

HARZA-EBASCO

Susitna Joint Venture
Document Number

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ALASKA POWER AUTHORITY

SUSITNA HYDROELECTRIC PROJECT

NOTES ON MEETINGS WITH APA, COLUMBIA, MARYLAND AUGUST 3RD

PREPARATION OF FERC LICENSE EXHIBITS

AUGUST 6, 1982

Prepared by:



ALASKA POWER AUTHORITY

6.2

SUSITNA HYDROELECTRIC PROJECT

NOTES ON MEETINGS WITH APA, COLUMBIA, MARYLAND AUGUST 30th

The meetings were called at the request of The Power Authority to review Acres work plans for preparation of FERC license documents for Susitna. Attendees were as follows:

APA:	R. Mohn	
	D. Wozniak	
Acres:	J. Lawrence	
	P. Hoover	
	J. Hayden	} Absent for initial discussions
	K. Young	
	M. Grubb	
	D. Willett	

Item 1: Proposed Work Plans

The attached work plans for Exhibits A through G and associated schedules were tabled for discussion. Specific questions raised by APA were as follows:

a) Land Questions

The Power Authority tabled the attached list of 10 questions which were discussed and generally responded to as noted on the attachment. No written response is required.

b) Water Rights

The submission as prepared by Acres is probably over-conservative in terms of project boundary definitions. Acres did not take the lead in identifying baseline land use conditions for the project boundary and some of this work will require tightening up for the license exhibit. It is important to define as soon as possible the land requirements and boundaries for access, transmission and recreation, all of which are the subject of continuing work. The 200 ft. boundary is generally a maximum and should not be exceeded without clear documentation of valid reasons for doing so. Acres proposal to employ Land Field Services to prepare Exhibit G was generally approved by The Power Authority. However a draft of the proposed subcontract defining scope and budget must receive APA approval prior to signature. It was noted that the native corporations had expressed an interest in constructing recreation facilities and access roads thereto for subsequent lease back to APA.

c) Supplementary Reports

A number of supplementary reports will be required in addition to the license application. It was agreed that three copies of all referenced documents should be forwarded to FERC with the license application. In special cases such as the supplementary design report, 6 copies were required. A number of these reference reports had already been printed and issued to APA in accordance with the stated requirements. Acres should prepare as soon as possible an inventory of available stocks of these reports so that any additional printing requirements can be identified.

d) Access

Final selection of the access route is a prerequisite to finalization of transmission and recreation plans. (See separate meeting notes)

e) Transmission

Acres proposes that LGL/Tetratich will prepare the Exhibit E documents for transmission. It should be noted that Land Field Services have an excellent data base for geotechnical and aesthetic information for the intertie. Buffalo office will undertake the transmission line design as soon as the access route is selected. This should be done in a manner compatible with that done for the interties by Commonwealth. Once completed the route should be flown and finally fixed for the license and the right-of-way boundaries defined. The Power Authority requires that Acres prepare and submit as soon as possible a work plan for transmission.

f) Mitigation Plans

No specific schedule was currently indicated for submission of mitigation plans to agencies for comment. It was generally agreed that drafts of the relevant documentation must be available to the agencies by mid-November at the latest. It is clearly important that consultation with the agencies should be on a continuing basis since by mid-November it will not be possible to incorporate all the results of ongoing field studies particularly for fisheries. Acres should issue letters to the agencies as soon as possible referring to documents already issued and tactfully request agency comment which could then be factored into the drafts to be issued mid-November. The proposed December workshops should be established as part of the ongoing process of obtaining agency input to the final Exhibit E which is to be filed mid-February.

g) Project Operation

It is clearly essential that a decision be made on the mode of operation of the project for inclusion in the license application by late August. Meetings in Anchorage later this month should be structured to provide the necessary information in terms of energy and environmental trade-offs that allow this decision to be made jointly by Acres and The Power Authority. The Power Authority requires Acres to provide as soon as possible a detailed plan for making this decision. It was agreed that new load forecasts would be treated in the application essentially as another sensitivity run rather than a new base case.

h) Exhibit E

A date of August 19th was established for the next Power Authority review of Acres progress on Exhibit E. It was proposed by The Power Authority that preparation of chapters 1, 4, 5, 10 and possibly 5 should be initiated immediately in order to spread the work over a longer period of time. APA expressed concern that Stielstra who is shown responsible for chapters 7, 8 and 9 (recreation, aesthetics, and land use) may be overloaded and even not qualified to undertake

all three items. D.Wozniak suggested consideration of Sullivan to assume some of this responsibility. Fleming of APA is to interview Stielstra and make recommendations.

AEIDC is delaying its contribution on fisheries: APA will apply appropriate pressure and try to overcome this problem. Although strictly not necessary the recreation plan in the Exhibit E format should be forwarded to the agencies for comment when available. The chapter 10 on alternatives must include a description of access and transmission alternatives considered and details of the substantial amount of agency consultation which has taken place and any mitigation plans which have developed.

The Power Authority expressed concern that Moulton of WCC who is the author of parts of chapter 3 has also been nominated for an assignment for the state which R. Mohn had recently been involved in. John Hayden will check into this.

In general, The Power Authority expressed concern that John Hayden not be overloaded with administrative work which might conflict with preparation of Exhibit E.

1) FERC Review

P. Hoover is to be established as the single point of contact for questions which exhibit preparers may wish to raise with FERC. At the meeting August 4th with Paul Carrier it was proposed that FERC be advised of The Power Authority's intentions to forward drafts for comment given an indication of the schedule for the submission. John Lawrence would be meeting R. Corso informally August 9th and would request how FERC would prefer to handle the informal consultation process between exhibit preparers and FERC staff.

P. Hoover is to be finally responsible for review of all exhibits for general consistency in style and format.

Item 2: Amendment #4

The Power Authority requested that Amendment #4 include for handing-over by Acres to a new engineer in the event this was necessary. For example; maps, photographs, design calculations and relevant correspondence files should be identified as elements to be handed-over by mid-to-late November so that they would be available to the new engineer in December or January.

Acres will forward to APA a copy of the current file index checked off with those files which Acres believe should be transferred for approval by The Power Authority before any action is taken. Reference should be made to original correspondence from The Power Authority regarding other study products which APA requires.

The Amendment should include formal language relating to the transition period with the new engineer and cover such items as: briefing meetings, contract closing-out, final payments, billings, audits etc. The Amendment

should cover an appropriate period past January 1st and also quote unit rates for services of personnel as and when needed in the future.

Acres were requested to explore the possibility of providing file and design calculation information on microfiche or microfilm, 2 to 3 copies being required. In general however computer printout should not be microfiched but originals of applicable sheets should be handed over.

A signed and executed document for Amendment #4 is required by September 10th.

A handwritten signature in dark ink, appearing to read "Hansen", is located in the upper right quadrant of the page.

SUSITNA HYDROELECTRIC PROJECT

ACCESS ROAD DECISION PROCESS

The meeting in Columbia August 3rd also dealt with the preparation of a "decision paper" to be finalized by August 16th as a basis for the APA Board decision on access. The supplementary access road report would follow on the basis of this decision paper.

It is imperative that a team of people assemble in Anchorage the week of August 9th to 13th to prepare this report. The team will comprise the following:

J. Hayden
J. Plummer
R. Chamberlain
M. Grubb
LGL
R. Fleming

Referring to The Power Authority report outline, responsibilities are as follows:

Chapter 1 and 2, John Hayden to write, APA review.

Chapter 3, Mike Grubb/LGL to write, R. Fleming to review. Acres should consult Banfield to obtain his reaction to the possibility of a Denali route. Dave Wozniak will contact BLM for their input. R. Fleming will deal with ADF&G input. Acres will contact Dr. Leopold as necessary.

Chapter 4 and 5, The Power Authority will obtain agency input which will be summarized by John Hayden.

Chapter 6, Jim Plummer assisted by Chamberlain and R&M will deal with costs.

Chapter 7, Jim Plummer will deal with schedule/rates. The Power Authority concerns were expressed regarding the railroad options. Stated hazards for the railroad options also apply to roads. It is essential that each be fully evaluated and compared in the study to properly establish the advantage of road access. Inadequate attention had been paid to the current rail restrictions and duty cycle requirements from Whittier to Cantwell which are believed to be quite restricted. The railroad staff in Anchorage must be contacted to obtain historical data which should be presented in the report.

Chapter 8, Environmental Aspects, and Land Use should be prepared by M. Grubb and LGL and reviewed by R. Fleming. The Matanuska-Susitna Burrough plans must be factored in together with the DNR Land Use plans. (A Carson)



ALASKA POWER AUTHORITY

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SUSITNA LAND QUESTIONS
FOR F.E.R.C.

1. May project facilities of the type listed below be placed on leased Land?
 - a. Dam and penstock
 - b. Impoundment area plus up to 200 feet surrounding the impoundment area.
 - c. Village sites, construction camps, air strips and service areas.
2. If such facilities cannot be placed on leased land, can they be conveyed to the Power Authority subject to a reversionary clause to take effect at such time as the area is no longer used for power project purposes.
3. The Power Authority is required by FERC to control a maximum area of up to 200 feet surrounding the impoundment area. What is the minimum number of feet around the impoundment area that the Power Authority must control?
4. Will the aliquot parts method of land description as currently being used by the Power Authority to describe the 200 foot surrounding the impoundment area be acceptable?
5. May the Power Authority award control of any or all recreational development within the project boundaries to a private corporation, and if so, with what restrictions?
6. FERC regulations require that land ownership and proposed uses be identified "within and abutting the project boundary". What size area is meant to be included by this clause?

How general a statement of future anticipated land uses will FERC accept from private owners (i.e., native corporations) of lands in and abutting the project area?
7. Would access to project facilities obtained by leasing a private road be acceptable.
8. What is the width of the transmission line Right-of-Way which must be identified upon submission of the FERC License Application?
9. Is it necessary to include in the FERC License Application a project land acquisition scheme and schedule?

Discussed —
No written response needed

AGENDA

Subject: Preparation of FERC License Application

- Item 1 Schedule Summary Tech./Env.
- Item 2 Review Exhibit Schedules Responsibilities
- Item 3 Exhibit E Agency Revised Schedule
- Item 4 Supplementary Reports
- Item 5 Formats - References
- Item 6 FERC Meeting of 8/3/82

Senior Editor - P. Hoover.

SUPPLEMENTAL REPORTS *

<u>Title</u>	<u>Schedule</u>	<u>Prime Responsibility</u>
Land Status (2.04)	Aug. 1	Hayden
Land Acquisition Analysis (2.05)	Sept. 1	Hayden/Subcontractor
Supplementary Feasibility Report	Dec. 1	Lawrence
1982 Geotechnical Report	Dec. 1	Thompson
Water Quality Report	Oct. 1	R&M
Ground Water Dynamics Report	Oct. 1	R&M
Sedimentation Study Report	Oct. 1	R&M
Wildlife Quarterly Reports	July 30/Oct. 30	ADF&G
Data Reports	Oct. 25	U of A
Aquatic Systems	Nov. 15	Dyok
Reservoir Modeling	Nov. 15	Dyok
Downstream Modeling	Nov. 15	Dyok

*Not completed

4/3 Review
KMS
DOW
A. C. C.

EXHIBIT E
SUMMARY OF RESPONSIBILITY

<u>Chapter</u>	<u>Title</u>	<u>Author</u>	<u>Reviewer</u>	<u>Senior Reviewer</u>
1	Description	M. Grubb	J. Lawrence	C. Debelius
2	Water Quality	W. Dyok	A. Coniglio	J. Hayden
3	Fish, Wildlife, Botanical	R. Senery <i>Not available?</i> L. Moulton	M. Grubb/K. Young	J. Hayden
4	Historic and Archaeological	J. Dixon	K. Young/D. Follows	J. Hayden
5	Socioeconomics	P. Rogers	M. Grubb	J. Hayden
6	Geology and Soils	L. Duncan	D. W. Lamb	S. Thompson
7	Recreation	S. Stielstra	K. Young	J. Hayden
8	Aesthetics	S. Stielstra	K. Young	J. Hayden
9	Land Use	S. Stielstra/J. Sullivan	J. Gill/C. Debelius	J. Hayden
10	Alternatives	C. Debelius/P. Hoover	J. Lawrence	G. Warnock

EXHIBIT E
CHAPTER 1 GENERAL DESCRIPTION

<u>Responsibility</u>	<u>Activity</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
M. Grubb	Initial Draft	Sept 6	1 week	Sept 10
Clerical Staff	Production	Sept 13	2 days	Sept 15
J. Lawrence	Internal Review	Sept 16	3 days	Sept 20
M. Grubb	Revised Draft	Sept 21	3 days	Sept 24
Clerical Staff	Production	Sept 27	2 days	Sept 29
-	APA Review	Oct 1	1 week	Oct 8
M. Grubb	Final Draft	Oct 12	1 week	Oct 19
C. Debelius	Final Review	Oct. 21	1 week	Oct. 28
Clerical Staff	Final Production	Jan 10	1 week	Jan 15
Contractor	Printing	Jan 20	3 weeks	Feb 9
-	Submit	Feb 10	1 week	Feb 15

Suggest advance start 1 month

EXHIBIT E
CHAPTER 2 WATER QUALITY

<u>Responsibility</u>	<u>Activity</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
W. Dyok	Initial Draft	Oct 1	3 weeks	Oct 22
Clerical Staff	Production	Oct 25	1 week	Nov 1
A. Coniglio	Review	Nov 2	1 week	Nov 9
W. Dyok	Revised Draft	Nov 10	2 weeks	Nov 24
Clerical Staff	Production	Nov 29	1 week	Dec 6
J. Hayden	Review	Dec 7	3 days	Dec 10
-	APA Review	Dec 13	1 week	Dec 20
W. Dyok	Final Draft	Dec 21	1 week	Dec 28
J. Hayden	Final Review	Jan 4	1 week	Jan 11
Clerical Staff	Final Production	Jan 12	3 days	Jan 15
Contractor	Printing	Jan 20	3 weeks	Feb 9
-	Submit	Feb 10	1 week	Feb 15

KEY INPUTS REQUIRED/MILESTONES

<u>Responsibility</u>	<u>Action</u>	<u>Date Required</u>
AEIDC	Aquatic Systems Model	Oct 1
Staff	Reservoir Modeling Results	Oct 1/Nov 15
Staff	Downstream Modeling Results	Oct 1/Nov 15
R&M	Water Quality Report	Oct 1
R&M	Groundwater Dynamics Report	Oct 1/Nov 15
R&M	Sedimentation Study Report	Oct 1
W. Dyok	Initial Draft	Oct 22
APA	Review	Dec 14
W. Dyok	Final Draft	Dec 28



SCHEDULE SHEET

211° 5'

CHARGE NO 5700.60

ALASKA POWER AUTHORITY

PROJECT SUGITNA EXHIBIT "E"-ENVIRONMENTAL REPORT

RECEIVED BY _____ DATE _____

PROJECT APPROVAL _____

WORK PACKAGE	DESCRIPTION	JULY	AUG	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.
	CHAPTER 2 WATER QUALITY								
	INITIAL DRAFT								
	PRODUCTION								
	REVIEW								
	REVISED DRAFT								
	PRODUCTION								
	REVIEW								
	APR. REVIEW								
	FINAL DRAFT								
	FINAL REVIEW								
	FINAL PRODUCTION PRINTING								
	SUBMIT KEY INPUTS REQ'D/MILESTONES								
	AERATIC SYSTEMS MODEL								
	FEBRUARY MODELING RESULTS								
	DYNAMETRIC MODELING RESULTS								
	WATER QUALITY REPORT								
	REGULATORY DYNAMICS REPORT								
	SEDIMENTATION STUDY REPORT								
	INITIAL DRAFT								
	REVIEW								
	FINAL DRAFT								

EXHIBIT E
CHAPTER 3 FISH, WILDLIFE, AND BOTANICAL
FISHERIES ONLY

<u>Responsibility</u>	<u>Activities</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
L. Moulton (WCC)	Initial Draft	Aug 1	8 weeks	Sept 24
Clerical Staff	Production	Sept 27	2 weeks	Oct 11
K. Young	Review	Oct 13	1 week	Oct 20
L. Moulton	Revised Draft	Oct 25	2 weeks	Nov 8
Clerical Staff	Production	Nov 9	1 week	Nov 16
K. Young	Review	Nov 22	1 week	Nov 29

WORKSHOP

L. Moulton	Final Draft	Dec 6	1 week	Dec 10
Clerical Staff	Production	Dec 13	1 week	Dec 17
K. Young/ J. Hayden	Final Review	Dec 20	2 weeks	Jan 4
-	APA Review	Dec 20	2 weeks	Jan 4
L. Moulton	Final Draft	Jan 5	1 week	Jan 12
J. Hayden	Senior Review	Jan 12	2 days	Jan 14
Clerical Staff	Final Production	Jan 17	4 days	Jan 21
Contract	Printing	Jan 22	3 weeks	Feb 9
-	Submit	Feb 10	1 week	Feb 15

KEY INPUTS REQUIRED/MILESTONES

<u>Responsible</u>	<u>Action</u>	<u>Date Required</u>
L. Moulton	Initial Draft	Oct 11
AEIDC	Aquatic Systems Model	Oct 13
Acres	Reservoir Modeling Results	Oct 1/Nov 15
Acres	Downstream Modeling Results	Oct 1/Nov 15
R&M	Water Quality Report	Oct 1
R&M	Groundwater Dynamics Report	Oct 1/Nov 15
R&M	Sedimentation Study Report	Oct 1
W. Dyok	Chapter 2 Draft	Oct 22
APA	Review	Jan 4
L. Moulton	Final Draft	Jan 12

Draft for agency review Nov. 15 (60 days)

SCHEDULE SHEET

SHEET ____ OF ____

CHARGE NO. #5700.60

CLIENT ALASKA POWER AUTHORITY

PREPARED BY: _____ DATE: _____

PROJECT SUSITNA EXHIBIT "E" - ENVIRONMENTAL REPORT

PROJECT APPROVAL: _____

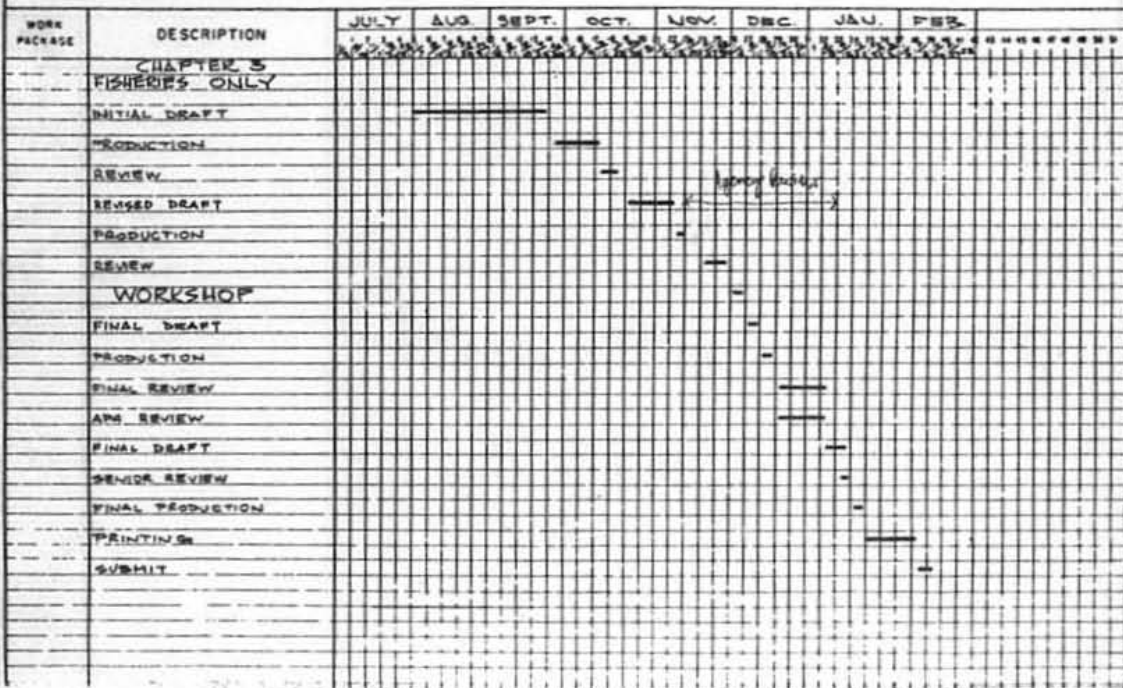


EXHIBIT E
CHAPTER 3 FISH, WILDLIFE, AND BOTANICAL
WILDLIFE AND BOTANICAL SECTIONS

<u>Responsibility</u>	<u>Activities</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
R. Sener (LGL)	Initial Draft	Sept 13	4 weeks	Oct 8
Clerical Staff	Production	Oct 11	1 week	Oct 15
M. Grubb	Review	Oct 18	1 week	Oct 22
R. Sener	Revised Draft	Oct 25	2 weeks	Nov 8
Clerical Staff	Production	Nov 9	3 days	Nov 12
K. Young	Review	Nov 15	1 week	Nov 19

WORKSHOP

R. Sener	Third Draft	Dec 6	1 week	Dec 10
Clerical Staff	Production	Dec 13	1 week	Dec 17
M. Grubb	Third Review	Dec 20	2 weeks	Jan 4
-	APA Review	Dec 20	2 weeks	Jan 4
R. Sener	Final Draft	Jan 5	1 week	Jan 12
J. Hayden	Senior Review	Jan 12	2 days	Jan 14
Clerical Staff	Final Production	Jan 17	4 days	Jan 21
Contract	Printer	Jan 22	3 weeks	Feb 9
-	Submit	Feb 10	1 week	Feb 15

KEY INPUTS REQUIRED/MILESTONES

<u>Responsibility</u>	<u>Action</u>	<u>Date Required</u>
ADF&G	Quarterly Reports	July 30
R. Sener	Initial Report	Oct 8
U of A	Data Reports	Oct 25
ADF&G	Quarterly Reports	Oct 30
Agencies	Comments From Workshop	Dec 3
R. Sener	Final Draft	Dec 10
APA	Review	Jan 4

Draft for Agency Review Nov. 15 (60 days)

AGNES

CHARGE NO. 5700.60

CLIENT ALASKA POWER AUTHORITY

PREPARED BY _____ DATE _____

PROJECT SUB/ITNA EXHIBIT "B" - ENVIRONMENTAL REPORT

PROJECT APPROVAL _____

[illegible]

EXHIBIT E
CHAPTER 4 CULTURAL RESOURCES

<u>Responsibility</u>	<u>Activity</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
J. Dixon (UofA)	Initial Draft	Oct 4	4 weeks	Nov 1
K. Young/ D. Follows	Review	Nov 2	3 days	Nov 5
J. Dixon	Revised Draft	Nov 8	3 weeks	Nov 29
K. Young/ D. Follows	Review	Dec 1	1 week	Dec 8
Clerical Staff	Production	Dec 10	1 week	Dec 17
-	APA Review	Dec 20	2 weeks	Jan 2
K. Young/ D. Follows	Final Draft	Jan 3	1 week	Jan 10
J. Hayden	Senior Review	Jan 11	2 days	Jan 13
Clerical Staff	Final Production	Jan 14	3 days	Jan 14
Contractor	Printing	Jan 20	3 weeks	Feb 9
-	Submit	Feb 10	1 week	Feb 15

KEY INPUTS REQUIRED/MILESTONES

<u>Responsibility</u>	<u>Action</u>	<u>Date Required</u>
J. Dixon	Initial Draft	Nov 1
APA	APA Review	Jan 2
K. Young/ D. Follows	Final Draft	Jan 10

NOTE: Assumes Exhibit E will be based on field studies through 1981 only. Results of 1982 field season will be ready December 22 and issued as an appendix. This will permit concentration on cultural resources mitigation plan in license application.

Suggest advance start 1 month

EXHIBIT E
CHAPTER 5 SOCIOECONOMICS

<u>Responsibility</u>	<u>Activity</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
P. Rogers (FOA)	Initial Draft	Oct 4	4 weeks	Nov 1
M. Grubb	Review	Nov 3	1 week	Nov 10
P. Rogers	Revised Draft	Nov 11	1 week	Nov 18
M. Grubb	Review	Nov 22	1 week	Nov 26
-	APA Review	Nov 29	1 week	Dec 6
P. Rogers	Final Draft	Dec 8	2 weeks	Dec 22
J. Hayden	Senior Review	Dec 27	1 week	Jan 5
P. Rogers	Camera Ready Copy	Jan 10	1 week	Jan 17
Contractor	Printing	Jan 20	3 weeks	Feb 9
-	Submit	Feb 10	1 week	Feb 13

KEY INPUTS REQUIRED/MILESTONES

<u>Responsibility</u>	<u>Action</u>	<u>Date Required</u>
P. Rogers	Initial Draft	Nov 1
APA	APA Review	Dec 6
P. Rogers	Final Draft	Dec 22

*check with each regarding
possible advance of start
by 1 month*

EXHIBIT E
CHAPTER 6 GEOLOGY AND SOILS

<u>Responsibility</u>	<u>Activity</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
L. Duncan	Initial Draft	Oct 15	3 weeks	Nov 5
Clerical Staff	Production	Nov 8	1 week	Nov 12
D. W. Lamb	Review	Nov 15	1 week	Nov 19
L. Duncan	Revised Draft	Nov 22	2 weeks	Dec 6
Clerical Staff	Production	Dec 8	1 week	Dec 15
-	APA Review	Dec 17	2 weeks	Jan 3
L. Duncan	Final Draft	Jan 5	1 week	Jan 12
S. Thompson	Final Review	Jan 13	1 day	Jan 14
Clerical Staff	Final Production	Jan 15	4 days	Jan 19
Contractor	Printing	Jan 20	3 weeks	Feb 9
-	Submit	Feb 10	1 week	Feb 15

KEY INPUTS REQUIRED/MILESTONES

<u>Responsibility</u>	<u>Document</u>	<u>Date Required</u>
L. Duncan	Initial Draft	Nov 5
Staff	1982 Field Season Results	As Available
APA	APA Review	Jan 3
L. Duncan	Final Draft	Jan 12

*Suggest Advance Start
2 months*

EXHIBIT E
CHAPTER 7 RECREATION

<u>Responsibility</u>	<u>Activity</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
? <u>S. Stielstra (TT)</u> Clerical Staff	Initial Draft	Sept 6	4 weeks	Oct 4
K. Young	Production	Oct 5	1 week	Oct 12
? <u>S. Stielstra</u> Clerical Staff	Review	Oct 15	1 week	Oct 22
K. Young	Revised Draft	Oct 25	2 weeks	Nov 8
-	Production	Nov 9	3 days	Nov 12
? <u>S. Stielstra</u>	Review	Nov 15	1 week	Nov 19
J. Hayden	APA Review	Nov 22	2 weeks	Dec 6
Clerical Staff	Final Draft	Dec 7	1 week	Dec 14
Contract	Senior Review	Dec 15	1 week	Dec 22
-	Final Production	Jan 3	1 week	Jan 10
-	Printing	Jan 20	3 weeks	Feb 9
-	Submit	Feb 10	1 week	Feb 15

KEY INPUTS REQUIRED/MILESTONES

<u>Responsibility</u>	<u>Action</u>	<u>Date Required</u>
<u>S. Stielstra</u>	Initial Draft	Oct 4
APA	APA Review	Dec 6
<u>S. Stielstra</u>	Final Draft	Dec 14

Solicit agency comment on current draft as soon as possible

EXHIBIT E
CHAPTER 8 AESTHETICS

<u>Responsibility</u>	<u>Activities</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
? <u>S. Stielstra (TP)</u>	Initial Draft	Oct 1	3 weeks	Oct 22
Clerical Staff	Production	Oct 25	1 week	Oct 29
K. Young	Review	Nov 1	1 week	Nov 5
? <u>S. Stielstra</u>	Revised Draft	Nov 8	1 week	Nov 12
Clerical Staff	Production	Nov 15	1 week	Nov 19
K. Young	Review	Nov 22	3 days	Nov 25
-	APA Review	Nov 29	2 weeks	Dec 13
? <u>S. Stielstra</u>	Final Draft	Dec 13	1 week	Dec 20
J. Hayden	Senior Review	Dec 20	2 days	Dec 22
Clerical Staff	Final Production	Dec 27	1 week	Jan 3
Contract	Printing	Jan 20	3 weeks	Feb 9
-	Submit	Feb 10	1 week	Feb 15

KEY INPUTS REQUIRED/MILESTONES

<u>Responsibility</u>	<u>Action</u>	<u>Date Required</u>
<u>S. Stielstra</u>	Initial Draft	Oct 22
APA	APA Review	Dec 13
<u>S. Stielstra</u>	Final Draft	Dec 20

Handwritten: Under Review

EXHIBIT E
CHAPTER 9 LAND USE

<u>Responsibility</u>	<u>Activities</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
? <u>S. Stielstra</u> (IT)	Initial Draft	Oct 18	3 weeks	Nov 8
Clerical Staff	Production	Nov 9	4 days	Nov 12
J. Gill	Review	Nov 15	1 week	Nov 19
? <u>S. Stielstra</u>	Revised Draft	Nov 22	2 weeks	Dec 6
Clerical Staff	Production	Dec 7	3 days	Dec 10
C. Debellus	Review	Dec 13	2 days	Dec 15
-	APA Review	Dec 17	2 weeks	Dec 31
? <u>S. Stielstra</u>	Final Draft	Jan 3	1 week	Jan 7
J. Hayden	Final Review	Jan 10	2 days	Jan 12
Clerical Staff	Final Production	Jan 17	3 days	Jan 20
Contractor	Printing	Jan 20	3 weeks	Feb 9
-	Submit	Feb 10	1 week	Feb 15

KEY INPUTS REQUIRED/MILESTONES

<u>Responsibility</u>	<u>Action</u>	<u>Date Required</u>
J. Sullivan (LUS)	Exhibit G Input	Oct 18
<u>S. Stielstra</u> <i>Under review</i>	Initial Draft	Nov 8
APA	Initial Review	Dec 31
<u>S. Stielstra</u>	Final Draft	Jan 7

EXHIBIT E
CHAPTER 10 ALTERNATIVES

<u>Responsibility</u>	<u>Activity</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
C. Debelius/ P. Hoover	Initial Draft	Sept 6	4 weeks	Oct 1
Clerical Staff	Production	Oct 4	1 week	Oct 8
J. Hayden	Review	Oct 10	4 days	Oct 15
C. Debelius/ P. Hoover	Revised Draft	Oct 16	2 weeks	Oct 30
Clerical Staff	Production	Nov 1	1 week	Nov 8
J. Lawrence	Review	Nov 10	1 week	Nov 17
-	APA Review	Nov 22	2 weeks	Dec 6
C. Debelius/ P. Hoover	Final Draft	Dec 8	1 week	Dec 15
G. Warnock	Final Review	Dec 20	2 weeks	Jan 3
Clerical Staff	Final Production	Jan 4	1 week	Jan 11
Contractor	Printing	Jan 20	3 weeks	Feb 9
-	Submit	Feb 10	1 week	Feb 15

KEY INPUTS REQUIRED/MILESTONES

<u>Responsibility</u>	<u>Document</u>	<u>Date Required</u>
C. Debelius/ P. Hoover	Initial Draft	Oct 1
APA	Review	Dec 6
D. Debelius/ P. Hoover	Final Draft	Dec 5

request advance 5 tent 1 month

8/3 Review RAN
DDW
Acres

EXHIBIT A & B
DESCRIPTION OF THE PROJECT
PROJECT OPERATION

<u>Input Responsibility</u>	<u>Activity</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
Columbia Staff	Initial Draft	July 1	5 weeks	Aug. 6
Columbia Clerical Staff	Production/Typing & Drafting	Aug. 6	1 week	Aug. 13
Buffalo Project Staff	Address Deficiencies/Revise.	Aug. 16	3 weeks	Sept. 3
Sr. Acres Staff	Internal Review*	Sept. 7	1 week	Sept. 10
Col/Buf/ Clerical	Finalize Draft/Repro	Sept. 10	1 week	Sept. 17
-	Send to APA	Sept. 17	-	-
-	APA Review	Sept. 20	4 weeks	Oct. 20
Anch/Bufalo Staff	Incorporate Project Changes**	Oct. 10	3 weeks	Oct. 30
	Finalize Draft	Nov. 1	1½ weeks	Nov. 10
	FERC Draft Submission	Nov. 10	-	-
	FERC Review	Nov. 15	4½ weeks	Dec. 15
	Float	Dec. 15	2½ weeks	Jan. 1
Columbia Staff	Incorporate FERC Comments	Jan. 1	1½ weeks	Jan. 10
Buffalo Staff	Finalize Production	Jan. 10	1½ weeks	Jan. 20
Contractor	Printing	Jan. 20	3 weeks	Feb. 9
	Submit	Feb. 10	1 week	Feb. 15

Key Milestones

Initial Draft Production	Aug. 13
Internal Review Copy	Sept. 3
APA Submittal	Sept. 17
Submit FERC Draft	Nov. 10
Complete/Finalize Prod.	Jan. 20

Overall Responsibility

Hoover
Lawrence
Lawrence
~~Lawrence~~
Lawrence

Critical Issues for Completion

- A. Access ~~to~~ Transmission Route - Oct. 10
- B. Project Operation Scheme
- C. Intake Structures

*Internal Review

Debelius
Willett

** Resulting from field investigations/design revisions/APA comments

EXHIBIT A - WATANA

	Compile Rough Draft Columbia	Revision and Design Changes	Internal Review
	↑		
1. Project Structure			
- Main Dam		R. Miller	D. Lamb
- Outlet Facility/Diversion		R. Ibbotson	
- Main Spillway		--"---	
- Emergency Spillway		--"---	
- Power Intake		M. Dumont	
- Penstock		--"---	J. Lawrence
- Powerhouse		--"---	
- Tailrace		--"---	
- Access Roads		J. Plummer	
2. Reservoir Data		G. Kirshnan	A. Confitto
3. Turbines and Generators		P. Rodrigue	J. Sinclair
4. Transmission Lines		R. Sarofim	E. Shadeed
5. Appurtenant Equipment			
- Misc. Mechanical Equipment		P. Rodrigue	J. Sinclair
- Accessory Electrical Equipment		L. Pereira	A. Jex
- Switchyard Structures and Equip.		L. Pereira	A. Jex
6. Project Lands		J. Gill	J. Hayden
	↓		

 Prepare: S. Rudy
 Review: P. Hoover

EXHIBIT A (Continued)
DEVIL CANYON

	Compile Rough Draft Columbia	Revisions and Design Changes	Internal Review
7. Project Structure			
- General Arrangement		R. Ibbotson	J. Lawrence
- Arch Dam		-----	H. Gichenbaum
- Saddle Dam		R. Miller	D. Lamb
- Primary Outlet		R. Ibbotson	
- Main Spillway		--"--	
- Emergency Spillway		--"--	
- Devil Canyon Power Facilities		M. Dumont	J. Lawrence
- Penstocks		--"--	
- Powerhouse and Related Structures		--"--	
- Tailrace Tunnel		--"--	
- Access Roads		J. Plummer	
8. Devil Canyon Reservoir		G. Krishnan	A. Coniglio
9. Turbines and Generators		P. Rodrique	J. Sinclair
10. Transmission Lines		R. Sarofim	E. Shadeed
11. Appurtenant Equipment			
- Misc. Mechanical Equipment		P. Rodrique	J. Sinclair
- Accessory Electrical Equipment		L. Pereira	A. Jex
- Switchyard Structures and Equip.		L. Pereira	A. Jex
12. Project Lands		J. Gill	J. Hayden

Prepare: S. Rudy
 Review: P. Hoover

EXHIBIT B

	Compile Rough Draft Columbia	Revisions and Design Changes	Internal Review
1. Energy Resource Alternatives	Prepare: S. Rudy Review: P. Hoover		
- Railbelt System and Future Alternative		P. Hoover	D. Willett
- Susitna Basin Alternatives			
2. Alternative Facility Design			
- Watana Project Formulation		R. Ibbotson	J. Lawrence
- Watana Scheme Development			
- Devil Canyon Project Formulation			
- Devil Canyon Scheme Development			
3. State of Project Operation		D. Crawford	J. Hayden
4. Energy Production and Supporting Info			
- Basin Hydrology		D. Crawford	--"--
- Reservoir Data			
- Operating Capability of Susitna Units			
- Tailwater Rating			
- Powerplant Capability			
5. Statement of Power Needs and Use			
- Railbelt Load Forecasts		P. Hoover	C. DeBeffus
- Rate Programs			
- Sale of Power			
6. Future Susitna Basin Development		G. Kirshnan	--"--



SCHEDULE SHEET

SHEET ____ OF ____

CHARGE NO. P-5700-60

CLIENT ALASKA POWER AUTHORITY

PREPARED BY: _____ DATE: _____

PROJECT SUSITNA EXHIBIT A

PROJECT APPROVAL: _____

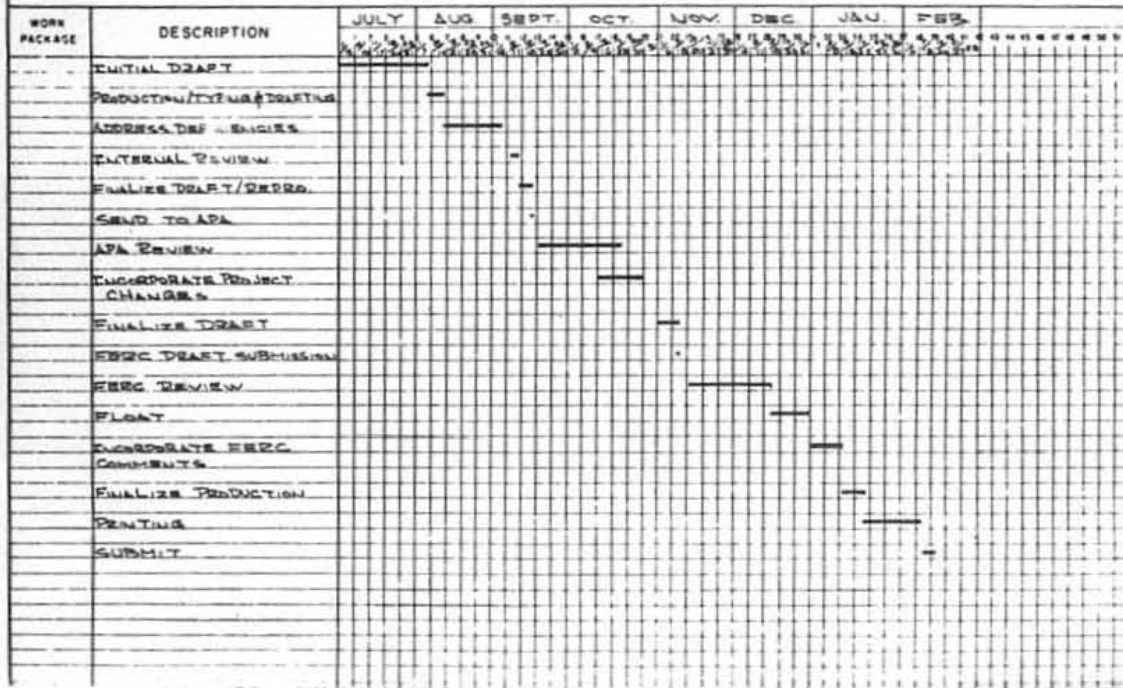


EXHIBIT C
CONSTRUCTION SCHEDULE

<u>Input Responsibility</u>	<u>Activity</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
Columbia Staff	Prepare Initial Draft	July 1	2 weeks	July 15
Buffalo Staff	Address Deficiencies/Revise	Aug. 1	2 weeks	Aug. 10
Sr. Acres Staff	Internal Review*	Aug. 11	1 week	Aug. 18
Buffalo Staff	Finalize/Typing & Draft APA Submittal	Aug. 19 Sept. 1	1 week -	Aug. 26 -
-	APA Review	Sept. 1	2 weeks	Sept. 15
Anch/Buf Staff	Incorporate Project changes** FERC Draft Submission	Sept. 15 Nov. 10	8 weeks -	Nov. 10 -
	FERC Review	Nov. 15	4 weeks	Dec. 15
Buffalo Staff	Incorporate FERC Comments	Jan. 1	1½ weeks	Jan. 10
Buffalo Staff	Finalize Production	Jan. 10	1½ weeks	Jan. 20
Contractor	Print Submit	Jan. 20 Feb. 10	3 weeks 1 week	Feb. 9 Feb. 15

<u>Key Milestones</u>		<u>Overall Responsibility</u>
Initial Draft Production	July 15	Rives
Internal Review Copy	Aug. 10	Plummer
APA Submittal	Sept. 1	Lawrence
FERC Draft Submittal	Nov. 10	Plummer
Complete/Finalize Prod.	Jan. 20	Lawrence

Critical Issues for Completion

A. Access Route Schedule

*Internal Review

MacDonald
Vanderburgh

** Resulting from field investigations/design revisions/APA Comments

EXHIBIT C - CONSTRUCTION SCHEDULE

- Text

- Bar Charts

Compile Rough Draft	Incorporate Addendum	Review 1st Draft
Columbia		
Rives Hoover		
S. P.	J. Plummer	M. Vanderburgh
	--H--	L. MacDonald



SCHEDULE SHEET

2448 00

CHARGE No P 5,700.60

Q. ENT ALASKA POWER AUTHORITY

PREPARED BY _____ DATE _____

PROJECT SUSITNA EXHIBIT C - CONSTRUCTION SCHEDULE

PROJECT APPROVAL _____

WORK PACKAGE	DESCRIPTION	JULY	AUG	SEPT.	OCT.	NOV.	DEC	JAN	FEB	
	PREPARE INITIAL DRAFT									
	CORRECT DEFICIENCIES/ REVISE CONST. SCHEDULE									
	PRODUCTION/TYPING A DRAFT									
	INTERNAL REVIEW									
	APA SUBMITTAL									
	APA REVIEW									
	FLOAT									
	FERC DRAFT SUBMISSION									
	FERC REVIEW									
	INCORPORATE FERC COMMENTS									
	FINALIZE PRODUCTION									
	PRINT									
	SUBMIT									

EXHIBIT D

PROJECT COSTS AND FINANCING

<u>Input Responsibility</u>	<u>Activity</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
Columbia Staff	Initial Draft	July 26	4 weeks	Aug. 20
Col. Cler. Staff	Production/Typing & Drafting	Aug. 20	1 week	Aug. 25
Buff/Toronto Staff	Address Deficiencies/Revise	Aug. 20	3 weeks	Sept. 10
Sr. Acres Staff	Internal Review*	Sept. 10	1 week	Sept. 17
Buff. Cler. Staff	Finalize Draft/Repro.	Sept. 20	1 week	Sept. 24
-	APA Submittal	Sept. 27	-	-
	APA Review	Sept. 27	4 weeks	Oct. 22
Anch/Buf. Staff	Incorporate Project Changes**	Sept. 27	6 weeks	Nov. 5
Col. Cler. Staff	Incorporate Final Changes	Nov. 8	1 week	Nov. 15
	Finalize Draft	Nov. 15	1 week	Nov. 22
	FERC Draft Submission	Nov. 22	-	-
	FERC Review	Nov. 22	4 weeks	Dec. 20
Columbia Staff	Incorporate FERC Comments	Jan. 1	1½ weeks	Jan. 10
Buff. Cler. Staff	Finalize Production	Jan. 10	1½ weeks	Jan. 20
Contractor	Printing	Jan. 20	3 weeks	Feb. 9
	Submit	Feb. 10	1 week	Feb. 15

<u>Key Milestones</u>		<u>Overall Responsibility</u>
Initial Draft Production	Aug. 25	Hoover
Internal Review Copy	Sept. 10	Debelius
APA Submittal	Sept. 27	Warnock
Submit FERC Draft	Nov. 22	Debelius
Complete/Finalize Prod.	Jan. 20	Lawrence

Critical Issues for Completion

- A. Financing Plan Finalization
B. Project Operation Changes

*Internal Review

Milne
Vanderburgh
Warnock

** Resulting from field investigations/design revisions/APA Comments

EXHIBIT D - COSTS AND FINANCING

- Statement of Cost Estimates
- Cost of Financing
- Value of Project Power
- Other Electric Alternatives
- Consequences of Denial of Application

Compile Rough Draft Columbia	Revisions and Design Changes	Internal Rreview
P. Hoyer C. Debelius	J. Plummer C. Debelius	I. Milne G. Warnock
	--"--	--"--
	--"--	--"--
	--"--	--"--



SCHEDULE SHEET

24117 of

CHARGE No. P 5700.60

ALASKA POWER AUTHORITY

PREPARED BY _____ DATE _____

PROJECT SUMMARY: EXHIBIT D - PROJECT COSTS AND FINANCING

伊藤の「*アノチノコ*」と「*アノチノコ*」

WORK PACKAGE	DESCRIPTION	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.
	INITIAL DRAFT								
	REDUCTION/TYPING & DRAFTING								
	ADDRESS DEFICIENCIES								
	INTERNAL REVIEW								
	FINALIZE DRAFT/REPRO.								
	APA SUBMITTAL								
	APA REVIEW								
	INCORPORATE FINAL CHANGES								
	FINALIZE DRAFT PRODUCTION								
	FERC DRAFT SUBMISSION								
	FERC REVIEW								
	INCORPORATE FERC COMMENTS								
	FINALIZE PRODUCTION								
	SUBMIT								

EXHIBIT F
GENERAL DESIGN DRAWINGS

<u>Input Responsibility</u>	<u>Activity</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
Columbia Staff	Prepare Drawings List with Changes	Aug. 9	1 week	Aug. 13
Buff Drafting Staff	Update Dwgs & Formats with transmission/access info	Aug. 13	1 month	Sept. 13
Sr. Acres Staff	Correct Deficiencies	Sept. 13	1 week	Sept. 17
-	Internal Review*	Sept. 20	1 week	Sept. 24
-	Submit to APA	Sept. 28	-	-
-	APA Review	Sept. 28	2 weeks	Oct. 10
Buffalo Staff	Incorporate Changes	Oct. 10	3 weeks	Oct. 29
	FERC Submittal	Nov. 10	-	-
	FERC Review	Nov. 15	3 1/2 weeks	Dec. 8
Buffalo Staff	Incorporation of FERC Comments and other design changes	Dec. 8	4 1/2 weeks	Jan. 8
Contractor	Printing	Jan. 8	3 weeks	Jan. 29
	Submit	Feb. 10	1 week	Feb. 15

Key Milestones

Completion of Drawings	Sept. 13
Internal review copies	Sept. 20
Submit to APA	Sept. 28
Submit draft to FERC	Nov. 10
Complete/Finalize Prod.	Jan. 8

Critical Issues for Completion

- A. Site Access
- B. Transmission
- C. Final Project Changes

Overall Responsibility

Giusiana
Dumont
Gill
Lawrence
Lawrence

*Internal Review

M. Vanderburgh
H. Eichenbaum
G. Thomson

EXHIBIT F
SUPPORTING DESIGN REPORT

<u>Input Responsibility</u>	<u>Activity</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
Columbia Staff	Review of Existing Material	July 26	1 week	July 30
" "	Develop Reference List	Aug. 1	1 week	Aug. 8
Col/BufF Staff	Provide "Front End" Report	Aug. 9	4 weeks	Sept. 3
Col. Cler. Staff	Initial Production	Sept. 6	1 week	Sept. 10
Sr. Acres Staff	Internal Review*	Sept. 13	3 weeks	Oct. 1
Anch/BufF Staff	Finalize Draft/Repro.	Oct. 4	1 week	Oct. 11
	Send to APA	Oct. 11	-	-
	APA Review	Oct. 11	4 1/2 weeks	Nov. 12
	Incorporate Changes**	Nov. 15	7 weeks	Jan. 4
BufF Cler. Staff	Correct/Finalize References	Jan. 4	1 1/2 weeks	Jan. 13
Contractor	Printing	Jan. 13	3 weeks	Feb. 2
	Submit	Feb. 10	1 week	Feb. 15

Key Milestones

Initial Production	Sept. 10
Submit to APA	Oct. 11
Complete/Finalize Prod.	Jan. 13

Note: No draft will be submitted to FERC

Overall Responsibility

Hoover
Gill
Lawrence

Critical Issues for Completion

A. Site Access
B. Final Project Changes

*Internal Review

D. Willett
G. Thomson
H. Eichenbaum
D. MacDonald

** Resulting from field investigations/design revisions/APA Comments

EXHIBIT F -

	Compile Rough Draft Columbia	Incorporate Addendum	Review 1st Draft
- Design Report			
- Logs, Geologic Reports, Lab Tests			
- Borrow and Quarry Sites, Materials			
- Stability and Stress Analysis for Structures and Slopes			
- Basis for Seismic Loading			
- Basis for Design Flood			
Design Drawings			
- Format			
- Civil			
- Electrical			
- Mechanical			

S. Rives
P. Hoover

L. Duncan

S. Thompson

N. Bond

J. Gill

J. Gill

H. Eichenbaum

G. Krishnan

A. Coniglio

J. Guisiana

M. Vanderburgh

M. Dumont

S. Thomson

L. Pereira

A. Jex

R. Rodrigue

J. Sinclair

EXHIBIT G
PROJECT MAPS

<u>Input Responsibility</u>	<u>Activity</u>	<u>Begin</u>	<u>Duration</u>	<u>End</u>
Columbia Staff	Review of existing Mat'l from R&M	July 26	2 weeks	Aug. 6
Subcontractor	Production of First Draft	Aug. 6	1 month	Sept. 3
Buff/Anch Staff	Internal review*	Sept. 6	1 1/2 weeks	Sept. 15
Subcontractor	Revisions	Sept. 15	2 weeks	Sept. 30
	Submit to APA	Oct. 1	-	-
Buffalo Staff	APA Review	Oct. 4	2 weeks	Oct. 15
	Revise/Project Changes	Oct. 18	1 week	Oct. 22
	Submit to FERC	Nov. 1	-	-
	FERC Review	Nov. 1	6 week	Dec. 15
Buffalo Staff	Incorporation of Final Changes	Jan. 4	3 weeks	Jan. 25
	Printing	Jan. 26	2 weeks	Feb. 9
	Submit	Feb. 10	1 week	Feb. 15

Key Milestones

First Draft	Sept. 3
APA Submittal	Oct. 1
FERC Draft	Nov. 1
Complete	Jan. 25

Overall
Responsibility

J. Gill
J. Hayden
Lawrence
Lawrence

*Internal Review

J. Gill
J. Hayden



SCHEDULE SHEET

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CHARGE No. 5700-60

GEN' ALASKA POWER AUTHORITY

Printed on _____ Date _____

PROJECT SUSITNA EXHIBIT G - PROJECT MAP

PROJECT APPROVAL _____

WORK PACKAGE	DESCRIPTION	JULY	AUG.	SEPT.	OCT.	NOV.	DIC.	JAN.	FEB.	MARCH											
	REVIEW OF EXISTING MATL FROM R & M																				
	PRODUCTION OF FIRST DRAFT																				
	ACRES REVIEW																				
	REVISION																				
	SUBMIT TO APA																				
	APA REVIEW																				
	REVISE / PROPOSE CHANGES																				
	SUBMIT TO FERC																				
	FERC REVIEW																				
	INCORPORATION OF FINAL CHANGES																				
	PRINTING																				
	SUBMIT																				