of the memorandum, and contract number after award.

Item 3 - Check spaces to indicate plans and reports required. For each reporting requirement checked, indicate frequency of delivery in column provided using one of the frequency codes shown.

3.A.1 Management Plan - The contractor's plan to manage the effort described in the statement of work or similar document. It will contain management methodologies, control systems, and procedures he will use. Includes milestones and other planning schedules, organizational identification and descriptions, and special and critical plans, such as test plans; plans for handling of Government owned property. Work breakdown structures, key personnel identification, and methods for monitoring progress toward objectives may be required.

3.A.2 Milestone Schedule and Status Report - The contractor's milestone schedule for all work breakdown structure items, line items, or deliverables specified in the contract. Updated periodically (usually monthly) with status, progress toward completion, and percent completion of each line item and of the total contract.

3.A.3 Cost Plan - A baseline plan for incurring costs on a contract or agreement to measure progress in terms of cost; update and forecast contract fund requirements; plan funding changes; and develop fund requirements and budget estimates.

3.A.4 Manpower Plan - A baseline plan to allocate manpower to each reporting category identified in the contract or agreement.

3.A.5 Contract Management Summary Report - A single-page graphic presentation of integrated cost, major milestones, and manpower for rapid visual analysis and trend forecasting.

3.A.6 Project Status Report - A periodic report to communicate to DOE management an assessment of contract status, to explain variances and problems, and to discuss any other areas of concern or achievements.

3.A.7 Cost Management Report - A periodic report of the status of costs compared to the Cost Plan. Data is used to: report actual and projected accrued costs; evaluate performance against plan; identify actual and potential problem areas; construct cost experience for projects and budgeting efforts; and, to verify the reasonableness of contractors' invoices.

3.A.8 Manpower Management Report - A periodic report of the status of actual and projected manpower expenditure against the Manpower Plan. Data is used to evaluate performance against plan; identify actual and potential problem areas; and to construct manpower experience for projections and planning efforts.

3.A.9 Conference Record - Documentation of the contractor's understanding of significant decisions, direction or redirection or required actions resulting from any meeting with DOE representatives.

3.A.10 Hot Line Report - A hardcopy report by the fastest means available, (TWX, etc) documenting critical problems, emergency situations, and important technical breakthroughs.

3.B.1 Notice of Energy R&D Project - A formatted, two-page report to provide information on unclassified DOE R&D projects for dissemination to the scientific, technical, and industrial communities and to the public. Also provides information to the Smithsonian Scientific Information Exchange.

3.B.2 Technical Progress Report - A formal, structured technical report, submitted periodically to communicate project results for dissemination to Government agencies, the scientific, technical and industrial communities and the public.

3.B.3 Topical Report - A special technical report prepared when a project has reached a point at which a major milestone or a significant phase has been completed, when unexpected results have been achieved, when it is logical to summarize results achieved, or when a new scientific or technological finding is deemed to warrant prompt publication.

3.B.4 Final Technical Report - Technical Progress Report reporting final results of DOE supported RD&D and scientific projects.

3.C PMS/Mini-PMS

1) Cost Performance Report (PMS Application)

Format 1 - Reports current period and cumulative budget, actual costs and earned value data by work breakdown structure elements. Identifies cost and schedule variances and provides contractor's estimate to complete comparisons to budgets.

Format 2 - Reports current period and cumulative budget, actual costs, and earned value data by contractor functional elements.

Format 3 - Provides periodic updating to the established performance measurement baseline. Incorporates authorized contract changes and internal re-planning into the performance measurement baseline.

Format 5 - Provides a narrative analysis of contract variances.

2) **Cost/Schedule Report (Mini-PMS Application)** - Periodic, usually monthly, report of cumulative budget, actual costs and earned value by summary work breakdown structure elements. Identifies cost and schedule variances and provides contractor's estimate to complete comparisons to budgets.

3) **System Description (PMS Application)** - Contractor's description of the management control system to be used in performing contract work. Must address all elements of the PMS criteria.

4) **Summary System Description (Mini-PMS Application)** - Contractor's summarized description of the management control system to be used in performing contract work.

5) **WBS Dictionary** - Lists and defines work breakdown structure. For more detailed instructions see PMS Manual.

Frequency Codes - Each code must have an identified time period (i.e., As Required - 5 days after event occurrence). These time periods are suggested in the solicitation and negotiated at contract award.

Item 4 - Identify any special reporting requirements not indicated in Item 3 and/or qualifiers to those selected. (Use additional sheets as necessary.)

Item 5 - Check appropriate blocks.

Report Distribution List - A comprehensive informative listing of reports by frequency of submission, addresses and number of copies for each addressee.

Reporting Categories (level of detail) - An identification by WBS level of task elements for which reporting will be required by DOE.

Item 6 - Signature of person or persons preparing the checklist and the date prepared. Preparation is by person or persons responsible for preparation of Procurement Request or Statement of Work.

Item 7 - Signature of the person reviewing the checklist and date reviewed.

APPENDIX I

PROPOSAL CHECK LIST

This check list is provided only for your convenience and is not intended to be all inclusive.

1. Is the cover page of the proposal properly signed?
2. The requested DOE funding does not exceed \$100,000.
3. You have determined that you are not prohibited from proposing as outlined in the Letter to Prospective Proposers which is found in the front of this SCAP.
4. Does each proposal address the technical statement (Section I) of this SCAP?
5. Have you indicated that you agree in principle to accept the standard agreement terms and conditions?
6. Does your management plan include:
 - a. Descriptions of your key tasks of work?
 - b. A work schedule showing the key tasks and activities you identify?
 - c. Distinct milestones for your project - not just activities that will take place?
 - d. A schedule for the completion of your selected milestones?
7. Have you included the biographies of your Project Manager and key personnel indicating their competence and experience?
8. Has a properly executed Optional Form 60 been submitted? No fee has been identified on Optional Form 60, line 14. Appendix C.
9. Has a completed Financial Assistance Standard Form 424 been included? See Appendix D.
10. Have you signed the Representations and Certifications? See Appendix E.

U.S. Department of Energy
Idaho Operations Office
Room 117
550 Second Street
Idaho Falls, Idaho 83401

Attn: Kent Hastings

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D R NIELSON
8721 MOUNT MAJESTIC RD
SANDY
UT 84070

POSTAGE & FEES PAID
UNITED STATES
DEPARTMENT OF ENERGY

