

SOLICITATION NO. 0 SP-40-09700

VOLUME 1 OF 1

GILA TAXONOMY

**TOTAL
SMALL BUSINESS
SET-ASIDE**

UNITED STATES DEPARTMENT OF THE INTERIOR

***BUREAU* OF RECLAMATION**

UPPER COLORADO REGION

SOLICITATION, OFFER AND AWARD

6000 TO 000000

1 132 PAGES

2. CONTRACT NO.	3. SOLICITATION NO. 0 SP 40 09700	a. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)	5. DATE ISSUED 07/25/90	6. REQUISITION/PURCHASE NO.
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NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

SOLICITATION

9. Sealed offers in original and 3 CODIES for furnishing the supplies or services in the Schedule will be received at me place specified in Item 8. or f handcarried, in the depository located in 125 S 0 0 0 0 S 0 0 0 0 S 0 0 0 0 until 4:30 PM local time 08/31/90 (Hour) (Date) S 0 0 0 L 0 0 C 0 0 UT 84138

CAUTION - LATE Submissions, Modifications, and Withdrawals. See Section L. Provision No. 52.214-7 or 52.215-10. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:	A. NAME R 0 0 0 0 0 M 0 0 0 0	TELEPHONE NO. (Include area code) (NO COLLECT CALLS) (801) 524-4078
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OFFER (Must be fully completed by offeror)

ITE: Item 12 does not apply if me solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date of receipt of offers specified above, to furnish any or all items upon which prices are offered at me price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I. Clause No. 52-232-8)	10 CALENDAR DAYS	20 CALENDAR DAYS	30 CALENDAR DAYS	CALENDAR DAYS
	%	%	%	%

14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated:	AMENDMENT NO	DATE	AMENDMENT NO	DATE

15A. NAME AND ADDRESS OF OFFEROR	CODE	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)
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15B. TELEPHONE NO. (include area code)	15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE	17. SIGNATURE	18. OFFER DATE
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AWARD (To be completed by Government)

19. CEPT O AS O I EMS NUMB R O	20. AMOUN	21. ACCO NTING AND APPROPRIATION
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22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c)(1) <input type="checkbox"/> 41 U.S.C. 253(c)(1)	23. SUBMIT INVOICES TO ADDRESS SHOWN IN ITEM 14 copies unless otherwise specified)
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24. ADMINISTERED BY (If other than Item 7) CODE	25. PAYMENT WILL BE MADE BY CODE
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26. NAME OF CONTRACTING OFFICER (Type or print)	27. UNITED STATES OF AMERICA (Signature of Contracting Officer)	28. AWARD DATE
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IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

GILA TAXONOMY

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B.1 Schedule

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Schedule II - Protein Electrophoresis
Investigations _____

Schedule III - DNA Investigations _____

Schedule IV - Chromosomal Investigations _____

B.2 Small Tributary Sampling 1/
(See Section C.5)

Gila River Basin; AZ, NM
(3 locations per trip) \$/sampling trip _____

Bill Williams System; AZ
(3 locations per trip) \$/sampling trip _____

Virgin & Moapa-Pluvial
White Systems; AZ, NV, UT \$/sampling trip _____
(3 locations per trip)

San Juan River System; CO, NM
(2 locations per trip) \$/sampling trip _____

Upper Colorado River System;
(including Dolores, Gunnison,
etc); CO (3 locations per trip) \$/sampling trip _____

Western Green River Tributaries;
UT (2 locations per trip) \$/sampling trip _____

Upper Yampa River and Lake,
Snake Systems; CO, WY
(3 locations per trip) \$/sampling trip _____

Upper Green River System; WY \$/sampling trip _____
(3 locations per trip)

Tributaries of Gulf of California;
NW Mexico (8 locations per trip) \$/sampling trip _____

B.3 Larger River Sampling. Travel to Participate with Agency Personnel in Larger River Sampling. Include all costs for transportation, lodging, and per diem to and from sampling area. Reclamation will provide on river support (See Section C.5)

Yampa-Upper Green River Area;
UT, CO

2 ()\$/sampling trip 5

Middle Green River Area; UT

\$/sampling trip _____

Colorado River from Debeque,
CO to Lake Powell and Lower
Green River

\$/sampling trip _____

Grand Canyon - Lower Little
Colorado River Area

\$/sampling trip _____

B.4 Denver Meetings

Estimated Qty. Unit Price Amount

2 _____

Total

1/ Small Tributary Sampling will be an indefinite quantity item. Offerors shall submit prices for sampling each of these small tributary habitats. Upon contract award, the Contracting Officer's Technical Representative (COTR) shall determine the actual sampling responsibility for each contractor.

2/ Meetings in Denver will also be handled as an indefinite quantity item.

SECTION C

DESCRIPTION/ SPECIFICATION

C.1 INTRODUCTION

C.1.1 Background

The development and implementation of recovery programs for endangered members of the cyprinid fish genus Gila in the Colorado River Basin have met with considerable confusion in recent years as the result of questions regarding the taxonomy of these fishes. This dilemma has prompted the Colorado River Recovery Implementation Committee (RIP) to seek a definitive study on the taxonomy of these fishes in the Basin under a cooperative agreement between the U.S. Fish & Wildlife Service (Region 6) and the Smithsonian Institution, Washington, D.C., which is supplying a Project Manager. A review panel consisting of qualified scientists and biologists representing concerned state and federal agencies has also been appointed to provide advisory assistance and oversight. The project is being funded by involved federal and state agencies that participate in the RIP including Utah, Wyoming, Colorado, Fish & Wildlife Service and Reclamation. Approval for this project was provided by the Recovery Implementation Committee Technical Group.

The Gila Taxonomy Project is being conducted in phases. During Phase I, beginning July, 1989, the Project Manager, with input from the Review Panel and other concerned parties, prepared a review of existing information on past research, activities of recent researchers, and collections resources (Phase I, Part 1 report). In addition as a document outlining management concerns, priority research needs, and general proposed research plan for the project was prepared as parts 2 and 3 of Phase I.

Phase II of the Project is the research phase which will involve co-investigations of morphological and genetic variation in many populations of Gila throughout the Colorado River Basin. These investigations will be carried out by contractors selected from among the respondents to this RFP. These contractors will cooperate with one another, the Project Manager, and the Review Panel in conducting a well coordinated research effort and synthesis of results. The Phase I, Parts 2 & 3 report is intended to identify the basic kinds of research required in Phase II and to serve as a general guide to the scope and depth of morphological and genetic studies that will most likely be necessary to address taxonomic questions. It is therefore appended as Section J, Attachment 1.

Several previous studies of a less comprehensive nature than that proposed for this project have failed to resolve questions surrounding the taxonomy of Colorado River Basin Gila forms.

Taxonomic questions surrounding these fishes fall into two categories: 1) What is the current status of mainstem river populations which exhibit variable morphology, not consistent with past concepts of three species of chubs (humpback, bonytail, and roundtail) which were believed to constitute these populations, and is the problematic variation of a natural intraspecific nature or the result of genetic introgression? 2). What is the status of various tributary chub populations throughout the Basin? A detailed synopsis of taxonomic problems throughout the Basin, and the management concerns resulting from them, is contained in Sec. J. Attach. 1, pp. 1-9, and the reader is referred thereto for further information.

C.1.2 Pertinent Literature

Much of the most pertinent literature to taxonomic problems with Gila spp. in the Colorado River Basin is cited in Sec. J, Attach. 1, pp. 20-22. This and some additional taxonomic literature and much additional literature on the distribution and status of these fishes is annotated in the above noted Phase I, Part 1 report reviewing existing information. Additional copies of this previously distributed report are available from: USFWS, Fisheries & Federal Aid, POB 25486, Denver Federal Center, Denver, CO., 80225 or will be supplied upon specific request along with the RFP.

C.2 PROJECT OBJECTIVES

The objectives of the Gila Taxonomy Project are to address the priority research needs outlined in detail in Sec. J., Attach. 1, pp. 10-12.

These can be summarized as follows:

1. To develop non-lethal techniques for obtaining ^{SWB} morphological and genetic data from Gila populations believed to contain endangered forms.

2. To document the extent of morphological and genetic variation within and among chub populations from different geographic areas over the entire Colorado Basin. Certain drainages of western Mexico containing members of the same complex may be included, funds permitting. Data from the latter would be utilized to determine the status of these chub populations and their possible bearing on taxonomy of forms within the Colorado Basin. *sample sizes*

3. To determine whether chub populations from mainstem river populations, particularly canyon reaches, comprise, or formerly *done* comprised, two or more discrete taxa.

4. If multiple taxa are present in mainstem river populations, determine whether introgressive hybridization is occurring. *sample populations*

5. To determine the taxonomic status of tributary chub populations in both confluent and isolated tributaries of the Colorado River drainage. *haul*

6. To improve the knowledge of larval-juvenile taxonomy of Gila forms within the Colorado River Basin.

7. To facilitate future genetic monitoring efforts and management decisions concerning recovery through the development of non-lethal sampling procedures and a knowledge of genetic variability within the Colorado River Gila complex. *Yocum*

C.3 SCOPE AND DURATION OF PROJECT

Taxonomic studies will encompass Gila populations from throughout the Colorado River Basin in the broad sense, including now disjunct pluvial tributaries within the basin (see map, Sec. J. Attach. 1, p. 29) Funding permitting, the study will also include certain drainages tributary to the Gulf of California in northwestern Mexico which contain Gila robusta-like forms (Sec. J., Attach. 1, pp. 1 & 6). This work will be included by bilateral modification should funding become available. Small numbers of extralimital taxa could be incorporated in the study by the contractor where appropriate to lend perspective to variation of forms within the Colorado Basin. The scope of the project can be best realized by examination of Sec. J. Attach. 1, pp. 1-6 and 28-33.

The research phase (Phase II) of the Project shall be completed in 3 years beginning from date of execution of the contract, including data analysis. An additional 6 months should be allowed for refinement of analyses and part-time involvement with the Project Manager in report preparation. Respondents should plan work and budgets over a similar timeframe.

C.4 RESEARCH

C.4.1 Roles of Contractors

Attempts to achieve the objectives stated in Section C.2 will involve several approaches. Objective 1, development of non-lethal sampling techniques, is currently being addressed by personnel of the U.S. Fish & Wildlife Service in conjunction with the Project Manager. Controlled experiments are being conducted on hatchery-reared, and perhaps some wild-caught, Gila spp. and other fishes to determine the effects of sampling certain tissues

for genetic studies. Based on results of these experiments, and subsequent field tests of techniques which prove most effective in these experiments, a sampling protocol will be derived. Contractors selected for morphological and genetic studies will have input into any further modification of techniques necessary to meet their specific needs.

Objectives 2 - 5 will be addressed through carefully coordinated/ investigations of morphological and genetic variation of Gila forms throughout the Colorado Basin. These investigations will be categorized into four areas, morphological variation, plus three genetic approaches, including analyses of protein variation, DNA variation, and chromosome morphology. The types of studies that might be conducted under each of these areas are discussed in Sec. J., Attach. 1, pp. 13-20. Studies involving tissues removed for genetic studies will be cross-coordinated with morphological studies on a specimen-by-specimen basis and participating contractors will have to place a high priority on attentive cooperation with others in this regard.

Objective 6, taxonomy of larval-juvenile Gila (see Sec. J, Attach. 1, pp. 18-19) in the Colorado River basin will be addressed one to two years into the project when sufficient genetic data has been obtained from adult fishes to offer researchers on larval and small juvenile chubs new information with which to further analyze variation in these younger stages. Researchers selected from among respondents to this RFP shall cooperate with larval fish researchers in this regard. Larval fish taxonomy studies for this project will be initiated with a separate RFP to be issued at a later date, based on the initial success of genetic researchers.

In the following sections, four schedules are provided reflecting each of the investigative approaches. Individual or teams of respondents to this RFP may submit proposals addressing as many schedules as desired, ranging from one approach to all four. Contractors will be selected for each schedule independent of whether they have responded to or been selected for other schedules.

C.4.2 Schedule I -- Morphological Investigations

The range of morphological variation in Colorado Basin Gila forms has presented perplexing difficulties to investigators comparing samples from among and within different geographic localities and has provided a major impetus to this study. To assess this variation will require detailed morphological analyses on specimens for which genetic information is available. In this way, morphological attributes may be discovered which can discriminate among taxa in some or all populations and can be applied to future monitoring and management efforts.

The specific aims and general types of morphological analyses which might be conducted in this project are outlined in Sec. J, Attach. 1. These are in no way intended to dictate or limit the proposed by prospective contractors. Proposed methodologies will be evaluated in light of prior success of proposed techniques, compatibility with non-lethal sampling procedures where necessary, and the probability of successfully addressing research needs (see Sec. M.6) based on the experience of member scientists of the Evaluation Committee. Thus respondents are encouraged to propose whatever data gathering techniques and analytical methodology (multivariate and/or univariate, etc.) which, in their experience, will best address the Project's objectives above (C.2) and the Priority Research Needs (Sec. J, Attach. 1, p. 10-12). In addition to studies of material extant in museum collections (detailed in the previously cited Phase I, Part 1 report), it will be necessary to conduct studies on newly collected material carefully cross-referenced for genetic studies. Data gathering techniques must necessarily include some type of imagery technique for documenting variation in populations containing endangered forms where mortality must be minimized and non-lethal techniques emphasized (Sec. J, Attach. 1, p. 26). Contractors will have input into modification of sampling protocol to accommodate their data gathering technique. Methods used in non-lethal sampling should yield data correlatable with that obtained from preserved material if at all possible.

C.4.3 Schedule II -- Protein Electrophoresis Investigations

Electrophoresis has become a proven technique over recent decades for revealing variation in animal proteins, such as allozymes and isozymes, and has been successfully employed in many fish studies. The ability to establish marker loci for taxa and thereby correlate genetic variation with morphological variation and geographic distribution of fishes is a valuable asset. Further, the ability to identify heterozygotic individuals and thus document and analyze hybridization is a strong point of this method. Therefore this method is deemed as one essential to addressing priority research needs for the Gila Taxonomy Project (Sec. J, Attach. 1, pp. 10-12).

Respondents to this schedule are encouraged to propose a regimen of electrophoretic investigations which, from their experience, will adequately address the priority research needs and the above stated objectives (C.2). However, it is anticipated that, initially, examination of a large number (perhaps 30-50) of loci from a small sample of specimens taken from different geographic locations will be required, taking into account those which may previously have been adequately examined by investigators, to identify sufficient marker loci. These markers would be used, in the course of this project, in broader studies utilizing larger sample sizes, such as those derived from non-lethal sampling

efforts, and, in the future, for genetics monitoring and management applications. Contractors will need to extract proteins from tissues taken from specimens also utilized for morphological studies (above), both those preserved after removal of tissues and those released after tissue removal in the course of non-lethal sampling efforts. These contractors will have input into modification of sampling protocols to accommodate their needs. Investigators of protein variability shall cooperate with other genetic researchers and morphological investigators in the careful cross-reference of such material and the exchange of information stemming from results. They shall also cooperate with larval-juvenile fish taxonomists when that portion of the Gila Taxonomy Project commences.

Protein electrophoretic investigations are further discussed under Sec. J, Attach. 1, pp. 15-17, and respondents are referred thereto to consider suggested approaches to these investigations. These suggested approaches are not necessarily required of, or intended to limit, methods proposed by respondents. Relative merits of proposals will be evaluated based on criteria stated in Section M.6.

C.4.4 Schedule III -- DNA Investigations

In recent years, techniques for the analysis of DNA have been refined which allow for studying variation in these molecules at a reasonable cost. Analysis of DNA has proven very successful at discriminating among fish taxa at the specific and infraspecific level and thus offers a powerful tool for studies of population-level genetics. Furthermore, the maternal inheritance pattern of mitochondrial DNA adds another dimension to the analytical capabilities of DNA studies. Because of the fine-grained discriminating powers of DNA studies and the unique kinds of data that are obtainable, in addition to yielding an independent data set from other genetic and morphological studies, it is deemed that a range-wide study of DNA variation is essential to the Gila Taxonomy Project (see Sec. J., Attach. 1, pp. 17-18).

Respondents to this schedule are encouraged to propose a course of study they think will best address the research needs of the project (Sec. J. Attach. 1, pp. 10-12) and the above stated objectives (C. LSqne suggested analyses are listed in Sec. J, Attach. 1, pp. These are not intended to dictate or limit the type of studies to be proposed which, however, must be adequate to meet the research needs. Relative merits of proposals will be evaluated based on criteria stated in Section M.6. Proposals may include whatever methods (use of mtDNA or nuclear DNA; fragment size comparisons, mapping, etc.) which have proven successful for the respondent, keeping in mind that relative cost is an important factor insofar as research needs are being adequately addressed. However, as with protein electrophoretic studies above, it will be required initially to

examine a large number of restriction sites or whatever from small samples representing broad geographic coverage to elucidate markers for broader application in this study, as well as future genetics monitoring efforts.

DNA contractors will have opportunity for input into sampling protocols, as stated above for other participants, and shall cooperate with other genetic researchers, morphologists, and larval-juvenile fish taxonomists as stated in Schedule II. As with protein electrophoresis, it will be necessary in some cases to extract DNA from tissues taken in non-lethal sampling efforts (Sec. J, Attach. 1, p. 26).

C.4.5 Schedule IV -- Chromosomal Investigations

Because of recent developments in banding techniques, etc., it has become possible to reveal differences in chromosomes beyond the simple gross morphology provided by karyotypes. Few cells are required for such investigations and, when proliferated through culture techniques, even fewer must be removed from the organism being studied. Such methods are therefore attractive for application to studies of endangered fish species because of low-trauma incurred beyond that involved in capture (Sec. J, Attach. 1, p. 26). If convincing evidence is available that chromosome studies can reveal analyzable variation in Gila forms, then this method is applicable to this project, particularly in addressing Objective 7 (Section C.2) concerning facilitation of future genetics monitoring efforts. If sufficient funding beyond that required for schedules I - III is at hand, then contracts will be let for this schedule; potential participants are highly encouraged to respond. This area of investigation and pertinent questions are further discussed under Sec. J, Attach. 1, p. 18.

Respondents to this schedule are encouraged to provide evidence of the effectiveness of recent techniques in resolution of variation in cyprinid chromosomes, and Gila in particular, and to propose a course of study which they believe will address the Gila Taxonomy Project's priority research needs (Sec. J, Attach. 1, pp. 10-12). Relative merits of proposals will be evaluated based on criteria stated in Section M.6. As with participants in other investigations (Schedules _____ if chromosomal investigators are selected, they will have input into modifications of sampling protocol to accommodate their needs. They will be expected to cooperate with other genetics researchers, morphologists, and larval fish taxonomists in exchange of information and careful cross-referencing of material as stated above (Secs. C.4.1 - C.4.4). In some cases, it will be necessary to conduct studies of cells removed in the course of non-lethal sampling efforts as discussed in Sec. J, Attach. 1, p. 26).

C.5 FIELD WORK PARTICIPATION

The possible roles of contractors and various agency and consultant biologists and the general scope of field work are discussed in Sec. J, Attach. 1, pp. 23-24. As stated therein, it is anticipated that research participants in both morphological and genetic investigations will be personally involved at times with all types of field work ranging from large river float trips to smaller tributary sampling. This will be particularly true of morphological investigators in the course of non-lethal sampling efforts when imagery techniques must be employed. While agency/consultant biologists will provide much of the logistical support for large river sampling, it is expected that contractors selected from among respondents will share responsibility among themselves for sampling of smaller tributary habitats, not necessarily with assistance of agency biologists. It should be kept in mind that all contractors will be extracting data from, and sharing, common material and, therefore, it will not be necessary for each researcher to be on every sampling trip once sampling protocols are established to accommodate his/her needs. These levels of participation should be kept in mind when considering one's time commitments over the course of the project, particularly in early portions of Phase II.

Because, all sampling locations and research participants will not be known until proposals are evaluated and contractors selected, it will be necessary to coordinate responsibilities for smaller habitat sampling among those participants after contract award. Since this contract is a firm-fixed price contract, respondents shall submit prices for sampling smaller tributary habitats based on the regional break-down given in Section B. prior to contract award. Respondents should compute an estimated average cost for traveling to, and conducting sampling of, smaller habitats in each region listed based on the specified number of locations per trip (which is based on the probable number and relative proximity of localities within that region). Separately, estimated average travel costs for the purpose of joining agency/consultant biologists in larger river sampling efforts should be computed based on the break-down given in Section B. This bid item will be handled as an indefinite quantity item and will be incorporated into the contract by modification upon determination of sampling responsibilities.

C.6 EQUIPMENT

For large river sampling, agency/consultant biologists will supply logistical support and equipment in terms of boats and major collecting equipment. For tissues to be used in genetic research, a few ultracold freezers will be supplied by the USFWS and placed at strategic locations in the Colorado Basin to provide temporary storage until transport to researcher's

institutions. Beyond that, it is anticipated that some tissue sampling necessities, such as surgical tools, anesthetic, sample containers, such as cryovials (subject to desires of research participants), and other small items will be supplied by agency biologists in the course of large river work. Research participants selected from among respondents to this RFP shall supply sufficient equipment to conduct sampling of smaller tributary habitats, containers for transportation of samples collected by themselves, and all necessary laboratory equipment to conduct their area of investigation. Morphological contractors who will conduct data gathering via imagery techniques in the course of non-lethal sampling shall supply the necessary equipment to accomplish this by their desired method. See also Sec. J, Attach. 1, pp. 24-28.

C.7 COLLECTING PERMITS

Because endangered species will be involved in the Gila Taxonomy Project, it will be necessary for research participants to obtain permits to collect and/or possess specimens or tissues taken therefrom. These will be granted by various federal and state agencies and the Project Manager will assure that contractors have all necessary permits and assist them with procurement if necessary.

C.8 DISPOSITION OF RESEARCH MATERIALS

See Sec. J, Attach. 1, p. 28.

C.9 PARTICIPATION IN REPORT PREPARATION, INFORMATION EXCHANGE, AND MEETINGS

Research participants shall cooperate with the Project Manager by supplying information necessary for the preparation of semi-annual progress reports. Near project's end, these participants shall cooperate with the Project Manager and the Review Panel in preparation of a comprehensive final report of findings for the Project. Information for semi-annual reports should be to the Project Manager two weeks prior to reporting dates (i.e., by approximately 15 March and 15 Sept. each year). The majority of input to the final report should be available to the Project Manager three months prior to the reporting date which will be designated during the research phase, based on anticipated completion, and with sufficient notice (12 mo. prior to final report date) to investigators. As stated above in Sections C.4.2 - C.4.5, it will be absolutely imperative for research

participants from each area of investigation to freely exchange information with contractors in other areas to successfully accomplish the research needs of the Project. Failure to do so will necessitate dismissal from the project.

Two meetings of contractors, the Review Panel, and Project Manager will be convened in Denver, Colorado approximately one year apart to evaluate progress and needed modifications to the project. The first is tentatively scheduled for June, 1991.

SECTION D
PACKAGING AND MARKING

D.1 PACKAGING

No special requirements for packaging of any items for this acquisition beyond normal, commercial methods are required.

SECTION E
INSPECTION AND ACCEPTANCE

E.1 52.246-4 INSPECTION OF SERVICES -- FIXED-PRICE (APR 1984)

(a) Definitions. "Services," as used in this clause, includes services performed, workmanship, and material furnished or utilized in the performance of services.

(b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.

(c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all times and places during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.

(d) If any of the services do not conform with contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, at no increase in contract amount. When the defects in services cannot be corrected by reperformance, the Government may (1) require the Contractor to take necessary action to ensure that future performance conforms to contract requirements and (2) reduce the contract price to reflect the reduced value of the services performed.

(e) If the Contractor fails to promptly perform the services again or to take the necessary action to ensure future performance in conformity with contract requirements, the Government may (1) by contract or otherwise, perform the services and charge to the Contractor any cost incurred by the Government that is directly related to the performance of such service or (2) terminate the contract for default.

E.2 ACCEPTANCE

Final acceptance of all work performed and all deliverables submitted under the contract will be accomplished by the Contracting Officer. Quality of work is subject to the verification and approval of the Contracting Officer's Technical Representative (COTR) with final payment to be withheld pending completion of any rework by the Contractor which is deemed necessary to bring the deliverables into compliance with the contract provisions.

SECTION F
DELIVERIES OR PERFORMANCE

F.1 REPORT PREPARATION

F.1.1 Semi-annual Report. As outlined in Section C.9 of this contract/solicitation, research participants shall cooperate with the Project Manager by supplying information necessary for the preparation of semi-annual progress reports. Information for semi-annual reports should be to the Project Manager two weeks prior to reporting dates (i.e., by approximately 15 March and 15 Sept. each year).

F.1.2 Final Report. The majority of input to the final report should be available to the Project Manager three months prior to the reporting date which will be designated during the research phase, based on anticipated completion, and with sufficient notice (12 mo. prior to final report date) to investigators.

F.2 MEETINGS

Two meetings of contractors, the Review Panel, and Project Manager will be convened in Denver, Colorado approximately one year apart to evaluate progress and needed modifications to the project. The first is tentatively scheduled for June, 1991.

SECTION G
CONTRACT ADMINISTRATION DATA

G.1 GOVERNMENT ADMINISTRATION PERSONNEL--RECLAMATION (APR 1989)

The contracting office representative responsible for overall administration of this contract is:

Richard Mingo, UC-811
Bureau of Reclamation
125 South State Street
PO Box 11568
Salt Lake City UT 84147
Phone: (801) 524-4078

G.2 CONTRACTOR'S ADMINISTRATION PERSONNEL--RECLAMATION
(APR 1989)

Offerors shall designate a person who will be in charge of overall administration of this contract:

Name: _____
Title: _____
Address: _____
City and State: _____
Telephone No.: _____
(Include Area Code)

G.3 CONTRACTOR TECHNICAL SUBMITTAL PERSONNEL

Please designate a person who will be responsible for submittal of technical data and drawings:

Name: _____
Title: _____
Address: _____
City & State: _____
Area Code and Telephone: _____

G.4 CONTRACTOR'S PAYMENT PERSONNEL--RECLAMATION (APR 1989)

Offerors shall designate the person who may be contacted for bank account and/or payment information.

Name: _____
Title: _____
Address: _____
City and State: _____
Telephone No.: _____
(Include Area Code)

G.5 REMITTANCE ADDRESS--RECLAMATION (OCT 1987)

Offerors shall indicate below the complete mailing address to which remittances should be mailed if such address is other than that included in Block 15A of the Standard Form 33:

G.6 CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE - RECLAMATION (APR 1989)

The performance of work hereunder will be subject to the technical direction of a contracting officer's technical representative who will be appointed, in writing, by the Contracting Officer after contract award.

SECTION H
SPECIAL CONTRACT PROVISIONS

H.1 KEY PERSONNEL

If identified as key personnel in this contract, such personnel are considered to be essential to the work being performed hereunder. Prior to diverting any of the specified individuals to other programs or making substitutions of personnel, the Contractor shall notify the Contracting Officer reasonably in advance and shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation of such changes to the contract effort. No changes in key personnel shall be made by the Contractor without the written consent of the Contracting Officer; provided, that the Contracting Officer may ratify in writing such changes and such ratification shall constitute the consent of the Contracting Officer required by this clause. If key personnel are found to devote less effort than anticipated at the time of contract award or are performing unsatisfactorily, the Contracting Officer may direct replacement of such personnel, by contract modification, or contract termination, as appropriate.

The following are hereby designated as key personnel:

Title: _____ Name: _____
Title: _____ Name: _____

H.2 INVOICE REQUIREMENTS (May 1988)

To assist the Government in making timely payments, the Contractor is requested to furnish the original invoice to the Contracting Officer at the following address:

Bureau of Reclamation
Attention: Code UC-810
PO Box 115768
Salt Lake City UT 84147

At the same time, please furnish a copy of the invoice to the Contracting Officer's Technical Representative at the following address:

Mr. Bob Williams
Bureau of Reclamation
Attention: UC-771
PO Box 11568
Salt Lake City UT 84147

Please indicate below the complete mailing address to which remittances should be mailed if such address is other than that included in Block 15A of the Standard Form 33:

H.3 PERMITS AND RESPONSIBILITIES - SAFETY AND HEALTH--
RECLAMATION (MAR 1986)

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

(b) Inspection or testing. The facilities and assistance required to be provided for the safety and health of Government Inspectors and/or Contracting Officer's Technical Representatives pursuant to the clause of this contract entitled "Inspection," shall comply with nationally recognized safety and health standards, codes, and regulations, except when otherwise prescribed by the contract.

(c) Responsibilities. In addition to being responsible for damages resulting from its fault or negligence, the Contractor shall be responsible for all damages to persons or property, except damages caused by the Government.

H.4 1452.204-70 RELEASE OF CLAIMS--DEPARTMENT OF THE INTERIOR
(APR 1984)

After completion of work and prior to final payment, the Contractor shall furnish to the Contracting Officer a release of claims (DI-137) against the United States relating to this contract, other than claims excepted from the operation of the release.

SECTION I
CONTRACT CLAUSES

I.1 AUTHORITY

I.1.1 52.202-1 DEFINITIONS (APR 1984)

(a) "Head of the agency" (also called "agency head") or "Secretary" means the Secretary (or Attorney General, Administrator, Governor, Chairperson, or other chief official, as appropriate) of the agency, including any deputy or assistant chief official of the agency, and, in the Department of Defense, the Under Secretary and any Assistant Secretary of the Departments of the Army, Navy, and Air Force and the Director and Deputy Director of Defense agencies; and the term "authorized representative" means any person, persons, or board (other than the Contracting Officer) authorized to act for the head of the agency or Secretary.

(b) "Contracting Officer" means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(c) Except as otherwise provided in this contract, the term "subcontracts" includes, but is not limited to, purchase orders and changes and modifications to purchase orders under this contract.

1.1.2 52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE
CERTAIN FEDERAL TRANSACTIONS (JAN 1990)

(a) Definitions.

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

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

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

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian

Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

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

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

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

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

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

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

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

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

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

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment

in an amount that is consistent with the amount normally paid for such services in the private sector.

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

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

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

(b) Prohibitions.

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

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

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

(i) Agency and legislative liaison by own employees.

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

(B) For purposes of subdivision (b) (3) M (A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

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

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

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

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

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

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

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

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

(ii) Professional and technical services.

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

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

(2) Any reasonable payment to a person, other than an officer or employee of an person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable

under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

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

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

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

(iii) Disclosure.

(A) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b) (1) of this clause, if paid for with appropriated funds.

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

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

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

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

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

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

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

(v) Penalties.

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

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

(vi) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provision.

1.1.3 52.215-1 EXAMINATION OF RECORDS BY COMPTROLLER
GENERAL (APR 1984)

(a) This clause applies if this contract exceeds \$10,000 and was entered into by negotiation.

(b) The Comptroller General of the United States or a duly authorized representative from the General Accounting Office shall, until 3 years after final payment under this contract or for any shorter period specified in Federal Acquisition Regulation (FAR) Subpart 4.7, Contractor Records Retention, have access to and the right to examine any of the Contractor's directly pertinent books, documents, papers, or other records involving transactions related to this contract.

(c) The Contractor agrees to include in first-tier subcontracts under this contract a clause to the effect that the Comptroller General or a duly authorized representative from the General Accounting Office shall, until 3 years after final payment under the subcontract or for any shorter period specified in FAR Subpart 4.7, have access to and right to examine any of the subcontractor's directly pertinent books, documents, papers, or other records involving transactions related to the subcontract. "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 to apply uniformly to the public, plus any applicable reasonable connection charge.

(d) The periods of access and examination in paragraphs (b) and (c) above for records relating to (1) appeals under the Disputes clause, (2) litigation or settlement of claims arising from the performance of this contract, or (3) costs and expenses of this contract to which the Comptroller General or a duly authorized representative from the General Accounting Office has taken exception shall continue until such appeals, litigation, claims, or exceptions are disposed of.

1.1.4 52.215-2 AUDIT--NEGOTIATION (DEC 1989)

(a) Examination of costs. If this is a cost-reimbursement, incentive, time-and-materials, labor-hour, or price-redeterminable contract, or any combination of these, the Contractor shall maintain -- and the Contracting Officer or representatives of the Contracting Officer shall have the right to examine and audit -- books, records, documents, and other evidence and accounting procedures and practices, regardless of form (e.g., machine readable media such as disk, tape, etc.) or type (e.g., data bases, applications software, data base management software, utilities, etc.), sufficient to reflect properly all costs claimed to have been incurred or anticipated to be incurred in performing this contract. This right of examinations shall include inspection at all reasonable times of the Contractor's plants, or parts of them, engaged in performing the contract.

(b) Cost or pricing data. If, pursuant to law, the Contractor has been required to submit cost or pricing data in connection with pricing this contract or any modification to this contract, the Contracting Officer or representatives of the Contracting Officer who are employees of the Government shall have the right to examine and audit all of the Contractor's books, records, documents, and other data, regardless of form (e.g., machine readable media such as disk, tape, etc.) or type (e.g., data bases, applications software, data base management software, utilities, etc.), including computations and projections, related to proposing, negotiating, pricing, or

performing the contract or modification, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data. The right of examination shall extend to all documents necessary to permit adequate evaluation of the cost or pricing data submitted, along with the computations and projections used.

(c) Reports. If the Contractor is required to furnish cost, funding, or performance reports, the Contracting Officer or representatives of the Contracting Officer who are employees of the Government shall have the right to examine and audit books, records, other documents, and supporting materials, for the purpose of evaluating (1) the effectiveness of the Contractor's policies and procedures to produce data compatible with the objectives of these reports and (2) the data reported.

(d) Availability. The Contractor shall make available at its office at all reasonable times the materials described in paragraphs (a) and (b) above, for examination, audit, or reproduction, until 3 years after final payment under this contract, or for any shorter period specified in Subpart 4.7, Contractor Records Retention, of the Federal Acquisition Regulation, or for any longer period required by statute or by other clauses of this contract. In addition--

(1) If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement; and

(2) Records relating to appeals under the Disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are disposed of.

(e) Except as otherwise provided in FAR Subpart 4.7, Contractor Records Retention, the Contractor may transfer computer data in machine readable form from one reliable computer medium to another. The Contractor's computer data retention and transfer procedures shall maintain the integrity, reliability, and security of the original data. The contractor's choice of form or type of materials described in paragraphs (a), (b), and (c) of this clause affects neither the Contractor's obligations nor the Government's rights under this clause.

(f) The Contractor shall insert a clause containing all the terms of this clause, including this paragraph (f), in all subcontracts over \$10,000 under this contract, altering the clause only as necessary to identify properly the contracting parties and the Contracting Officer under the Government prime contract.

1.1.5 52.215-33 ORDER OF PRECEDENCE (JAN 1986)

Any inconsistency in this solicitation or contract shall be resolved by giving precedence in the following order: (a) the Schedule (excluding the specifications); (b) representations and other instructions; (c) contract clauses; (d) other documents, exhibits, and attachments; and (e) the specifications.

1.1.6 52.227-1 AUTHORIZATION AND CONSENT (APR 1984)

(a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted.

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed \$25,000; however, omission of this clause from any subcontract, under or over \$25,000, does not affect this authorization and consent.

1.1.7 52.233-1 DISPUTES (APR 1984)

(a) This contract is subject to the Contract Disputes Act of 1978 (41 U.S.C. 601-613) (the Act).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) "Claim," as used in this clause, means a written demand or a written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. A claim arising under a contract, unlike a claim relating to that contract, is a

claim that can be resolved under a contract clause that provides for the relief sought by the claimant. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$50,000 is not a claim under the Act until certified as required by subparagraph (d) (2) below. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d) (1) A claim by the Contractor shall be made in writing and submitted to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2) For Contractor claims exceeding \$50,000, the Contractor shall submit with the claim a certification that--

- (i) The claim is made in good faith;
- (ii) Supporting data are accurate and complete to the best of the Contractor's knowledge and belief; and
- (iii) The amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable.

(3) (i) If the Contractor is an individual, the certification shall be executed by that individual.

(ii) If the Contractor is not an individual, the certification shall be executed by--

(A) A senior company official in charge at the Contractor's plant or location involved; or

(B) An officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs.

(e) For Contractor claims of \$50,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$50,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (properly certified if required), or (2) the date payment otherwise would be due, if that date is later, until the date of payment. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(h) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

1.1.8 52.244-1 SUBCONTRACTS (FIXED-PRICE CONTRACTS)
(JAN 1986)

(a) This clause does not apply to firm-fixed-price contracts and fixed-price contracts with economic price adjustment. However, it does apply to subcontracts resulting from unpriced modifications to such contracts.

(b) "Subcontract," as used in this clause, includes but is not limited to purchase orders, and changes and modifications to purchase orders. The Contractor shall notify the Contracting Officer reasonably in advance of entering into any subcontract if the Contractor does not have an approved purchasing system and if the subcontract--

(1) Is to be a cost-reimbursement, time and materials, or labor-hour contract estimated to exceed \$25,000 including any fee;

(2) Is proposed to exceed \$100,000; or

(3) Is one of a number of subcontracts with a single subcontractor, under this contract, for the same or related supplies or services, that in the aggregate are expected to exceed \$100,000.

(c) The advance notification required by paragraph (b) above shall include--

(1) A description of the supplies or services to be subcontracted;

(2) Identification of the type of subcontract to be used;

(3) Identification of the proposed subcontractor and an explanation of why and how the proposed subcontractor was selected, including the competition obtained;

(4) The proposed subcontract price and the Contractor's cost or price analysis;

(5) The subcontractor's current, complete, and accurate cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions;

(6) The subcontractor's Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract; and

(7) A negotiation memorandum reflecting--

(i) The principal elements of the subcontract price negotiations;

(ii) The most significant considerations controlling establishment of initial or revised prices;

(iii) The reason cost or pricing data were or were not required;

(iv) The extent, if any, to which the Contractor did not rely on the subcontractor's cost or pricing data in determining the price objective and in negotiating the final price;

(v) The extent, if any, to which it was recognized in the negotiation that the subcontractor's cost or pricing data were not accurate, complete, or current; the action taken by the Contractor and subcontractor and the effect of any such defective data on the total price negotiated;

(vi) The reasons for any significant difference between the Contractor's price objective and the price negotiated; and

(vii) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.

(d) The Contractor shall obtain the Contracting Officer's written consent before placing any subcontract for which advance notification is required under paragraph (b) above. However, the Contracting Officer may ratify in writing any such subcontract. Ratification shall constitute the consent of the Contracting Officer.

(e) Even if the Contractor's purchasing system has been approved, the Contractor shall obtain the Contracting Officer's written consent before placing subcontracts that have been selected for special surveillance and so identified in the Schedule of this contract.

(f) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination (1) of the acceptability of any subcontract terms or conditions, (2) of the acceptability of any subcontract price or of any amount paid under any subcontract, or (3) to relieve the Contractor of any responsibility for performing this contract.

(g) No subcontract placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement subcontracts shall not exceed the fee limitations in subsection 15.903(d) of the Federal Acquisition Regulation (FAR).

(h) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.

1.1.9 52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

1.1.10 1452.215-70 EXAMINATION OF RECORDS BY THE DEPARTMENT OF INTERIOR (APR 1984)

For purposes of the Examination of Records by the Comptroller General (Apr 1984) clause of this contract (FAR 52.214-1), the Secretary of the Interior, the Inspector General, and their duly authorized representative(s) from the Department of the Interior shall have the same access and examination rights as the Comptroller General of the United States.

I.1.11 AUTHORITIES AND LIMITATIONS--RECLAMATION (APR 1989)

(a) Authority to modify this contract on behalf of the Government is expressly limited to authorized persons (see 48 CFR 43.102) who are properly designated as Contracting Officers in accordance with 48 CFR 1.6 and 48 CFR 1401.6.

(b) Authority of the Contracting Officer's Technical Representative, properly appointed as such in accordance with 48 CFR 1401.670, is limited to the duties which will be set forth in the designation letter which will be prepared after contract award and is subject to the limitations of 48 CFR 1401.670. A copy of the designation letter will be forwarded to the Contractor for acknowledgement and internal record purposes.

(c) Except as otherwise may be expressly provided in this contract, the Contractor assumes all risks, liabilities, and consequences of performing this contract in accordance with any written or oral order (including but not limited to direction, instruction, interpretation, or determination) of a person not authorized in writing to issue such an order.

1.1.12 COMPLIANCE WITH GOVERNMENT ORDERS--RECLAMATION (APR 1989)

(a) Except as provided in (b) below, the Contractor shall, without unnecessary delay, comply with any written or oral order of the Contracting Officer or his or her authorized representative. For the purpose of this clause, written or oral order includes any direction, instruction, interpretation, or determination, including those related to drawings, other technical data, samples, and literature.

(b) If the Contractor considers that the order was issued without proper authority, it may (and if it also considers such order to be a change pursuant to paragraph (b) of the Changes clause of this contract, it shall) immediately request written confirmation from the Contracting Officer, and any performance pending receipt of such confirmation shall be subject to the provisions of paragraph (c) of the Authorities and Limitations clause of this contract.

1.2 PERFORMANCE

1.2.1 52.203-6 RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (JUL 1985)

(a) Except as provided in (b) below, the Contractor shall not enter into any agreement with an actual or prospective subcontractor, nor otherwise act in any manner, which has or may have the effect of restricting sales by such subcontractors

directly to the Government of any item or process (including computer software) made or furnished by the subcontractor under this contract or under any follow-on production contract.

(b) The prohibition in (a) above does not preclude the Contractor from asserting rights that are otherwise authorized by law or regulation.

(c) The Contractor agrees to incorporate the substance of this clause, including this paragraph (c), in all subcontracts under this contract.

1.2.2 52.203-10 REMEDIES FOR ILLEGAL OR IMPROPER ACTIVITY
(MAY 1989)

(a) The Government, at its election, may reduce the price of a fixed-price-type contract or contract modification and the total cost and fee under a cost-type contract or contract modification by the amount of profit or fee determined as set forth in paragraph (c) of this clause if the head of the agency or his or her designee, determines that there was a violation of subsection 27(a) of the Office of Federal Procurement Policy Act (41 U.S.C. 423) as implemented in the FAR. In the case of a contract modification the fee subject to reduction is the fee associated with the particular contract modification.

(b) Prior to making such a fee or profit reduction, the agency head or his or her designee shall provide to the Contractor a written notice of the action being considered and the basis therefor. The Contractor shall have a period determined by the agency head or his or her designee, but in no event less than 30 calendar days after receipt of such notice to submit in person, in writing, or through a representative, information and argument in opposition to the proposed reduction. The agency head or his or her designee may, upon good cause shown, determine to reduce the contract or contract modification price or fee by an amount which is less than the amount determined under paragraph (c) of this clause.

(c) The price or fee reduction referred to in paragraph (a) of this clause shall be--

(1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;

(2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award notwithstanding any minimum fee or "fee floor" specified in the contract.

(3) For cost-plus-award-fee contracts--

(i) The base fee established in the contract at the time of contract award;

(ii) If no base fee is specified in the contract, 10 percent of the amount of each award fee otherwise payable to the Contractor for each incentive period or at each award fee determination point;

(4) For fixed-price-incentive contracts, the Government may--

(i) Reduce the contract target price and contract target profit both by an amount equal to the initial target profit specified in the contract at the time of contract award;

(ii) When the contract provides for multiple deliverables, reduce the amount otherwise payable to the Contractor upon each delivery and acceptance by an amount determined by the Contracting Officer to be the profit portion of each payable amount until the cumulative total of such reductions is equal to the initial target profit amount specified in the contract at the time of contract award;

(iii) In addition to any other withholdings, retentions or reserves, reduce the amount of progress payments otherwise payable in connection with each invoice or voucher properly submitted by the Contractor for payment until the aggregate progress payments amounts so withheld equal the initial target profit established at the time of contract award; or

(iv) If the Government elects either (c) (4) (ii) or (iii) of this clause, at the time of total final price establishment, the price established in accordance with the incentive price revision provisions of the contract shall be reduced by an amount equal to the amount of initial target profit specified in the contract at the time of contract award and such reduced price shall be the total final contract price. Any progress payments amounts retained by the Government in (c) (4) (iii) of this clause shall be returned to the Contractor, if appropriate.

(5) For firm-fixed-price contract or contract modifications, by 10 percent of the initial contract price; 10 percent of the contract modification price; or a profit amount determined by the Contracting Officer from records or documents in existence prior to the date of the contract award or modification.

(d) The Government may, at its election, reduce a prime Contractor's price or fee in accordance with the procedures of paragraphs (b) and (c) of this clause for violations of the Act by its subcontractors by an amount not to exceed the amount of

profit or fee reflected in the subcontract at the time the subcontract was first definitively priced.

(e) In addition to the remedy in paragraph (a) of this clause, the Government may terminate this contract or modification for default. The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this contract.

1.2.3 52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN
SUBCONTRACTING WITH CONTRACTORS DEBARRED,
SUSPENDED, OR PROPOSED FOR DEBARMENT (MAY 1989)

(a) The Government suspends or debar Contractors to protect the Government's interests. Contractors shall not enter into any subcontract equal to or in excess of \$25,000 with a Contractor that has been debarred, suspended, or proposed for debarment unless there is a compelling reason to do so. If a Contractor intends to subcontract with a party that is debarred, suspended, or proposed for debarment (see FAR 9.404 for information on the list of Parties Excluded from Procurement Programs), a corporate officer or designee of the Contractor shall notify the Contracting Officer, in writing, before entering into such subcontract. The notice must include the following:

- (1) The name of the subcontractor;
- (2) The Contractor's knowledge of the reasons for the subcontractor being on the list of Parties Excluded from Procurement Programs;
- (3) The compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion on the list of Parties Excluded from Procurement Programs; and
- (4) The systems and procedures the Contractor has established to ensure that it is fully protecting the Government's interests when dealing with such subcontractor in view of the specific basis for the party's debarment, suspension, or proposed debarment.

(b) The Contractor's compliance with the requirements of 52.209-6 will be reviewed during Contractor Purchasing System Reviews (see FAR Subpart 44.3).

1.2.4 52.212-12 SUSPENSION OF WORK (APR 1984)

(a) The Contracting Officer may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract.

(c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

1.2.5 52.212-13 STOP-WORK ORDER (AUG 1989)

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either-

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

1.2.6 52.219-14 LIMITATIONS ON SUBCONTRACTING (OCT 1987)

By submission of an offer and execution of a contract, the Offeror/Contractor agrees that in performance of the contract in the case of a contract for--

(a) Services (except construction). At least 50 percent of the cost of contract performance incurred for personnel shall be expended for employees of the concern.

(b) Supplies (other than procurement from a regular dealer in such supplies). The concern shall perform work for at least 50 percent of the cost of manufacturing the supplies, not including the cost of materials.

(c) General construction. The concern will perform at least 15 percent of the cost of the contract, not including the cost of materials, with its own employees.

(d) Construction by special trade contractors. The concern will perform at least 25 percent of the cost of the contract, not including the cost of materials, with its own employees.

1.2.7 52.223-6 DRUG-FREE WORKPLACE (MAR 1989)

(a) Definitions. As used in this clause,

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1.2.8 52.225-12 NOTICE OF RESTRICTIONS ON CONTRACTING WITH SANCTIONED PERSONS (MAY 1989)

(a) Statutory prohibitions have been imposed on contracting with sanctioned persons, as specified in Federal Acquisition Regulation (FAR) 42.225-13, Restrictions on Contracting with Sanctioned Persons.

(b) By submission of this offer, the Offeror represents that no products or services, except those listed in this paragraph (b), delivered to the Government under any contract resulting from this solicitation will be products or services of a sanctioned person, as defined in the clause referenced in paragraph (a) of this provision, unless one of the exceptions in paragraph (d) of the clause at FAR 52.225-13 applies.

<u>Product or Service</u>	<u>Sanctioned Person</u>
---------------------------	--------------------------

(List as necessary)

1.2.9 52.225-13 RESTRICTIONS ON CONTRACTING WITH SANCTIONED PERSONS (MAY 1989)

(a) Definitions. (1) "Component part" means any article which is not usable for its intended functions without being imbedded or integrated into any other product and which, if used in production of a finished product, would be substantially transformed in that process.

(2) "Finished product" means any article which is usable for its intended function without being imbedded in, or integrated into, any other product. It does not include an article produced by a person, other than a sanctioned person, that contains parts or components of the sanctioned person if the parts or components have been substantially transformed during production of the finished product.

(3) "Sanctioned person" means a company or other foreign person upon whom prohibitions have been imposed.

(4) "Substantially transformed," when referring to a component part or finished product, means that the part or product has been subjected to a substantial manufacturing or processing operation by which the part or product is converted or combined into a new and different article of commerce having a new name, character, and use.

(b) General. Section 2443 of the Multilateral Export Control Enhancement Amendments Act (Pub. L. 100-418) and Executive Order 12661, effective December 28, 1988, impose, for a period of 3 years, with certain exceptions, a prohibition on contracting with, or procuring (including rental and lease/purchase) directly or indirectly the products or services of (1) Toshiba Machine Company, (2) Kongsberg Trading Company, (3) Toshiba Corporation, or (4) Kongsberg Vaapenfabrikk. The Act and Executive Order also prohibit, for the same 3-year period, the importation into the United States of all Products produced by Toshiba Machine Company and Kongsberg Trading Company. These prohibitions also apply to subsidiaries, successor entities or joint ventures of Toshiba Machine Company or Kongsberg Trading Company.

(c) Restriction. Unless listed by the Contractor in its offer, in the solicitation provision at FAR 52.225-12, Notice of Restrictions on Contracting with Sanctioned Persons, or unless one of the exceptions in paragraph (d) of this clause applies, the Contractor agrees that no products or services delivered to the Government under this contract will be products or services of a sanctioned person.

(d) Exceptions. The restrictions do not apply--

(1) To finished products of nonsanctioned persons containing components of a sanctioned person if these components have been substantially transformed during the manufacture of the finished product.

(2) To products or services of a sanctioned person provided--

(i) The products are designed to the specifications of a nonsanctioned person marketed under the trademark, brand or name of the nonsanctioned person;

(ii) The business relationship between the nonsanctioned person and the sanctioned person clearly existed prior to June 30, 1987; and

(iii) The nonsanctioned person is not directly or indirectly owned by a sanctioned person.

(3) If a determination has been made in accordance with FAR 25.1003(a) or (b).

(e) Award. Award of any contract resulting from this solicitation will not affect the Contractor's obligation to comply with importation regulations of the Secretary of the Treasury.

1.2.10 52.227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (APR 1984)

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement rising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(c) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the dollar amount set forth in 13.000 of the Federal Acquisition Regulation (FAR).

1.2.11 52.227-14 RIGHTS IN DATA--GENERAL (JUN 1987)

(a) Definitions.

"Computer software," as used in this clause, means computer programs, computer data bases, and documentation thereof.

"Data," as used in this clause, means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software. The term does not include information incidental to contract administration, such as financial, administrative, cost or pricing, or management information.

"Form, fit, and function data," as used in this clause, means data relating to items, components, or processes that are

sufficient to enable physical and functional interchangeability, as well as data identifying source, size, configuration, mating, and attachment characteristics, functional characteristics, and performance requirements; except that for computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithm, process, formulae, and flow charts of the software.

"Limited rights," as used in this clause, means the rights of the Government in limited rights data as set forth in the Limited Rights Notice of subparagraph (g) (2) if included in this clause.

"Limited rights data," as used in this clause, means data (other than computer software) that embody trade secrets or are commercial or financial and confidential or privileged, to the extent that such data pertain to items, components, or processes developed at private expense, including minor modifications thereof.

"Restricted computer software," as used in this clause, means computer software developed at private expense and that is a trade secret; is commercial or financial and is confidential or privileged; or is published copyrighted computer software; including minor modifications of such computer software.

"Restricted rights," as used in this clause, means the rights of the Government in restricted computer software, as set forth in a Restricted Rights Notice of subparagraph (g) (3) if included in this clause, or as otherwise may be provided in a collateral agreement incorporated in and made part of this contract, including minor modifications of such computer software.

"Technical data," as used in this clause, means data (other than computer software) which are of a scientific or technical nature.

"Unlimited rights," as used in this clause, means the right of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose, and to have or permit others to do so.

(b) Allocation of rights.

(1) Except as provided in paragraph (c) of this clause regarding copyright, the Government shall have unlimited rights in--

(i) Data first produced in the performance of this contract;

(ii) Form, fit, and function data delivered under this contract;

(iii) Data delivered under this contract (except for restricted computer software) that constitute manuals or instructional and training material for installation, operation, or routine maintenance and repair of items, components, or processes delivered or furnished for use under this contract; and

(iv) All other data delivered under this contract unless provided otherwise for limited rights data or restricted computer software in accordance with paragraph (g) of this clause.

(2) The Contractor shall have the right to--

(i) Use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of this contract, unless provided otherwise in paragraph (d) of this clause;

(ii) Protect from unauthorized disclosure and use those data which are limited rights data or restricted computer software to the extent provided in paragraph (g) of this clause;

(iii) Substantiate use of, add or correct limited rights, restricted rights, or copyright notices and to take other appropriate action, in accordance with paragraphs (e) and (f) of this clause; and

(iv) Establish claim to copyright subsisting in data first produced in the performance of this contract to the extent provided in subparagraph (c) (1) of this clause.

(c) Copyright.

(1) Data first produced in the performance of this contract. Unless provided otherwise in paragraph (d) of this clause, the Contractor may establish, without prior approval of the Contracting Officer, claim to copyright subsisting in scientific and technical articles based on or containing data first produced in the performance of this contract and published in academic, technical or professional journals, symposia proceedings or similar works. The prior, express written permission of the Contracting Officer is required to establish claim to copyright subsisting in all other data first produced in the performance of this contract. When claim to copyright is made, the Contractor shall affix the applicable copyright notices of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship (including contract number) to the data when such data are delivered to the Government, as well as when the data are published or deposited for registration as a published work

in the U.S. Copyright Office. For data other than computer software the Contractor grants to the Government, and others acting on its behalf, a paid-up, nonexclusive, irrevocable worldwide license in such copyrighted data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government. For computer software, the Contractor grants to the Government and others acting in its behalf, a paid-up nonexclusive, irrevocable worldwide license in such copyrighted computer software to reproduce, prepare derivative works, and perform publicly and display publicly by or on behalf of the Government.

(2) Data not first produced in the performance of this contract. The Contractor shall not, without prior written permission of the Contracting Officer, incorporate in data delivered under this contract any data not first produced in the performance of this contract and which contains the copyright notice of 17 U.S.C. 401 or 402, unless the Contractor identifies such data and grants to the Government, or acquires on its behalf, a license of the same scope as set forth in subparagraph (c) (1) of this clause; provided, however, that if such data are computer software the Government shall acquire a copyright license as set forth in subparagraph (g) (3) of this clause if included in this contract or as otherwise may be provided in a collateral agreement incorporated in or made part of this contract.

(3) Removal of copyright notices. The Government agrees not to remove any copyright notices placed on data pursuant to this paragraph (c), and to include such notices on all reproductions of the data.

(d) Release, publication and use of data.

(1) The Contractor shall have the right to use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of this contract, except to the extent such data may be subject to the Federal export control or national security laws or regulations, or unless otherwise provided in this paragraph of this clause or expressly set forth in this contract.

(2) The Contractor agrees that to the extent it receives or is given access to data necessary for the performance of this contract which contain restrictive markings, the Contractor shall treat the data in accordance with such markings unless otherwise specifically authorized in writing by the Contracting Officer.

(e) Unauthorized marking of data. Notwithstanding any other provisions of this contract concerning inspection or acceptance, if any data delivered under this contract are marked

with the notices specified in subparagraph (g) (2) or (g) (3) of this clause and use of such is not authorized by this clause, or if such data bears any other restrictive or limited markings not authorized by this contract, the Contracting Officer may at any time either return the data to the Contractor, or cancel or ignore the markings. However, the following procedures shall apply prior to canceling or ignoring the markings.

(i) The Contracting Officer shall make written inquiry to the Contractor affording the Contractor 30 days from receipt of the inquiry to provide written justification to substantiate the propriety of the markings;

(ii) If the Contractor fails to respond or fails to provide written justification to substantiate the propriety of the markings within the 30-day period (or a longer time not exceeding 90 days approved in writing by the Contracting Officer for good cause shown), the Government shall have the right to cancel or ignore the markings at any time after said period and the data will no longer be made subject to any disclosure prohibitions.

(iii) If the Contractor provides written justification to substantiate the propriety of the markings within the period set in subdivision (e) (1) (i) of this clause, the Contracting Officer shall consider such written justification and determine whether or not the markings are to be canceled or ignored. If the Contracting Officer determines that the markings are authorized, the Contractor shall be so notified in writing. If the Contracting Officer determines, with concurrence of the head of the contracting activity, that the markings are not authorized, the Contracting Officer shall furnish the Contractor a written determination, which determination shall become the final agency decision regarding the appropriateness of the markings unless the Contractor files suit in a court of competent jurisdiction within 90 days of receipt of the Contracting Officer's decision. The Government shall continue to abide by the markings under this subdivision (e) (1) (iii) until final resolution of the matter either by the Contracting Officer's determination becoming final (in which instance the Government shall thereafter have the right to cancel or ignore the markings at any time and the data will no longer be made subject to any disclosure prohibitions), or by final disposition of the matter by court decision if suit is filed.

(2) The time limits in the procedures set forth in subparagraph (e) (1) of this clause may be modified in accordance with agency regulations implementing the Freedom of Information Act (5 U.S.C. 552) if necessary to respond to a request thereunder.

(3) This paragraph (e) does not apply if this contract is for a major system or for support of a major system by a civilian agency other than NASA and the U.S. Coast Guard agency subject to the provisions of Title III of the Federal Property and Administrative Services Act of 1949.

(4) Except to the extent the Government's action occurs as the result of final disposition of the matter by a court of competent jurisdiction, the Contractor is not precluded by this paragraph (e) from bringing a claim under the Contract Disputes Act, including pursuant to the Disputes clause of this contract, as applicable, that may arise as the result of the Government removing or ignoring authorized markings on data delivered under this contract.

(f) Omitted or incorrect markings.

(1) Data delivered to the Government without either the limited rights or restricted rights notice as authorized by paragraph (g) of this clause, or the copyright notice required by paragraph (c) of this clause, shall be deemed to have been furnished with unlimited rights, and the Government assumes no liability for the disclosure, use, or reproduction of such data. However, to the extent the data has not been disclosed without restriction outside the Government, the Contractor may request, within 6 months (or a longer time approved by the Contracting Officer for good cause shown) after delivery of such data, permission to have notices placed on qualifying data at the Contractor's expense, and the Contracting Officer may agree to do so if the Contractor--

(i) Identifies the data to which the omitted notice is to be applied:

(ii) Demonstrates that the omission of the notice was inadvertent;

(iii) Establishes that the use of the proposed notice is authorized; and

(iv) Acknowledges that the Government has no liability with respect to the disclosure, use, or reproduction of any such data made prior to the addition of the notice or resulting from the omission of the notice.

(2) The Contracting Officer may also (i) permit correction at the Contractor's expense of incorrect notices if the Contractor identifies the data on which correction of the notice is to be made, and demonstrates that the correct notice is authorized, or (ii) correct any incorrect notices.

(g) Protection of limited rights data and restricted computer software.

(1) When data other than that listed in subdivisions (b) (1) (i), (ii), and (iii) of this clause are specified to be delivered under this contract and qualify as either limited rights data or restricted computer software, if the Contractor desires to continue protection of such data, the Contractor shall withhold such data and not furnish them to the Government under this contract. As a condition to this withholding, the Contractor shall identify the data being withheld and furnish form, fit, and function data in lieu thereof. Limited rights data that are formatted as a computer data base for delivery to the Government are to be treated as limited rights data and not restricted computer software.

(2) [Reserved]

(3) [Reserved]

(h) Subcontracting. The Contractor has the responsibility to obtain from its subcontractors all data and rights therein necessary to fulfill the Contractor's obligations to the Government under this contract. If a subcontractor refuses to accept terms affording the Government such rights, the Contractor shall promptly bring such refusal to the attention of the Contracting Officer and not proceed with subcontract award without further authorization.

(i) Relationship to patents. Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government.

1.2.12 52.237-3 CONTINUITY OF SERVICES (APR 1984)

(a) The Contractor recognizes that the services under this contract are vital to the Government and must be continued without interruption and that, upon contract expiration, a successor, either the Government or another contractor, may continue them. The Contractor agrees to (1) furnish phase-in training and (2) exercise its best efforts and cooperation to effect an orderly and efficient transition to a successor.

(b) The Contractor shall, upon the Contracting Officer's written notice, (1) furnish phase-in, phase-out services for up to 60 days after this contract expires and (2) negotiate in good faith a plan with a successor to determine the nature and extent of phase-in, phase-out services required. The plan shall specify a training program and a date for transferring responsibilities for each division of work described in the plan, and shall be subject to the Contracting Officer's approval. The Contractor

shall provide sufficient experienced personnel during the phase-in, phase-out period to ensure that the services called for by this contract are maintained at the required level of proficiency.

(c) The Contractor shall allow as many personnel as practicable to remain on the job to help the successor maintain the continuity and consistency of the services required by this contract. The Contractor also shall disclose necessary personnel records and allow the successor to conduct onsite interviews with these employees. If selected employees are agreeable to the change, the Contractor shall release them at a mutually agreeable date and negotiate transfer of their earned fringe benefits to the successor.

(d) The Contractor shall be reimbursed for all reasonable phase-in, phase-out costs (i.e., costs incurred within the agreed period after contract expiration that result from phase-in, phase-out operations) and a fee (profit) not to exceed a pro rata portion of the fee (profit) under this contract.

1.2.13 52.244-5 COMPETITION IN SUBCONTRACTING (APR 1984)

The Contractor shall select subcontractors (including suppliers) on a competitive basis to the maximum practical extent consistent with the objectives and requirements of the contract.

1.2.14 52.249-6 TERMINATION (COST-REIMBURSEMENT) (MAY 1986)

(a) The Government may terminate performance of work under this contract in whole or, from time to time, in part, if--

(1) The Contracting Officer determines that a termination is in the Government's interest; or

(2) The Contractor defaults in performing this contract and fails to cure the default within 10 days (unless extended by the Contracting Officer) after receiving a notice specifying the default. "Default" includes failure to make progress in the work so as to endanger performance.

(b) The Contracting Officer shall terminate by delivering to the Contractor a Notice of Termination specifying whether termination is for default of the Contractor or for convenience of the Government, the extent of termination, and the effective date. If, after termination for default, it is determined that the Contractor was not in default or that the Contractor's failure to perform or to make progress in performance is due to causes beyond the control and without the fault of negligence of

the Contractor as set forth in the Excusable Delays clause, the rights and obligations of the parties will be the same as if the termination was for the convenience of the Government.

(c) After receipt of a Notice of Termination, and except as directed by the Contracting Officer, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:

(1) Stop work as specified in the notice.

(2) Place no further subcontracts or orders (referred to as subcontracts in this clause), except as necessary to complete the continued portion of the contract.

(3) Terminate all subcontracts to the extent they relate to the work terminated.

(4) Assign to the Government, as directed by the Contracting Officer, all right, title, and interest of the Contractor under the subcontracts terminated, in which case the Government shall have the right to settle or to pay any termination settlement proposal arising out of those terminations.

(5) With approval or ratification to the extent required by the Contracting Officer, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts, the cost of which would be reimbursable in whole or in part, under this contract; approval or ratification will be final for purposes of this clause.

(6) Transfer title (if not already transferred) and, as directed by the Contracting Officer, deliver to the Government (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated, (ii) the completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the Government, and (iii) the jigs, dies, fixtures, and other special tools and tooling acquired or manufactured for this contract, the cost of which the Contractor has been or will be reimbursed under this contract.

(7) Complete performance of the work not terminated.

(8) Take any action that may be necessary, or that the Contracting Officer may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the Government has or may acquire an interest.

(9) Use its best efforts to sell, as directed or authorized by the Contracting Officer, any property of the types referred to in subparagraph (6) above; provided, however, that the Contractor (i) is not required to extend credit to any purchaser and (ii) may acquire the property under the conditions prescribed by, and at prices approved by, the Contracting Officer. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Government under this contract, credited to the price or cost of the work, or paid in any other manner directed by the Contracting Officer.

(d) After expiration of the plant clearance period as defined in Subpart 45.6 of the Federal Acquisition Regulation, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of termination inventory not previously disposed of, excluding items authorized for disposition by the Contracting Officer. The Contractor may request the Government to remove those items or enter into an agreement for their storage. Within 15 days, the Government will accept the items and remove them or enter into a storage agreement. The Contracting Officer may verify the list upon removal of the items, or if stored, within 45 days from submission of the list, and shall correct the list, as necessary, before final settlement.

(e) After termination, the Contractor shall submit a final termination settlement proposal to the Contracting Officer in the form and with the certification prescribed by the Contracting Officer. The Contractor shall submit the proposal promptly, but no later than 1 year from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 1-year period. However, if the Contracting Officer determines that the facts justify it, a termination settlement proposal may be received and acted on after 1 year or any extension. If the Contractor fails to submit the proposal within the time allowed, the Contracting Officer may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.

(f) Subject to paragraph (e) above, the Contractor and the Contracting Officer may agree on the whole or any part of the amount to be paid (including an allowance for fee) because of the termination. The contract shall be amended, and the Contractor paid the agreed amount.

(g) If the Contractor and the Contracting Officer fail to agree in whole or in part on the amount of costs and/or fee to be paid because of the termination of work, the Contracting Officer shall determine, on the basis of information available, the amount, if any, due the Contractor, and shall pay that amount, which shall include the following:

(1) All costs reimbursable under this contract, not previously paid, for the performance of this contract before the effective date of the termination, and those costs that may continue for a reasonable time with the approval of or as directed by the Contracting Officer; however, the Contractor shall discontinue these costs as rapidly as practicable.

(2) The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the terminated portion of the contract if not included in subparagraph (1) above.

(3) The reasonable costs of settlement of the work terminated, including--

(i) Accounting, legal, clerical, and other expenses reasonably necessary for the preparation of termination settlement proposals and supporting data;

(ii) The termination and settlement of subcontracts (excluding the amounts of such settlements); and

(iii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory. If the termination is for default, no amounts for the preparation of the Contractor's termination settlement proposal may be included.

(4) A portion of the fee payable under the contract, determined as follows:

(i) If the contract is terminated for the convenience of the Government, the settlement shall include a percentage of the fee equal to the percentage of completion of work contemplated under the contract, but excluding subcontract effort included in subcontractors' termination proposals, less previous payments for fee.

(ii) If the contract is terminated for default, the total fee payable shall be such proportionate part of the fee as the total number of articles (or amount of services) delivered to and accepted by the Government is to the total number of articles (or amount of services) of a like kind required by the contract.

(5) If the settlement includes only fee, it will be determined under subparagraph (g) (4) above.

(h) The cost principles and procedures in Part 31 of the Federal Acquisition Regulation, in effect on the date of this contract, shall govern all costs claimed, agreed to, or determined under this clause.

(i) The Contractor shall have the right of appeal, under the Disputes clause, from any determination made by the Contracting Officer under paragraph (e) or (g) above or paragraph (k) below, except that if the Contractor failed to submit the termination settlement proposal within the time provided in paragraph (e) and failed to request a time extension, there is no right of appeal. If the Contracting Officer has made a determination of the amount due under paragraph (e), (g) or (k), the Government shall pay the Contractor: (1) the amount determined by the Contracting Officer if there is no right of appeal or if no timely appeal has been taken, or (2) the amount finally determined on an appeal.

(j) In arriving at the amount due the Contractor under this clause, there shall be deducted--

(1) All unliquidated advance or other payments to the Contractor, under the terminated portion of this contract;

(2) Any claim which the Government has against the Contractor under this contract; and

(3) The agreed price for, or the proceeds of sale of materials, supplies, or other things acquired by the Contractor or sold under this clause and not recovered by or credited to the Government.

(k) The Contractor and Contracting Officer must agree to any equitable adjustment in fee for the continued portion of the contract when there is a partial termination. The Contracting Officer shall amend the contract to reflect the agreement.

(1) (1) The Government may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the contract, if the Contracting Officer believes the total of these payments will not exceed the amount to which the Contractor will be entitled.

(2) If the total payments exceed the amount finally determined to be due, the Contractor shall repay the excess to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury under 50 U.S.C. App. 1215(b)(2). Interest shall be computed for the period from the date the excess payment is received by the Contractor to the date the excess is repaid. Interest shall not be charged on any excess payment due to a reduction in the Contractor's termination settlement proposal because of retention or other disposition of termination inventory until 10 days after the date of the retention or disposition, or a later date determined by the Contracting Officer because of the circumstances.

(m) The provisions of this clause relating to fee are inapplicable if this contract does not include a fee.

1.2.15 TECHNICAL DIRECTION—RECLAMATION (MAR 1988)

(a) The performance of work hereunder will be subject to the technical direction of a Contracting Officer's Technical Representative (COTR), who will be appointed, in writing, by the Contracting Officer. The COTR and the Contractor shall work together closely to ensure that all contractual requirements are being met. The term "technical direction" is defined to include, without limitation, the following:

(1) Provision of information to the Contractor which assists in the interpretation of drawings, specifications, or technical portions of the work description.

(2) Review and, where required by the contract, approval of technical reports, drawings, specifications, and technical information to be delivered by the Contractor under the contract.

(b) Technical direction must be within the general scope of work stated in the contract. The COTR does not have the authority to issue any technical direction which (1) constitutes an assignment of additional work outside the scope of the contract; (2) constitutes a change as defined in the contract clause entitled, "Changes;" (3) in any manner causes an increase or decrease in the total contract price or the time required for contract performance; or (4) changes any of the expressed terms, conditions, or specifications of the contract. The COTR shall notify the Contracting Officer well in advance of the anticipated issuance of any technical directions which the COTR feels may fall within categories (1) through (4) above to receive guidance on how to proceed with issuance of such direction. **All** technical direction of a significant nature shall be issued, in writing, by the COTR or shall be confirmed, in writing, within five (5) working days after issuance.

(c) The Contractor shall proceed promptly with the performance of technical directions duly issued by the COTR. If, in the opinion of the Contractor, an instruction or direction issued by the COTR is within one of the categories listed in (b) (1) through (4) above, the Contractor shall not proceed, but shall notify the Contracting Officer in writing within five (5) working days after the receipt of any such instruction or direction. Upon receiving such notification from the Contractor, the Contracting Officer shall issue an appropriate contract modification or advise the Contractor, in writing, that, in his or her opinion, the technical direction is within the scope of this clause and does not constitute a change under the "Changes" clause of the contract. The Contractor shall thereupon proceed

immediately with the directions given. A failure of the parties to agree upon the nature of the instruction or direction, or upon the contract action to be taken with respect thereto shall be subject to the provisions of the "Disputes" clause of the contract.

1.3 QUALITY ASSURANCE

1.3.1 52.246-20 WARRANTY OF SERVICES (APR 1984)

(a) Definitions. "Acceptance," as used in this clause, means the act of an authorized representative of the Government by which the Government assumes for itself, or as an agent of another, ownership of existing and identified supplies, or approves specific services, as partial or complete performance of the contract.

"Correction," as used in this clause, means the elimination of a defect.

(b) Notwithstanding inspection and acceptance by the Government or any provision concerning the conclusiveness thereof, the Contractor warrants that all services performed under this contract will, at the time of acceptance, be free from defects in workmanship and conform to the requirements of this contract. The Contracting Officer shall give written notice of any defect or nonconformance to the Contractor within 90 days from the date of acceptance by the Government. This notice shall state either (1) that the Contractor shall correct or reperform any defective or nonconforming service, or (2) that the Government does not require correction or reperformance.

(c) If the Contractor is required to correct or reperform, it shall be at no cost to the Government, and any services corrected or reperformed by the Contractor shall be subject to this clause to the same extent as work initially performed. If the Contractor fails or refuses to correct or reperform, the Contracting Officer may, by contract or otherwise, correct or replace with similar services and charge to the Contractor the cost occasioned to the Government thereby, or make an equitable adjustment in the contract price.

(d) If the Government does not require correction or reperformance, the Contracting Officer shall make an equitable adjustment in the contract price.

1.3.2 52.246-25 LIMITATION OF LIABILITY -- SERVICES
(APR 1984)

(a) Except as provided in paragraphs (b) and (c) below, and except to the extent that the Contractor is expressly responsible under this contract for deficiencies in the services required to be performed under it (including any materials furnished in conjunction with those services), the Contractor shall not be liable for loss of or damage to property of the Government that (1) occurs after Government acceptance of services performed under this contract and (2) results from any defects or deficiencies in the services performed or materials furnished.

(b) The limitation of liability under paragraph (a) above shall not apply when a defect or deficiency in, or the Government's acceptance of, services performed or materials furnished results from willful misconduct or lack of good faith on the part of any of the Contractor's managerial personnel. The term "Contractor's managerial personnel," as used in this clause, means the Contractor's directors, officers, and any of the Contractor's managers, superintendents, or equivalent representatives who have supervision or direction of--

- (1) All or substantially all of the Contractor's business;
- (2) All or substantially all of the Contractor's operations at any one plant, laboratory, or separate location at which the contract is being performed; or
- (3) A separate and complete major industrial operation connected with the performance of this contract.

(c) If the Contractor carries insurance, or has established a reserve for self-insurance, covering liability for loss or damage suffered by the Government through the Contractor's performance of services or furnishing of materials under this contract, the Contractor shall be liable to the Government, to the extent of such insurance or reserve, for loss of or damage to property of the Government occurring after Government acceptance of, and resulting from any defects and deficiencies in, services performed or materials furnished under this contract.

(d) The Contractor shall include this clause, including this paragraph (d), supplemented as necessary to reflect the relationship of the contracting parties, in all subcontracts over \$25,000.

1.3.3 QUALITY ASSURANCE--UPPER COLORADO (FEB 1989)

The Government may inspect 100% of the contract work. If work is not performed in accordance with work schedules or is documented to be inadequate, incomplete, or otherwise deficient, the Government will require satisfaction through the following: (1) reperformance at Contractor expense, or 2) deduction from the current invoice of an amount representing the value of the unperformed or unsatisfactory service.

In addition, any performance deficiencies may also be subject to contract administration remedies stated in the clauses of this contract. This provision supplements the warranty clauses stated elsewhere.

1.4 ADJUSTMENTS

1.4.1 52.215-22 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA (APR 1988)

(a) If any price, including profit or fee, negotiated in connection with this contract, or any cost reimbursable under this contract, was increased by any significant amount because (1) the Contractor or a subcontractor furnished cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data, (2) a subcontractor or prospective subcontractor furnished the Contractor cost or pricing data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data, or (3) any of these parties furnished data of any description that were not accurate, the price or cost shall be reduced accordingly and the contract shall be modified to reflect the reduction.

(b) Any reduction in the contract price under paragraph (a) above due to defective data from a prospective subcontractor that was not subsequently awarded the subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which (1) the actual subcontract or (2) the actual cost to the Contractor, if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor; provided, that the actual subcontract price was not itself affected by defective cost or pricing data.

(c) (1) If the Contracting Officer determines under paragraph (a) of this clause that a price or cost reduction should be made, the Contractor agrees not to raise the following matters as a defense:

(i) The Contractor or subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the contract would not have been modified even if accurate, complete, and current cost or pricing data had been submitted.

(ii) The Contracting Officer should have known that the cost or pricing data in issue were defective even though the Contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the Contracting Officer.

(iii) The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract.

(iv) The Contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data.

(2)(i) Except as prohibited by subdivision (c)(2)(ii) of this clause, an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a contract price reduction if--

(A) The Contractor certifies to the Contracting Officer that, to the best of the Contractor's knowledge and belief, the Contractor is entitled to the offset in the amount requested; and

(B) The Contractor proves that the cost or pricing data were available before the date of agreement on the price of the contract (or price of the modification) and that the data were not submitted before such date.

(ii) An offset shall not be allowed if--

(A) The understated data was known by the Contractor to be understated when the Certificate of Current Cost or Pricing Data was signed; or

(B) The Government proves that the facts demonstrate that the contract price would not have increased in the amount to be offset even if the available data had been submitted before the date of agreement on price.

1.4.2 52.215-24 SUBCONTRACTOR COST OR PRICING DATA (APR 1985)

(a) Before awarding any subcontract expected to exceed \$100,000 when entered into, or before pricing any subcontract modification involving a pricing adjustment expected to exceed \$100,000, the Contractor shall require the subcontractor to

submit cost or pricing data (actually or by specific identification in writing), unless the price is--

- (1) Based on adequate price competition;
- (2) Based on established catalog or market prices of commercial items sold in substantial quantities to the general public; or
- (3) Set by law or regulation.

(b) The Contractor shall require the subcontractor to certify in substantially the form prescribed in subsection 15.804-4 of the Federal Acquisition Regulation (FAR) that, to the best of its knowledge and belief, the data submitted under paragraph (a) above were accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract modification.

(c) In each subcontract that exceeds \$100,000 when entered into, the Contractor shall insert either--

(1) The substance of this clause, including this paragraph (c), if paragraph (a) above requires submission of cost or pricing data for the subcontract; or

(2) The substance of the clause at FAR 52.215-25, Subcontractor Cost or Pricing Data--Modifications.

1.4.3 52.215-30 FACILITIES CAPITAL COST OF MONEY (SEP 1987)

(a) Facilities capital cost of money will be an allowable cost under the contemplated contract, if the criteria for allowability in subparagraph 31.205-10(a)(2) of the Federal Acquisition Regulation are met. One of the allowability criteria requires the prospective contractor to propose facilities capital cost of money in its offer.

(b) If the prospective Contractor does not propose this cost, the resulting contract will include the clause Waiver of Facilities Capital Cost of Money.

1.4.4 52.215-31 WAIVER OF FACILITIES CAPITAL COST OF MONEY (SEP 1987)

The Contractor did not include facilities capital cost of money as a proposed cost of this contract. Therefore it is an unallowable cost under this contract.

1.4.5 52.229-3 FEDERAL, STATE, AND LOCAL TAXES (APR 1984)

(a) "Contract date," as used in this clause, means the date set for bid opening or, if this is a negotiated contract or a modification, the effective date of this contract or modification.

"All applicable Federal, State, and local taxes and duties," as used in this clause, means all taxes and duties, in effect on the contract date, that the taxing authority is imposing and collecting on the transactions or property covered by this contract.

"After-imposed Federal tax," as used in this clause, means any new or increased Federal excise tax or duty, or tax that was exempted or excluded on the contract date but whose exemption was later revoked or reduced during the contract period, on the transactions or property covered by this contract that the Contractor is required to pay or bear as the result of legislative, judicial, or administrative action taking effect after the contract date. It does not include social security tax or other employment taxes.

"After-relieved Federal tax," as used in this clause, means any amount of Federal excise tax or duty, except social security or other employment taxes, that would otherwise have been payable on the transactions or property covered by this contract, but which the Contractor is not required to pay or bear, or for which the Contractor obtains a refund or drawback, as the result of legislative, judicial, or administrative action taking effect after the contract date.

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

(c) The contract price shall be increased by the amount of any after-imposed Federal tax, provided the Contractor warrants in writing that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the contract price, as a contingency reserve or otherwise.

(d) The contract price shall be decreased by the amount of any after-relieved Federal tax.

(e) The contract price shall be decreased by the amount of any Federal excise tax or duty, except social security or other employment taxes, that the Contractor is required to pay or bear, or does not obtain a refund of, through the Contractor's fault, negligence, or failure to follow instructions of the Contracting Officer.

(f) No adjustment shall be made in the contract price under this clause unless the amount of the adjustment exceeds \$100.

(g) The Contractor shall promptly notify the Contracting Officer of all matters relating to any Federal excise tax or duty that reasonably may be expected to result in either an increase or decrease in the contract price and shall take appropriate action as the Contracting Officer directs.

(h) The Government shall, without liability, furnish evidence appropriate to establish exemption from any Federal, State, or local tax when the Contractor requests such evidence and a reasonable basis exists to sustain the exemption.

1.4.6 52.229-5 TAXES--CONTRACTS PERFORMED IN U.S. POSSESSIONS' OR PUERTO RICO (APR 1984)

The term "local taxes," as used in the Federal, State, and local taxes clause of this contract, includes taxes imposed by a possession of the United States or by Puerto Rico.

1.4.7 52.233-3 PROTEST AFTER AWARD (AUG 1989)

(a) Upon receipt of a notice of protest (as defined in 33.101 of the FAR) the Contracting Officer may, by written order to the Contractor, direct the Contractor to stop performance of the work called for by this contract. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Upon receipt of the final decision in the protest, the Contracting Officer shall either--

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled either before or after a final decision in the protest, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to an adjustment within 30 days after the end of the period of work stoppage; provided, that if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon a proposal at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

(e) The Government's rights to terminate this contract at any time are not affected by action taken under this clause.

1.4.8 52.243-1 CHANGES--FIXED-PRICE (AUG 1987)

(a) The Contracting Officer may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this contract in any one or more of the following:

(1) Drawings, designs, or specifications when the supplies to be furnished are to be specially manufactured for the Government in accordance with the drawings, designs, or specifications.

(2) Method of shipment or packing.

(3) Place of delivery.

(b) If any such change causes an increase or decrease in the cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, the Contracting Officer shall make an equitable adjustment in the contract price, the delivery schedule, or both, and shall modify the contract.

(c) The Contractor must assert its right to an adjustment under this clause within 30 days from the date of receipt of the written order. However, if the Contracting Officer decides that the facts justify it, the Contracting Officer may receive and act upon a proposal submitted before final payment of the contract.

(d) If the Contractor's proposal includes the cost of property made obsolete or excess by the change, the Contracting Officer shall have the right to prescribe the manner of the disposition of the property.

(e) Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

1.4.9 CHANGE ORDER ACCOUNTING (APR 1984) - MODIFICATION--
RECLAMATION (APR 1984)

(a) When costs are or will be a factor in any Contractor proposal or claim for a contract price adjustment pursuant to the Changes clause or any other clause of this contract, the Contractor (including its applicable subcontractors) shall maintain sufficient records and data to establish the cost of the work in accordance with the applicable 48 CFR 31 contract cost principles and procedures cited in the Pricing of Adjustments clause.

(b) Whenever the estimated cost of a proposal or claim, or series of related proposals or claims, will exceed \$100,000, the Contractor, for each such proposal or claim, or series of related proposals or claims, shall maintain separate accounts, by job order or other suitable accounting procedure, of all incurred segregable, direct costs (less allowable credits) of work, both changed and not changed, allocable to the proposal(s) and claim(s). The Contractor shall maintain such accounts until the parties agree to an equitable adjustment for the proposal(s) or claim(s), or the matter is conclusively disposed of in accordance with the Disputes clause.

1.4.10 CONTRACTOR PROPOSALS--RECLAMATION (MAR 1988)

The Contractor shall, in connection with any proposal it makes for a contract modification, furnish a price breakdown, itemized as required by the Contracting Officer. Unless otherwise directed, the breakdown shall be in sufficient detail to permit an analysis of all material, labor, equipment, subcontract, and overhead costs, as well as any profit, and shall cover all work involved in the modification, whether such work was deleted, added, or changed. Any amount claimed for subcontracts shall be supported by a similar price breakdown, together with an evaluation by the prime contractor of its reasonableness. If the proposal includes a time extension, the contractor shall furnish a justification for such time extension. The proposal, together with the price breakdown and time extension justification, where applicable, shall be furnished within the time specified by the contract or as specified by the Contracting Officer.

1.4.11 PRICE WARRANTY--RECLAMATION (APR 1984)

(a) The Contractor warrants that--

1 (1) The items to be provided are commercial items sold in substantial quantities to the general public, and

1 (2) The prices set forth herein are not in excess of its sales prices to its most favored customer for comparable quantities and under comparable conditions, including all discounts, rebates, and similar reductions.

(b) For breach of this warranty, the Government shall have the right to an equitable adjustment in the contract price. Failure to agree to such adjustment shall be a dispute within the meaning of the Disputes clause of this contract. This right of adjustment is in addition to any other rights and remedies provided by law or under this contract.

1.5 PAYMENT

1.5.1 52.232-1 PAYMENTS (APR 1984)

The Government shall pay the Contractor, upon the submission of proper invoices or vouchers, the prices stipulated in this contract for supplies delivered and accepted or services rendered and accepted, less any deductions provided in this contract. Unless otherwise specified in this contract, payment shall be made on partial deliveries accepted by the Government if--

(a) The amount due on the deliveries warrants it; or

(b) The Contractor requests it and the amount due on the deliveries is at least \$500.00.

1.5.2 52.232-8 DISCOUNTS FOR PROMPT PAYMENT (APR 1989)

(a) Discounts for prompt payment will not be considered in the evaluation of offers. However, any offered discount will form a part of the award, and will be taken if payment is made within the discount period indicated in the offer by the offeror. As an alternative to offering a prompt payment discount in conjunction with the offer, offerors awarded contracts may include prompt payment discounts on individual invoices.

(b) In connection with any discount offered for prompt payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall

be considered to have been made on the date which appears on the payment check or the date on which an electronic funds transfer was made.

1.5.3 52.232-11 EXTRAS (APR 1984)

Except as otherwise provided in this contract, no payment for extras shall be made unless such extras and the price therefor have been authorized in writing by the Contracting Officer.

1.5.4 52.232-17 INTEREST (APR 1984)

(a) Notwithstanding any other clause of this contract, all amounts that become payable by the Contractor to the Government under this contract (net of any applicable tax credit under the Internal Revenue Code (26 U.S.C. 1481)) shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 12 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in paragraph (b) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid.

(b) Amounts shall be due at the earliest of the following dates:

(1) The date fixed under this contract.

(2) The date of the first written demand for payment consistent with this contract, including any demand resulting from a default termination.

(3) The date the Government transmits to the Contractor a proposed supplemental agreement to confirm completed negotiations establishing the amount of debt.

(4) If this contract provides for revision of prices, the date of written notice to the Contractor stating the amount of refund payable in connection with a pricing proposal or a negotiated pricing agreement not confirmed by contract modification.

(c) The interest charge made under this clause may be reduced under the procedures prescribed in 32.614-2 of the Federal Acquisition Regulation in effect on the date of this contract.

1.5.5 52.232-18 AVAILABILITY OF FUNDS (APR 1984)

Funds are not presently available for this contract. The Government's obligation under this contract is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are made available to the Contracting Officer for this contract and until the Contractor receives notice of such availability, to be confirmed in writing by the Contracting Officer.

1.5.6 52.232-19 AVAILABILITY OF FUNDS FOR THE NEXT FISCAL YEAR (APR 1984)

Funds are not presently available for performance under this contract beyond Fiscal Year 1990. The Government's obligation for performance of this contract beyond that date is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise for performance under this contract beyond Fiscal Year 1990, until funds are made available to the Contracting Officer for performance and until the Contractor receives notice of availability, to be confirmed in writing by the Contracting Officer.

1.5.7 52.232-23 ASSIGNMENT OF CLAIMS (JAN 1986)

(a) The Contractor, under the Assignment of Claims Act, as amended, 31 U.S.C. 3727, 41 U.S.C. 15 (hereafter referred to as "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence.

(b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable under this contract, and shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.

(c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

1.5.8 52.232-25 PROMPT PAYMENT (APR 1989)

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

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

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

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

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

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

(i) The due date for meat and meat food products, as defined in section 2(a)(3) of the Packers and Stockyard Act of 1921 (7 U.S.C. 182(3)) and further defined in Pub. L. 98-181 to include any edible fresh or frozen poultry meat, any perishable

poultry meat food product, fresh eggs, and any perishable egg product, will be as close as possible to, but not later than, the 7th day after product delivery.

(ii) The due date for perishable agricultural commodities, as defined in section 1(4) of the Perishable Agricultural Commodities Act of 1930 (7 U.S.C. 499a(44)), will be as close as possible to, but not later than, the 10th day after product delivery, unless another date is specified in the contract.

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

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

(i) Name and address of the Contractor.

(ii) Invoice date.

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

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

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

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

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

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

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

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

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

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

(6) The interest penalty shall be at the rate established by the Secretary of the Treasury under Section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date, except where the interest penalty is prescribed by other governmental authority. This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the Federal Register semiannually on or about January 1 and July 1. The interest penalty shall accrue daily on the invoice payment amount approved by the Government and be compounded in 30-day increments inclusive from the first day after the due date through the payment date. That is, interest accrued at the end of any 30-day period will be added to the approved invoice payment amount and be subject to interest penalties if not paid in the succeeding 30-day period. If the designated billing office failed to notify the Contractor of a defective invoice within the periods prescribed in subparagraph (a) (4) of this clause, then the due date on the corrected invoice will be adjusted by subtracting the number of days taken beyond

the prescribed notification of defects period. Any interest penalty owed the Contractor will be based on this adjusted due date. Adjustments will be made by the designated payment office for errors in calculating interest penalties, if requested by the Contractor.

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

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

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

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

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

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

(7) An interest penalty shall also be paid automatically by the designated payment office, without request from the Contractor, if a discount for prompt payment is taken improperly. The interest penalty will be calculated as described in subparagraph (a)(6) of this clause on the amount of discount

taken for the period beginning with the first day after the end of the discount period through the date when the Contractor is paid.

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

- (i) Is owed an interest penalty;
- (ii) Is not paid the interest penalty within 10 days after the date the invoice amount is paid; and
- (iii) Makes a written demand, not later than 40 days after the date the invoice amount is paid, that the agency pay such a penalty.

(b) Contract Financing Payments.

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

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

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

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

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

1.5.9 52.232-28 ELECTRONIC FUNDS TRANSFER PAYMENT METHODS
(APR 1989)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1.5.10 ADMINISTRATION OF FUNDS—RECLAMATION (NOV 1984)

(a) As used in this clause the term "earnings" is defined as any amounts due the Contractor for performance of Schedule pay items, including contract adjustments and retained percentages, adjusted by offsets for any amounts due the Government.

(b) Future availability of appropriated funds for this contract is anticipated at the following rate, which is provided for information purposes only. The Government does not warrant that all or any of the anticipated funds will be made available to the Contracting Officer for payment of earnings.

<u>Fiscal Year</u>	<u>Schedule</u>
Current Year	10%
1990	30%
1991	30%
1992	30%
1993	30%

(c) The Contracting Officer shall provide notice to the Contractor of any changes in funds available for earnings (including amount provided, period covered, and any other limitations applicable) by contract modification under the following circumstances:

(1) When funds are made available to the Contracting Officer for payment of earnings for each fiscal year or lesser period;

(2) When the amount of funds is reduced because the Contracting Officer determines, at his or her sole direction, that the amount available is in excess of that required to meet all anticipated earnings prior to the next fiscal year; or

(3) When existing funds are exhausted and no additional funds will be made available.

(d) The Contractor shall notify the Contracting Officer if it appears that the funds available for earnings will be exhausted within thirty (30) days. The Contracting Officer may, if funds can be made available, advise the Contractor of the availability of additional funds in accordance with paragraph (c) above.

(e) Payment of earnings shall be made only from such appropriated funds as are available for this contract, whether from an annual or an interim appropriations act, after such funds are received by the Contracting Officer. No payment will be made for work done after funds have been exhausted, unless and until sufficient additional funds are made available to the Contracting Officer.

(f) Prosecution of the work at a rate that will exhaust the funds available for payment of earnings before the end of the fiscal year will be at the Contractor's sole risk; however, should the Contractor so elect, it may continue the work in accordance with the terms and conditions of the contract, provided that funds are available for inspection and supervision, of which the Contracting Officer will so notify the Contractor. No payment will be made for interest resulting from a Contractor's election to proceed with the work after funds have been exhausted.

(g) An equitable adjustment, in performance time only, shall be made for any increase in the time required for performance of any part of the work caused by an exhaustion of funds. However, any suspension, delay, interruption, or extension of time granted as a result of an exhaustion of funds, shall not entitle the contractor to any price adjustment under the clause of this contract entitled "Suspension of Work."

(h) If the Government fails to reserve additional funds for payment of earnings within sixty (60) days after the beginning of a fiscal year following exhaustion of funds, the Contractor may, if it so elects, terminate the contract by written notice to the Contracting Officer. Such termination shall be at no cost to either party for the termination or as a result of the termination, and shall not be subject to the terms of the "Termination for the Convenience of the Government"

clause. The liability of either party under this contract shall cease, either thirty (30) days after payments are discontinued, or thirty (30) days after receipt of termination notice by the Contracting Officer, whichever is later.

1.5.11 GOVERNMENT REQUESTS FOR PAYMENT-RECLAMATION
(APR 1984)

When requests (or demands) for payment are made to the Contractor for costs incurred by the Government, such requests shall include all allocable direct and indirect costs.

1.6 SOCIOECONOMIC

1.6.1 52.203-1 OFFICIALS NOT TO BENEFIT (APR 1984)

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this contract, or to any benefit arising from it. However, this clause does not apply to this contract to the extent that this contract is made with a corporation for the corporation's general benefit.

1.6.2 52.203-3 GRATUITIES (APR 1984)

(a) The right of the Contractor to proceed may be terminated by written notice if, after notice and hearing, the agency head or a designee determines that the Contractor, its agent, or another representative--

(1) Offered or gave a gratuity (e.g., an entertainment or gift) to an officer, official, or employee of the Government; and

(2) Intended, by the gratuity, to obtain a contract or favorable treatment under a contract.

(b) The facts supporting this determination may be reviewed by any court having lawful jurisdiction.

(c) If this contract is terminated under paragraph (a) above, the Government is entitled--

(1) To pursue the same remedies as in a breach of the contract; and

(2) In addition to any other damages provided by law, to exemplary damages of not less than 3 nor more than 10 times the cost incurred by the Contractor in giving gratuities to the person concerned, as determined by the agency head or a designee. (This subparagraph (c) (2) is applicable only if this contract uses money appropriated to the Department of Defense.)

(d) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

1.6.3 52.203-5 COVENANT AGAINST CONTINGENT FEES
(APR 1984)

(a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

(b) "Bona fide agency," as used in this clause, means an established commercial or selling agency, maintained by a contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

"Bona fide employee," as used in this clause, means a person, employed by a contractor and subject to the contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

"Contingent fee," as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

"Improper influence," as used in this clause, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

1.6.4 52.203-7 ANTI-KICKBACK PROCEDURES (OCT 1988)

(a) Definitions.

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor employee,

subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

"Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor" as used in this clause, means a person who has entered into a prime contract with the United States.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from--

(1) Providing or attempting to provide or offering to provide any kickback;

(2) Soliciting, accepting, or attempting to accept any kickback; or

(3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

(c) (1) The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.

(2) When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.

(3) The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.

(4) The Contracting Officer may (i) offset the amount of the kickback against any monies owed by the United States under the prime contract and/or

(ii) direct that the Prime Contractor withhold from sums owed a subcontractor under the prime contract, monies withheld, the amount of the kickback. The Contracting Officer may order that monies withheld under subdivision (c) (4) (ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c) (4) (i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.

(5) The Contractor agrees to incorporate the substance of this clause, including subparagraph (c) (5), but excepting subparagraph (c) (1), in all subcontracts under this contract.

1.6.5 52.219-6 NOTICE OF TOTAL SMALL BUSINESS SET-ASIDE
(APR 1984)

(a) Definition.

"Small business concern," as used in this clause, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the size standards in this solicitation.

(b) General. (1) Offers are solicited only from small business concerns. Offers received from concerns that are not small business concerns shall be considered nonresponsive and will be rejected.

(2) Any award resulting from this solicitation will be made to a small business concern.

(c) Agreement. A manufacturer or regular dealer submitting an offer in its own name agrees to furnish, in performing the contract, only end items manufactured or produced by small business concerns inside the United States, its territories and possessions, the Commonwealth of Puerto Rico, the Trust Territory of the Pacific Islands, or the District of Columbia. However, this requirement does not apply in connection with construction or service contracts.

1.6.6 52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS AND SMALL DISADVANTAGED BUSINESS CONCERNS (FEB 1990)

(a) It is the policy of the United States that small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that it's prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals.

• (b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.

(c) As used in this contract, the term "small business concern" shall mean a small business as defined pursuant to section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto. The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall mean a small business concern (1) which is at least 51 percent unconditionally 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 unconditionally owned by one or more socially and economically disadvantaged individuals; and (2) whose management and daily business operations are controlled by one or more of such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or publicly owned business having at least 51 percent of its stock unconditionally owned by one of these

entities which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirements of 13 CFR 124. The Contractor shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian Americans, and other minorities, or any other individual found to be disadvantaged by the Administration pursuant to section 8(a) of the Small Business Act. The Contractor shall presume that socially and economically disadvantaged entities also include Indian Tribes and Native Hawaiian Organizations.

(d) Contractors 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.

1.6.7 52.219-9 SMALL BUSINESS AND SMALL DISADVANTAGED
BUSINESS SUBCONTRACTING PLAN (FEB 1990)

(a) This clause does not apply to small business concerns.

(b) "Commercial product," as used in this clause, means a product in regular production that is sold in substantial quantities to the general public and/or industry at established catalog or market prices. It also means a product which, in the opinion of the Contracting Officer, differs only insignificantly from the Contractor's commercial product.

"Subcontract," as used in this clause, means any agreement (other than one involving an employer-employee relationship) entered into by a Federal Government prime Contractor or subcontractor calling for supplies or services required for performance of the contract or subcontract.

(c) The offeror, upon request by the Contracting Officer, shall submit and negotiate a subcontracting plan, where applicable, which separately addresses subcontracting with small business concerns and with small disadvantaged business concerns. If the offeror is submitting an individual contract plan, the plan must separately address subcontracting with small business concerns and with small disadvantaged business concerns with a separate part for the basic contract and separate parts for each option (if any). The plan shall be included in and made part of the resultant contract. The subcontracting plan shall be negotiated within the time specified by the Contracting Officer. Failure to submit and negotiate the subcontracting plan shall make the offeror ineligible for award of a contract.

(d) The offeror's subcontracting plan shall include the following:

(1) Goals, expressed in terms of percentages of total planned subcontracting dollars, for the use of small business concerns and small disadvantaged business concerns as subcontractors. The offeror shall include all subcontracts that contribute to contract performance, and may include a proportionate share of products and services that are normally allocated as indirect costs.

(2) A statement of--

(i) Total dollars planned to be subcontracted;

(ii) Total dollars planned to be subcontracted to small business concerns; and

(iii) Total dollars planned to be subcontracted to small disadvantaged business concerns.

(3) A description of the principal types of supplies and services to be subcontracted, and an identification of the types planned for subcontracting to (i) small business concerns and (ii) small disadvantaged business concerns.

(4) A description of the method used to develop the subcontracting goals in (1) above.

(5) A description of the method used to identify potential sources for solicitation purposes (e.g., existing company source lists, the Procurement Automated Source System (PASS) of the Small Business Administration, the National Minority Purchasing Council Vendor Information Service, the Research and Information Division of the Minority Business Development Agency in the Department of Commerce, or small and small disadvantaged business concerns trade associations).

(6) A statement as to whether or not the offeror included indirect costs in establishing subcontracting goals, and a description of the method used to determine the proportionate share of indirect costs to be incurred with (i) small business concerns and (ii) small disadvantaged business concerns.

(7) The name of the individual employed by the offeror who will administer the offeror's subcontracting program, and a description of the duties of the individual.

(8) A description of the efforts the offeror will make to assure that small business concerns and small disadvantaged business concerns have an equitable opportunity to compete for subcontracts.

(9) Assurances that the offeror will include the clause in this contract entitled "Utilization of Small Business Concerns and Small Disadvantaged Business Concerns" in all subcontracts that offer further subcontracting opportunities, and that the offeror will require all subcontractors (except small business concerns) who receive subcontracts in excess of \$500,000 (\$1,000,000 for construction of any public facility), to adopt a plan similar to the plan agreed to by the offeror.

(10) Assurances that the offeror will (i) cooperate in any studies or surveys as may be required, (ii) submit periodic reports in order to allow the Government to determine the extent of compliance by the offeror with the subcontracting plan, (iii) submit Standard Form (SF) 294, Subcontracting Report for Individual Contracts, and/or SF295, Summary Subcontract Report, in accordance with the instructions on the forms, and (iv) ensure that its subcontractors agree to submit Standard Forms 294 and 295.

(11) A recitation of the types of records the offeror will maintain to demonstrate procedures that have been adopted to comply with the requirements and goals in the plan, including establishing source lists; and a description of its efforts to locate small and small disadvantaged business concerns and award subcontracts to them. The records shall include at least the following (on a plant-wide or company-wide basis, unless otherwise indicated):

(i) Source lists, guides, and other data that identify small and small disadvantaged business concerns.

(ii) Organizations contacted in an attempt to locate sources that are small or small disadvantaged business concerns.

(iii) Records on each subcontract solicitation resulting in an award of more than \$100,000, indicating (A) whether small business concerns were solicited and if not, why not, (B) whether small disadvantaged business concerns were solicited and if not, why not, and (C) if applicable, the reason award was not made to a small business concern.

(iv) Records of any outreach efforts to contact (A) trade associations, (B) business development organizations, and (C) conferences and trade fairs to locate small and small disadvantaged business sources.

(v) Records of internal guidance and encouragement provided to buyers through (A) workshops, seminars, training, etc., and (B) monitoring performance to evaluate compliance with the program's requirements.

(vi) On a contract-by-contract basis, records to support award data submitted by the offeror to the Government, including the name, address, and business size of each subcontractor. Contractors having company or division-wide annual plans need not comply with this requirement.

(e) In order to effectively implement this plan to the extent consistent with efficient contract performance, the Contractor shall perform the following functions:

(1) Assist small business and small disadvantaged business concerns by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation by such concerns. Where the Contractor's lists of potential small business and small disadvantaged subcontractors are excessively long, reasonable effort shall be made to give all such small business concerns an opportunity to compete over a period of time.

(2) Provide adequate and timely consideration of the potentialities of small business and small disadvantaged business concerns in all "make-or-buy" decisions.

(3) Counsel and discuss subcontracting opportunities with representatives of small and small disadvantaged business firms.

(4) Provide notice to subcontractors, similar to that in the solicitation provision at 52.219-1, concerning penalties for misrepresentations of business status as small business or small disadvantaged business for the purpose of obtaining a subcontract that is to be included as part or all of a goal contained in the Contractor's subcontracting plan.

(f) A master subcontracting plan on a plant or division-wide basis which contains all the elements required by (d) above, except goals, may be incorporated by reference as a part of the subcontracting plan required of the offeror by this clause; provided, (1) the master plan has been approved, (2) the offeror provides copies of the approved master plan and evidence of its approval to the Contracting Officer, and (3) goals and any deviations from the master plan deemed necessary by the Contracting Officer to satisfy the requirements of this contract are set forth in the individual subcontracting plan.

(g) (1) If a commercial product is offered, the subcontracting plan required by this clause may relate to the offeror's production generally, for both commercial and noncommercial products, rather than solely to the Government contract. In these cases, the offeror shall, with the concurrence of the Contracting Officer, submit one company-wide or division-wide annual plan.

(2) The annual plan shall be reviewed for approval by the agency awarding the offeror its first prime contract requiring a subcontracting plan during the fiscal year, or by an agency satisfactory to the Contracting Officer.

(3) The approved plan shall remain in effect during the offeror's fiscal year for all of the offeror's commercial products.

(h) Prior compliance of the offeror with other such subcontracting plans under previous contracts will be considered by the Contracting Officer in determining the responsibility of the offeror for award of the contract.

(i) The failure of the Contractor or subcontractor to comply in good faith with (1) the clause of this contract entitled "Utilization of Small Business Concerns and Small

Disadvantaged Business Concerns," or (2) an approved plan required by this clause, shall be a material breach of the contract.

1.6.8 52.219-13 UTILIZATION OF WOMEN-OWNED SMALL
BUSINESSES (AUG 1986)

(a) "Women-owned small businesses," as used in this clause, means small business concerns that are at least 51 percent owned by women who are United States citizens and who also control and operate the business.

"Control," as used in this clause, means exercising the power to make policy decisions.

"Operate," as used in this clause, means being actively involved in the day-to-day management of the business.

"Small business concern," as used in this clause, means a concern including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

(b) It is the policy of the United States that women-owned businesses shall have the maximum practicable opportunity to participate in performing contracts awarded by any Federal agency.

(c) The Contractor agrees to use its best efforts to give women-owned small businesses the maximum practicable opportunity to participate in the subcontracts it awards to the fullest extent consistent with the efficient performance of its contract.

(d) The Contractor may rely on written representations by its subcontractors regarding their status as women-owned small businesses.

1.6.9 52.220-1 PREFERENCE FOR LABOR SURPLUS AREA CONCERNS (APR 1984)

(a) This acquisition is not a set aside for labor surplus area (LSA) concerns. However, the offeror's status as such a concern may affect (1) entitlement to award in case of tie offers or (2) offer evaluation in accordance with the Buy American Act clause of this solicitation. In order to determine whether the offeror is entitled to a preference under (1) and (2) above, the offeror must identify, below, the LSA in which the costs to be incurred on account of manufacturing or production (by the offeror or the first-tier subcontractors) amount to more than 50 percent of the contract price.

(b) Failure to identify the locations as specified above will preclude consideration of the offeror as an LSA concern. If the offeror is awarded a contract as an LSA concern and would not have otherwise qualified for award, the offeror shall perform the contract or cause the contract to be performed in accordance with the obligations of an LSA concern.

1.6.10 52.220-3 UTILIZATION OF LABOR SURPLUS AREA CONCERNS (APR 1984)

(a) Applicability. This clause is applicable if this contract exceeds the appropriate small purchase limitation in Part 13 of the Federal Acquisition Regulation.

(b) Policy. It is the policy of the Government to award contracts to concerns that agree to perform substantially in labor surplus areas (LSA's) when this can be done consistent with the efficient performance of the contract and at prices no higher than are obtainable elsewhere. The Contractor agrees to use its best efforts to place subcontracts in accordance with this policy.

(c) Order of preference. In complying with paragraph (b) above and with paragraph (c) of the clause of this contract entitled Utilization of Small Business Concerns and Small Disadvantaged Business Concerns, the Contractor shall observe the following order of preference in awarding subcontracts: (1) small business concerns that are LSA concerns, (2) other small business concerns, and (3) other LSA concerns.

(d) Definitions. "Labor surplus area," as used in this clause, means a geographical area identified by the Department of Labor in accordance with 20 CFR 654, Subpart A, as an area of concentrated unemployment or underemployment or an area of labor surplus.

"Labor surplus area concern," as used in this clause, means a concern that together with its first-tier subcontractors will perform substantially in labor surplus areas. Performance is substantially in labor surplus areas if the costs incurred under the contract on account of manufacturing, production, or performance of appropriate services in labor surplus areas exceed 50 percent of the contract price.

1.6.11 52.222-3 CONVICT LABOR (APR 1984)

The Contractor agrees not to employ any person undergoing sentence of imprisonment in performing this contract except as provided by 18 U.S.C. 4082(c)(2) and Executive Order 11755, December 29, 1973.

1.6.12 52.222-26 EQUAL OPPORTUNITY (APR 1984)

(a) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with subparagraphs (b)(1) through (11) below. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(b) During performing this contract, the Contractor agrees as follows:

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not

be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi) layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

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

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

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. Standard Form 100 (EEO-1), or any successor form, is the prescribed form to be filed within 30 days following the award, unless filed within 12 months preceding the date of award.

(8) The Contractor shall permit access to its books, records, and accounts by the contracting agency or the Office of Federal Contract Compliance Programs (OFCCP) for the purposes of investigation to ascertain the Contractor's compliance with the applicable rules, regulations, and orders.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies

invoked against the Contractor as provided in Executive Order 11246, as amended, the rules, regulations, and orders of the Secretary of Labor, or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraph (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing these terms and conditions, including sanction for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(C) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

1.6.13 52.222-28 EQUAL OPPORTUNITY PREAWARD CLEARANCE OF SUBCONTRACTS (APR 1984)

Notwithstanding the clause of this contract entitled "Subcontracts," the Contractor shall not enter into a first-tier subcontract for an estimated or actual amount of \$1 million or more without obtaining in writing from the Contracting Officer a clearance that the proposed subcontractor is in compliance with equal opportunity requirements and therefore is eligible for award.

1.6.14 52.222-35 AFFIRMATIVE ACTION FOR SPECIAL DISABLED AND VIETNAM ERA VETERANS (APR 1984)

(a) Definitions.

"Appropriate office of the State employment service system," as used in this clause, means the local office of the Federal-State national system of public employment offices assigned to serve the area where the employment opening is to be filled, including the District of Columbia, Guam, Puerto Rico, Virgin Islands, American Samoa, and the Trust Territory of the Pacific Islands.

"Openings that the Contractor proposes to fill from within its own organization," as used in this clause, means employment openings for which no one outside the Contractor's organization

(including any affiliates, subsidiaries, and the parent companies) will be considered and includes any openings that the Contractor proposes to fill from regularly established "recall" lists.

"Openings that the Contractor proposes to fill under a customary and traditional employer-union hiring arrangement," as used in this clause, means employment openings that the Contractor proposes to fill from union halls, under their customary and traditional employer-union hiring relationship.

"Suitable employment openings," as used in this clause--

(1) Includes, but is not limited to, openings that occur in jobs categorized as--

- (i) Production and nonproduction;
- (ii) Plant and office;
- (iii) Laborers and mechanics;
- (iv) Supervisory and nonsupervisory;
- (v) Technical; and

(vi) Executive, administrative, and professional positions compensated on a salary basis of less than \$25,000 a year; and

(2) Includes full-time employment, temporary employment of over 3 days, and part-time employment, but not openings that the Contractor proposes to fill from within its own organization or under a customary and traditional employer-union hiring arrangement, nor openings in an educational institution that are restricted to students of that institution.

(b) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against the individual because the individual is a special disabled or Vietnam Era veteran. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified special disabled and Vietnam Era veterans without discrimination based upon their disability or veterans' status in all employment practices such as

- (i) Employment;
- (ii) Upgrading;
- (iii) Demotion or transfer;

- (iv) Recruitment;
- (v) Advertising;
- (vi) Layoff or termination;
- (vii) Rates of pay or other forms of compensation; and
- (viii) Selection for training, including apprenticeship.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Vietnam Era Veterans' Readjustment Assistance Act of 1972 (the Act), as amended.

(c) Listing openings. (1) The Contractor agrees to list all suitable employment openings existing at contract award or occurring during contract performance, at an appropriate office of the State employment service system in the locality where the opening occurs. These openings include those occurring at any Contractor facility, including one not connected with performing this contract. An independent corporate affiliate is exempt from this requirement.

(2) State and local government agencies holding federal contracts of \$10,000 or more shall also list all their suitable openings with the appropriate office of the State employment service.

(3) The listing of suitable employment openings with the State employment service system is required at least concurrently with using any other recruitment source or effort and involves the obligations of placing a bona fide job order, including accepting referrals of veterans and nonveterans. This listing does not require hiring any particular job applicant or hiring from any particular group of job applicants and is not intended to relieve the Contractor from any requirements of executive orders or regulations concerning nondiscrimination in employment.

(4) Whenever the Contractor becomes contractually bound to the listing terms of this clause, it shall advise the State employment service system, in each State where it has establishments, of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these terms and has so advised the State system, it need not advise the State system of subsequent contracts. The Contractor may advise the State system when it is no longer bound by this contract clause.

(5) Under the most compelling circumstances, an employment opening may not be suitable for listing, including situations when (i) the Government's needs cannot reasonably be supplied, (ii) listing would be contrary to national security, or (iii) the requirement of listing would not be in the Government's interest.

(d) Applicability. (1) This clause does not apply to the listing of employment openings which occur and are filled outside the 50 states, the District of Columbia, Puerto Rico, Guam, Virgin Islands, American Samoa, and the Trust Territory of the Pacific Islands.

(2) The terms of paragraph (c) above of this clause do not apply to openings that the Contractor proposes to fill from within its own organization or under a customary and traditional employer-union hiring arrangement. This exclusion does not apply to a particular opening once an employer decides to consider applicants outside of its own organization or employer-union arrangement for that opening.

(e) Postings. (1) The Contractor agrees to post employment notices stating (i) the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified special disabled veterans and veterans of the Vietnam era, and (ii) the rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. They shall be in a form prescribed by the Director, Office of Federal Contract Compliance Programs, Department of Labor (Director), and provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of the Act, and is committed to take affirmative action to employ, and advance in employment, qualified special disabled and Vietnam Era veterans.

(f) Noncompliance. If the Contractor does not comply with requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(g) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Director to enforce the terms, including action for noncompliance.

1.6.15 52.222-36 AFFIRMATIVE ACTION FOR HANDICAPPED
WORKERS (APR 1984)

(a) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against any employee or applicant because of physical or mental handicap. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified handicapped individuals without discrimination based upon their physical or mental handicap in all employment practices such as--

- (i) Employment;
- (ii) Upgrading;
- (iii) Demotion or transfer;
- (iv) Recruitment;
- (v) Advertising;
- (vi) Layoff or termination;
- (vii) Rates of pay or other forms of compensation; and
- (viii) Selection for training, including apprenticeship.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Rehabilitation Act of 1973 (29 U.S.C. 793) (the Act), as amended.

(b) Postings. (1) The Contractor agrees to post employment notices stating (i) the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified handicapped individuals and (ii) the rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. They shall be in a form prescribed by the Director, Office of Federal Contract Compliance Programs, Department of Labor (Director), and provided by or through the Contracting Officer.

(3) The contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Act and is

committed to take affirmative action to employ, and advance in employment, qualified physically and mentally handicapped individuals.

(c) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(d) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of \$2,500 unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Director to enforce the terms, including action for noncompliance.

1.6.16 52.222-37 EMPLOYMENT REPORTS ON SPECIAL DISABLED
VETERANS AND VETERANS OF THE VIETNAM ERA
(JAN 1988)

(a) The contractor shall report at least annually, as required by the Secretary of Labor, on:

(1) The number of special disabled veterans and the number of veterans of the Vietnam era in the workforce of the contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of special disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled "Federal Contractor Veterans' Employment Report VETS-100."

(c) Reports shall be submitted no later than March 31 of each year beginning March 31, 1988.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date: (1) As of the end of any pay period during the period January through March 1st of the year the report is due, or (2) as of December 31, if the contractor has previous written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each contractor subject to the reporting requirements at 38 U.S.C. 2012(d) shall invite all special disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 2012 to identify themselves to the contractor. The invitation shall state that the information is voluntarily provided, that the information will be kept confidential, that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 2012.

(f) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

1.6.17 52.223-2 CLEAN AIR AND WATER (APR 1984)

(a) "Air Act," as used in this clause, means the Clean Air Act (42 U.S.C. 7401 et seq.).

"Clean air standards," as used in this clause, means--

(1) Any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, work practices, or other requirements contained in, issued under, or otherwise adopted under the Air Act or Executive Order 11738;

(2) An applicable implementation plan as described in section 110(d) of the Air Act (42 U.S.C. 7410(d));

(3) An approved implementation procedure or plan under section 111(c) or section 111(d) of the Air Act (42 U.S.C. 7411(c) or (d)); or

(4) An approved implementation procedure under section 112(d) of the Air Act (42 U.S.C. 7412(d)). "Clean water standards," as used in this clause, means any enforceable limitation, control, condition, prohibition, standard, or other requirement promulgated under 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).

"Compliance," as used in this clause, means compliance with--

(1) Clean air or water standards; or

(2) 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 under the requirements of the Air Act or Water Act and related regulations.

"Facility," as used in this clause, 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, used in the performance of a contract or subcontract. When a location or site of operation includes more than one building, plant, installation, or structure, the entire location or site shall be deemed a facility except when the Administrator, or a designee, of the Environmental Protection Agency, determines that independent facilities are collocated in one geographical area.

"Water Act," as used in this clause, means Clean Water Act (33 U.S.C. 1251 et seq.).

(b) The Contractor agrees--

(1) To comply with all the requirements of section 114 of the Clean Air Act (42 U.S.C. 7414) and section 308 of the Clean Water Act (33 U.S.C. 1318) 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, and all regulations and guidelines issued to implement those acts before the award of this contract;

(2) That no portion of the work required by this prime contract will be performed in a facility listed on the Environmental Protection Agency List of Violating Facilities on the date when this contract was awarded unless and until the EPA eliminates the name of the facility from the listing;

(3) To use best efforts to comply with clean air standards and clean water standards at the facility in which the contract is being performed; and

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

1.6.18 UTILIZATION OF HISTORICALLY BLACK COLLEGES AND UNIVERSITIES --RECLAMATION (AUG 1984)

(a) It is the policy of the Government that Historically Black Colleges and Universities shall have the maximum practicable opportunity to participate in the performance of Government contracts.

(b) The Contractor agrees to use its best efforts to carry out this policy in the award of its subcontracts to the fullest extent consistent with the efficient performance of this contract. As used in this contract, the term "historically black college or university" means any one of 114 institutions of postsecondary education that were originally founded or whose antecedents were originally founded for the purpose of providing educational opportunities for individuals of the "Negro or Colored" race, and which continue to have as one of their primary purposes the provision of postsecondary educational opportunities for Black Americans.

SECTION J
ATTACHMENTS

J.1 ATTACHMENTS

The documents, exhibits, and other attachments which are identified in this Section J, apply to and are a part of this solicitation. In the event that any document is missing in whole or in part from this solicitation when received, the offeror shall notify the Contracting Officer immediately.

Reverse sides of documents, exhibits, and other attachments with printing thereon are considered separate pages for counting purposes.

The following attachment(s) apply to and form a part of this solicitation:

<u>Attachment No.</u>	<u>Title</u>	<u>No. of Pages</u>
1	Phase I Parts 2 and 3	37
2	Pricing Proposal (SF 1411)	2
3	Disclosure of Lobbying Activities	2

COLORADO RIVER BASIN GILA TAXONOMY PROJECT

PHASE I REPORT

PART 2

MANAGEMENT CONCERNS, PRIORITY RESEARCH NEEDS,
AND PROPOSED RESEARCH PLAN

and

PART 3

SAMPLING GUIDELINES

By:

Wayne C. Starnes, Ph.D., Project Manager

Division of Fishes
NHB WG-12, Smithsonian Institution
Washington, D.C. 20560 USA

For:

U.S. Fish and Wildlife Service
Box 25486, Denver Federal Center
Denver, Colorado 80225 USA
(Re: Cooperative Agreement No. 14-16-0006-89-913)

5 March 1990
(FINAL DRAFT)

PREFACE

The development and implementation of recovery programs for endangered members of the cyprinid fish genus Gila in the Colorado River basin have become confused in recent years as the result of questions regarding the taxonomy of these fishes. This dilemma has prompted the U.S. Fish and Wildlife Service to seek a definitive study of the group in an attempt to clarify these questions. Toward that end, a cooperative agreement (No. 14-16-006-89-913) was entered into between the Service and the Smithsonian Institution to plan and implement the Colorado River Basin Gila Taxonomy Project. In addition to the Project Manager appointed by the Smithsonian, a Review Panel consisting of scientists with expertise in taxonomy and genetics and biologists from concerned state and federal agencies was selected to overview the project. The following document contains the Parts 2 and 3 requirements under Phase I of the cooperative agreement. Part 2, Management Concerns, Priority Research Needs, and Proposed Research Plan, discusses the taxonomic problems among fishes of the Gila complex occurring in the Colorado River basin and adjacent Mexico, identifies management concerns stemming from these problems and priority needs for addressing them, and outlines a research plan to accomplish those needs. Part 3 provides Sampling Guidelines for gathering the specimens and data necessary to implement the research plan which will be conducted under Phase II of the Agreement. These parts follow the previously distributed Part 1: Review of Existing Information on Taxonomy and Distribution, Activities of Researchers, and Collections Resources for Fishes of the Cyprinid Genus Gila from the Colorado River Basin. Much of the information utilized in formulating Parts 2 and 3 is drawn from that report.

Upon approval of Parts 2 and 3 of this report by the Review Panel, it is to be distributed to concerned parties for further comments, after which it will be finalized. Phase II (the research phase) of the project then commences. Requests for Proposals, granting considerable latitude for proposed methods of morphological and genetic research to address the Priority Research Needs, will be derived from the content of Parts 2 and 3. Research participants will be recommended to funding agencies from among the respondents by the Project Manager and Review Panel. This report also serves as a basis for planning the involvement of agency and possibly consultant personnel in field sampling and the development of sampling techniques. As the research phase draws to a close, perhaps three years hence, the research participants and Project Manager will collaborate to synthesize information (Phase III) from the various areas of research (morphological, genetic) and hopefully make well corroborated taxonomic decisions which will provide information useful to management agencies trying to identify "management units of concern" among Colorado River basin Gila populations. The Review Panel will continue to have an oversight role during Phases II and III. In addition to the final report generated

from the Phase III effort, researchers will be encouraged to collaborate in various combinations to publish the results of studies in the primary scientific literature.

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PART 2

MANAGEMENT CONCERNS PRIORITY NEEDS AND PROPOSED RESEARCH PLAN GILA TAXONOMY PROJECT

BACKGROUND -- TAXONOMIC PROBLEMS

The following discussion is, in part, a synopsis of information annotated in the previously submitted report (Phase I, Part 1) which surveyed existing information on taxonomy and distribution of fishes of the genus Gila in the Colorado River basin.

The cyprinid fish genus Gila contains an assemblage of large western North American minnows which, under current taxonomy, ranges in Pacific drainages from the **Klamath** River system of Oregon to Gulf of California tributaries in northwestern Mexico, the Rio Grande system, and several endorheic basins. Several groupings (e.g., the nominal Siphateles, Snyderichthys, Temeculina, Siboma, and others) have been recognized by various workers over the years at both the generic and subgeneric level among fishes currently ascribed to the genus. The relationships of these minnows to those currently assigned to other genera have not been well demonstrated in a phylogenetic context and thus the inclusiveness of the genus remains problematic. It may not be a natural (monophyletic) group as presently construed.

"Typical" Gila, based on the type species for the genus, Gila robusta Baird and Girard, described from the lower Colorado River basin, formerly occurred throughout much of the Colorado River drainage, including several now disjunct pluvial tributaries, except at very high elevations. Many populations have been extirpated by habitat alterations since the **1800s**. Gila forms inhabiting the Colorado drainage are very similar to one another, presumably closely related, and have been collectively referred to as the "Gila robusta complex". This group is also represented in eastern tributaries to the Gulf of California in Mexico from the Rio Yaqui system of Sonora southward to perhaps the Rio Culiacan of Sinaloa (Hendrickson, 1983). The Gila robusta complex has a history of taxonomic confusion in both main stem river forms and tributary populations.

The prevailing view over the years has been that larger river Gila populations in the upper Colorado River basin and downstream through the Grand Canyon reaches to the Boulder Canyon area of northwestern Arizona consisted of three species: the

humpback chub, *Gila cypha* Miller (1946), confined mostly to canyon reaches; the bonytail chub, *G. elegans* Baird and Girard (1853); and the roundtail chub, *G. robusta* Baird and Girard (1853), which also inhabits smaller rivers and creeks. The latter two species also formerly occurred in the lower Colorado River and Gila River but the bonytail is now virtually extirpated from that region and various forms of roundtail chubs now occur only as scattered populations in some tributaries.

Historically, specimens basically referable to bonytail chubs, *G. elegans*, have been collected at widely scattered localities throughout larger streams of the Colorado Basin indicating a range from the upper Green River of southern Wyoming and lower Yampa system of northwestern Colorado and southward in the Green River to the Colorado River, in the upper Colorado River system to perhaps the Rifle, Colorado, area and in the lower Gunnison, the San Juan River into New Mexico, through the Grand Canyon area (perhaps uncommon), and in the lower Colorado and Gila rivers. Today, listed as an endangered species, "typical" bonytails are extirpated from the entire Gila River system and lower Colorado except Mohave and possibly Havasu reservoirs. They are exceedingly rare in the upper Colorado River basin with only sporadic reports based on one or a few specimens possibly identifiable as such from reaches just above Lake Powell, Utah, the Black Rocks area of the Colorado River near the Colorado-Utah border, Desolation-Gray canyons area of the Green River and the lower Yampa River. The humpback chub, *G. cypha*, not discovered until 1946 and now also listed as an endangered species, is known to have occurred from the Boulder Canyon area of northwestern Arizona upstream in the Colorado River into Colorado and through the Green and Yampa systems into Wyoming, probably occurring primarily in canyon reaches. Currently, chubs generally referable to humpbacks are known to occur in the Grand Canyon (primarily in the vicinity of and in the Little Colorado River), the Cataract Canyon reaches of the Colorado and Green rivers above Lake Powell, Utah, the Westwater-Black Rocks reaches of the Colorado River near the Colorado-Utah border and perhaps Debeque Canyon above Grand Junction, Colorado, Desolation-Gray canyons reach of Green River, Utah, Green-Yampa rivers confluence area and upstream in the Yampa to Cross Mountain Canyon and in the Little Snake River; humpback chubs or questionable humpback-like chubs have been occasionally to rarely collected from most reaches interlying these canyon areas or in tributaries such as the lower White River, Utah.

However the prevailing concept of three syntopic species has been confounded somewhat in recent decades by taxonomic changes and, as more and more sampling of perhaps dwindling chub populations has yielded many specimens which are confusing to investigators, conflicting opinions about the identity of such specimens have emerged. Prior to the description of the humpback chub, *G. cypha* by Miller (1946), he had (Miller, 1945) subjugated

G. elegans to subspecies status under G. robusta and it was treated thusly in numerous subsequent works until all three taxa were again recognized as species by Holden and Stalnaker (1970). During that period, several faunal surveys, using primarily the common name "bonytail chub" to refer to both elegans and robusta, failed to distinguish between these forms, thus resulting in uncertainty years hence as to the true composition of populations surveyed. Additionally, various concepts have been invoked to grapple with the question of three closely related sympatric taxa. Gaufin et al. (1960) regarded these as representing "three diverging lines of evolution"; La Rivers (1962) referred to them as "ecotypes" within the "G. robusta complex"; Holden and Stalnaker (1970) regarded them as products of incomplete speciation and Smith et al. (1979) introduced the Gila robusta "superspecies" concept with cypha and elegans having been derived from robusta in separate speciation events. Thus the number of species involved, even given three morphologically discrete taxa, has been a confusing issue to biologists seeking to study and manage large river chub populations, irrespective of the further complications caused by specimens of questionable identity.

In upper basin canyon reaches many specimens having morphology seemingly intermediate between "typical" humpback and bonytail, or roundtail, **chubs have been** collected. These have led to conflicting opinions about the identity of such specimens (whether products of hybridization or intraspecific variation) and thus the composition of different Gila populations which have been under study for purposes of managing endangered species. While previous workers had questioned the distinctiveness of G. elegans from G. robusta, Holden and Stalnaker (1970) hypothesized that these species were reproductively isolated and that, therefore, problematic specimens represented "intergrades" between elegans and cypha resulting from incomplete speciation followed by introgressive hybridization in some areas; a less likely explanation was that one or two variable species were represented. They hypothesized that the presence of numerous "intergrades" in the Lake Powell area may have been the result of habitat alterations caused by impoundment but noted also many such problematic specimens collected prior to impoundment of Flaming Gorge from the upper Green River area could not be thusly explained. Smith (1983) theorized that the three chub taxa might be "coalescing" into one or two because of habitat alterations and that only a few pure cypha remained in the upper basin with elegans genes having been largely subsumed. However, Kobetich and Holden (1976) opined that cypha may have been hybridizing with other forms prior to such alterations. Holden and Stalnaker (1975) categorized a "Gila cypha complex" aside from robusta and elegans to include both typical and problematic humpback-like specimens.

Opinions concerning the composition of particular chub populations vary widely. The chub population from the Yampa

River and proximate Green River has been sampled extensively since those reported on by Holden and Stalnaker above and is thought to be comprised largely of specimens referable to humpbacks or roundtails with very little evidence of hybridization (Douglas et al., 1989; Tyus and Karp, 1989; Karp and Tyus, in litt.). Only one bonytail has been collected in this area in recent years and the possibility of bonytail genes having been subjugated into one or both of the other recognized taxa was not considered. Rosenfeld and Wilkinson (1989) concluded that upper basin chub populations studied by them from Desolation Canyon on the Green River and Westwater Canyon on the Colorado, based on biochemical analyses, showed evidence of extensive hybridization between cypha and robusta and that this had resulted in genetic differences between humpback-like chubs from these populations and that of the Little Colorado River. However, Wick (1975), Archer et al. (1985) and Kaeding et al. (in litt.) felt that chubs from the Black Rocks area adjacent to Westwater were largely separable into humpback and roundtail based on morphology and, in a separate study of morphology, Rosenfeld (in litt.) had concluded that the intermediate specimens from both areas were largely assignable to G. cypha. Valdez (1985) believed that most upper basin Gila were separable as to either cypha or robusta except that the chub population from Debeque Canyon on the upper Colorado River was highly problematic as previously reported by Valdez and Clemmer (1982). In the Grand Canyon area, the results of the Rosenfeld and Wilkinson (1989) study cited above may imply some "purity" to the humpback chub population which occurs in that reach, principally in the vicinity of the Little Colorado River, but the absence today of roundtail and bonytail forms which may (?) have occurred there prior to alteration of the area by Glen Canyon Dam raises questions of subsumation of their genes into those of cypha, a possibility raised in part (for elegans) by Kaeding and Zimmerman (1982). These contradictions, and the failure of previously defined criteria for delineating species applied in subsequent investigations, are frustrating to those biologists attempting to identify and eventually manage habitats of endangered chub populations and several have called for a comprehensive study addressing these problems (e.g., Joseph et al., 1977; Valdez and Clemmer, 1982; Colorado Fishes Recovery Team, 1988).

Aside from the perplexing problems with mainstem river Gila species, a number of taxonomic questions remain regarding tributary forms which have been variously referred to as separate species or subspecies of G. robusta. While chub populations in smaller tributaries of the upper Colorado River basin have not been the subject of thorough study, and should be investigated, distinctive forms are thusfar not noted from that region. However in the San Juan system and in many tributaries of the now highly fragmented lower Colorado River basin a number of distinctive forms of unresolved status are known to exist. The San Juan system, which also formerly harbored populations of

"typical" *G. elegans* (Gehlbach and Miller, 1961; U.S. National Museum specimens), has yielded roundtail specimens (now rare) with varied morphology and scalation similar to those found in chubs of the Virgin River system much further downstream in the Colorado Basin and below the Grand Canyon region (Ellis, 1914; Smith et al., 1979). Smith et al. (1979) reasoned that these populations may or may not have similar origins to Virgin River chubs while Holden and Stalnaker (1970) implied phenotypic convergence. The Virgin River chub, originally described as a separate species, *Gila seminuda* Cope and Yarrow, but long since relegated to subspecific status under *G. robusta*, is also now listed as a federally endangered species. It is a variable form with morphological attributes ranging between those of *robusta*, *elegans*, and, to some degree, *cypha* (Smith et al., 1979). Miller (1946) and Rosenfeld and Wilkinson (1989) have hypothesized that the Virgin River chub is of hybrid origin, involving *elegans* and *robusta*, though Rosenfeld (in litt.) earlier believed that morphological evidence did not support such an hypothesis. Similar chubs occur in the adjacent (and confluent until recent times) Moapa River system of southern Nevada though at least one investigator (R.D. Suttkus, per. comm.) feels that these might be distinctive from Virgin River populations. Above the Moapa system, further north in the Pluvial White River system, disjunct and imperiled populations (now possibly reduced to one) of spring associated roundtail chubs occur which were not discovered until the 1940s; these chubs were described as a separate species, *Gila jordani* Tanner (1950) but have since been relegated to subspecific status under *G. robusta* (e.g., La Rivers, 1962).

Further to the south in the lower Colorado River basin, isolated roundtail chub populations occur in the Bill Williams system of western Arizona, some of which are questionably worthy of taxonomic recognition (R.D. Suttkus, per comm.). In the Gila River portion of the lower basin many chub populations exist which are now isolated due to natural or artificial dewatering of much of that river system or natural barriers such as falls. These have been the subject of several studies (e.g., Miller, 1945; Rinne, 1976; DeMarais, 1986) and have received a variety of taxonomic treatments. One problem involves the status of the nominal *G. intermedia* Cope and Yarrow which has been for many years considered by some a subspecies of *G. robusta* (e.g., Miller, 1945, 1946; Uyeno, 1961) while others retain it as a species (Rinne and Minckley, 1970; Minckley, 1973; Rinne, 1976). Rinne (1976) hypothesized that *intermedia* was in fact closer related to more similar chubs occurring in adjacent basins to the east and south (e.g., *G. ditaenia*, *G. nigrescens*) than to *G. robusta*. At times, some chub populations in the Gila basin (e.g., Aravaipa Creek) have been thought to be the result of introgression between *intermedia* and *robusta* (Barber and Minckley, 1966) while, at other times, these have been referred to the nominal taxon *G. grahami* Baird and Girard (as *G. robusta grahami*), a form believed to be distributed allopatrically in the

basin with regard to the nominate subspecies, *G. r. robusta*, and in a few isolated streams of the adjacent Little Colorado system to the north (now possibly extirpated) (Minckley, 1973; Rinne, 1976). More recently the validity of applying the name grahami to these populations has been questioned (B. DeMarais, per comm.), though the existence of at least two roundtail chub morphs in the basin in addition to *G. intermedia* is recognized.

To the south of the Gila River basin in Mexico populations of Gila robusta-like chubs occur, in some cases sympatric with other *Gila* spp., in several eastern tributaries to the Gulf of California from the Rio Yaqui system to perhaps the Rio Culiacan. Those of the Rio Yaqui were formerly known as Gila minacae Meek but more recently have been regarded as synonymous with *G. robusta* (Hendrickson et al., 1980; Hendrickson, 1983). A definitive study of Mexican robusta forms has not been conducted and the taxonomic status of those populations relative to one another or to Colorado Basin forms has not been demonstrated. Also, it is not known if poorly sampled canyon reaches of some Mexican rivers may harbor additional forms of Gila adapted for those habitats (e.g., humpback-like or other) such as those found in the Colorado River drainage.

Finally, it should be noted that, because of their endangered status several members of the Colorado Basin Gila complex have undergone artificial propagation studies aimed at determining the feasibility of augmenting the recovery of wild populations. Broodstock from populations believed to represent typical *Gila elegans* (Lake Mohave) (Hamman, 1985), *G. cypha* (Little Colorado R., Black Rocks area of upper Colorado R.) (Hamman, 1982), *G. robusta seminuda*, and *G. robusta lordani* have already been successfully bred artificially. Hybrid combinations and backcrosses involving *G. elegans*, *G. cypha*, and *G. robusta* have also been artificially produced demonstrating the potential interfertility of these forms. Some of these propagated chubs have already been the subjects of genetic or taxonomic research (e.g., Minckley et al., 1989; Karp and Tyus, in litt.) and have the potential to further contribute to such efforts. Minckley et al. (1989) demonstrated that the genetic heterogeneity of bonytail chubs propagated from a relatively small broodstock may be comparable to that expected in wild cyprinid populations which has implications both for comparative taxonomic studies and genetics management of these fishes.

MANAGEMENT CONCERNS

The taxonomic problems discussed above, particularly those of upper Colorado Basin mainstem river Gila populations, have presented severe problems to those federal and state agencies

attempting to identify and manage habitats critical to endangered species. The dilemma of not being able to discern those forms protected under the Endangered Species Act from sympatric forms thusfar not deemed to need that protection has frustrated attempts at planning and implementation of recovery programs for these fishes. Moreover, many of the problematic tributary chub populations from various portions of the Colorado River basin just discussed are already imperiled by habitat alterations and Mexican populations might conceivably reach that predicament in the foreseeable future. Thus the taxonomic status of all members of the Gila complex in the basin and perhaps adjacent Mexico is or will soon be of great importance to those trying to identify and manage habitats of distinctive forms which are threatened or endangered.

Borne of the frustration in dealing with mainstem river Gila populations discussed above, several agencies, with the Fish and Wildlife Service as lead, have sought solutions to these problems by entering into an agreement in support of a definitive taxonomic study. In that regard, the Service has asked five very basic questions that follow. Further, the Project Manager has subdivided these into additional, more specific, questions which may ultimately be of relevancy in managing the future welfare of these fishes as well as those from other portions of the Colorado River basin as outlined below:

USFWS -- "Are roundtail, bonytail, and humpback chubs three distinct species and are their classifications adequately supported by data collected in recent years?"

Additional questions:

- 1) Are problematic intermediate or "intergrade" forms encountered today in some canyon populations morphological variants of one or two species or the products of hybrid combinations?
- 2) If intermediate forms are more prevalent today than a few decades ago, do they represent selection for particular infraspecific variants or a breakdown of reproductive barriers between syntopic species because of habitat alterations?
- 3) **If** hybridization phenomena are occurring, what are the patterns of gene flow through populations with respect to sex, reciprocal crosses, etc.?

USFWS "Is the genetic and morphological variation within these species adequately described and do current data support maintenance of the taxonomic status of these fishes?"

Handwritten note:
likely the same

Additional questions:

- 1) Aside from intrapopulation variation of riverine forms queried above, are there regional differences within each of the respective forms?
 - a. bonytail -- lower basin versus upper basin or portions thereof?
 - b. humpback -- Grand Canyon versus upper Colorado and/or Green rivers or between canyon areas within these respective systems?
 - c. roundtail -- are any tributary populations in the basin distinctive from mainstem populations?
 - what is the status of nominal lower basin tributary forms that have been considered "subspecies" (e.g., grahami, intermedia, jordani, seminuda)?
 - are there additional distinctive lower basin tributary forms (e.g., in Moapa R., Bill Williams system, etc.)?
 - What is the status of robusta-like forms in Mexico?
- 2) Are there additional canyon forms in poorly explored areas of Mexican rivers? If so, what are taxonomic implications with regard to Colorado R. canyon forms?

USFWS -- "Has there been an identifiable change in the genetic and/or morphological characteristics of the Gila complex in recent times? If so, how are these changes related to environmental perturbations?"

Additional questions:

- 1) Are forms identifiable as "bonytail", "humpback", and "roundtail" in riverine populations today different from historical material (via rapid selection or hybridization)?
- 2) Are so called "intergrade" forms more prevalent in canyon areas than formerly?
- 3) If such changes are identified in some populations but not others, are the latter perceived to be in less altered habitats?

already defined

USFWS -- "What are the key characteristics which separate these species? Can definitive criteria be developed to identify species and hybrids?"

Additional questions:

- 1) Are there morphological or genetic (protein/DNA/chromosomal) attributes, or combinations thereof, which unambiguously separate Gila forms in syntopic populations?
- 2) Do any such attributes exist which may be of utility in some populations but not others?
- 3) Can such criteria be applied in non-lethal techniques in the course of population monitoring and management?
 - a) morphometric and/or meristic attributes?
 - b) protein markers (from superficial tissues)?
 - c) DNA (superficial tissues)?
 - d) chromosomes (superficial or cultured tissues)?
- 4) Can such criteria (non-lethal or not) be applied to larval and juvenile Gila spp.?

USFWS -- "To what degree must the genetic integrity of the species and its populations be protected to preserve the Gila spp. in the Colorado River?"

political question

Additional questions:

- 1) What is the extent of existing within-population genetic variance?
- 2) Are wild and broodstock populations of effective size to prevent protracted genetic bottlenecks (i.e., loss of rare alleles)?
- 3) What is among-population variance and its management implications?

PRIORITY RESEARCH NEEDS

Based on the taxonomic problems and management concerns outlined above for members of the genus *Gila* the following actions are perceived to be required. These actions are listed in order of priority as determined by the more pressing questions relative to preservation and recovery of populations of endangered species and the need to identify "management units of concern". While this prioritization may serve as a guideline to the allocation of resources for this project, it is stressed that the best results can be obtained from a comprehensive study which completes all the actions specified below and every effort should be expended to accomplish them.

1. Development of non-lethal techniques for conducting morphological and genetics studies of *Gila* spp. for this study and for future monitoring of populations containing endangered forms.
2. A comprehensive genetic and morphological investigation of mainstem river Colorado River basin *Gila* populations throughout the upper basin and in the Grand Canyon area to:
 - a) determine the range of morphological variation within genetically and geographically identifiable units and morphological traits or genetic markers which will distinguish them; search for covariance between genetic and morphological data sets in samples representing these units; attempt to correlate morphological attributes with age and sex;
 - b) search for indications of hybrids or further introgression among genetically distinctive forms and their relationship to morphological "intermediacy";
 - c) attempt to determine if forms that existed formerly (e.g., in preimpoundment samples) are extant and, conversely, if variants or introgressed forms occurred formerly;
 - d) determine the distribution of introgressed versus non-or less introgressed chub populations;
 - e) if introgression is indicated, attempt to determine patterns of gene flow relative to sexes of respective forms involved in hybrid matings, backcrosses, etc.;
 - f) search for indications of restricted gene flow between subunits of genetically identifiable units in different

- river reaches and thus identify the geographic structure of populations;
- g) document patterns of local genetic variation (e.g., heterozygosity) for future monitoring and management decisions;
 - h) provide a basis for genetic and morphological comparisons of mainstem forms with tributary forms (e.g., of G. robusta);
 - i) provide genotypic information for studies of young stages of Gila spp. (below);
3. A comparative genetic and morphological study of tributary populations of Gila spp. over the entire Colorado Basin to:
- a) determine the taxonomic status of tributary roundtail forms (e.g., Virgin R. chub, San Juan system, Little Snake and others) relative to mainstem forms;
 - b) search for and characterize genetically distinctive chub populations in tributaries and any corresponding morphological distinctness (i.e., examine the status of currently recognized specific or subspecific level taxa, e.g., G. intermedia, G. robusta jordani, G. r. grahami, etc.);
 - c) search for indications of introgression or hybrid origin among broadly sympatric forms in the Gila River basin;
 - d) provide baseline information on genetic variability for possible future genetic monitoring of endangered tributary chub populations.
4. A study of larval and juvenile Gila spp. based on specimens genetically correlated with adult morphotypes from wild populations and/or artificially propagated stock to:
- a) attempt to identify distinguishing morphological characters for young stages of Gila spp., particularly from populations where two or more forms occur;
 - b) provide preliminary information on the composition of local assemblages of young Gila spp. relative to that of adults in proximate areas;
5. A comparative genetic and morphological study of Gila spp., apparently closely related to the Colorado Basin complex, in

rivers of northern Mexico tributary to the Gulf of California (Yaqui, Mayo, Fuerte, and others) to:

- a) Determine the taxonomic status of roundtail chub populations relative to Colorado Basin forms and identify any distinctive populations;
 - b) Explore the possibility of the occurrence of canyon adapted Gila forms in such habitats in Mexican rivers and, if so, their taxonomic status relative to Colorado Basin forms (e.g., humpback chubs).
6. A genetic study of existing artificially propagated Gila stock to:
- a) Compare hatchery stocks with wild populations to determine whether introgressed or the "purest" available stocks have been selected for propagation;
 - b) Determine the genetic variability of hatchery stocks relative to wild populations.

These priority research needs should be addressed through a well coordinated comprehensive study of morphological and genetic variation in Colorado River Basin Gila populations conducted by investigators using a several different approaches. The following Proposed Methods outlines a tentative research plan from which generalized requests for proposals will be derived to elicit researchers' ideas on specifics of these approaches. From these, the Project Manager and Review Panel will make recommendations for those to be funded. Conferrals on sampling strategy will be made with agency and other biologists regionally familiar with Gila populations. Sampling efforts necessary to fulfill researchers needs will be coordinated between those biologists and the researchers. Researchers and the Project Manager and Review Panel should cooperate, and perhaps occasionally convene, to compare results of the different approaches as the studies progress in order to identify areas of discordance which may need further investigation and to assure that information addressing questions stemming from various research needs is forthcoming. At project's end, a comprehensive report of the comparative results should be prepared with the cooperation of the above parties.

PROPOSED METHODS

The following are suggested general procedures for attaining the necessary data and accomplishing analyses to satisfy the research needs outlined above. The overall approach should include integrated morphological and genetic (protein/DNA/cytological) investigations of Gila spp. from populations over the entire Colorado Basin and possibly certain drainages of adjacent Mexico. Morphological investigations and those from the respective areas of genetic research undertaken should be correlated on a specimen-by-specimen basis to assure that maximum information on morphological variation relative to genetic variation is attained. Morphological studies should be supplemented by studies of Gila material extant in museum collections. Some representative material from additional drainages may be incorporated in the study where comparative information may shed light on analyses of variation in Colorado Basin populations. Non-lethal techniques must be developed and utilized to the extent possible in analyses of some chub populations which contain endangered forms. Specific methodology for particular analyses is generally not cited and is to be proposed by research participants based on their experience with methods which have proven successful and will be subject to the approval of the Project Manager and the Review Panel.

Materials

The materials for this study should consist of both specimens and tissue samples collected specifically for this study, as detailed in Part 3 herewith, and previously existing museum specimens, radiographs, photographs, and possibly frozen tissues which are detailed in the previously distributed Part 1 report under Museum Collections Resources. In addition to preserved specimens and tissues, additional important material will probably include computurized images or photographs resulting from non-lethal morphological methods conducted in this study.

Non-lethal Sampling Methods

It will be necessary early in the Project to develop non-lethal techniques for the taking of morphological data and tissues for genetic investigations. These may be developed on captive samples of non-endangered Gila or artificially propagated Gila and supplemented by studies on other species. Some credible assessment of post-procedural survival should be accomplished. A very general outline of proposed procedures appears in Part 3 of this report (Sampling Guidelines) but specific procedures should be further developed by the Project Manager in cooperation with

researchers and field personnel. Researchers selected for morphological studies necessarily should devise their own methods for taking of data (e.g., photography or other imagery techniques). However, some preliminary development of tissue sampling techniques, designed to yield tissues typically used in genetic investigations (e.g., fin, muscle, perhaps blood and/or liver) will probably be accomplished by agency field biologists and the Project Manager before contractual arrangements are completed with researchers in order to expedite the onset of field work once those arrangements are in place. Two or three technicians trained in successful techniques could be made available to accompany and assist researchers on expeditions thus allowing the researchers to concentrate more on the rapid acquisition of morphological data during the procedure, thereby reducing handling time. Tissue sampling would of course be conducted in cooperation with, and subject to the constant approval of, concerned genetic researchers and may be modified as necessary to accommodate their needs.

Morphological Investigations

Studies of morphology should include a combination of carefully correlated studies of data taken from both preserved and live Gila material. Specimens utilized for studies of morphology should be correlated with genotypes as determined by genetic studies as outlined below. In populations which are not deemed to be in danger of extirpation, these studies might be conducted on series of specimens carefully preserved after specific tissues have been removed for genetic analyses as suggested in Part 3. In monotypic populations (e.g., certain tributaries) study materials might be supplemented liberally by any previously existing museum specimens representing these populations whose states of preservation are suitable for comparative analysis. In mainstem river populations which are deemed to be polytypic and to contain endangered forms, it is recommended that non-lethal techniques be employed to record morphological attributes (see Part 3). Methods of documenting morphology should be as uniform as possible and capable of achieving correlation between preserved specimens and images produced by non-lethal methods.

Researchers will be encouraged to engage in whatever morphological analyses they feel can address the previously outlined Priority Research Needs. For example, morphological studies might include, but certainly would not be restricted to, the following:

1. Documentation by univariate or multivariate techniques of the range of morphological variation in both juveniles and adults of forms identified as distinctive in genetics studies (below) and analyses of variation between such forms

and among geographic localities within such forms; attempts to correlate morphology with age and sex.

2. Attempts to identify morphological features which unambiguously distinguish between members of genetically distinct groups.
3. Attempts to document the range of variation in any hybrid combinations of Gila that are detected genetically in wild populations and identify any features which distinguish them. Also, if the probable genetic identity of populations from which previously spawned broodstock was obtained can be established, extant preserved series of hybrid combinations produced from this stock might be analyzed for variation.
4. Performance of an overall analysis of variation in any populations in which considerable hybridizations detected to determine if ranges of variation are discrete, overlapping, or form a continuum with those of either or both parental types.
5. For upper basin riverine populations exhibiting problematic intermediate specimens, a comparison of genetically correlated material collected for this study with previously collected museum material representing those populations, where available; such a study may assess whether characteristic morphological attributes have changed over the intervening period and, if so, whether it is due to hybridization (i.e., if new material contains introgressed material based on genetic analyses) or suggests selection for different variants within species (i.e., little or no introgressed material present in new material).

Protein Electrophoretic Investigations

Electrophoretic investigations of protein variability are a proven technique in the discrimination of cyprinid fish taxa and it is highly recommended that such studies be conducted on Colorado River basin Gila. These analyses should be performed on tissues selected from, and correlated with, particular specimens also used in morphological studies and other types of genetic analyses. Varied tissues (probably muscle, liver, eye-brain, perhaps fin and blood) could be taken from small samples (perhaps 5) of individuals from representative populations throughout the Colorado Basin (e.g., several mainstem populations containing one or more Gila forms and sufficient tributary populations to represent each major tributary system and, further, any additional populations that researchers may deem to be reproductively isolated or constrained from others within these systems) and hatchery material where appropriate. Protein analyses surveying a large number of presumptive loci could be

performed on these tissues in an attempt to identify any fixed differences between populations, or among forms within populations, which may serve as genetic markers for expanded analyses of larger samples and additional populations. Information gained from this initial survey might facilitate the following investigations and additional ones which may be proposed by researchers.

1. The refinement in development of non-lethal tissue sampling techniques. That is, if it is found that genetic markers can be obtained from tissue relatively even more superficial than previously selected (e.g., fin, less muscle) or small amounts of blood. } could be done > 1 year
2. An expanded analysis of larger sample (including tissues or blood obtained in non-lethal sampling) sizes of adult and young stages of Gila from many populations focusing on marker loci to yield data which can provide the following:
 - a) samples of known genotypes from each population on which studies of morphological variation within adults and searches for distinguishing characters could be based;
 - b) samples of known genotypes of larval or juvenile specimens to serve as the basis for documenting their morphology and their occurrence in given habitats.
3. As part of the expanded analysis, samples from populations which prove to have two or more genetically distinctive types based on fixed allelic differences or distinctive frequencies might be surveyed for the occurrence and amount of heterozygosity at these loci in order to detect hybrids and introgression between forms. They could also be surveyed for occurrence of homozygotes and heterozygotes among marker loci within the same individuals for the purpose of detecting backcrosses or F2 individuals. Specimens identified as heterozygotes at marker loci in this survey could serve as the basis for documenting the morphology of hybrids and further introgressed individuals.
4. Within groups with similar genotypes (i.e., species), allelic differences or variation could be subjected to genetic distance or other analyses as an indicator of relative gene flow or restrictions thereof between widely separated localities within mainstem rivers and among tributaries. } have etc. genes & enzymes
5. If sufficient polymorphic enzyme variation can be found within genotypic groups (taxa) based on the survey of a large number of loci, estimates of genetic variability (heterogeneity) could be derived and yield information basic

to future genetic monitoring efforts.

DNA Investigations

A second area of genetic investigation which has proven capable of discriminating among cyprinid taxa and has the capability of yielding highly resolved information on genetic variation is the analysis of DNA. This approach should yield independent (from other genetic and morphological studies) data on genetically distinctive Gila populations, genetic divergence and variability, and, if mitochondrial DNA is utilized, unique information on maternal inheritance patterns, and is thus highly recommended as an additional area of genetic research. As with protein analyses, tissues selected for DNA extraction would need to be strictly correlated with particular specimens used in morphological studies. Analyses aimed at fathoming such phenomena as gene flow patterns in any populations exhibiting hybridization or further introgression might employ tissues from relatively large samples of small juvenile Gila specimens if it can be established, based on protein analysis (above) of adults and a subsample of juveniles, that gene frequencies are comparable between these two groups collected from the same area.

Researchers may propose whatever method (e.g., endonuclease restriction enzymes studies of DNA employing fragment size comparisons and/or restriction site mapping, etc.) to provide the desired resolution to address the Priority Research Needs within the bounds of economic feasibility. Data from this area of investigation might be further analyzed relative to the following in addition to other areas the researchers might propose:

1. The identification of genetically distinctive populations, and samples thereof, on which morphological studies can be based.
2. The distribution of mtDNA types among morphologically or genotypically (from enzyme analysis) defined groups to test for:
 - a) The presence of mtDNA typical to one group in another group as indications of occasional hybridization, subsumed gene pools (e.g., of Gila elegans), hybrid origin of taxa, or, if resolution permits, occasional gene flow between populations at the infraspecific level.
 - b) In populations where introgression between taxa is indicated by protein analysis, the admixture of mtDNA in heterozygotic specimens indicated to be F1s, or F2s or backcrosses as an indicator of any directionality relative to sex in hybrid matings.

3. The estimation of genetic variability in populations based on percentage of sequence divergence, diversity of lineages, or other measure to provide a possible basis for future genetic monitoring.

Cytogenetic Investigations

Cytogenetic data typically has not provided, until recently in some cases, the resolution necessary to discriminate between closely related taxa. However, recent advances in technique (e.g., NOR and C-banding) have improved the chances of providing that resolution. The capability of performing such techniques on cells cultured from small amounts of tissue (e.g., fin -- thus facilitating low-trauma non-lethal sampling) make cytogenetics an attractive area of investigation if conducted in conjunction with other genetic methods. Any information gained from such a study may be particularly applicable to future monitoring efforts on chub populations. As in other areas of genetic investigations, strict correlation of tissue sources relative to specimens used in these studies and morphological investigations must be maintained.

If pursued, the following questions might be addressed by researchers in addition to others they might propose:

1. Do distinctive chromosomal attributes exist for genetically distinct groups identified by other methods?
2. Do such attributes exist for specimens indicated to be introgressed by other genetic approaches (i.e., can hybrids be detected through this approach)?

Larval-Juvenile Fish Studies

To improve on the still deficient information on the early development and identification of younger stages of Gila spp. from several previous studies of Colorado fishes will take a coordinated effort between investigators documenting the genotypic and morphologic variation of maturing or adult fishes and larval fish researchers. It is suggested that genetic researchers may cooperate with larval fish investigators in the following ways in addition to others that may be devised and proposed between these parties:

1. From polytypic chub populations, small juvenile specimens of each taxon distinguished by genetic methods could be supplied to the larval fish investigators. Investigators should attempt to correlate these immature specimens of known identity, a resource not generally available in

previous studies, with extant preserved material of similar age and "back track" the development of distinguishing features in existing sequential age series of wild-caught fish; these series presumably exist among the numerous samples of young *Gila* previously collected from portions of the Colorado Basin in recent years.

2. Once genotypic markers are established for distinctive *Gila* populations, larval fish researchers could sample localized nursery areas within each general area from which adults were sampled. Large series (perhaps 100) of these wild-caught early life stage *Gila* could be divided with a subsample (perhaps 25%) frozen for electrophoretic analysis, some preserved, and the remainder transported to rearing facilities to observe and describe development. The frozen subsample should be submitted to genetic investigators who would attempt identification by isolating genetic markers in whole ground specimens. If the subsample is monotypic, then the larval researchers may work under the assumption that they are documenting the development of the same taxon with few exceptions. If not, researchers are alerted that they should be searching for multiple lineages in the series.
3. Adults of known identity, as determined by non-lethal genetic techniques, may be artificially spawned, including hybrid crosses, and their offspring reared for developmental studies. This might involve stock already captive at Dexter NFH or other facility or, if necessary, additional captures.

It is anticipated that it will be one year or more from the time the genetic research begins before those researchers will be in a position to supply sufficient information to the larval fish researchers. It is thus recommended that larval researchers be added to the project at the appropriate later time.

Comprehensive Analyses

As research efforts under each of the major approaches begin to yield the major portion of their results, a comprehensive comparison including the results of all will be conducted by the Project Manager in cooperation with the various researchers involved. Congruency of findings will be sought which hopefully will result in corroborated taxonomic decisions which will be set forth in a summary report to be prepared by the Project Manager in collaboration with researchers. Incongruencies may point to areas where further investigation is warranted while the project is still in progress. Whereas previous morphological studies of the Colorado Basin *Gila* complex have largely failed to resolve several taxonomic questions to the satisfaction of many, the results of genetics investigations could provide strengthened bases for taxonomic decisions and identify the management units

of concern previously discussed under Priority Research Needs.

Although the determination of relationships among Gila spp. is not a primary aim of this study, phylogenetic information would very likely lend insight to alpha level taxonomic decisions and may therefore be sought during the comprehensive phase. For example, a taxon having strong evidence of a sister group relationship with an extralimital form can hardly be considered a subspecies of some other taxon within its basin of occurrence. If sufficient enzyme and/or molecular variation is found in this study these data may be subjected to separate and/or consensus phylogenetic analyses with representation of extralimital Gila forms included for comparison. The results of such analyses may also give insight into the patterns of evolution of morphological attributes within the group.

LITERATURE CITED

- Archer, D.L., L.R. Kaeding, B.D. Burdick, and C.W. McAda. 1985. A study of the endangered fishes of the upper Colorado River. U.S. Fish & Wildlife Service Rpt., Grand Jct., CO. 132 p.
- Baird, S.F., and C. Girard. 1853. Descriptions of some new fishes from the River Zuni. Proc. Acad. Nat. Sci. Phila. 6:368-369.
- Colorado River Fishes Recovery Team. 1988. Humpback chub (Gila cypha) recovery plan (draft). U.S. Fish & Wildlife Serv., Denver. 37 p.
- DeMarais, B.D. 1986. Morphological variation in Gila (Pisces: Cyprinidae) and geologic history: lower Colorado River basin. Ms. Thesis, Ariz. St. Univ., Tempe.
- Douglas, M.E., W.L. Minckley, and H.M. Tyus. 1989. Qualitative characters, identification of Colorado River chubs (Cyprinidae: genus Gila) and the "art of seeing well". Copeia 1989:653-662.
- Ellis, M.M. 1914. Fishes of Colorado. Univ. Colo. Stud. 11. 136 p.
- Gaufin, A.R., G.R. Smith, and P. Dotson. 1960. Aquatic survey of Green River and tributaries; pp. 139-175, in: S. Flowers et al., Ecological studies of the flora and fauna of Flaming Gorge Reservoir basin, Utah and Wyoming. Univ. Utah Anthro. Pap. 48. 243 p.
- Gehlbach, F.R., and R.R. Miller. 1961. Fishes from archaeological

- sites in northern New Mexico. Southwest Nat. 6:2-8.
- Hamman, R.L. 1982. Spawning and culture of humpback chub. Prog. Fish-Cult. 44:213-216.
- Hamman, R.L. 1985. Induced spawning of hatchery-reared bonytail. Prog. Fish-Cult. 47:239-241.
- Hendrickson, D.A. 1983. Distribution records of native and exotic fishes in Pacific drainages of northern Mexico. J. Ariz.-Nev. Acad. Sci. 15:65-106.
- Hendrickson, D.A., W.L. Minckley, R.R. Miller, et al. 1980. Fishes of the Rio Yaqui basin, Mexico and United States. J. Ariz.-Nev. Acad. Sci. 18:33-38.
- Holden, P.B., and C.B. Stalnaker. 1970. Systematic studies of the cyprinid genus Gila, in the upper Colorado River basin. Copeia 1970:409-420.
- Holden, P.B., and C.B. Stalnaker. 1975. Distribution and abundance of mainstream fishes of the middle and upper Colorado River basins, 1967-1973. Trans. Amer. Fish. Soc. 104:217-231.
- Joseph, T.W., J.A. Sinning, R.J. Behnke, and P.B. Holden. 1977. An evaluation of the status, life history, and habitat requirements of endangered and threatened fishes of the upper Colorado River system. U.S. Fish and Wildlife Serv. Rpt. FWS/OBS-77/62. 184 p.
- Kaeding, L.R., and M.A. Zimmerman. 1982. Life history and population ecology of the humpback chub in the Little Colorado and Colorado rivers of the Grand Canyon, Arizona; pp. 281-320, in: W.H. Miller et al., Colorado River fishery project. Pt. 2. USFWS-Bur. Reclam. Salt Lake City, UT. .
- Kobetich, G.C., and P.B. Holden. 1976. The rare fishes of the Colorado River basin. Paper presented: W. Div. Amer. Fish. Soc., Sun Valley, ID.
- La Rivers, I. 1962. Fishes and fisheries of Nevada. Nevada St. Game & Fish Comm., Carson City. 782 p.
- Miller, R.R. 1945. A new cyprinid fish from southern Arizona, and Sonora, Mexico, with description of a new subgenus of Gila and a review of related species. Copeia 1945:104-110.
- Miller, R.R. 1946. Gila cypha, a remarkable new species of cyprinid fish from the Colorado River in Grand Canyon, Arizona. J. Wash. Acad. Sci. 36:409-415.
- Minckley, W.L. 1973. Fishes of Arizona. Ariz. Game & Fish Dept.,

Phoenix. 293 p.

Minckley, W.L., D.G. Buth, and R.L. Mayden. 1989. Origin of brood stock and allozyme variation in hatchery-reared bonytail, an endangered North American cyprinid fish. *Trans. Amer. Fish. Soc.* 118:131-137.

Rinne, J.N. 1976. Cyprinid fishes of the genus Gila from the lower Colorado River basin. *Wasmann J. Biol.* 34:65-107.

Rinne, J.N., and W.L. Minckley. 1970. Native Arizona fishes: Part III "chubs". *Ariz. Wildlf. Views* 17:12-19.

Rosenfeld, M.J., and J.A. Wilkinson. 1989. Biochemical genetics of the Colorado River Gila complex (Pisces: Cyprinidae). *Southwest. Nat.* 34:232-244.

Smith, G.R. 1983. Significance of hybridization in Chasmistes and Gila. *Trans. Bonnevl. Chap. Amer. Fish. Soc.* 1983:1-8.

Smith, G.R., R.R. Miller, and W.D. Sable. 1979. Species relationships among fishes of the genus Gila in the upper Colorado River drainage. *U.S. Nat. Park Serv. Tran. Proc. Ser.* 5:613-623.

Tanner, V.M. 1950. A new species of Gila from Nevada (Cyprinidae). *Great Basin Nat.* 10:31-36.

Tyus, H.M., and C.A. Karp. 1989. Habitat use and streamflow needs of rare and endangered fishes, Yampa River, Colorado. *U.S. Fish & Wildlf. Serv. Biol. Rpt.* 89(14). 27 p.

Uyeno, T. 1960. Osteology and phylogeny of the American cyprinid fishes allied to the genus Gila. Ph.D. Diss. U. Mich., Ann Arbor. 174 p.

Valdez, R.A. 1985. Status of the distribution and taxonomy of Gila cypha in the upper Colorado River. *Proc. Desert Fish. Coun.* 12: (1980):53-60.

Valdez, R.A., and G.H. Clemmer. 1982. Life history and prospects for recovery of the humpback and bonytail chub; pp. 109-119, in: W.H. Miller et al., *Fishes of the upper Colorado River system, present and future.* W. Div. Amer. Fish. Soc., Bethesda, Md. 131 p.

Wick, E.J. 1975. Gila cypha, the humpback chub: can it be saved or is it doomed to extinction? *Col. St. Univ., Ft. Collins.* 14 p.

PART 3

SAMPLING GUIDELINES FOR GILA TAXONOMY PROJECT

The following sections discuss and outline the personnel and procedures believed necessary to collect the specimens, tissues, and other materials necessary, in addition to previously existing material, to accomplish the research outlined in Part 2. Suggested sampling localities and sample sizes and types for Gila populations throughout the Colorado Basin and certain drainages of adjacent Mexico are also specified.

PERSONNEL

To amass the tremendous amount of new material needed for genetic and morphological investigations of Gila spp. will require a cooperative effort involving personnel of several federal and state agencies, academic researchers, and possibly private consultants. Collection of larger river habitats in particular will require the services of most or all of these participants. In the upper Colorado Basin, it is anticipated that the services of U.S. Fish & Wildlife Service field station personnel, as well as personnel of the Utah Division of Wildlife Resources, Colorado Division of Wildlife, and perhaps consultants and Bureau of Reclamation personnel will be required to collect difficult canyon habitats. Every effort will be made to employ the expertise of those personnel most familiar with given habitats and chub populations within the limits of economic considerations. Also, every effort will be made to coordinate and cooperate with, contribute to, and take advantage of ongoing investigations of chub populations or other fishes being conducted by various agencies in order to conserve effort and resources. Of course, if non-lethal techniques are to be used in canyon areas which contain endangered species (e.g., humpback chubs), it will be absolutely necessary for those academic researchers performing these procedures (e.g., video imagery, etc.) to accompany each expedition; this will require careful planning of sequential rather than concurrent field efforts or the capability of researchers to put two crews in the field who can perform identical procedures. The Project Manager will assist with the coordination of all such efforts and participate in them where feasible.

In smaller tributary habitats which require much less logistical effort, and probably do not contain endangered chub populations requiring non-lethal procedures, small crews composed

of state (including those mentioned above and Wyoming Game and Fish) or federal personnel and academic researchers can perform the tasks. Although, ideally, the researchers or the Project Manager should participate in as many of these collections as possible to assure themselves of the particular kind of specimen treatment they desire, it is recognized that it may be necessary in some instances for agency personnel to conduct these tasks alone. With some instruction, carrying out the specified handling procedures should not be a problem.

In the San Juan basin and lower Colorado Basin it is anticipated that field work can be accomplished mainly by academic researchers and personnel of the Arizona, Nevada, and New Mexico departments of game and fish, with perhaps participation of Bureau of Reclamation and/or National Park Service personnel in the Grand Canyon area. As above, every effort will be made to coordinate with ongoing investigations to conserve efforts and resources.

If Mexican chub populations are to be sampled, these efforts will be coordinated with Mexican biologists who are familiar with their habitats and can assist in securing the necessary permission to collect and export material. Also involved will be American investigators who have experience working in the region and the rapport and support of Mexican biologists.

COLLECTION METHODS

An array of collecting methods will be necessary to assemble the additional material needed for the Gila Taxonomy Project, especially in light of the difficult-to-collect habitats **frequented by some forms. Methods will be dependent on availability of particular equipment in different areas and will be employed based on the experience of investigators familiar with those areas as to what have been the most effective means.** Every effort will be made to minimize mortality of specimens prior to initiating standard or non-lethal handling procedures. This will require frequent checking of stationary gear, such as trammel nets, and some care not to excessively expose specimens to electroshocking effects.

In large river habitats, including in canyon reaches, boat- or raft-borne collecting techniques will be necessary in many cases, including possibly electroshocking, setting of hoop and possibly trammel nets, and angling; angling from shore may also be effective where possible in these reaches. Emphasis will be on methods which minimize mortality to the degree possible. Shallow areas, including some localized backwater areas within or adjacent canyon reaches, should be seined, particularly for young chubs. Larval fish investigators to be eventually associated with the project will probably employ additional specialized

collecting techniques which have been most effective in their experience.

In smaller habitats, seining and/or backpack shocking should be sufficient to procure the material required from those streams.

SPECIMEN HANDLING PROCEDURES

Because of the integrated nature of investigations in the Gila Taxonomy Project and the need for several kinds of information from each specimen procured, coupled with the problem of working with endangered forms which could conceivably be impacted by excessive sampling, special procedures must be prescribed. Four suggested procedures are outlined below to treat both adult and juvenile chubs procured for the Project. Non-lethal techniques are suggested for studies of populations containing endangered forms which may require large sample sizes to accomplish studies of intraspecific variation or hybridization. However it will probably be necessary to preserve a small sample of such forms according to the Standard Procedure (below) to facilitate broad spectrum enzyme surveys, etc. It may be possible to limit these specimens to those few which may be already apparently succumbing to stress endured during collection.

The definition of what constitutes an adult will have to vary because of the disparities in the sizes at maturity among chub populations (e.g., small tributary forms versus river, etc.) and will have to be left to the judgement of investigators familiar with those populations.

It is of paramount importance that specimens and tissues excised from them be accurately cross-referenced through a numbering system which will be devised by the Project Manager in cooperation with researchers from each area of investigation. This system must facilitate the logistics of distributing these materials to different investigators and follow-up reconciliations for comparison of results; it must also accurately associate individuals with localities.

Tissues removed from larger specimens and whole young specimens taken for genetic studies should probably be frozen in plastic vials or bags containing water and transported on dry ice to ultracold facilities for storage until studies commence. It is anticipated that the Fish and Wildlife Service will provide ultracold freezers in each region of the Colorado Basin which is remote from those of researchers to serve as interim storage.

Non-lethal Procedures -- Adults

In habitats which contain populations of endangered forms, and which may require large sample sizes to resolve problems of variation or hybridization, non-lethal sampling procedures are recommended for obtaining most of the required data. The following general procedure is proposed and is subject to further development and modification with experience gained by the researchers and field personnel.

- 1) Anesthetize the specimen in tricaine methanesulfonate
- 2) Place the specimen in the desired receptacle for recording the image, record the image perform any necessary counts, transverse measurements, etc., and assign the image and data a reference number.
- 3) Remove a small amount (with an instrument to be devised by field participants, researchers, and Project Manager) of dorsolateral muscle and pelvic fin tissue from the right side of the fish and treat the wound with antibiotic solution; place tissue in a cryo-vial, assign the same reference number, and place in cold container for transport. In addition, it may be possible, if necessary, to extract a small amount of blood (perhaps 0.5 cc) from the caudal vein or to extract a small amount of liver tissue with a biopsy needle.
- 4) If cytogenetic studies are to be conducted in addition to other genetic studies, a small additional amount of fin tissue may be clipped and treated according to the procedure below under Standard Procedure.
- 5) The specimen should then be revived as quickly as possible and carefully released. It is not deemed necessary for purposes of this study to mark the released specimen by tagging which may inflict undue additional stress. The recorded image will serve as the reference to the fish.

Standard Preservation Procedure -- Adults

The suggested procedure for preservation of specimens and tissues from the majority of locales which are judged not to have populations which may be impacted by removal of small samples follows. This procedure may also be conducted on a small number (five or so) of individuals of endangered forms from each population in order to obtain diverse tissue needed for surveys of a broad selection of enzyme loci.

- 1) Anesthetize the live specimen with tricaine methanesulfonate
- 2) Carefully excise the right eye; excise about 2 cc of muscular tissue from the right dorsolateral area; make an incision along the lower right abdomen and remove the liver and gonads; place these tissues in a cryovial, label with reference number with permanent marker, and place in freezing container for transportation. Optionally, additional materials may be required from specimens, such as fin tissue (clip from right pectoral or pelvic) or blood drawn from the heart-gill region.
- 3) Preserve the specimen in 10% formalin solution being careful to assure that the body is as straight as possible to facilitate later morphometric investigations, including possible video techniques. This may require some rehandling of the specimen during hardening to assure desired results. Shallow plastic-lined pits in the sand may be useful to serve as hardening basins. Given adequate space in the preservation container, chubs will probably harden with the fins relatively erect which may also facilitate later measurements. Adequate containers should be on hand so as not to crowd specimens. Depending on the possible effects on measurements, investigators may wish to transfer specimens to 70% ethyl alcohol solutions several days after preservation.
- 4) If cytological studies are to be conducted, additional procedures may be required. Additional fin or muscle tissue might be removed (right side of fish), placed in a vial in a prescribed buffered saline solution, reference numbered, and transported on ice within a few days to the laboratory of the investigator so that culturing procedures may be initiated.

Procedures for Juveniles

Freezing. -- At each locality where the above procedures are conducted on adults, it is anticipated that samples of young chubs (probably 75-100 mm or less) may be collected to supplement genetic studies. These specimens may be simply placed in small plastic bags or vials with water, assigned a single reference number for the entire collection, and placed on dry ice for transport. Alternately, if transporting live specimens is feasible, they can be carried to researchers' laboratories or to other ultracold facilities before this procedure is done.

Formalin Preservation. -- From several populations where

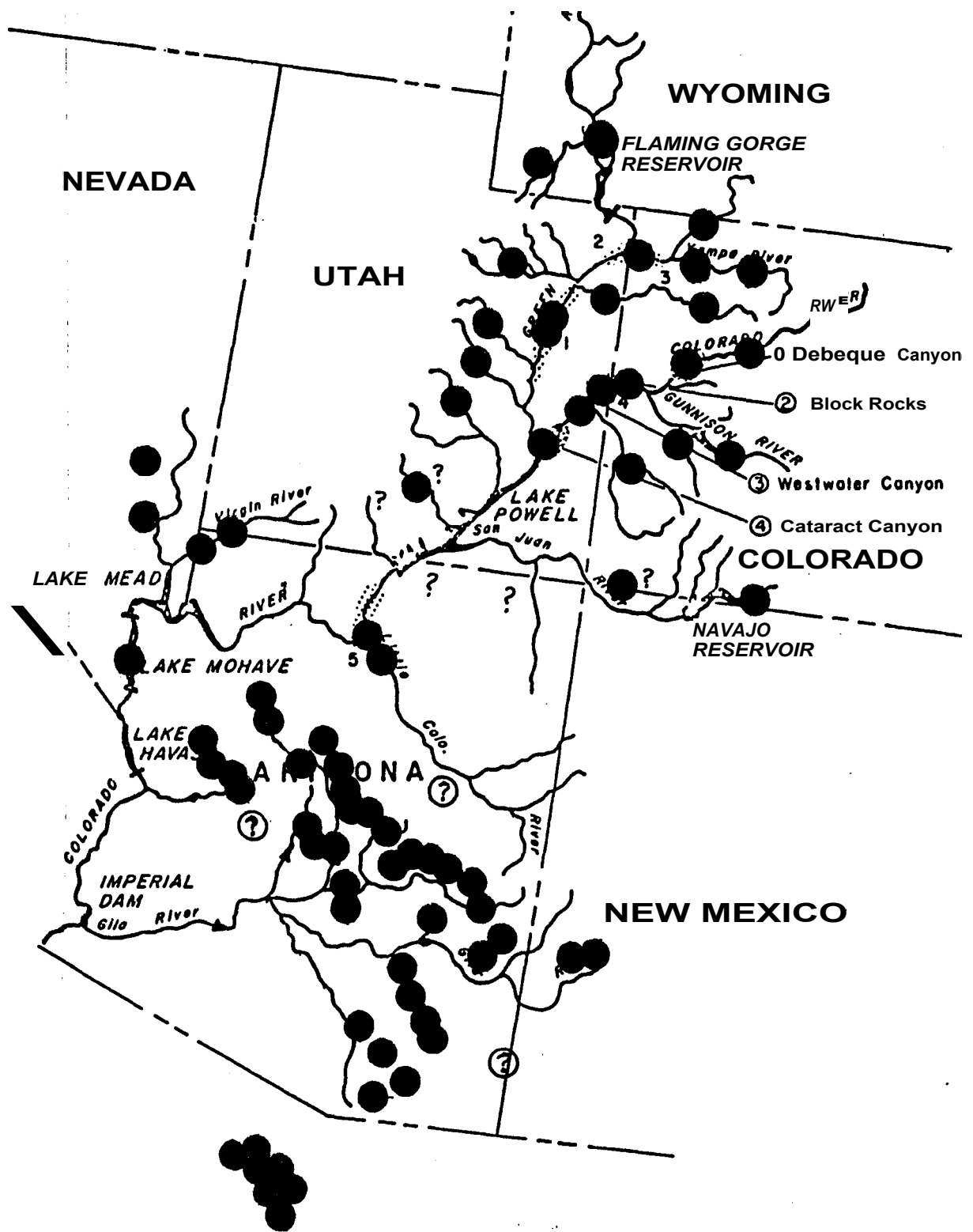
adequate previously preserved juvenile material may not be available to facilitate studies of ontogenetic variation, etc., it may be necessary to preserve additional specimens. This will be by convention of placing specimens in uncrowded containers of 10% formalin solution and assigning the sample a reference number. Transfer to alcohol storage can follow in several days.

Deposition of Materials

A large amount of new material, both formalin/alcohol preserved and frozen, will accrue from sampling for this project and tremendous amounts of raw data will be taken. ,apitable repositories for this material should be agreed upon by researchers and the Project Manager early in the project. It is suggested that alcoholic specimens be divided among the museum collections of the researchers' institutions and other appropriate institutions, such as the U.S. National Museum, U.S. Fish & Wildlife National Ecology Center at Ft. Collins, Colorado, and, if necessary, perhaps other institutions which have emphasis on western North American freshwater fishes. Frozen tissues which remain after genetic investigations, when no longer required by the researchers, should be deposited in a suitable permanently supported national or regional repository if such is established by that time. Copies of raw data should also be deposited at an agreed upon repository, accessible to future workers, after completion of the project.

COLLECTION LOCALES

Table 1 is intended to serve as strictly a preliminary list of suggested general locales (Map) from which it may be necessary to acquire Gila material to address the scope of this project and a general guide for estimating that scope for planning purposes. Sample sizes too are strictly preliminary recommendations and are based on numbers anticipated to be needed to address problems in particular populations, taking into account, in some cases, amount of existing material and past difficulties in effectively sampling these populations; these also are, in a large part, intended for planning purposes to provide crude estimates of the amount of material which must be processed in the course of the project. These locales and sample sizes are, of course, subject to considerable modification, depending on the proposed needs of researchers and additional knowledge concerning distribution that researchers and field personnel may offer. Preservation of series of young is recommended in areas where such a resource is generally deficient in existing museum collections and is thusly reflected in the table.



Map of general collection localities suggested for Colorado River Basin Gila Taxonomy Project.

Table 1. Suggested localities and sample sizes of collections for Gila Taxonomy Project. Sample categories refer to those described under Specimen Handling Procedures above.

<u>LOCALE</u>	<u>SAMPLE SIZES</u>			
	<u>Adults</u>		<u>Juveniles</u>	
	Standard	Non-lethal	Frozen	Formol
<u>Green River Basin</u>				
Upper Green R., WY				
Green R. bet. Fontenelle & Flaming Gorge	20		10	20
Black's or Ham's Fk.	20		10	20
Yampa R. System				
Upper Yampa above Cross Mtn	20		10	20
Little Snake R. ca. WY-CO	20	*	10	20
Yampa R. mouth Cross Mtn.	20	*	10	20
Yampa R. in Yampa Canyon	10**	150	100	
Middle Green R. area				
Green R. Desolation-Gray Canyon area	10**	100	100	
Lower White R., UT	20		10	20
Upper White R., CO	20		10	20
Upper Duchesne R. sys., UT	20		10	20
Minnie Maud Cr., UT	20 (if present?)		10	20
San Rafael R., UT	20		10	20
Price R., UT	20		10	20
<u>Upper Colorado R. Basin</u>				
Colorado R. ca. Rifle, CO	20		10	20
Colorado R., Debeque Canyon	10**	50	50	20
Upper Gunnison R. (Black Fk.??)	20		10	20
Gunnison R.-Uncompahgre	20		10	20
Colorado R., Grand Jct., CO	20		10	20
Colorado R., Black Rocks,"	10**	100	100	
Colorado R., Westwater Canyon, UT	10**	100	100	
Colorado R. ca. Moab, UT	20*	*	10	20
Colorado R., Cataract Canyon (& lower Green R.)	10**	50	50	20
Dolores R., CO	20		10	20
Dirty Devil R., UT	20		10	20
Escalante R., UT	?? (present?)			

Table 1 (continued)

San Juan R. Basin

Upper San Juan-Navaho R. area, CO-NM	20		10
Mancos Vor Animas R.	20 (if present?)		10
Chinle Wash-Daguma Cr., AZ	?		

Grand Canyon Area

Colorado-L. Col. R. confl.	10	50	50
Little Col. R. above Salt Canyon	10	50	50
Lower Grand Canyon area?	?		

Upper Little Colorado R. Area

??? ?? (Possibly extirpated)

Virgin-Muddy R. Area

Virgin R., AZ-UT	10**	50	25
Moapa R., NV	15		15

Pluvial White R., NV

Ash-Crystal Springs area (may incorporate Dexter NFH material)	10		10
--	----	--	----

Lower Colorado River Area

Lake Mohave, AZ (Dexter NFH material)	20		20
Bill Williams R. system, AZ			
Trout Cr.	10		10
Burro Cr.	10		10
Santa Maria-Sycamore Cr.	10		10
Francis Cr.	10		10

Table 1 (continued)

Gila River Basin

Hassayampa R. system, AZ		
Upper Hassayampa R. ??	??	<u>(if Gila present?)</u>
Agua Fria R. system, AZ		
Sycamore or Spring Cr.	10	10
Cave Cr., Seven Spgs., AZ	10	10
Verde R. system, AZ		
Chino Wash area	10	10
Upper Verde R.	10	10
Upper Oak Cr.	10	10
Verde R. ca. Cottonwood	10	10
Mid.-upper Wet Beaver Cr.	10	10
Mid.-upper W Clear Cr.	10	10
Mid.-upper Fossil Cr.	10	10
Lower Verde R.	10	10
Mid.-upper E Verde R.	10	10
Salt R. system, AZ		
Lower Salt R. system ??	10	10
Tonto Cr.	10	10
Fish Cr.	10	10
Cherry Cr.	10	10
Canyon Cr.	10	10
Cebeque Cr.	10	10
Carrizo Cr.	10	10
White R. system	10	10
Black R. system	10	10
Upper Gila R. system, AZ-NM		
Ash Cr. ??	??	<u>(Gila present?)</u>
San Carlos-Blue R.	10	10
Upper San Simon Cr. ??	10	(if present?) 10
Bonita Cr.	10	10
Eagle Cr.	10	10
Upper San Francisco syst.??	10	(if extant?)
Upper Gila R. syst., NM		
Turkey Cr.	10	10
Middle or East Fk.	10	10
Santa Cruz R. system, AZ		
Sabino Canyon	10	10
Cienega Cr.	10	10
Turkey Cr.	10	10
Monkey Spring	10	10

Table 1 (continued)

San Pedro R. system, AZ				
Aravaipa Cr.	10		10	
Redfield Canyon	10		10	
Bass Canyon	10		10	
Babocomari Cr.	10		10	

Gulf of California Tributaries -- Mexico

Rio Yaqui system, several localities	20+	(per locale)	20+	20+
Rio Mayo system,	20+	"	20	20+
Rio Fuerte system,	20+	"	20+	20+
Rio Sonora system, "	20+	"	20+	20+
Additional Mexican drainages ??				

* -- Refers to situations where endangered forms may occur which, if encountered, will be subjected to non-lethal techniques

** -- Refers to probable polytypic populations which contain endangered forms in which case no more than five specimens of such forms will be sacrificed under the standard preservation technique

PRICING PROPOSAL

Name of Offeror

Supplies and/or Services to be Furnished

Home Office Address

Division(s) and Location(s)

Total Amount of Proposal

Gov't Solicitation No.

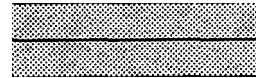
Where Work is to be Performed

DETAIL DESCRIPTION OF COST ELEMENTS

- | | | | |
|-----------------------------|---------------|---------------------|---------------|
| 1. Direct Material | Est. Cost (8) | Total Est. Cost (1) | Reference (2) |
| a. Purchased Parts | | | |
| b. Subcontracted Items | | | |
| c. Other - (1) Raw Material | | | |

 (2) Your **Standard** Commercial Items

 (3) **Interdivisional** Transfers



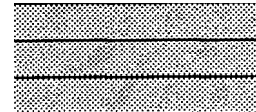
Total Direct Material

2. Material Overhead (See Footnote 3)

(Rate x \$ Base.)

3. Direct Labor (Specify)

Est. Hours Rate/Hour Est. Cost (8)



Total Direct Labor

Labor Overhead (Dept. or Cost Center) O.H. Rate x Base Est. Cost (8)



Total Labor Overhead

5. Special Testing (Including field work at Gov't Installation)

Est. Cost (8)

Total Special Testing

6. Special Equipment (If direct charge) (Itemize on Exhibit A)

Est. Cost (8)

Total Spec. Equipment

7. Travel (If direct charge) (Itemize on Exhibit A)

Est. Cost (8)

 a. Transportation

 b. Per Diem or Subsistence

Total Travel

8. Consultants (Identify-purpose-rate)

Est. Cost (8)

Total Consultants

9. Other Direct Costs (Itemize on Exhibit A)

10. Total Direct Cost & Overhead

11. General & Administrative Expense (Rate % of cost element Nos.

 . Royalties (see Footnote 4)

13. Total Estimated Cost

14. Fee or Profit (Rate % x \$ Base.)

15. Total Estimated Cost & Fee or Profit

INSTRUCTIONS TO OFFERORS

A. 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. However if the offeror's accounting system differs significantly from that depicted on the form, the offeror shall submit a cost proposal in his own format representing his own accounting format.

B. 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:

The existing, verifiable data.

The judgement factors applied in projecting from known data to the estimate, and

The contingencies used by the offeror in his proposed price.

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

C. 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.

D. The formats for the "Cost Estimates" 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.

E. 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 herein. 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), described 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 transferrer 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 costs 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; data 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.

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by Out
0348-0046

Complete this form to disclose **lobbying** activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action: a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	2. Status of Federal Action: <input type="checkbox"/> a. bid/offer/application b. initial award c. post-award	3. Report Type: a. initial filing b. material change For Material Change Only: year _____ quarter _____ date of last report
4. Name and Address of Reporting Entity: <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known:	5. If Reporting Entity in No. 4 is Subawardee. Enter Name and Address of Prime: Congressional District, if known:	
6. Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, if applicable:	
8. Federal Action Number, if known:	9. Award Amount, if known: \$	
10. a. Name and Address of Lobbying Entity (if individual, last name, first name, MI):	b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):	
(Continuation Sheet(s) SF-LLL-A, if necessary)		
11. Amount of Payment (check all that apply): \$ _____ <input checked="" type="radio"/> actual <input type="radio"/> planned	13. Type of Payment (check all that apply): <input type="checkbox"/> a. retainer <input type="checkbox"/> b. one-time fee <input checked="" type="radio"/> c. commission <input type="checkbox"/> d. contingent fee <input type="checkbox"/> e. deferred <input type="checkbox"/> f. other; specify:	
12. Form of Payment (check all that apply): <input type="checkbox"/> a. cash <input type="checkbox"/> b. in-kind; specify: nature _____ value _____		
14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11: (attach Continuation Sheet(s) SF-LLL-A, if necessary)		
15. Continuation Sheet(s) SF-LLL-A attached: <input type="checkbox"/> Yes <input type="checkbox"/> No		
16. Information requested through this form is authorized by title 31 U.S.C. section 1352. No disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____	
Authorized for Local Reproduction Standard Form - LLL		

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Use the SF-LLL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate **classification** of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate **classification** of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee", then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.
(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MO).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the Federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) of Congress that were contacted.
15. Check whether or not a SF-LLL-A Continuation Sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.

**DISCLOSURE OF LOBBYING ACTIVITIES
CONTINUATION SHEET**

Approved by OMB
0348-0046

Reporting Entity: _____ Page _____ of _____

SECTION K
REPRESENTATIONS, CERTIFICATIONS AND OTHER OFFEROR STATEMENTS

K.1 52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION
(APR 1985)

(a) The offeror certifies that--

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory--

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a) (1) through (a) (3) above; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a) (1) through (a) (3) above
.....
[insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization];

(ii) As an authorized agent, does certify that the principals named in subdivision (b) (2) (i) above have not participated, and will not participate, in any action contrary to subparagraphs (a) (1) through (a) (3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the offeror deletes or modifies subparagraph (a)(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

**K.2 52.203-4 CONTINGENT FEE REPRESENTATION AND AGREEMENT
(APR 1984)**

(a) Representation. The offeror represents that, except for full-time bona fide employees working solely for the offeror, the offeror--(Note: The offeror must check the appropriate boxes. For interpretation of the representation, including the term "bona fide employee," see subpart 3.4 of the Federal Acquisition Regulation.]

(1) has, has not employed or retained any person or company to solicit or obtain this contract; and

(2) has, has not paid or agreed to pay to any person or company employed or retained to solicit or obtain this contract any commission, percentage, brokerage, or other fee contingent upon or resulting from the award of this contract.

(b) Agreement. The offeror agrees to provide information relating to the above Representation as requested by the Contracting Officer and, when subparagraph (a)(1) or (a)(2) is answered affirmatively, to promptly submit to the Contracting Officer--

(1) A completed Standard Form 119, Statement of Contingent or Other Fees, (SF-119); or

(2) A signed statement indicating that the SF-119 was previously submitted to the same contracting office, including the date and applicable solicitation or contract number, and representing that the prior SF-119 applies to this offer or quotation.

**K.3 52.203-11 CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS
TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (JAN 1990)**

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief as of December 23, 1989, that--

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

K.4 52.204-3 TAXPAYER IDENTIFICATION (SEP 1989)

(a) Definitions.

"Common parent," as used in this solicitation provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

"Corporate status," as used in this solicitation provision, means a designation as to whether the offeror is a corporate entity, an unincorporated entity (e.g., sole proprietorship or partnership), or a corporation providing medical and health care services.

"Taxpayer Identification Number (TIN)," as used in this solicitation provision, means the number required by the IRS to be used by the offeror in reporting income tax and other returns.

(b) The offeror is required to submit the information required in paragraphs (c) through (e) of this solicitation provision in order to comply with reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M and implementing regulations issued by the Internal Revenue Service (IRS). If the resulting contract is subject to the reporting requirements described in 4.902(a), the failure or refusal by the offeror to furnish the information may result in a 20 percent reduction of payments otherwise due under the contract.

(c) Taxpayer Identification Number (TIN).

TIN: _____

TIN has been applied for.

TIN is not required because:

Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the U.S. and does not have an office or place of business or a fiscal paying agent in the U.S.;

Offeror is an agency or instrumentality of a foreign government;

Offeror is an agency or instrumentality of a Federal, state or local government;

Other. State basis. _____

(d) Corporate Status.

Corporation providing medical and health care services, or engaged in the billing and collecting of payments for such services;

Other corporate entity;

Not a corporate entity;

Sole proprietorship

Partnership

Hospital or extended care facility described in 26 CFR 501(c)(3) that is exempt from taxation under 26 CFR 501(a).

(e) Common Parent.

Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this clause.

Name and TIN of common parent:

Name _____

TIN _____

K.5 52.204-4 CONTRACTOR ESTABLISHMENT CODE (AUG 1989)

In the block with its name and address, the offeror should supply the Contractor Establishment Code applicable to that name and address, if known, to the offeror. The number should be preceded by "CEC:" Offerors should take care to report the correct CEC and not a similar number assigned to the Offeror in a different system. CEC: _____

The CEC is a 9-digit code assigned to a contractor establishment that contracts with a Federal executive agency. The CEC system is a contractor identification coding system which is currently the Dun and Bradstreet Data Universal Numbering System (DUNS). The CEC system is distinct from the Federal Taxpayer Identification Number (TIN) system.

The Government will obtain a Contractor Establishment Code for any awardee that does not have or does not know its CEC.

K.6 52.209-5 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (MAY 1989)

(a) (1) The Offeror certifies, to the best of its knowledge and belief, that--

(i) The Offeror and/or any of its Principals--

(A) Are are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have have not , within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property; and

(C) Are are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a) (1) (i) (B) of this provision.

(ii) The Offeror has has not , within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

K.7 52.215-6 TYPE OF BUSINESS ORGANIZATION (JUL 1987)

The offeror or quoter, by checking the applicable box, represents that

(a) It operates as a corporation incorporated under the laws of the State of _____ an individual, a partnership, a nonprofit organization, or **E** a joint venture; or

(b) If the offeror or quoter is a foreign entity, it rates as an individual, a partnership, a nonprofit organization, a joint venture, or a corporation, registered for business in _____ country

K.8 52.215-11 AUTHORIZED NEGOTIATORS (APR 1984)

The offeror or quoter represents that the following persons are authorized to negotiate on its behalf with the Government in connection with this request for proposals or quotations: [list names, titles, and telephone numbers of the authorized negotiators].

K.9 52.219-1 SMALL BUSINESS CONCERN REPRESENTATION (FEB 1990)

(a) Representation. The offeror represents and certifies as part of its offer that it is, is not a small business concern and that all, not all end items to be furnished will be manufactured or produced by a small business concern in the United States, its territories or possessions, Puerto Rico, or the Trust Territory of the Pacific Islands.

(b) Definition.

"Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in this solicitation.

(c) Notice. Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small business concern in paragraph (a) of this clause in order to obtain a contract to be awarded under the preference programs established pursuant to sections 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall (1) be punished by imposition of a fine, imprisonment, or both; (2) be subject to administrative remedies; and (3) be ineligible for participation in programs conducted under the authority of the Act.

K.10 52.219-2 SMALL DISADVANTAGED BUSINESS CONCERN
REPRESENTATION (FEB 1990)

(a) Representation. The offeror represents that it is, is not a small disadvantaged business concern.

(b) Definitions.

"Asian-Pacific Americans," as used in this provision, means a United States citizen whose origins are in Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the U.S. Trust Territory of the Pacific Islands (Republic of Palau), the

Northern Mariana Islands, Laos, Kampuchea (Cambodia), Taiwan, Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Republic of the Marshall Islands, or the Federated States of Micronesia.

"Indian Tribe," as used in this provision, means any Indian tribe, band, nation, or other organized group or community of Indians, including any Alaska Native Corporation as defined in 13 CFR 124.100 which is recognized as eligible for the special programs and services provided by the U.S. to Indians because of their status as Indians, or which is recognized as such by the State in which such tribe, band, nation, group, or community resides.

"Native Americans," as used in this provision, means American Indians, Eskimos, Aleuts, and native Hawaiians.

"Native Hawaiian Organization," as used in this provision, means any community service organization serving Native Hawaiians in, and chartered as a not-for-profit organization by, the State of Hawaii, which is controlled by Native Hawaiians, and whose business activities will principally benefit such Native Hawaiians.

"Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it

is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

"Small disadvantaged business concern," as used in this provision, means a small business concern that (a) is at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals and (b) has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one of these entities which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirements of 13 CFR 124.

"Subcontinent Asian Americans," as used in this provision, means United States citizens whose origins are in India, Pakistan, Bangladesh, Sri Lanka, Bhutan, or Nepal.

(c) Qualified groups. The offeror shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian Americans, and other individuals found to be qualified by the SBA under 13 CFR 124. The offeror shall presume that socially and economically disadvantaged entities also include Indian tribes and Native Hawaiian Organizations.

K.11 52.219-3 WOMEN-OWNED SMALL BUSINESS REPRESENTATION
(APR 1984)

(a) Representation. The offeror represents that it is,

El is not a women-owned small business concern.

(b) Definitions.

"Small business concern," as used in this provision, means a concern including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

"Women-owned," as used in this provision, means a small business that is at least 51 percent owned by a woman or women who are U.S. citizens and who also control and operate the business.

K.12 52.222-21 CERTIFICATION OF NONSEGREGATED FACILITIES
(APR 1984)

(a) "Segregated facilities," as used in this provision, 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, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or otherwise.

(b) By the submission of this offer, the offeror certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The offeror agrees that a breach of this certification is a violation of the Equal Opportunity clause in the contract.

(c) The offeror further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will--

(1) Obtain identical certifications from proposed subcontractors before the award of subcontracts under which the subcontractor will be subject to the equal opportunity clause;

(2) Retain the certifications in the files; and

(3) Forward the following notice to the proposed subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

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

A Certification of Nonsegregated Facilities must be submitted before the award of a subcontract under which the subcontractor will be subject to the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

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

K.13 52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS
(APR 1984)

The offeror represents that--

(a) It has, has not participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation, the clause originally contained in Section 310 of Executive Order No. 10925, or the clause contained in Section 201 of Executive Order No. 11114;

(b) It has, has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

K.14 52.222-25 AFFIRMATIVE ACTION COMPLIANCE (APR 1984)

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

K.15 52.223-1 CLEAN AIR AND WATER CERTIFICATION (APR 1984)

The Offeror certifies that--

(a) Any facility to be used in the performance of this proposed contract is , is not listed on the Environmental Protection Agency List of Violating Facilities;

(b) The Offeror will immediately notify the Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the Environmental Protection Agency, indicating that any facility that the Offeror proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and

(c) The Offeror will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

K.16 52.223-5 CERTIFICATION REGARDING A DRUG-FREE WORKPLACE
(MAR 1989)

(a) Definitions. As used in this provision,

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

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

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

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

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

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

(b) By submission of its offer, the offeror, if other than an individual, who is making an offer that equals or exceeds "\$25,000," certifies and agrees, that with respect to all employees of the offeror to be employed under a contract resulting from this solicitation, it will--

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(c) By submission of its offer, the offeror, if an individual who is making an offer of any dollar value, certifies and agrees that the offeror will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in the performance of the contract resulting from this solicitation.

(d) Failure of the offeror to provide the certification required by paragraphs (b) or (c) of this provision, renders the offeror unqualified and ineligible for award. (See FAR 9.104-1(g) and 19.602-1(a)(2)(i).)

(e) In addition to other remedies available to the Government, the certification in paragraphs (b) and (c) of this provision concerns a matter within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

K.17 52.222-15 CERTIFICATION OF ELIGIBILITY (FEB 1988)

(a) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

SECTION L
INSTRUCTIONS, CONDITIONS, AND NOTICES

L.1 52.214-7 LATE SUBMISSIONS, MODIFICATIONS, AND WITHDRAWALS
OF BIDS (DEC 1989)

(a) Any bid received at the office designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made and it--

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

(2) Was sent by mail or, if authorized by the solicitation, was sent by telegram or via facsimile, 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) Was sent by U.S. Postal Service Express Mail Next Day Service-Post Office To Addressee, not later than 5:00 P.M. at the place of mailing two working days prior to the date specified for receipt of bids. The term "working days" excludes weekends and U.S. Federal holidays.

(b) Any modification or withdrawal of a bid is subject to the same conditions as in paragraph (a) of this provision.

(c) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent either by registered or certified mail is the U.S. or Canadian Postal Service postmark both on the envelope or wrapper and on the original receipt from the U.S. or Canadian Postal Service. Both postmarks must show a legible date or the bid, modification, or withdrawal shall be processed as if mailed late. "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 by employees of the U.S. or Canadian Postal Service on the date of mailing. Therefore, bidders should request the postal clerk to place a legible hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

(d) The only acceptable evidence to establish the time of receipt at the Government installation is the time/date stamp of that installation on the bid wrapper or other documentary evidence of receipt maintained by the installation.

(e) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent by U.S. Postal Service Express Mail Next Day Service Post Office to Addressee is the date entered by the post office receiving clerk on the "Express Mail Next Day Service-Post Office to Addressee" label and the postmark on the envelope or wrapper and on the original receipt from the U.S. Postal Service. "Postmark" has the same meaning as defined in paragraph (c) of this provision, excluding postmarks of the Canadian Postal Service. Therefore, bidders should request the postal clerk to place a legible hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

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

(g) Bids may be withdrawn by written notice or telegram (including mailgram) received at any time before the exact time set for receipt of bids. If the solicitation authorizes facsimile bids, bids may be withdrawn via facsimile received at any time before the exact time set for receipt of bids, subject to the conditions specified in the provision entitled "Facsimile Bids." A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for receipt of bids, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid.

L.2 52.215-5 SOLICITATION DEFINITIONS (JUL 1987)

"Offer" means "proposal" in negotiation.

"Solicitation" means a request for proposals (RFP) or a request for quotations (RFQ) in negotiation.

"Government" means United States Government.

L.3 52.215-7 UNNECESSARILY ELABORATE PROPOSALS OR QUOTATIONS (APR 1984)

Unnecessarily elaborate brochures or other presentations beyond those sufficient to present a complete and effective response to this solicitation are not desired and may be construed as an indication of the offeror's or quoter's lack of cost consciousness. Elaborate art work, expensive paper and bindings, and expensive visual and other presentation aids are neither necessary nor wanted.

L.4 52.215-8 AMENDMENTS TO SOLICITATIONS (DEC 1989)

(a) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.

(b) Offerors shall acknowledge receipt of any amendment to this solicitation by (1) signing and returning the amendment, (2) identifying the amendment number and date in the space provided for this purpose on the form for submitting an offer, (3) letter or telegram, or (4) facsimile, if facsimile offers are authorized in the solicitation. The Government must receive the acknowledgment by the time specified for receipt of offers.

L.5 52.215-9 SUBMISSION OF OFFERS (DEC 1989)

(a) Offers and modifications thereof shall be submitted in sealed envelopes or packages (1) addressed to the office specified in the solicitation and (2) showing the time specified for receipt, the solicitation number, and the name and address of the offeror.

(b) Telegraphic offers will not be considered unless authorized by the solicitation; however, offers may be modified by written or telegraphic notice.

(c) Facsimile offers, modification or withdrawals will not be considered unless authorized by the solicitation.

(d) Item samples, if required, must be submitted within the time specified for receipt of offers. Unless otherwise specified in the solicitation, these samples shall be (1) submitted at no expense to the Government, and (2) returned at the sender's request and expense, unless they are destroyed during preaward testing.

L.6 52.215-13 PREPARATION OF OFFERS (APR 1984)

(a) Offerors are expected to examine the drawings, specifications, Schedule, and all instructions. Failure to do so will be at the offeror's risk.

(b) Each offeror shall furnish the information required by the solicitation. The offeror shall sign the offer and print or type its name on the Schedule and each continuation sheet on which it makes an entry. Erasures or other changes must be initialed by the person signing the offer. Offers signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.

(c) For each item offered, offerors shall (1) show the unit price/cost, including, unless otherwise specified, packaging, packing, and preservation and (2) enter the extended price/cost for the quantity of each item offered in the "Amount" column of the Schedule. In case of discrepancy between a unit price/cost and an extended price/cost, the unit price/cost will be presumed to be correct, subject, however, to correction to the same extent and in the same manner as any other mistake.

(d) Offers for supplies or services other than those specified will not be considered unless authorized by the solicitation.

(e) Offers must state a definite time for delivery of supplies or for performance of services, unless otherwise specified in the solicitation.

(f) Time, if stated as a number of days will include Saturdays, Sundays, and holidays.

L.7 52.215-14 EXPLANATION TO PROSPECTIVE OFFERORS (APR 1984)

Any prospective offeror desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing soon enough to allow a reply to reach all prospective offerors before the submission of their offers. Oral explanations or instructions given before the award of the contract will not be binding. Any information given to a prospective offeror concerning a solicitation will be furnished promptly to all other prospective offerors as an amendment of the solicitation, if that information is necessary in submitting offers or if the lack of it would be prejudicial to any other prospective offerors.

L.8 52.215-15 FAILURE TO SUBMIT OFFER (APR 1984)

Recipients of this solicitation not responding with an offer should not return this solicitation, unless it specifies otherwise. Instead, they should advise the issuing office by letter or postcard whether they want to receive future solicitations for similar requirements. If a recipient does not submit an offer and does not notify the issuing office that future solicitations are desired, the recipient's name may be removed from the applicable mailing list.

L.9 52.215-16 CONTRACT AWARD (APR 1985)

(a) The Government will award a contract resulting from this solicitation to the responsible offeror whose offer conforming to the solicitation will be the most advantageous to the Government, cost or price and other factors, specified elsewhere in this solicitation, considered.

(b) The Government may (1) reject any or all offers if such action is in the public interest, (2) accept other than the lowest offer, and (3) waive informalities and minor irregularities in offers received.

(c) The Government may award a contract on the basis of initial offers received, without discussions. Therefore, each initial offer should contain the offeror's best terms from a cost or price and technical standpoint.

(d) The Government may accept any item or group of items of an offer, unless the offeror qualifies the offer by specific limitations. Unless otherwise provided in the Schedule, offers may be submitted for quantities less than those specified. The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit cost or prices offered, unless the offeror specifies otherwise in the offer.

(e) A written award or acceptance of offer mailed or otherwise furnished to the successful offeror within the time for acceptance specified in the offer shall result in a binding contract without further action by either party. Before the offer's specified expiration time, the Government may accept an offer (or part of an offer, as provided in paragraph (d) above), whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award. Negotiations conducted after receipt of an offer do not constitute a rejection or counteroffer by the Government.

(f) Neither financial data submitted with an offer, nor representations concerning facilities or financing, will form a part of the resulting contract. However, if the resulting contract contains a clause providing for price reduction for defective cost or pricing data, the contract price will be subject to reduction if cost or pricing data furnished is incomplete, inaccurate, or not current.

L.10 52.215-19 PERIOD FOR ACCEPTANCE OF OFFER (APR 1984)

In compliance with the solicitation, the offeror agrees, if this offer is accepted within 120 calendar days from the date specified in the solicitation for receipt of offers, to furnish any or all items on which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the Schedule.

L.11 52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a cost plus fixed fee type contract resulting from this solicitation.

L.12 52.222-45 NOTICE OF COMPENSATION FOR PROFESSIONAL EMPLOYEES
(APR 1984)

Note the provisions relating to evaluation of compensation for professional employees set forth elsewhere in this solicitation. Failure to comply with these provisions may constitute sufficient cause to justify rejection of a proposal. The total compensation plan required to be submitted by the offeror will be viewed as being within the purview of Public Law 87-653 (10 U.S.C. 2306(f)) and in accordance with Federal Acquisition Regulation 15.802(a).

L.13 52.222-46 EVALUATION OF COMPENSATION FOR PROFESSIONAL
EMPLOYEES (APR 1984)

(a) Recompensation of service contracts may in some cases result in lowering the compensation (salaries and fringe benefits) paid or furnished professional employees. This lowering can be detrimental in obtaining the quality of professional services needed for adequate contract performance. It is therefore in the Government's best interest that professional employees, as defined in 29 CFR 541, be properly and fairly compensated. As a part of their proposals, offerors will submit a total compensation plan setting forth salaries and fringe benefits proposed for the professional employees who will work under the contract. The Government will evaluate the plan to assure that it reflects a sound management approach and understanding of the contract requirements. This evaluation will include an assessment of the offeror's ability to provide uninterrupted high-quality work. The professional compensation proposed will be considered in terms of its impact upon recruiting and retention, its realism, and its consistency with a total plan for compensation. Supporting information will include data, such as recognized national and regional compensation surveys and studies of professional, public and private organizations, used in establishing the total compensation structure.

(b) The compensation levels proposed should reflect a clear understanding of work to be performed and should indicate the capability of the proposed compensation structure to obtain and keep suitably qualified personnel to meet mission objectives. The salary rates or ranges must take into account differences in skills, the complexity of various disciplines, and professional job difficulty. Additionally, proposals envisioning compensation levels lower than those of predecessor Contractors for the same work will be evaluated on the basis of maintaining program continuity, uninterrupted high-quality work, and availability of required competent professional service employees. Offerors are cautioned that lowered compensation for essentially the same professional work may indicate lack of sound management judgment and lack of understanding of the requirement.

(c) The Government is concerned with the quality and stability of the work force to be employed on this contract. Professional compensation that is unrealistically low or not in reasonable relationship to the various job categories, since it may impair the Contractor's ability to attract and retain competent professional service employees, may be viewed as evidence of failure to comprehend the complexity of the contract requirements.

L.14 1452.233-2 SERVICE OF PROTEST (JAN 1985) (DEVIATION)--
DEPARTMENT OF THE INTERIOR

Protests, as defined in section 33.101 of the Federal Acquisition Regulation, shall be served on the Contracting Officer by obtaining written and dated acknowledgement of receipt from:

Michael K. Barrett, Contracting Officer
Bureau of Reclamation
PO Box 11568, Code UC-810
125 South State Street, Room 7217
Salt Lake City UT 84147

A copy of the protest served on the Contracting Officer shall be simultaneously furnished by the protester to the Assistant Solicitor for Procurement and Patents, Office of the Solicitor, Room 6511, U.S. Department of the Interior, 18th and C Streets, N.W., Washington, D.C. 20240.

L.15 INSTRUCTIONS FOR PREPARING TECHNICAL PROPOSALS

(a) Inasmuch as technical proposals describe the capability of your organization, the proposals should be specific and complete in every detail. Proposals should describe your capability to satisfactorily perform the work in accordance with Section C. Proposals should therefore be submitted in English, and be practical, legible, clear, concise, and coherent. Clarity of presentation is important for sound evaluation. In order that the evaluation of proposals may be accomplished strictly on the basis of technical merit, no costs shall be included in technical proposals.

Offerors should provide the stated number of copies of the proposal to the Contracting Officer. The proposals should contain a full response to the specifications and requirements of the Work Statement in Section C. In addition the proposals should be prepared in consideration of the evaluation factors stated in Section M. Proposals should contain the cost and pricing data required by the provisions of Sections B and M. The instructions in Section L apply in general to the whole of the proposals.

(b) Present the proposal in a standard three-ring binder, with a label on the cover identifying the offeror, solicitation number, and title of the solicitation. The chapters described in (c) below should be separated with index tabs. Oversize material, samples, etc. should be identified with a label or tag with name of the offeror, solicitation number, and solicitation title. If there are multiple pieces, label them part 1 of n. , 2 of n. , etc. All proposal pages shall be consecutively numbered.

(c) To aid in evaluation of proposals it is desired that the proposals follow the same general format. Therefore proposals should contain the following information:

1. Table of contents.
 2. List of all submittals and supporting data, such as permits, tables, drawings, appendices, samples, etc.
 3. Introduction. This section should contain a statement of your understanding of the scope of work. It should also contain a summary of your proposed approach to performing the work.
 4. Describe the firms background and experience (See evaluation factor M.4.1).
 5. Describe the firms management plan for the overall program (See evaluation factor M.4.2).
 6. Describe the firms staff available for the project. This should include resumes, publication listings or other pertinent data (See evaluation factor M.4.3).
 7. ~~Describe~~ your physical resources (Evaluation factor 4, paragraph 5.4)
- ~~Describe~~ the firms physical resources (See evaluation facto M.4.5).

Note: In the event the offeror proposes to use subcontractors, the capabilities of the subcontractors must be demonstrated in the same manner as stated above for the prime contractor. In addition the prime contractor should demonstrate how the subcontractor will be managed, or coordinated so that the objective of this solicitation will be achieved.

L.16 INSTRUCTIONS FOR PREPARING PRICE PROPOSALS

(a) Each offeror is required to submit an original and the stated number of duplicate price proposals. Price proposals are to be submitted in separate, detachable, and unclassified form so the offeror's Technical Proposal can be evaluated solely upon the basis of technical merit, independent of dollar values. The Price Proposal should detail the costs of the entire contract performance period and specific program phases. In addition the Cost Proposal shall contain all other submittals other than the Technical Proposals, i.e., Section B - Bid Schedule, Section G - Contract Administration Data, Section K -Representations, Certifications, and Other Offeror Statements, etc.

A Standard Form (SF) 1411 (Contract Pricing Proposal Cover Sheet) is included in this solicitation in Section J. Instructions and footnotes relative to completion of the Contract Pricing Proposal are on the reverse of the SF-1411. The categories of cost elements on the Contract Pricing Proposal may not necessarily be applicable to every facet of this acquisition; however, offerors shall make a conscientious effort to detail the applicable cost elements into the parameters of the form. Clear, concise, and accurate price proposals reflect the offeror's financial plan for accomplishing the effort contained in the Technical Proposal. The adequacy of the SF-1411 and attachments may be used as a measure of financial and management skill; failure to provide the required detail may effect the cost evaluation score.

Each proposal must include all the pertinent details as to cost elements as required by the "Instruction to Offerors" and "Footnotes" on Form SF-1411 inclusive of identification of support data on "Exhibits A," which appears on the reverse side of the attached Form SF-1411. Likewise, all specific statements, authorizations, authentications, and other information as mentioned on Form SF-1411 must be completed or supplied as appropriate. Full disclosure of offeror's cost data and estimating process is required. Detailed supporting schedules and additional data materially aid the Contracting Officer in evaluating proposals.

(b) The following explanations are presented to assist Offerors in preparing price proposals:

Block 1a: Purchased Parts. Enter the total amount and detail substantiation in Exhibit A (or separate schedules).

Block 1b: Subcontracted Items. Enter the description and detail the extent of subcontracting in Exhibit A (or separate schedules). Include the basis of each cost estimate, the proposed contract type (fixed-price, cost, etc.), the proposed source (sole source or competitive) and method of selection,

assurance that further analysis and negotiation on subcontractor price proposals will be made, and copies of subcontractor cost proposals.

Block 1c: Other. Include items such as purchase of material and equipment; computer rentals must be substantiated in Exhibit A (or separate schedules). However, do not duplicate items listed in Block 9.

Block 2: Material Overhead. Enter the percentage and the base to which it applies.

Block 3: Direct Labor. Describe direct labor needs by categories such as management, technical, clerical, and laboratory. If proposed direct labor rates represent other than current weighted average experienced rates, substantiate in Exhibit A (or separate schedule). State whether any additional direct labor (new hires) will be required during the contract performance period. If so, state the number required. If your accounting system treats fringe benefits as part of direct labor costs, state the amount, rate, and base to which they apply.

Block 4: Labor Overhead. Enter the percentage and the base to which it applies. If multiple overhead rates exist, state the amount, rate, and base to which they apply. If labor fringe benefits are included in overhead, provide an explanation. Offerors must identify and support the proposed rate, i.e., historical data, auditor-recommended rates, etc. Additional instructions appear in footnote 3 on the reverse of SF-1411.

Block 7: Travel Costs. Include the rates and base figures applicable to all elements of travel, i.e., 10 days of per diem at \$50/day. Attach a schedule estimating the number of days and people required. If applicable, identify and support any other special transportation costs.

Block 8: Consultants. Indicate the specific program area in which consultants are to be used, the amount of time services will be required, the consultant's quoted rate, the basis for the rate, and whether the consultant has received the quoted rate for similar services.

Block 9: Other Direct Costs. Include all other direct costs not listed in Block 1 above, including bases and rate applicable, i.e., 500 feet of wire at \$1.59 per foot. Computer usage and/or electronic data processing costs must be listed separately and reference the manufacturer, trade name, peripheral equipment, whether the system is owned, leased, or subcontracted, what portion of contract work the system will be used for, the amount of anticipated usage, and an explanation of whether usage will be continuous or sporadic.

Block 10: General and Administrative Expense. Complete per the instructions in footnote 3 on the reverse of SF-1411.

Block 14: Fee or Profit. Identify the rate and amount of profit.

Reference Column: Use this column per the instructions in footnote 2 on the reverse of SF-1411.

L.17 MAILING ADDRESS FOR MAILED BIDS OR PROPOSALS

An envelope has been furnished in the solicitation package for returning bids or proposals to the Contracting Officer. If offerors choose to use their own envelopes, the envelope must be sealed, marked, and addressed as follows:

FROM: (Name, Address, and Zip Code of Offeror) (Do Not Forget Correct Postage)

TO: BUREAU OF RECLAMATION
ATTENTION: CODE UC-811
PO BOX 11278
SALT LAKE CITY UT 84147

Solicitation No.: 0-SP-40-09700

Solicitation Title: Gila Taxonomy

L.18 PHYSICAL ADDRESS FOR HAND-CARRIED BIDS OR PROPOSALS

If bids or proposals are to be handcarried by the offeror, a representative of the offeror's firm, or by commercial carrier, they should be delivered to:

BUREAU OF RECLAMATION
ROOM 7217, ATTN: UC-811
125 SOUTH STATE STREET
SALT LAKE CITY, UTAH 84138

L.19 RETENTION/DISPOSITION OF MATERIALS

Offers submitted in response to this solicitation will not be returned; they will be retained by the Government for official record purposes. Proposal material supplied to the offeror by the Bureau (including attachments and specifications) shall not be returned to the procuring office but may be disposed of at the discretion of the offeror.

L.20 SMALL BUSINESS SIZE STANDARDS—RECLAMATION (AUG 1989)

The small business size standard for this acquisition is \$3.5 million. The applicable Standard Industrial Code (SIC) is 8733.

SECTION M

EVALUATION FACTORS FOR AWARDS

M.1 NEGOTIATION--RECLAMATION (APR 1989)

If discussions are necessary, the Contracting Officer (CO) will enter into such discussions with those offerors whose responses to this Request for Proposals fall within the competitive range. The competitive range will be established by the CO after the evaluation of technical and price/cost proposals. The CO will determine which proposals are in the competitive range in accordance with the procedures set forth at Federal Acquisition Regulation 15.609.

M.2 EVALUATION PROCEDURES--RECLAMATION (DEC 1987)

The Government will select the best overall offer, based on technical merit, cost/price, and other pertinent factors which are stated in the solicitation. The evaluation process is described below.

(a) Evaluation of technical and cost/price proposals.

(1) All technical proposals submitted will be evaluated by a Technical Proposal Evaluation Committee (TPEC). Cost/price data will not be considered during this activity. The criteria for technical evaluation are set forth in the provision of this section entitled Technical Evaluation Criteria and will be the sole basis for determining the technical merit of proposals. In addition to the technical evaluation criteria, offerors should refer to the instructions for preparing technical proposals in the solicitation provision entitled Submission of Technical Proposals. The culmination of the technical evaluation will be a classification of each technical proposal as "acceptable", **acceptable** with modification", or "unacceptable." All offerors will be notified in writing of the adjective technical ranking assigned to their offer after determination of the competitive range. (See paragraph (b) below.)

(2) After completion of the technical evaluation, a cost/price evaluation will be made for all offers classified as either "acceptable," or "acceptable with modification." The criteria for cost/price evaluation are set forth in the provision of this section entitled Cost/Price Evaluation Criteria and will be the sole basis for rating cost/price proposals. This evaluation will be accomplished by one or more of the Contracting Officer's staff and, if necessary, other technical staff whom the Contracting Officer assigns to the Cost/Price Evaluation Committee. In addition to reviewing the cost/price evaluation

criteria, offerors should refer to instructions for preparing cost/price proposals in the solicitation provision entitled Submission of Cost/Price Analysis.

(b) Competitive range determination. Unless strong reasons exist which would justify award without discussions, the second step of the overall evaluation will be the determination of the competitive range by the Contracting Officer. This determination will include consideration of technical merit and the associated cost/price of only those proposals identified as "acceptable" or "acceptable with modification." The competitive range will include those offers which have a reasonable chance of being selected for award.

(c) Negotiations. If it is determined by the Contracting Officer that discussions are necessary, the third step of the overall evaluation will be the conduct of negotiations, both technical and cost/price, with all offerors in the competitive range. These offerors will be given the opportunity to submit clarifications, revisions, or corrections to their proposals (referred to as "the best and final offer"). All such offerors will be informed, in writing, of the closing date of negotiations which will be common to all offerors and will be the final date that revisions, changes, or additions to initial offers will be accepted by the Government.

(d) Source selection. The culmination of the overall evaluation process will be the evaluation of best and final offers based on the criteria stated in the solicitation and using the procedures identified in paragraph (a) above. At the completion of this evaluation, the Contracting Officer will select for award that offer which represents the best combination of technical merit and related price to the Government.

M.3 EVALUATION FACTORS--RECLAMATION

The following is provided to illustrate the overall weighing structure for technical and cost/price evaluation of proposals submitted under each of the schedules in Sections C.4.2-C.4.5:

TECHNICAL PORTION (70% of overall points)

<u>Evaluation Factors</u>	<u>Percent of Total</u>	<u>Total Points</u>
1. Relative merits of proposed methods	25	60
2. Qualifications of respondent(s)	25	60
3. Physical and Technical Resources	20	48
Total Technical	70	168

COST/PRICE PORTION (30% of overall points)

<u>Evaluation Factors</u>	<u>Percent of Total</u>	<u>Total Points</u>
1. Overall cost	30%	72
TOTAL POINTS		240

M.4 TECHNICAL EVALUATION CRITERIA

A Technical Proposal Evaluation Committee, consisting in part of the Project Manager and Review Panel, will evaluate the technical proposals according to the criteria listed in this provision. Technical criteria comprise 70% of the total evaluation weight. Subfactors stated below are listed in descending order of importance.

<u>Evaluation Criteria</u>	<u>Points</u>
1. Relative merits of proposed methods	
a) Prior success of proposed procedures in similar studies	20
b) Compatibility with non-lethal sampling procedures where necessary	20
c) Probability of adequately addressing Project research needs	20
Subtotal	60
2. Qualification of Respondent(s)	
a) Prior experience with fish studies in the appropriate technical area of investigation (Schedules I-IV, Section C.4)	20
b) Prior experience with studies of cyprinid fishes in the appropriate technical area of investigation	10
c) A demonstrated ability (based on previous reports/publications) to conduct appropriate analyses of data yielded in such studies	10
d) A demonstrated ability to complete such investigations and analyses and prepare reports synthesizing findings in a <u>timely</u> manner	10

e)	A demonstrated ability to further reveal findings through publications in the primary scientific literature	5
f)	Prior experience with <u>Gila</u> spp., particularly Colorado R. forms, in appropriate area of investigation	5
Subtotal		60

3. Physical and Technical Resources

a)	Possession of necessary laboratory facilities and a large percentage of equipment necessary to conduct proposed investigations	42
b)	Possession of adequate sampling gear to _____ independently conduct sampling of smaller habitats for <u>Gila</u> spp.	6
Subtotal		48
Total Points		168

M.5 COST/PRICE EVALUATION CRITERIA--RECLAMATION (DEC 1987)

The Cost/Price Evaluation Committee will evaluate the cost/price proposals according to the criteria listed in this provision. Cost/Price criteria comprise 35% of the total evaluation weight. Unless otherwise stated below, the evaluation factors stated under each criterion are:

M.5.1 Quantum of Total Price - The quantum price score will be determined using the following formula:

$$\text{Quantum Price Score} = M - [(M) * (\underline{P - L})]$$

where:

P = Proposed individual price (proposed individual price of offeror with a "technically acceptable or technically acceptable with modification: offer) and

L = Lowest proposed price (lowest price of offeror with a "technically acceptable or technically acceptable with modification" offer)

M = The maximum total of 20 points

Note: Price proposals will not be scored less than 0 points. To provide equitable consideration for all offers, prior to scoring the above formula, variables L and P may be adjusted to correct obvious inconsistencies, omissions, and/or errors. Also, the Contracting Officer may make any other adjustments necessary to properly match the cost proposal with the specification work requirements and to provide an equitable cost baseline for comparative scoring.

TOTAL M.5.1 57 Points

M.5.2 quality of cost/price proposal.

This evaluation will be made based on the following criteria:

M.5.2.1 Realism of proposed costs.

5 Points

M.5.2.2 Trackability of proposed costs to the specified work.

5 Points

M.5.2.3 Rationale and support for proposed costs.

5 Points

TOTAL M.5.2 15 Points

TOTAL COST/PRICE POINTS: 72 Points

M.6 NOTICE OF POSSIBILITY OF AWARD WITHOUT DISCUSSION-
-RECLAMATION (DEC 1987)

Offerors are cautioned to review carefully all terms, conditions, and specifications of the solicitation prior to submission of proposals. If the proposals received clearly demonstrate the existence of adequate competition, and, if acceptance of the most favorable initial proposal without discussions would result in a fair and reasonable price for the work and represent the lowest overall cost to the Government, then the Government reserves the right to accept initial proposals without discussion. Offerors are cautioned that each proposal should be prepared based on the most favorable technical and cost/price terms which can be submitted, since acceptance of an initial offer by the Government will result in a legally binding contract.

M.7 RESPONSIBILITY SURVEY--RECLAMATION (DEC 1987)

If an offer submitted in response to this solicitation is favorably considered and included in the competitive range, a Government survey team may contact the offeror's facility to

determine its financial and technical ability to perform the work. Current financial statements and other data required to make these determinations shall be made available to the survey team.

M.8 OTHER AWARD FACTORS--RECLAMATION (DEC 1987)

(a) The Contracting Officer will consider several factors in the selection process which are important, but not quantified, such as:

(1) Agreement to the general and special contract provisions;

(2) Period of performance acceptable to the Government;

(3) Preaward clearances, determinations, and approvals required by Federal Acquisition Regulations, Department of Interior Acquisition Regulations and Reclamation Acquisition Directives, e.g., responsibility determination pursuant to FAR Subpart 9.1.

(4) Circumstances which create an appearance of conflict of interest with an offeror.

(b) Failure of the offeror to comply these requirements may result in rejection of its proposal.

M.9 AWARD DETERMINATION--RECLAMATION (DEC 1987)

Proposals will be evaluated to determine those offers which are within the competitive range, technical, price, and other factors stated in the solicitation considered. Negotiations may be conducted with all offerors whose proposals are determined to be technically acceptable or technically acceptable with modification and are included in the competitive range. A contract award may or may not be made to the proposal with the lowest proposed price. Since quality performance is considered vital to successful contract performance, the Government reserves the right to award a contract on other than a low price basis, if a higher-priced proposal is rated significantly higher technically than another or is determined by the CO to represent a more advantageous offer to the Government.

Award will be made to the responsible offeror, whose offer, conforming to the terms and conditions of this solicitation, is determined to be the most advantageous to the Government, technical, price, and other solicitation factors considered, following award procedures prescribed in the Federal Acquisition Regulations.

