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ENVIRONMENTAL STUDIES

L.G.L.- ALASKA RESEARCH ASSOCIATES ARTIC ENVIRONMENTAL INFORMATION AND DATA CENTER WOODWARD - CLYDE CONSULTANTS, INCORPORATED FRANK ORTH & ASSOCIATES WOODY TRIHEY

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Acres American Incorporated 1577 C Street Suite 305 Anchorage, Alaska 99501

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Anchorage, Alaska 99501 Telephone (907) 279-9631

ALASKA POWER AUTHORITY

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SUSITNA HYDROELECTRIC PROJECT

Preproposal Conference, July 15, 1982

Use a Separate Form for Each Question

Question Number	(APA Assigned)
FIRM:	
SPOKESPERSON:	
QUESTION:	

Please! Be specific, brief and legible!!

ACRES AMERICAN INCORPORATED

AGREEMENT NO.

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FOR

WILDLIFE AND HABITAT STUDIES

to be provided by

LGL - ALASKA RESEARCH ASSOCIATES 1577 "C" Street Anchorage, Alaska 99501

in connection with

SUSITNA HYDROELECTRIC PROJECT ENGINEERING AND TECHNICAL SERVICES FEASIBILITY STUDIES LEADING TO LICENSE APPLICATION

July 1982

Acres American Incorporated 1577 "C" Street Suite 305 Anchorage, Alaska 99501 Telephone: (907) 276-4888 ACRES AMERICAN INCORPORA'ED AGREEMENT NO.

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For I luded AQUATIC ENVIRCNMENTAL STUDIES to be provided by ALASKA RESEARCH ASSOCIATES LGL 1577 "C" Street Anchorage, Alaska 99501

in connection with

SUSITNA HYDROELECTRIC PROJECT ENGINEERING AND TECHNICAL SERVICES FEASIBILITY STUDIES LEADING TO LICENSE APPLICATION

July 1982

Acres American Incorporated 1577 "C" Street Suite 305 Anchorage, Aïaska 99501 Telephone: (907) 276-4888 TABLE OF CONTENTS

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(1) THE AGREEMENT (Pages -)

- (2) Attachment 1 Scope of Work for Wildlife and Habitat Studies
- (3) Attachment 2 Pricing Proposal

(4) Attachment 3 - Insurance Requirements

- (5) Attachment 4 Nondiscrimination Agreement and Certification
- (6) Attachment 5 Agreement between The Authority and Alaska Native Corporation Dated January 4, 1980
- (7) Attachment 6 Bureau of Land Management Stipulations to Authority Permit No. Dated
- (8) Attachmnet 7 Invoicing Instructions

	INDEX OF ARTICLES OF AGREEMENT
ARTICLE	
	en e
	SCOPE
	COMMUNICATIONS AND NOTICES
	COMPLETION OF WORK, TERM OF AGREEMENT
v v v v v v v v v v v v v v v v v v v	COMPENSATION
in the VI sector and the	SUBMISSION OF INVOICES AND PAYMENTS
VĪI	KFY DEDSONNEL
VIII	PROJECT FILES
ÏX	ASSIGNMENT
λ Vr	INSURANCE AND INDEMNIFICATION
NI ANA ANA ANA ANA ANA ANA ANA ANA ANA A	DISSEMINATION OF INFORMATION
XIII	DISPUIES
and the XIV second s	FXAMINATION OF COSTS
XV	TERMINATION
XVI	NONDISCRIMINATION AGREEMENT CERTIFICATION
VUTT	AND AFFIRMATIVE ACTION COMPLIANCE
XVII XVIII	ALASKA PREFERENCE
XIX	SUBCONTRACTOR APPROVAL
XX	COMPLIANCE WITH LAWE
XXI	GOVERNING LAW
XXII	DOCUMENTS PROPERTY OF THE AUTHORITY
	WAIVER OF CONTRACT BREACH
XXV	ADDITIONAL PROVISIONS
XXVI	SEVERABILITY OF INVALID PROVISIONS
XXVII	REPORTS

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AGREEMENT

THIS AGREEMENT, made and entered into this _____ day of ______ by and between

Acres American Incorporated a New York Corporation, hereinafter referred to as ACRES

and

LGL Alaska Research Associates 1577 "C" Street Anchorage, Alaska 99501 hereinafter referred to as LGL

WITNESSETH:

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WHEREAS, ACRES has entered into an agreement with the Alaska Power Authority (the "AUTHORITY") to study the feasibility of development of a hydroelectric project known as the Susitna Hydroelectric Project (the "PROJECT") located in the Upper Susitna River Basin, and

WHEREAS, ACRES wishes to retain the services of environmental specialists to provide certain services under Task 7, Environmental Studies as outlined in Attachment 1 - Scope of Work.

WHEREAS, ACRES has selected SUBCONTRACTOR to perform the services set out in Attachmnet 1 - Scope of Work and as that work may be modified pursuant to the provisions of this Agreement, and SUBCONTRACTOR is willing to accept responsibility for the performance of the services set forth in this Agreement for the compensation and in accordance with the terms and conditions herein specified.

NOW, THEREFORE, in consideration of the premises and the mutual benefits which will result to the parties hereto in carrying out the Articles of this Agreement, it is agreed as follows Article I - Scope

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- SUBCONTRACTOR shall perform the work as set out in Attachment 1 to this Agreement entitled "Scope of Work", and as that work may be modified pursuant to the provisions of this Agreement.
- 2. The general scope of work of this Agreement may be modified for consistency with modification made in the ACRES/AUTHORITY Agreement pursuant to Article XIII Changes.

Article 11 - Communications and Notices

All communications between ACRES and SUBCONTRACTOR about this Agreement shall be addressed to the following personnel at ACRES and SUBCONTRACTOR respectively:

ACRES

David C. Willett - Vice President Acres American Incorporated 900 Liberty Bank Building Buffalo, New York 14202 Telex: 91-6423

or

John W. Hayden - Deputy Project Manager 1577 "C" Street, Suite 305 Anchorage, Alaska 99501 Telex: 02-5450

SUBCONTRACTOR

Benny J. Gallaway - Principal in charge 1577 "C" Stree: Anchorage, Alaska 99501

All notices required by this Agreement to be given by either party shall be deemed to be properly given and received if made in writing to the other party by registered mail, telegram, telecopy or telex addressed, directed or hand delivered as provided in this Article.

Article III - Completion of Work; Term of Agreement

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Subject to no changes having occurred in the Schedule of Work pursuant to Articles I, VI, XIII, XV and XXVI, SUBCONTRACTOR shall perform all work in a timely fashion and agrees to complete all work under this Agreement prior to the FERC License Submission.

The parties to this Agreement recognize that time is of the essence in the completion of the Scope of Work. SUBCONTRACTOR agrees to make all efforts to meet the project schedule up to the submission of License Application and other such schedules as may be agreed in the course of the Project. Should SUBCONTRACTOR fail to meet these schedules, then provided that the delay is not caused by conditions outside the control of SUBCONTRACTOR, the costs accruing to ACRES and other subcontractors as a result of such delay may be deducted from monies owing SUBCONTRACTOR.

Provided that the Scope of Work has been completed, this Agreement shall terminate on June 30, 1983.

Upon completion of all work covered by this Agreement, all property produced or purchased under this Agreement and not otherwise committed by the terms of Article XV shall be transferred to ACRES.

Article IV - Compensation

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ACRES shal' pay SUBCONTRACTOR for services performed under this Agreement to cover the following items as hereinafter defined:

- Payment for services of Project staff and other authorized personnel, plus
- (2) Payment for direct costs, and
- (3) Payment for the cost of subtier subcontractors services.

The total estimated cost of all the work to be performed under this Agreement, as set out in Attachment 1 - Scope of Work, is \$1,217,837 including a fixed fee. Cost Breakdown is indicated on Attachment 2 - Pricing Proposal.

No payment will be made by ACRES for services performed and direct costs under this Agreement or any sub-tier contracts hereunder until such times as AUTHORITY has approved individual invoices and has paid ACRES therefore.

<u>1 - PAYMENT FOR SERVICES</u>

Payment for services shall be the sum of (a) Direct Salaries, (b) Fringe Benefits, (c) Overhead Charges and (d) Fee, all as hereinafter defined.

(a) Direct Salaries shall comprise:

(i) The actual salaries paid to all employees engaged by SUBCONTRACTOR directly on the Project, including any differentials up to a limit of 25% of actual salaries, paid to employees on assignments in excess of 30 calendar days in Alaska.

The actual salary paid is the product of an employees's hourly rate (monthly rate x 12 \div 2080 hours) times the number of hours worked on the Project, adjusted for periodic salary increases which shall be paid to employees engaged by SUBCONTRACTOR directly on the Project which shall not average in excess of Federal Wage and Price or other guidelines approved by ACRES, and for adjustments made as a result of changes in level of responsibility. あどうが、たんどう

- (ii) Premium portion of overtime paid to said employees, which shall not be subject to mark-up for Fringe Benefits, or Overhead Charges.
- (b) Fringe Benefits shall comprise 18.19 percent of actual salaries to cover such costs as annual vacation, sick time, statutory holidays, government and company pensions and insurances. The percentage charged for Fringe Benefits will be subject to audit.
- (c) Overhead Charges shall comprise 124 percent of the sum of actual salaries and Fringe Benefits to cover those indirect corporate costs incurred elsewhere than in the Alaska Project Office including but not limited to office rent, depreciation, utilities and administration costs. The percentage charged for Overhead will be subject to audit.
- (d) The Fee, paid to cover interest on invested capital and profit, shall be a total sum of \$11,828. This Fee may be adjusted only as a result of changes to the Scope of Work in accordance with Article XIII of this Agreement.

2 - PAYMENT FOR DIRECT COSTS

Payment for Direct Costs shall be made to SUBCONTRACTOR for those costs which are directly attributable to the work including, but not limited to:

- transportation and subsistence expenses at state approved rates on travel in the interest of the Project
- long distance telephone, telegraph and telex expenses
- reproductions and printing
- SUBCONTRACTOR'S in-house and outside computer time rental costs and usage of computer programs
- field expenses, aerial and ground surveying
- state and local taxes excluding taxes on SUBCONTRACTOR'S income (unless AUTHORITY provides tax exempt certificates)

Obligations for the purchase, lease or rent of equipment, supplies and materials shall not be incurred without prior approval of ACRES. This

restriction applies only to individual obligations having an initial value of \$5,000 or more and to obligations for multiple items from a single source wherein the total value of the obligation exceeds \$10,000. Payment for direct costs shall include percent thereon to cover the handling costs of Subcontractor.

To the extent that any supplier of equipment or materials offers a discount for prompt payment, volume purchase, or any other reasons, the discounted price shall be considered the direct cost of such equipment of materials.

3- LIMITATION OF FUNDS

(a) At not time will any provision of this Agreement make ACRES or the AUTHORITY liable for payment for performance of work under this Agreement in excess of the amounts which have been appropriated by the Alaska Legislature and obligated for expenditure for the purposes of this Agreement.

(b) The amount presently available for payment and allotted by ACRES to this Agreement is \$488,331. It is contemplated that from time to time additional funds will be allotted to this Agreement. SUBCONTRACTOR agrees to perform or have performed work on this Agreement up to the point at which the total amount paid and payable by ACRES pursuant to the terms of the Agreement approximates but does not exceed the total amount actually allotted for payment under the Agreement.

(c) If at any time SUBCONTRACTOR has reason to believe that the costs which it expects to incur in the performance of the Agreement in the suceeding 60 days, when added to all costs previously incurred, will exceed 75 percent of the total amount then allotted to this Agreement, SUBCONTRACTOR shall notify ACRES in writing to that effect. The notice shall state the estimated amount of additional funds required. If, after such notification, additional funds are not allotted, ACRES may, upon written request by SUBCONTRACTOR, terminate this Agreement pursuant to the provisions of Article XV of this Agreement. If SUBCONTRACTOR, in the exercise of its reasonable judgement, estimates that the funds available will allow it to continue to discharge its obligations hereunder for a period extending beyond the date, which SUBCONTRACTOR requests, it shall specify the later date in its request and ACRES, at its discretion, may terminate this Agreement on that later date.

(d) Except as required by other provisions of this Agreement specifically citing and stated to be an exception from this clause, ACRES shall not be obligated to reimburse SUBCONTRACTOR for costs incurred in excess of the total amount from time to time allotted to the Agreement, and SUBCONTRACTOR shall not be obligated to continue performance under the Agreement (including actions under the Termination clause) or otherwise to incur costs in excess of the amount allotted to the Agreement, unless and until ACRES has notified SUBCONTRACTOR in writing that such allotted amount has been increased and has specified in such notice an increased amount constituting the total amount then allotted to the Agreement. No notice, communication, or representation in any; other form of from any person other than the authorized Officer of ACRES shall affect the amount allotted to this Agreement. In the absence of the specified notice, ACRES shall not be obligated to reimburse SUBCONTRACTOR for any costs in excess of the total amount then allotted to this Agreement, whether those excess costs were incurred during the course of the Agreement or as a result of termination. When and to the extent that the amount allotted to the Agreement has been increased, any costs incurred by SUBCONTRACTOR in excess of the amount previously allotted shall be allowable to the same extent as if such costs had been incurred after such increase in the amount allotted unless ACRES issues a termination or other notice and directs that the increase is solely for the purpose of covering termination of other specified expenses.

(e) Change orders issued pursuant to Article XIII of this Agreement shall not be considered an authorization to SUBCONTRACTOR to exceed the amount allotted in the absence of a statement in the change order, or other modification increasing the amount allotted.

(f) Nothing in this Article shall affect the right of ACRES to terminate this Agreement. In the event this Agreement is terminated, all property produced or purchased and reimbursed for under this Agreement shall be transferred to ACRES in accordance with Article XV, Termination.

Article V - Submission of Invoices and Payments

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(1) SUBCONTRACTOR shall submit monthly invoices to ACRES within 10 working days of each month-end and in accordance with AUTHORITY's Invoicing Instructions, a copy of which is appended hereto as Attachment 7.

ACRES will submit monthly invoices to the Authority within 15 working days of each month end. Any invoices received from SUBCONTRACTOR after the 10-working-day period will be submitted by ACRES to the AUTHORITY in the following month.

ACRES shall pay SUBCONTRACTORS' invoices within 5 calendar days of receipt of payment of said invoices from the AUTHORITY.

(2) SUBCONTRACTOR'S FEE, as defined in Section 1(d) of Article IV, shall be paid in monthly installments of \$3,943 each until 85 percent of the Fee has been paid. The remaining 15 percent of the Fee shall be held in retention by ACRES until submission of the application for a license to, and acceptance by, the Federal Energy Regulatory Commission, but in any event not later than December 31, 1983 provided that SUBCONTRACTOR has completed the Scope of Work.

Article VI - Excusable Delays

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defaults of subtier subcontractor, Except with respect to SUBCONTRACTOR shall not be in default by reason of any failure in performance of this Agreement in accordance with its terms (including any failure by SUBCONTRACTOR to make progress in the prosecution of the work hereunder which endangers such performance) if such failure arises out of causes beyond the control and without the fault or negligence of Such causes may include, but are not restricted to , SUBCONTRACTOR. acts of God or of the public enemy, acts of any government of agency thereof in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather, but in every case the failure to perform must be beyond the control and without the fault or negligence of SUBCONTRACTOR. If the failure to perform is caused by the failure of a subtier subcontractor to perform or make progress, and if such failure arises out of causes beyond the control of both SUBCONTRACTOR and subtier subcontractor and without the fault or neglience of either of ... them, SUBCONTRACTOR shall not be deemed to be in default, unless (a) the supplies or services to be furnished by the subtier subcontractor were reasonably obtainable from other sources, and (b) ACRES shall have ordered SUBCONTRACTOR, in writing, to procure such supplies or services from such other sources, and (c) SUBCONTRACTOR shall have failed to comply reasonably with such order. Upon request of SUBCONTRACTOR, ACRES shall ascertain the facts and extent of such failure and, if ACRES shall determine that any failure to perform was occassioned by any one or more of the said causes, the schedule of Work shall be revised accordingly, subject to the rights of ACRES under Article XV hereof, and subject to the rights of both parties under Article XII hereof.

Article VII - Key Personnel

following personnel are considered to be essential to the work to be performed under this Agreement: SUBCONTRACTOR shall give reasonable advance notice of any substitutions, and shall submit justification in sufficient detail to permit evaluation of the impact of any substitutions on the Agreement. No substitutions shall be made without the written consent of ACRES, which consent shall not be unreasonably withheld.

Company

Function

Name

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Principal in Charge Program Manager Agency and Investigator Liason Data Review and Synthesis

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S. Fancy

Article VIII - Project Files

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AUTHORITY through ACRES shall have full and free access to all Project files developed under this Agreement in the possession of SUBCONTRACTOR or any sub-tier contractors hereunder including data, drawings, calculations, notes, technical correspondence and materials. Such files will be available to AUTHORITY through ACRES for at least five (5) years after termination of the Agreement. Copies of any file items will be provided to ACRES upon request by ACRES, providing ACRES pays the cost of reproduction. In the event of termination of this Agreement prior to completion, SUBCONTRACTOR shall provide a full copy of all such materials to ACRES upon request within four (4) weeks of termination, with the total cost of reproduction included in SUBCONTRACTOR'S termination charges.

Article IX - Assignment

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(1) This Agreement is not assignable without prior written authorization from ACRES, nor is any subtier subcontract issued by SUBCONTRACTOR for work to be performed under this Agreement assignable without prior written authorization from ACRES.

(2) If ACRES at any time is no longer a contractor of the AUTHORITY, upon notification by ACRES to CONTRACTOR, ACRES will assign its rights and obligations under this CONTRACT to the AUTHORITY or its designated agent. In the event of such an assignment, the assignee shall be substituted in full place and stead for ACRES under the CONTRACT, and ACRES shall be released from any and all further obligations hereunder.

Arcicle X - Insurance & Indemnification

SUBCONTRACTOR shall provide ACRES with certification of compliance with the minimum requirements of Attachment 3. No field activities by SUBCONTRACTOR or of subtier shall be undertaken its any subcontractors until the minimum insurance coverage required in Attachment 3 has been obtained. SUBCONTRACTOR further agrees to require certification of compliance with these requirements for a11 Subcontractors. Subcontractor further agrees to name AUTHORITY and ACRES as additional parties insured under any insurance coverage to be provided to this Agreement and require pursuant to subtier subcontractors to do likewise.

ACRES AND SUBCONTRACTOR agree that this Agreement and any subtier subcontract hereunder are not intended to be contracts of hiring under the provisions of any Workmen's Compensation Law and shall not be so construed, and SUBCONTRACTOR and its subtier subcontractors in performing the work hereunder will be acting as independent contractors.

SUBCONTRACTOR and its subtier subcontractors shall exercise that degree of diligence, skill and care in the performance of the work hereunder which would normally be exercised by duly qualified persons in performing similar functions, and SUBCONTRACTOR, its agents, employees or subtier subcontractors to meet the foregoing standard of professional responsibility, regardless of any limit on SUBCONTRACTOR'S professional liability insurance coverage.

SUBCONTRACTOR shall indemnify and save harmless ACRES and AUTHORITY from and against all claims, 'demands and causes of action on account of personal injuries, death or property damages arising out of acts or omissions of SUBCONTRACTOR, its agents, employees or subtier subcontractors in the execution of the work hereunder which do not involve breach of the foregoing duty of care only to the limits of the liability insurance coverage (other than professional liability insurance coverage) provided for in Attachment 3. ちんかいための なかいけん たいい

In case any action shall be brought against ACRES and the AUTHORITY or any official or employee of ACRES and the AUTHORITY based on any of the claims, demands or causes of action described above, ACRES and the AUTHORITY or such official or employee shall promptly notify SUBCONTRACTOR in writing and SUBCONTRACTOR shall assume the defense thereof, including the employment of counsel and payment of all expenses incident to such defense. ACRES and the AUTHORITY or such official or employee shall have the right to employ separate counsel in any such action and participate in the defense thereof, but the fees and expenses of such counsel shall be paid by ACRES and the AUTHORITY or such official or employee unless the employment of such counsel has been authorized by SUBCONTRACTOR. SUBCONTRACTOR shall not be liable for any settlement of any such action without its consent but, if any such action is settled with the consent of SUBCONTRACTOR or there is a final judgement for the plaintiff in any such action, SUBCONTRACTOR agrees to indemnify and hold harmless ACRES and the AUTHORITY or such official or employee from and against such settlement or judgement.

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ACRES and Subcontractor agree to review the matter of appropriate insurance coverage for Subcontractor and its subtier subcontractors within three months of the start of work on this Agreement.

Article XI - Dissemination of Information

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SUBCONTRACTOR shall not disclose any information obtained in the performance of this Agreement without ACRES permission until such date, if any, that ACRES shall release SUBCONTRACTOR from the provision of this Article. Any presentation of any statistical or analytical material or reports based on information obtained from the studies covered by this Agreement will be subject to review by ACRES before publication or dissemination in order to determine whether safeguards and privacy have been observed.

Article XII - Disputes

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Except as otherwise provide in this Agreement, any claim or controversy arising out of or relating to this Agreement shall be settled by arbitration upon written request therefor presented by either party to the other within six months after presentation by either party to the other of written notice of the existence of the claim or controversy. Such written notice of the existence of the claim or controversy must have been presented within six months of the occurence of the claim or controversy, or the claim or controversy will be deemed to have been waived.

The parties shall select a single arbitrator by mutual agreement. If they cannot agree upon a single arbitrator, each will choose three (3) names from a list of five (5) provided by the American Arbitration Association. From these choices, a single arbitrator will be chosen by agreement of the parties. If such agreement is not accomplished, either party may request the American Arbitration Association to appoint an arhitrator in accordance with its Commercial Arbitration Rules, which rules shall govern the conduct of the arbitration in the absence of contrary agreement by the parties.

The parties shall then submit to the arbitrator a written statement setting forth either matters in dispute. If the facts are not agreed upon, the arbitrator shall promptly hold hearings in either Anchorage, Alaska, or Buffalo, New York and thereafter shall promptly reach an appropriate decision of each matter in dispute. The decision of the arbitrator on all matters in dispute, which have been submitted to him, shall be issued in writing and shall state his reasons for such decision and separately list his findings of fact and conclusions of law, and shall be signed by the arbitrator within thirty (30) calendar days after receipt of such scatement or conclusion of such hearings. The arbitrator shall not have the power to amend or add to this Agreement, but subject to this limitation, the decision of the arbitrator shall not have the power to amend or add to this Agreement, but subject to this limitation, the decision of the arbitrator shall be final and binding upon the parties.

Article XIII - Changes

- (1) SUBCONTRACTOR shall not make changes to the Scope of Work or undertake work for ACRES additional to the Scope of Work without written authorization.
- (2) ACRES may, at any time, by a written order delivered to SUBCONTRACTOR, make changes to the Scope of Work, or authorize additional work outside the Scope of Work.
- (3) If any such change or addition causes an increase or decrease in the estimated cost of, or time required for, the performance of any part of the work under this Agreement, whether changed or not by any such order, or if such change otherwise affects any other provisions of this Agreement, an equitable adjustment shall be made by ACRES:
 - (a) in the estimated cost of completion schedule, or both, and
 - (b) in the amount of Fee to be paid and
 - (c) in such other provisions of the Agreement as may be affected, and the Agreement shall be modified in writing accordingly.

Any claim by SUBCONTRACTOR for adjustment under this Article must be asserted within sixty (60) days from the date of receipt by SUBCONTRACTOR of the notification of change; provided, however, that ACRES, after deciding that the facts justify such action, may receive and act upon any such claim asserted at any time prior to final payment under this Agreement. Failure to agree to any adjustment shall be a dispute within the meaning of Article XII of this Agreement.

Article XIV - Examination of Costs

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 ACRES shall have the right to examine books, records, documents, and other evidence and SUBCONTRACTOR shall employ accounting procedures and practices, sufficient to reflect properly all payroll costs, including overtime and all direct costs of whatever nature claimed to have been incurred and anticipated to be incurred for the performance of the Scope of Work. Such right of examination shall include inspection at all reasonable times at SUBCONTRACTOR'S offices, plants, or such parts thereof, as may be engaged in the performance of this Agreement.

The materials described above shall be made available at the principal offices of SUBCONTRACTOR, at all reasonable times, for inspection, audit or reproduction, until the expiration of three (3) years from the date of final payment under this Agreement and for such longer period, if any, as is required by applicable statute, or by other Articles of this Agreement, or by (1) and (2) below:

- (1) If this Agreement is completely or partially terminated, the records related to the work terminated shall be made available for a period of three (3) years from the date of any resulting final settlement thereof.
- (2) Records which relate to disputes under Article XII of this Agreement or litigation or the settlement of claims arising out of the performance of this Agreement, shall be made available until such disputes, litigation or claims have been disposed of, and for a period of three (3) years after settlement of claims.

Article XV - Termination

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- (a) The performance of the work under this Agreement may be terminated by ACRES in whole, or from time-to-time, in part:
 - (1) Whenever SUBCONTRACTOR shall default in performance of this Agreement (including in the term "default" any such failure by SUBCONTRACTOR to make progress in the prosecution of the work hereunder as endangers such performance), and shall fail to cure such default within a period of ten (10) working days (or such longer period as ACRES may allow) after receipt from ACRES of a notice specifying the default; or
 - Whenever ACRES shall terminate for its convenience. {**2**} · ACRES shall terminate the Agreement for its convenience only insofar as the AUTHORITY/ACRES Agreement may be terminated by the AUTHORITY, or the AUTHORITY may direct ACRES in writing persuant , to Article VI, Excusable Delays in the AUTHORITY/ACRES Agreement, to procure substitute services for the services of SUBCONTRACTOR during a period when the SUBCONTRACTOR is unable to perform due to causes beyond its control, or upon written request of SUBCONTRACTOR under Article IV, 4(c) of this Agreement.

Any such termination shall be effected by delivery to SUBCONTRACTOR of a Notice of Termination specifying the extent to which performance of work under the Agreement is terminated, and the date upon which such termination becomes effective.

- (b) After receipt of a Notice of Termination and except as otherwise directed by ACRES, SUBCONTRACTOR shall:
 - Stop work under the Agreement on the date and to the extent specified in the Notice of Termination;

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(2) Place no further orders or subcontracts for materials, services, or facilities, except as may be necessary for completion of such portion of the work under the Agreement as is not terminated; (3) Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination;

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- (4) Assign to ACRLS in the manner and to the extent direct by ACRES, all of the right, title, and interest of SUBCONTRACTOR under the orders or subtier subcontracts so terminated, in which case ACRES shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subtier subcontracts;
- (5) With the approval or ratification of ACRES, which shall be final and conclusive for all purposes of this clause, settle all outstanding liabilities and all claims arising out of termination of orders and subtier contracts, the cost of which would be reimbursable in whole or in part, in accordance with the provisions of this Agreement.
- (6) Transfer title to ACRES (to the extent that title has not already been transferred) and deliver in the manner, at the times, and to the extent directed by ACRES, (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced as a part of, or acquired in respect of the performance of, the work terminated by the Notice of Termination; (ii) the completed or partially completed plans, drawings, information, and other property which, if the Scope of Work had been completed, would be required to be furnished to ACRES, and (iii) any jigs, dies, and fixtures, and other special tools and tooling acquired or manufactured for the performance of the Scope of Work for the cost of which SUBCONTRACTOR has been or will be reimbursed under this Agreement;
- (7) Use its best efforts to sell, in the manner, at the times, to the extent, and at the price or prices directed or authorized by ACRES, any property of the types referred to in (6) above; provided, however, that SUBCONTRACTOR (i) shall not be required to extend credit to any purchaser, and (ii) may acquire any such property under the conditions prescribed by and at a price or prices approved by ACRES; and provided

further, that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by ACRES to SUBCONTRACTOR under this Agreement or shall otherwise be credited to the price or cost of the work covered by this Agreement or paid in such other manner as ACRES may direct;

(8) Completed performance of such part of the work as shall not have been terminated by the Notice of Termination.

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After receipt of a Notice of Termination, SUBCONTRACTOR shall (c) submit to ACRES its termination claim in the form and with the certification prescribed by ACRES. Such claim shall be submitted promptly but in no event later than eigth (8) months from the effective date of termination, unless one or more extensions in writing are granted by ACRES upon written request of SUBCONTRACTOR within such eight (8) month period or authorized extension thereof. However, if ACRES determines that the facts justify such actions, ACRES may receive and act upon any such termination claim at any time after such 8-month period extension thereof. or any ' Upon failure of SUBCONTRACTOR to submit its termination claim within the time allowed, ACRES may determine, on the basis of information available to it, the amount, if any, due to SUBCONTRACTOR by reason of the termination and shall thereupon pay to SUBCONTRACTOR the amount so determined, which amount shall be considered full and final settlement of all amounts due by ACRES to SUBCONTRACTOR in respect of termination.

- (d) Subject to the provisions of paragraph (c), SUBCONTRACTOR and ACRES may agree upon the whole or part of the amount or amounts to be paid (including an allowance for the FEE) to SUBCONTRACTOR by reason of the total or partial termination of work pursuant to this clause. The Agreement shall be amended accordingly upon approval and payment of the agreed amount by the AUTHORITY to ACRES.
- (e) Notwithstanding any different result which might follow from application of the provisions of Article V entitled Submission of Invoices and Payment, ACRES shall not withhold from SUBCONTRACTOR any termination payments to which SUBCONTRACTOR is entitled under this Agreement.

Article XVI - Nondiscrimination Agreement, Certification, and Affirmative Action Compliance

Attachment 4 is hereby made a part of this Agreement and shall as between ACRES and SUBCONTRACTOR be interpreted and construed as if the word "SUBCONTRACTOR" appeared therein in the place of the work "ACRES" and as if the work "ACRES" appeared therein in the place of the word "AUTHORITY". SUBCONTRACTOR shall certify compliance by appropriate execution thereof and agrees to continue such compliance to include any and all sub-tier subcontracts during the life of this Agreement.

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Article XVII - Alaska Preference

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SUBCONTRACTOR agrees to comply with all applicable provisions of A.S. 36.10 and of any regulation thereunder with respect to employment preferences to Alaskan residents and firms in the performance of this Agreement or of any subtier subcontract hereunder.

Article XVIII - Subcontractor Approval

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ACRES reserves the right to review and approve any subtier subcontractor or subtier subcontract proposed to perform services covered by this Agreement.

Article XIX - Reuse of Documents

All documents including drawings and specifications furnished by SUBCONTRACTOR pursuant to this Agreement are instruments of its services in respect of the Project. They are not intended or represented to be suitable for reuse by ACRES or others on any other project. Any reuse on any other project without specific written verification or adaptation by SUBCONTRACTOR will be at ACRE'S sole risk and without liability or legal exposure to SUBCONTRACTOR, and ACRES will indemnify and hold harmless SUBCONTRACTOR from all claims, damages, losses and expenses including attorney's fees arising out of or resulting therefrom. Any such verification or adaptation by SUBCONTRACTOR will entitle SUBCONTRACTOR to further compensation at rates to be agreed upon by ACRES and SUBCONTRACTOR.

Article XX - Compliance with Laws

SUBCONTRACTOR shall comply with all applicable United States, state, territorial and commonwealth laws, including rules, regulations, decision, and ordinances of any political subdivisions and/or agencies of the United States, any state, territory or commonwealth thereof.

Without limitation to the foregoing, SUBCONTRACTOR shall comply with (1) Occupational Safety and Health Act of 1970 and other applicable laws; and (2), if required, Executive Order No. 11246, dated September 24, 1965, as amended by Executive Order 11375, including posting of notices, filing of reports and initiation of programs; and the provisions of A.S. 36.05, to the extent applicable in the performance of this Agreement, or of any subtier subcontracts hereunder.

Article XXI - Governing Law

This Agreement shall be governed by and construed in accordance with the laws of the State of Alaska.

Article XXII - Documents Property of Acres

Drawings, specifications, reports, and any other documents prepared by SUBCONTRACTOR in connection with any or all of the services furnished hereunder shall be the property of ACRES.

Article XXIII - Waiver of Contract Breach

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The waiver by one party of any breach of this Agreement or the failure of one party to enforce at any time, or for any period of time, any of the provisions hereof, shall be limited to the particular instance, shall not operate or be deemed to waive any future breaches of this Agreement and shall not be construed to be a waiver of any provision, except for the particular instance.
Article XXIV - Additional Provisions

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The agreement between the AUTHORITY and Alaska Native Corporations dated January 4, 1980 and the applicable Bureau of Land Management stipulations to the AUTHORITY permit No. AK-017-0036 dated February 6, 1980 are considered part of this Agreement and included as Attachments 5 and 6 to be adhered to by SUBCONTRACTOR, and incorporated as part of all subtier subcontracts as necessary to insure compliance with the said Agreement and stipulations.

Article XXV - Severability of Invalid Provisions

If any provisions of this Agreement shall be held to contravene or be invalid under the laws of any particular state, country or jurisdiction where used, such contravention shall not invalidate the entire Agreement, but shall be construed as if not containing the particular provisions or provisions held to be invalid in the particular state, country or jurisdiction and the rights or obligations of the parties hereto shall be construed and enforced accordingly.

Article XXVI - General Conditions

For the purpose of this Agreement, work done at the request of ACRES after May 1, 1982 and before execution of this Agreement shall be deemed to be work done after the execution of this Agreement and shall be subject to all the conditions contained herein.

Article XXVII - Reports

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SUBCONTRACTOR shall provide Reports in accordance with the requirements set out in Figure 4 and related text of Attachment 1 to this Agreement.

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This Agreement consists of the cover page, Table of Contents, Index of Articles, the Agreement page or preamble, Articles I through XXVII, this signature page, and the following attachments:

Attachment 1.	Scope of Work.
Attachment 2.	Pricing Proposal.
Attachment 3.	Insurance Requirements.
Attachment 4.	Nondiscrimination Agreement and Certification.
Attachment 5.	Agreement between the AUTHORITY and Alaska Native
	Corporations dated January 4, 1980.
Attachment 6.	Bureau of Land Management stipulations to AUTHORITY
	permit No. AK-017-0036, dated February 6, 1980.
Attachment 7.	Invoicing Instructions, dated

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The terms and conditions of this Agreement, upon approval by the AUTHORITY, shall constitute the full and entire agreement between ACRES and SUBCONTRACTOR concerning the matters set forth herein, and no other agreement or understanding of any nature has been entered into or will be recognized.

IN WITNESS WHEREOF, the parties have, this _____ day of _____, caused this Agreement to be signed by their respective officers thereunto duly authorized, subject to approval by the AUTHORITY.

LGL -	LGL – ALASKA RESEARCH ASSOCIATES			ACRES AMERICAN INCORPORATI				
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INTRODUCTION

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The technical feasibility, economic viability, and environmental impacts of an optimal hydroelectric development in the Susitna River Basin are being studied by Acres American, Inc. on behalf of the Alaska Power Authority. As part of these studies, Acres American recently contrated LGL Alaska Research Associates, Inc. to coordinate the terrestrial environmental studies being performed by the Alaska Department of Fish and Game and several University of Alaska research groups. LGL's role in the project includes working with several State and Federal agencies on impact assessment and development of a mitigation-plan, to be included as part of a license application to the Federal Energy Regulatory Commission (scheduled for the first quarter of 1983). Through our University of Alaska subcontractors, LGL is also conducting field studies on vegetation, furbearers, birds, and small mammals.

A primary objective of the Alaska Power Authority is to mitigate to the limit of practicability the negative impacts of the Susitna Project on fish and wildlife resources. A number of field studies have been conducted to help predict the effects of the project on these resources, and some preliminary impact assessments and mitigation planning have been conducted. A methodology is now needed that will (1) incorporate the interrelationships of the various disciplines into a refined impact assessment (e.g., use data from the hydrology studies to quantify changes in vegetation and in turn various wildlife species); (2) focus the ongoing and future studies so that the data are collected in the proper units, sampling scheme, and time frame; and (3) allow quantitative comparisons among various compensation lands or habitat enhancement techniques being considered as mitigation alternatives. Our recommended approach to the project is detailed in the following pages.

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An organizational chart for the program is depicted on Figure 1. The program manager is Dr. Robert Sener, Senior Vice President of LGL, who will be 100% dedicated to the project begining July 1, 1982 and who will work out of the Acres' Anchorage facility.



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The following major tasks will be completed by LGL in completing the wildlife and habitat impact assessment and mitigation planning on this project:

- Supervise and manage all non ADF&G wildlife, vegetation and habitat studies associated with the project and coordinate and monitor ADF&G studies
- 2. Manage and supervise wildlife assessment process
- 3. Develop wildlife mitigation plan
- 4. Establish and maintain communications and report with regulatory agencies and principal investigators
- 5. Supervise and consult with University of Alaska regarding their research program and progress.
- Prepare wildlife and vegetation components of Exhibit E for FERC license application.

TECHNICAL APPROACH

Our recommended approach involves a series of workshops using simulation modelling as a tool to improve the preliminary impact assessment, identify the most important variables to measure during future monitoring studies, and to provide a quantitative comparison among specific mitigation options. The workshops will provide the input needed for a FERC license application in early 1983, and will also provide a framework for inter-agency coordination and future planning during the construction and operation phases of the project.

As a result of environmental studies of the area conducted since 1979, a considerable amount of data has been collected describing the vegetation and wildlife of the Susitna Basin. Prior to any impact assessments and mitigation planning, a synthesis of the data collected during the Phase I studies of big game and vegetation needs to be prepared. Vegetation maps of the Susitna Basin have been produced; these can best be integrated with the computerized big game sightings data and U.S.G.S. topographic data tapes by digitizing sample areas representative of larger areas within the basin. Statistical comparisons of animal use versus availability of habitat types and other variables can then be made within and among these sample areas to determine if the animals were associated with certain vegetation types, elevation contours, distances from streams and lakes, etc. more or less often that would be expected on the basis of availability. This will be required in order to provide a quantitative impact assessment for the Susitna Project, and will be fully documented in the FERC application. Digitizing and preliminary data analysis will be conducted by Northern Technical Services (Nortec) of Anchorage as a subcontract to LGL. Nortec maintains an inhouse computer with state-of-the-art software systems compatible with the computer systems used by ADF&G and USFWS. This automated approach will be flexible in order to allow additional

analyses by agency personnel and can be expanded if required later in the project. This intensive period of automated data integration and analysis is scheduled for completion on 14 August 1982 so that the results will be available for the first assessment and mitigation planning workshop in late August.

The FERC application requires a detailed plan to mitigate the adverse effects of the project on fish and wildlife resources. We recommend the development of two separate mitigation plans: the first plan, which we will call the construction mitigation plan, will outline mitigation measures to be implemented during the design and construction phases of the project. This plan will include mitigation measures such as controlling dust along the roads, leaving clumps of trees for eagle nesting along the reservoir margins, fencing construction camps, and minimizing aircraft disturbance to wildlife. These measures are easily defined and understood, and are more easily agreed to by the agencies than are issues involving replacement lands and habitat enhancement Most of the environmental protection measures to be measures. incorporated in the construction mitigation plan were included in the draft mitigation options paper, and thus have already been reviewed and modified by agency representatives. If the construction mitigation plan is approved by the time of the license application or shortly after, -construction of the Watana Dam could then proceed while more difficult mitigation measures (such as the purchase of replacement lands by APA) are being negotiated.

The final comprehensive mitigation plan will not be complete at the time of the license application, but this is normally the case and will not result in delay of the project. The final plan will resolve the complex issues that cannot be decided prior to construction (for example, the desirability of onsite habitat enhancement measures as opposed to the outright purchase of habitat equivalent in value to that which will be lost). 「ないというなない」というできたのでも

We recommend the simulation modelling approach for the following reasons:

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- I. It provides a means to incorporate the professional judgements of scientists, regulators, and resource managers. Because mitigation planning will include many subjective evaluations, the decision-makers must be closely involved throughout the process.
 - It utilizes existing data, but focuses future research in areas that are decided by the workshop participants to be the most important. The approach will insure that the data are collected in the proper units, sampling scheme, and time-frame, and will integrate data from the different disciplines (e.g., hydrology, furbearers, vegetation).
- 3. It allows great flexibility. The selected indicators (agreed upon on the first day of the workshop) can include population attributes (e.g., changes in the number of beavers with and without the project, or with different mitigation options); habitat units or important descriptive variables (e.g., amount of browse available in late winter), or any number of alternative indicators as selected by the workshop participants. Data on habitat, predation, weather, and other biophysical system components can be incorporated into the models.

The model will encapsulate the best available understanding of the biophysical system, and will provide a 'laboratory world' for testing mitigation options.

Following a review and synthesis of existing information, the impact assessment and mitigation planning will proceed systematically through a series of steps (Figure 2). These steps are (1) identification of habitat and population indicators (e.g., number of beavers, hectares of some important habitat type, density of willow stems); (2) quantification of impacts in terms of indicators (what will be the changes in the indicators over the life of the project); and (3) comparison and evaluation of mitigation options.



Figure 2. Elements of assessment and mitigation planning process.

The last step requires that some valuation of the indicators and the tradeoffs between indicators be made; this will be done in coordination with the fish and wildlife policy of the Alaska Power Authority. The valuations can be accomplished using any number of approaches, including HEP analysis for the anticipated indicator of habitat units, if so desired.

The steps in the development of a simulation model are outlined in Figure 3, and further explained in Table 1. The initial model will be constructed during an intensive one-week workshop (to be held in Anchorage) scheduled for the last week in August. The approach we recommend can be divided into six steps: (1) review and synthesis of existing information, (2) preparation and scoping for the workshop, (3) workshop, (4) model refinement, (5) reporting, and (6) evaluation of model results. The facilitator/modellers who will conduct the workshop require time to familiarize themselves with the problem and to plan the workshop. A scoping meeting usually lasting about two days is needed to develop a preliminary conceptual model of the biophysical system and to carefully select the participants for the workshop. The workshop itself is designed to occur over a five day period; the five days are intensively focused and require long days from all.

After the workshop two major tasks will be undertaken: the refinement of the model, and the reporting of the workshop and the model. Reporting involves a complete description of what is considered and what not considered and why. The functional relationships developed, the assumptions made, and the data used will all be documented. The model developed during the short period of a five day workshop will require revision to incorporate better data and new understanding. This will require a series of technical meetings with key participants and some reprogramming to integrate these ideas and data. Once the model has been refined it will be used to compare different scenarios, such as with and without the oject, and with and



Figure 3. Steps in simulation modelling.

Table 1. Examples of the output of each step of the simulation modelling approach.

<u>Step</u>

Definition of Development Activities

Identification of Key Indicators

Definition of Spatial and Temporal Bounds

Identification of Interrelationships between Biophysical System Components

Development of Component Submodels

Integration of Submouels

Analysis of Model Results

Model Refinement

Examples

Impoundment of Susitna River, access road construction and operation, construction noise

Habitat - % cover, browse species, proximity to water; Populations - moose, bears, small mammals, birds

Space - Susitna Basin with primary and secondary impact areas Time - 50-100 year planning horizon with annual time step

Focus on biophysical processes e.g., response of habitat to changes in hydrologic regime

Submodels might be hydrology, vegetation, ungulates, birds, carnivores, small mammals, etc.

The interrelationship identified will define the linkages necessary to integrate the submodels

Population and habitat indicators will be predicted over the planning horizon and their behavior analyzed

New information and ideas will be included to refine the understanding embodied in the model

Table 7 (continued)

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<u>Step</u>

Comparison of Model Results from Different Scenarios and mitigation options

Examples

Possible scenarios to be

- considered will be:
 1) without the project; no
 mitigation
- 3) with the project; various mitigation options

without different mitigation alternatives. These results will be analyzed and become the basis for the mitigation plans.

. PREPARATION OF LICENSE APPLICATION

LGL will provide chapters to Acres to be included in the FERC license application scheduled for late March 1983. These chapters will describe the vegetation, bird, and mammal resources of the project area, predict the effects of the project on the vegetation and wildlife resources, and outline plans to mitigate potential negative impacts.

SCHEDULE

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A preliminary schedule for the project through June 1983 is shown as Figure 4. A review of existing information is already underway, and field studies are being conducted by LGL's subcontractors. The current field studies will end in late summer, with reports due to LGL by late Planning for future field studies will begin immediately December. after the first intensive workshop scheduled for the last week of August. Technical meetings to improve the model and to display the results to agency representatives and researchers, will begin in September and continue indefinitely. However, by the time the license application is submitted, an impact assessment based on the best available information, and a framework for developing the mitigation plans, will be completed and included in the application. A second workshop bringing together all of the original participants will be held in February 1983. The purpose of the second workshop is not to greatly modify or add to the application (which will be in the final writing phase by this time), but rather will discuss and display different scenarios based on the revised and improved model, and thus add to the mitigation planning. This second workshop will be less intensive than



Figure 4. Preliminary schedule through June 1983.

the first, and may require only two or three days. Any changes to the model at this time will help to develop the second mitigation plan and will add focus to future research, but will not greatly change the license application.

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PRICING PROPOSAL

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LGL ALASKA RESEARCH ASSOCIATES, INC.

	3 merals	9 months	
Services	July 1-1982 to Sept. 30, 1982	Oct. 1-1982 to June 30, 19823	<u>Total</u>
Manhours (estimated)	2,477	9,628	12,105
Salary Cost	44,676	170,157	214,833
Fringe Benefits (18.19%)	8,127	30,951	39,078
o			
Project Cost of Services	52,803	201,108	253,911
Overhead (124%)	65,475	249,375	314,850
Subtotai Labor Costs	118,278	450,483	568,761
Direct Costs			
Subcontracts			
University of Alaska	\$ 192,247	\$ 105,000	297,247
Nortec	30,000	•	30,000
Modelers	78,520	68,983	147,503
Travel and Per Diem	21,400	16,100	37,500
Computer	5,000	7,500	12,500
Conference Facilities	4,000	4,000	8,000
Reproduction	4,000	13,000	17,000
Others	6,000	8,250	14,250
Subtotal Direct Costs	\$ 341,167	\$ 222,833 \$	564,000
<u>Fees</u>			
Fee on Services (10%)	\$ 11,828	\$ 45,048 \$	56,876
Handling Fee (5%)	17,058	11,142	28,200
lotal Contract	\$ 488,331	\$ 729,506 \$	1,21/,83/
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ACRES AMERICAN INCORPORATED Agreement No.

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AQUATIC ENVIRONMENTAL STUDIES

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to be provided by

ARTIC ENVIRONMENTAL INFORMATION AND DATA CENTER,

707 "A" Street Anchorage, Alaska 99501

in connection with

SUSITNA HYDROELECTRIC PROJECT ENGINEERING AND TECHNICAL SERVICES FEASIBILITY STUDIES LEADING TO LICENSE APPLICATION

July 1982

ACRES AMERICAN INCORPORATED 1577 "C" Street Suite 305 Anchorage, Alaska 99501 Telephone: (907) 276-4888 .



Subtask 7.10 - Aquatic Impact Assessment

Objective:

To analyze and interpret available baseline knowledge of the Susitna River aquatic system and examine and present in models and reports the impact on fishery resources of hydroelectric development in the upper Susitna basin.

Tasks:

1. Coordinate and cooperate with the Alaska Dept. of Fish and Game, Su Hydro Study Group, on the fishery and aquatic habitat Cooperate with R&M Consultants, Acres American, studies. Inc., and other subcontractors on hydrologic, suspended sediment, river mechanics, and other related aquatic studies. This effort is to ensure that continuous and accurate elements communications occur between study SO that information is developed in a timely manner for fishery impact assessment efforts and, ultimately, mitigation planning. Continuously identify deficiencies in all aquatic-related data gathering or analysis programs in terms of information requirements for accurate quantitative assessment of project effects, and suggest means to improve data gathering and analysis efforts. Interact with the Alaska Dept. of Fish and Game, SU Hydro Study Group, in preparation of their procedures manuals.

Assemble at AEIDC an information management program to collect and compile available knowledge of the Susitna River aquatic system relating specifically to the ultimate examination of project impact on fishery resources. Review existing unanalyzed fishery/aquatic data, available Susitna Hydro reports (1980-82), and other related documents on the Susitna basin to become familiar with the current base of knowledge in these fields. Examine this available background information and continuously assess newly collected data and information from the ongoing Susitna Hydro aquatic studies and prepare, as appropriate, synthesis reports of this available information and an assessment of the effects of the proposed Susitna Hydroelectric project on the fishery resources of the Susitna Basin. Part of this effort will include examination of the 1974-78 Alaska Dept. of Fish and Game reports and interaction with ADF&G on the utility of inforamation contained in these reports for integration into the new Su Hydro study team (ADF&G) computer data base.

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Construct a dynamic "model" of the Susitna River basin which will be used to develop quantitative relationships between aquatic habitats and resources pursuant to various hydro operational scenarios. This model will be built incrementally over the time and have a complex set of components obtained from various elements of the overall Susitna Hydro study effort, including information from river temperature models (Acres), suspended sediment models (R&M), various reservoir models (Acres), water quality interpretive reports (R&M/AEIDC), fish versus habitat models (ADF&G/AEIDC), bedload transport models (R&M), perching and scour studies (R&M), groundwater dynamics interpretive reports (Acres/R&M), and other related documents and information.

Over the short term (early winter 1982-83) a preliminary model of the aquatic system will be assembled to assess impacts of the project operation on fish habitat and the aquatic system. This short-term effort is to assist in the preparation of mitigation measures required in the spring 1983. The short-term and long-term modeling assessments will be accomplished in cooperation with all study participants and in consultation with the Instream Flow and Aquatic Systems Group (IFG), U.S. Fish and Wildlife Service, Fort Collins, Colorado.

Establish a format, schedule, and content of periodic briefings on aquatic study, analysis, and impact assessment efforts to the Alaskan resource agencies, presumably through the Susitna Hydro Steering COmmittee. Establish a regimen of semimonthly half-day presentations commending in August 1982 and continuing through the life of the preconstruction phase. This effort will facilitate communication of study findings and interpretations to the appropriate federal and state regulatory or commenting agencies for their review and comment.

Justification:

AEIDC's effort are required to facilitate a smooth and accurate transmission of data collected in the field and the documents ultimately prepared for the licensing process required by the Federal Energy Regulatory Commission. AEIDC's role will be one of facilitation and accurate quantitative impact assessment in the fishery/aquatic resources The effects of hydroelectric development in the upper Susitna area. Basin with its construction of large impoundments, access roads and transmission lines, will include altered downstream riverine conditions, inundation of habitat, and other disturbances in the aquatic system. The effects of these alterations must be considered in terms of the interrelationships among hydrology, geomorphology, water quality, and biology. Changes in streamflows or inundation of habitat can affect fish migration, reproduction, production, and quantity and quality of habitat. Ultimately federal and state agencies will condition licenses or permits with provisions for construction and operation of the Susitna project. In order that this permitting and licensing process proceed in a timely manner, it is critical that a comprehensive, accurate, and quantitative assessment be undertaken in a smooth and coordinated manner.

Approach/Discussion:

Close communications are essential to the success of the interface between data collection activities and mitigation planning. AEIDC will assemble a staff with the appropriate expertise, management structure, and technical analytical capabilities for accomplishing this work. Included will be expertise in fishery biology, instream flow assessment, and statistics and water quality effects on biology. Expertise in hydrology and hydraulic engineering, river mechanics and river modeling, temperature modeling, and ice dynamics will be largely drawn from the Acres and R&M staffs. AEIDC also will provide expertise in graphics, cartography, information systems management, and technical editing to compile and prepare suitable products for presentation to appropriate agencies or groups and for mitigation planning efforts.

Assigned to the project will be a principal investigator, assisted by senior staff in fisheries biology, instream flow assessment, computer systems management, and other support personnel. This group will continuously interact with all study team members gathering and

analyzing data relating to understanding the aquatic system, and will prepare a dynamic model of the functioning of the Susitna aquatic basin. Ultimately this model will depend upon available information, but is expected to include several components, including reservoir thermal and suspended sediment characteristics, and quantification of fish habitat relationships with streamflow and water quality change. Various other information reports will be integrated including information on sediment transport, perching and scour assessments, groundwater dynamics, and other related information. It is envisioned that these modular integrated components and information sources will be into a comprehensive mode ((or)) other system of information which can be used by Included will AEIDC to prepare impact assessment reports. be assessments of the effect of staged project development (Watana first with Devil's Canyon second), flow peaking, access roads and transmission corridors, inundation of habitat, reservoir filling periods, and other related effects on the aquatic system and resources of the Susitna River drainage.

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AEIDC also will facilitate the transfer of aquatic information to the wildlife study participants. Information on downstream riverine changes are prerequisite to the determination of impacts on riparian habitats and related terrestrial and aquatic wildlife species.

AEIDC plans to establish an advisory relationship with the U.S. Fish and Wildlife Service's Instream Flow and Aquatic Systems Group (IFG) in Fort Collins, Colorado. Assistance from the IFG would be requested specifically in areas of new methodological modeling techniques such as in quantification of thermal or sediment transport and channel charge relationships with fish habitat.

AEIDC's envisioned role in facilitating the analysis of available fishery and aquatic habitat information for impact assessment is presented in Figure 1. This Figure illustrates the flow of information from the various data collection and analysis programs, through AEIDC's impact analysis and assessment activities, to the mitigation planning effort of Woodward-Clyde Consultants.

Since the flow of information and the production of timely and accurate reports requires cooperation and close coordination with all parties, AEIDC will observe field data collection efforts and the study sites selected for detailed study or modeling efforts, and will cooperate with various study team members in the analysis of data to determine the character of the baseline condition. However, AEIDC's major role will be the synthesis of information and impact assessment. Furthermore, AEIDC will cooperate and interact with Woodward-Clyde Consultants in preparation of various mitigation plans.

Accomplishments and Deliverables:

5

The above tasks will be accomplished commencing July 1, 1982 and continue throughout October 30, 1983. It is expected that envisioned contract negotiations for fiscal year 1984 would be conducted during June 1983. The attached budget addressed only the fiscal year 1983 efforts required by AEIDC from July 1, 1982 to June 30, 1983. However, in order to accomplish the overall objective of AEIDC's efforts, this effort must continue through October 30, 1983. Susitna Aquatic Studies Program and Instream Flow Assessment Team



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Figure 2 itemizes the reports and other deliverable items AEIDC expects from various contractors, and also includes products to be prepared by AEIDC. In addition to these reports, AEIDC will prepare monthly progress reports, monthly manpower and budget updates, and will continuously coordinate and interact with various aquatic study team project members and appropriate agencies as required by Acres American, Inc.

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Figure 2. Susitna Aquatic Studies Anticipated Milestones and Deliverables Commencing July 1982

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Approximace Date	Milestone/Deliverable				
July 15	ADF&G Procedures Manuals to AEIDC.				
July 31, 1982	R&M aerial photography bluelines to AEIDC. Woodward-Clyde internal working document: mitigation outline.				
September 30, 1982	R&M Water Quality interpretive report to AEIDC R&M/Acres draft Eklutna Lake thermal/suspended sediments study basic data report to AEIDC. R&M draft groundwater dynamics in sloughs report to AEIDC. R&M draft perching and scour study of upper river report to AEIDC. Acres pre- and postproject weekly thermal routing model output to AEIDC. Acres pre- and postproject weekly streamflow data report to AEIDC.				
October 1982	AEIDC model of Susitna aquatic system based on available aquatic information.				
November30, 1982	<pre>AEIDC internal working document:nonquantitative conceptual model of Susitna aquatic system impacts. R&M draft basic data report on riverine suspended sediment loads to AEIDC. USGS draft bedload transport basic data report to AEIDC.</pre>				
January 31, 1983	ADF&G internal working documents: draft basic data reports to AEIDC Woodward-Clyde draft Exhibit E.				
March 1, 1983	ADF&G POS for FY84 to AEIDC.				
April 15, 1983	Revised draft ADF&G basic data reports to AEIDC.				
May 1, 1983	<pre>ADF&G internal working documents: draft inter- pretive report on relationships between fish and aquatic habitat to AEIDC. R&M draft interpretive report on groundwater dynamics in sloughs to AEIDC. R&M/Acres draft interpretive report and mode of reservoir thermal/suspended sediment conditions to AEIDC.</pre>				

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Figure 2. Susitna Aquatic Studies Anticipated Milestones and Deliverables Commencing July 1982 (continued)

Approximate Date	Milestone/Deliverable				
June 1, 1983	ADF&G draft Procedures Manual for FY84 to AEIDC.				
June 30, 1983	 Final ADF&G interpretive report on fish/habitat relationships. ADF&G internal working document: draft interpretive report on in site salmonid egg incubation study to AEIDC. ADF&G draft winter 1982-83 basic data report to AEIDC. R&M draft ice dynamics interpretive report and aerial photographs to AEIDC. 				
July 1, 1983	AEIDC work plan for FY84.				
October 30, 1983	AEIDC draft impact assessment report.				
January 31, 1984	Revised draft ADF&G Winter 1982-83 basic draft report. Revised draft winger egg incubation study report.				

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PRICING PROPOSAL F	OR AQUATIC IMP	ACT ASSESSMENT	BUDGET
	AEIDC 3 mm	a word.	
	July 1,	Oct. 1,	
	1982 to	1982 to	
	Sept. 30,	June 30,	Total of
	1982	1983	Contract
Services			
Manhours (estimated	3,080	11,120	14,200
Salary	56,365	203,744	260,109
Leave Allowance (16.9%)	9,526	34,432	43,958
Staff Benefits			
TRS (22% of \$187,931)	9,136	32,209	41,345
PERS (25.1% of \$116,136)	6,115	23,035	29,150
Direct Costs			
Travel & Per Diem	5,030	13,630	18,660
Boeing Computer Services	10,000	50,000	60,000
Printing		25,000	25,000
Other Costs & Supplies	4,750	16,050	20,800
Indirect Costs (43%)	43,396	171,182	214,578
TOTAL	144,318	569,282	713,600

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ACRES AMERICAN INCORPORATED

AGREEMENT NO. P5700.10.41

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AMENDMENT NO. 2

for

POWER STUDIES, SEISMIC STUDIES, MARKETING AND FINANCING SUPPORT AND OTHER SERVICES

to be provided by

WOODWARD-CLYDE CONSULTANTS, INC.

in connection with

SUSITNA HYDROELECTRIC PROJECT ENGINEERING AND TECHNICAL SERVICES FEASIBILITY STUDIES LEADING TO LICENSE APPLICATION

JULY 1982

ACRES AMERICAN INCORPORATED Suite 305 1577 "C" Street Anchorage, ALaska 99501 Telephone: (907) 276-4888

TABLE OF CONTENTS

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- Revised Article IV Compensation (1)

- (1) Revised Afticle IV Compensation
 (2) Revised Attachment IX Assignment
 (3) Revised Attachment 1 Scope of Work
 (4) Revised Attachment 2 Pricing Proposal.
 (5) Revised Attachment 7- Billing Instructions
 (6) Signature Sheet for Acceptance

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-ARTICLE IV - COMPENSATION

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Under Article IV - Compensation, change second paragraph to read:

"The total estimated cost of all the work to be performed under this Agreement, as set out in Attachment 1 - Scope of Work, is \$1,782,531, including escalation. Cost breakdown is indicated on Attachment 2 - Pricing Proposal".

Item 1, Paragraph (d): Change Fee amount from \$113,391 to \$120,951 to cover the period through September 30, 1982.

Item 4, the following paragraphs are added:

- (i) Upon approval of this Amendment No. 2, ACRES will allocate to SUBCONTRACTOR \$93,536. This allocation, plus previous allotments under this agreement will total \$1,489,319 to cover the period through September 30, 1982.
- (j) All costs are reflected in Attachment 2 Pricing Proposal, and in-no-event will costs for Phase 1 exceed the total agreed to in this Amendment No. 2.

REMAINDER OF ARTICLE IV UNCHANGED

-1-

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(1) This Agreement is not assignable without prior written authorization from ACRES, nor is any subtier subcontract issued by SUBCONTRACTOR for work to be performed under this Agreement assignable without prior written authorization from ACRES.

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(2) If ACRES at any time is no longer a contractor of the AUTHORITY, upon notification by ACRES to CONTRACTOR, ACRES will assign its rights and obligations under this CONTRACT to the AUTHORITY or its designated agent. In the event of such an assignment, the assignee shall be substituted in full place and stead for ACRES under the CONTRACT, and ACRES shall be released from any and all further obligations hereunder.

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ATTACHMENT 1

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SCOPE OF WORK

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Add the following Scope of Work for Subtasks 7.10 - Fisheries Mitigation Planning.

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Subtask 7.10 - Fisheries Mitigation Planning

<u>Objectives</u>

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The primary objective of the fisheries mitigation planning effort is to develop a mitigation plan consisting of quantified mitigation options for each phase of the project. The ultimate goal is to provide the mitigation document required by the FERC for license approval. A secondary objective is to identify information deficiencies and prioritize studies needed to fulfill the quantification requirements of the mitigation plan.

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Tasks

Task 1. Agency and Project Coordination. The mitigation planning will require an unusual amount of coordination and communication among the various Fisheries Study Group components, regulatory agencies and other environmental studies components. This project coordination will be the responsibility of the Woodward-Clyde Consultants (WCC) Project Manager.

Task 2. Inforamtion and Data Review. There is a considerable volume of existing fisheries and hydraulic information and data relating to the Susitna Hydroelectric Project. Since this information will form the basis of the mitigation plan, project staff must be thoroughly familiar with this information prior to initiating the mitigation planning effort. Only those project personnel directly involved in a decision-making role need to be familiar with all phases of the proposed project.

Task 3. Mitigation Plan Outline. A mitigation plan outline must be developed early in the project to structure the mitigation effort, allow an evaluation of the adequacy of existing information, identify information deficiencies and prioritize study needs. The outline will be as detailed as possible and will address all phases of the proposed project. The draft outline will be developed by WCC with input from the Fisheries Study Group. The draft outline will be circulated within the Fisheries Study Group for review and comment and the Su Hydro Steering Committee for informal review. The final outline will allow for a structured study approach and orderly development of a mitigation plan.

Task 4. Identification and Prioritization of Study Needs. This tas' will be a cooperative affort with other members of the Fisheries Study Group, with input from the Su Hydro Steering Committee. The identification and prioritization of study needs will logically follow from the mitigation outline. The task should be initiated early in the study so that field efforts can be re-directed as necessary to provide information required in the mitigation plan. The task will be an on-going process throughout the project but is identified as a separate task to formalize and emphasize the importance of this study component.

Task 5. Quantification of Mitigation Plan. This task consists of quantifying the various mitigation options identified in the mitigation plan outline and other appropriate options that may be identified. The quantification will consist of identifying expected gains or losses of fish and/or fish habitat from various construction alternatives and mitigation techniques during the various phases of project development. Because of the time lag between data collection and data availability, the FY 1983 mitigation plan will be solely based on data available prior to September 30, 1982. By limiting the FY 1983 plan to data available in this time frame, the plan will not be a complete mitigation document. Information being gathered during the 1982 and 1983 field seasons will be needed to prepare a finalized plan.

Quantification will be achieved by utilizing available predictive models. and standard statistical analysis calibrated with existing Susitna Basin data. If the necessary data specific to the Susitna Basin are not available, information from other systems will be utilized, where appropriate, until basin-specific information is available. The quantification effort will be performed by WCC personnel (biologists and hydrologists) with input from other mitigation experts retained by Acres American, Inc. as part of the Fisheries Study Group.

Task 6. Preparation of Mitigation Document. The mitigation document will present the various mitigation options in a format structured according to construction phase. The options will be presented in order of perceived desirability in a manner that allows easy comparison of the alternatives. The desirability ranking will be based on USFWS Mitigation Policy, which prioritizes mitigation goals. These defined goals, in order of priority, are (1) avoiding the impact, (2) minimizing impact, (3) rectifying impact, (4) reducing impact over time and (5) compensating for impact. Liberal use of appropriate figures and tables will facilitate comparison of alternatives. The narrative will thoroughly discuss alternatives, state assumptions and document sources of information. An important section of the document will be the discussion of information deficiencies and study needs. This section will focus on studies needed to adequately quantify the mitigation document to fulfill FERC requirements. Although the quantitative aspects of the document will be based on pre-FY 1983 data, the FY 1983 studies will be considered in assessing future data needs. The document will be prepared as an interim mitigation plan. The interim plan can be circulated for agency review with the intent of obtaining conceptual approval for the scope of the mitigating options and the recommended study plan.

Task 7. Review and Assessment of FY 1983 Data, Identification of Study Needs. Following preparation of the interim mitigation plan, a formal review and assessment of the data collected during the FY 1983 field season will begin. This assessment will focus on the applicability of the data to the mitigation plan and will be used to finalize recommendations for FY 1984 studies and update recommendations for continuing studies.

Task 8. Quantification and Update of Mitigation Plan. After receiving and evaluating the FY 1983 field data, study efforts will concentrate on quantifying and updating the mitigation plan based on the newly acquired data. This task will continue into FY 1984 and lead to a sequential refining of the mitigation document.

Approach/Discussion

No.

In order to expeditiously prepare a FERC license application it will be necessary to 1) prepare an acceptable scope and format for the mitigation plan, 2) quantify the mitigation options as thoroughly as possible with available information, 3) prepare an interim mitigation plan, 4) obtain conceptual approval for the scope and data requirements from appropriate agencies and 5) finalize and select mitigation options as needed data become available. An important component of_this study approach is obtaining local agency acceptance of the concept that

-4-

the initial mitigation document submitted with the FERC license application need not be complete. This acceptance can be facilitated by developing a detailed interim mitigation plan, as proposed here, identifying data requirements and study needs (with agency input) and committing to provide the needed studies prior to FERC license approval. With this commitment to supporting the required studies, and with agreement from local agencies that these studies will address the proper concerns, it should be possible to proceed with the FERC licenseapplication. Conditional approval, subject to the submission of an acceptable mitigation document, has been obtained for other projects.

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Deliverables

JAS 1983

First Quarter FY 1983. A detailed outline of the mitigation plan will be prepared in the first quarter to define and direct the mitigation planning effort. This outline will allow a review of the mitigation effort by other project components and concerned agencies, which in turn will provide valuable input for directing the mitigation planning.

OND 1983 JEM 1984 Second and Third Quarter FY 1983. Draft Interim Mitigation Plan. If a timely review can be accomplished, the final will be completed during the third quarter; if not, the final interim plan will be completed in the fourth quarter, FY 1983.

Lit submitted 1st quarter Cal yr 1984

AMJ 1984 Fourth Quarter FY 1983. Final Interim Mitigation Plan (see comment under Third Quarter).

-5-

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IS k	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
								-				
Agency and Project Coordination												
Information and Data Review											•	
Mitigation Plan Outline			an a			•••						
. Identification and Prioritization of Study Needs												
. Quantification of Mitigation Plan			ويوادين والمراجع	theory and survey and the state of				•		•		
. a) Preparation of Draft Mitigation Plan Document												
b) Preparation of Final Document							•					
. Review and Assessment 1983 Data, Identificat of Study Needs	of ion								• • • •	•		
. Quantification and Preparation of Mitigat Plan Supplement	ion											

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ATTACHMENT 2

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PRICING PROPOSAL

Delete in its entirety Attachment 2 - Pricing Proposal contained in Agreement P5700.10.41 dated March 1980 (signed by Ulrich Lusher of WCC and D.C. Willett of Acres on 4 April 1980) and in Amendment No. 2 dated December 1981 (signed by George E. Brogan of WCC and D.C. Willett of Acres on January 12, 1982). Substitute the attached revised Attachment 2 - Pricing Proposal.

-7-

ATTACHMENT 2

D

PRICING PROPOSAL

WOODWARD-CLYDE CONSULTANTS, INC.

			300	9 mo	
	Services	Total from Amendment No. 1	July 1 - Sept. 30 1982	Oct. 1 June 30 1983	Total fo Amendmen No. 2
117	Total Manhours (estimated)	32,200	1,304	4,208	37,712
	Salary Cost Fringe Benefit (35 percent)	\$ 344,149 120,452	\$24,350 8,520	\$ 69,505 24,327	\$ 438,004 153,299
	Project Cost of Services (PCOS) Overhead (130 percent)	464,601 603,981	32,870 42,730	93,832 121,981	591,303 768,692
	Subtotal Handling Fee (2 percent) Fee on Services	1,068,528 4,194 113,391	75,600 204 7,560	215,813 1,093 21,581	1,359,995 5,491 142,532
	Subtotal	1,186,167	83,364	238,487	1,508,018
	Direct Costs	209,676	10,172	43,665	274,513
	GRAND TOTAL	\$1,395,843	\$93,536	<u>\$293,152</u>	\$1,782,531
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ACRES AMERICAN INCORPORATED AGREEMENT NO.

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FOR

SOCIOECONOMIC STUDIES

to be provided by

FRANK ORTH AND ASSOCIATES 225 108th Avenue N.E., Suite 311 Bellevue, WA 98004

in connection with

SUSITNA HYDROELECTRIC PROJECT ENGINEERING AND TECHNICAL SERVICES FEASIBILITY STUDIES LEADING TO LICENSE APPLICATION

July 1982

Acres Americn Incorporated 1577 "C" Street Suite 305 Anchorage, Alaska 99501 Telephone: (907) 276-4888

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ATTACHMENT 1

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Scope of Work for Socioeconomic Studies in connection with the Susitna Hydroelectric Project

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Subtask 7.05 - Sc economic Analysis

The proposed socioeconomic studies are divided into four separate Work Packages. The numbers one through four are used consistently to refer to Work Packages seven, eight, nine and ten.

Carlos Materia Carlos and Carlos Carlos Carlos

(a) <u>OBJECTIVES</u>

The objectives of the four different proposed work packages are as follows:

- 1. Determine the economic value of important commercial, recreational, and subsistence fish and wildlife resources. This data will indicate the unit economic value of resources to various user groups.
- 2. Determine economic effects of Susitna Hydroelectric Project on commercial, recreational and subsistence fish and game user groups.
- 3. Determine the significance of the economic effects of the Project for each user group.
- 4. Update existing data and inforamtion based upon input from Acres American, Inc. and other team members. Reimplement socioeconomic impact model using updated data and information.

(b) JUSTIFICATION

Reasons for implementing the four socioeconomic work packages are as follows:

- When combined with recent fish and wildlife use patterns, the economic value and social significance of the resources to each user group may be approximated. Where combined with fish and wildlife resource population data, the economics potential of importante resources will be estimated.
- 2. Economic value is a common denominator. These values will provide a better understanding of what could be gained or lost by user groups and will facilitate the development of mitigation measures.
- 3. Frequently, dollar values by themselves are not meaningful. Dollar values need to be put into contexts that are meaningful to both those persons being impacted and those who made decisions.
- 4. Refinement of design and project logistics will continue through Phase II. Reimplementation of the socioeconomic impact model will be necessary to process updated data and information. This will highlight key assumptions and parameters and allow decision makers to choose those assumptions and parameters which they feel are most valid. The incorporation of new data will allow the model to produce all of the results required by FERC and to produce more accurate results.

(c) APPROACH/DISCUSSION

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1 - Work Package 7: Baseline Economic Valuations for Important Commercial, Recreational and Subsistence Fish and Wildlife Resources.

a. Fish and wildlife resources with significant existing or potential economic value to alternative user groups will be identified and investigated by species or species group as appropriate. Fish and wildlife use pattern information collected in Work Package 2 will determine, in large part, resources with significant existing economic values. Resources with significant potential economic values will be identified in coordination with other Susitna Project Team members.

b. Existing fish and wildlife valuation studies will be identified and reviewed. Criteria will be developed to judge the acceptability of the study methodologies. Valuations from those studies which pass the test will be adopted. These valuations will serve as baseline conditions and will be extended into the future using appropriate methods.

c. Methodologies will be adopted from existing studies or modified to obtain valuations for important fish and wildlife resources not covered in the studies.¹ These valuations will also be extended through time for comparability (to valuations of b, above) and completeness.

d. Valuations from b and c, above, will be combined to obtained a a set of valuations for important fish and wildlife resources, by user group.

e. Unquantifiable dimensions of the valutions will be addressed (identified, considered, and discussed) and used in support of the quantitative measures in order to more completely characterize resource values.

2 - Work Package 8: Economic Effect of Project on Commercial, Recreational, and Subsistence User Groups.

Determine economic effects of project on commercial, recreational, and subsistence user groups resulting from potential changes in harvestable stocks of fish and wildlife.

(1) Description of user groups and fish and game utilization

- User group characteristics

- Quantity and value of harvests, by location and user group.

Note: For fish, the focus is on salmon that utilize the Susitna River and its tributaries and drainages, and Arctic grayling and Dolly Varden. For wildlife, the focus is on caribou, moose, bear and important furbearers that occur in Game Management Unit 13. Also, subsistence users may be treated as recreational users where the cost of harvest appears to exceed the cost of making fish, wildlife or an equivalent amount of food available to a user at his residence.

Quantification of potential project-induced changes in quantities (2)and values of harvest, by location and user group.

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- Discussion of how unit value might change as harvestable stock (3)changes, by user group.
- 3 -Work Package 9: Significance of Economic Effects of Project on Commercial, Recreational, and Subsistence User Groups.

Determine the significance of the economic effects on user groups.

- Description of recent and current fish and wildlife utilization rates (1)(eq., no. of fish/year or wildlife/year by species), by user group. This will establish a standard or minimum acceptable utilization rate for each user group.
- Description of potential future utilization rates, by user group. (2)
- (3) Comparison of minimum acceptable and potential future utilization rates. (Express where possible in future quantity and value/user groups vs. minimum acceptable quantity and value/user groups.
- (4) Identification of ways to mitigate losses (if any) and to enhance gains (if any).
- (5). Discussion of impact of increasing demand for fish and wildlife on current user groups.
- Work Package 10: Update Socioeconomic Impact Model With Data and Information.

Updated data and information from Acres American, Inc. and other team members will be obtained. For example, many of the construction work force and materials and equipment requirements associated with the transmission lines need to be updated. This will provide significantly more accurate results from the model. Other examples are the composition of the construction work force for the dams, models of access and travel allowances associated with each mode. Updated information in these areas will substantially enhance the accuracy of projected impacts.

(d)SCHEDULE

The schedule for the four work packages is as follows:

Work Package	<u>Start Date</u>	Draft Report	Completion Date (including Report)		
7	June, 1982	Aug. 1, 1982	September 1, 1982		
8	June, 1982	Sept. 1, 1982	October 1, 1982		
9	Aug. 1, 1982	Sept. 1, 1982	October 1, 1982		
10	Sept. 1, 1982	Nov. 1, 1982	December 1, 1982		

All reports must be completed by December 15, 1982.

PRICING PROPOSAL

FRANK ORTH AND ASSOCIATES

	Jul to Sep	y 1-1982 t. 30, 1982	Oct. 1-1982 to June 30, 1982	Total	
		Task	Task		
	7	8	9 10		
Services					
Manhours	\$ 1,280	\$ 700	\$ 370 \$ 420	\$ 2,770	
Salary Costs	15,477	8,044	4,253 4,802	32,576	
Fringe Benefits (27%)	4,179	2,172 ****	1,148 1,296	8,795	
Project Cost of Services	19,656	10,216	5,401 6,098	41,371	
Overhead (85%)	16,708	8,684	4,590 5,184	35,166	
Subtotal Labor Costs	\$36,364	\$ 18,900	\$ 9,991 \$ 11,282	\$ 76,537	
Direct Costs					
Travel and Per Diem	\$ 2,500	\$ 1,000	\$ 500 \$ 500	\$ 4,500	
Printing	1,000	500	500 500	2,500	
Computer	3,000	500	500 1,000	5,000	
Others	3,069	1,652	993 235	5,949	
<u>Fees</u>					
Fee on Services (10%)	\$ 3,636	\$ 1,890	\$ 994 \$ 1,128	\$ 7,653	
Handling Fee (2%)	191	83	40 45	359	
TOTAL	\$ 49,760	\$ 25.025 ·	\$ 13,023 \$ 14,690	\$ 102,498	

AGREEMENT

1982 between This Agreement made this <u>Z</u> day of <u>July</u>

Mr. Woody Trihey P.O. Box 10-1774 Anchorage, Alaska 99511

and

Acres American, Incorporated 1577 "C" Street, Suite 305 Anchorage, Alaska 99501

Now, Therefore, in consideration of the premises and the mutual benefits which will result to the parties hereto in carrying out the terms of this Agreement, it is agreed to as follows:

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ARTICLE I - SCOPE

TASK I - Technical Assistance to ADF&G

Mr. Trihey will work closely with ADF&G in implementing the ADF&G Aquatic Studies field data collection program. Specifically Mr. Trihey will assist ADF&G in:

- the development of a recommended field program,
- the preparation of procedure manuals,
- the selection of study sites,
- craining of field personnel,
- redirection of the inseason program as may become necessaly,
- and data collection, interpretation, and presentation.

Mr. Trihey will provide technical assistance to AEIDC. He will participate in establishing an interface between ADF&G and AEIDC regarding data reduction and analysis, interdisciplinary coordination, and report writing.

TASK III - Technical Liaison

State States

Technical liaison on the project will come from Acres through Mr. Wayne Dyok.

ARTICLE II - DISSEMINATION OF INFORMATION

In agreement with Article XI of ACRES contract with the Alaska Power Authority, Mr. Trihey agrees not to publish or disseminate technical presentations, professional papers, or reports based upon information obtained in the performance of duties covered by Article I without the 97000 = Sico)/... prior review of ACRES.

ARTICLE III - COMPENSATION

Acres will pay \$97,000 as total compensation for Mr. Trihey's time and expenses. Mr. Tribey's time is based on an annual billing of 2000 hours at a rate of \$45.00 per hour which includes all direct and indirect labor costs; expenses include a long term field per diem of \$50.00 per day to cover the costs of food and lodging up to a maximum of 100 days, and \$2,000 for miscellaneous expenses for boat fuel and the like.

ARTICLE IV - FIELD EQUIPMENT AND SUPPORT

Acres will provide all field equipment that is not available through the ADF&G Su Hydro program, required by Mr. Trihey to complete his field tasks. Other support to be provided by Acres includes; helicopter time of approximately 50 hours, and office space, general administrative and secretarial support, and other direct costs as appropriate, if not available through the ADF&G Su Hydro program.

ARTICLE V - BILLING AND PAYMENTS

Billings are to be received by Acres no later than the tenth of the following month. Payments are due within 45 days of receipt of invoice or 5 working days after Acres receives payment from the Alaska Power Authority; whichever is sooner. The billings will be based on hours worked on the project billed at a rate of \$45.00 per hour. Payment is to be rendered only upon submission of the monthly progress report accompanying the monthly invoice.

ARTICLE VI - TERMINATION

The performance of work under this Agreement may be terminated by Acres in whole or in part in the event Mr. Trihey defaults, or Acres' contract with the Alaska Power Authority is terminated. In such case, Mr. Trihey will be compensated only for the work performed in accordance with Articles III and V of this Agreement.

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ARTICLE VII - DURATION OF CONTRACT

This Agreement is effective July 1, 1982 and will continue for a period of 12 months unless terminated by Acres.

ARTICLE VIII - PROJECT FILES

ACRES is to have full and free access to all information relating to this Agreement in Mr. Trihey's possession, or in the possession of his subcontractors. Photocopies of data, drawings, calculations, notes, technical correspondence, or other materials will be provided to ACRES upon request. Upon completion or termination of this Agreement Mr. Trihey shall provide a full copy of his Project Files to ACRES within four (4) weeks, upon request.

ARTICLE IX - REPORTING REQUIREMENTS

A short monthly progress report is to be sent to ACRES by the tenth of the following month describing the activities and accomplishments carried out during the month.

ARTICLE X - DOCUMENTS PROPERTY OF ACRES

Drawings, specifications, reports, and any other documents prepared by Mr. Trihey in connection with any or all of the services furnished hereunder shall be the property of ACRES.

ACRES AMERICAN INCORPORATED

MR. WOODY TRIHEY

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J.W. Hayden

E. Woody Trikey

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E. Woody Trihey