

ALASKA POWER AUTHORITY
SUSITNA HYDROELECTRIC PROJECT

PROGRESS REPORT
FOR
AUGUST 1981

ACRES AMERICAN INCORPORATED
1000 Liberty Bank Building
Main at Court
Buffalo, New York 14202
Telephone: (716) 853-7525

ALASKA POWER AUTHORITY
SUSITNA HYDROELECTRIC PROJECT
MONTHLY PROGRESS REPORT

Report No. 19

Period: August 1981

Progress Report No. 19 covers the activities on the Susitna Hydroelectric Project for the month of August 1981.

Task 1, Power Studies, is complete.

Task 2, Survey and Site Facilities, continued with flights being maintained by Alyeska Air Services and Larry's Flying Service as required. Camp occupancy at both High Lake Lodge and the Watana camp continued at capacity levels for the month. Major quantities for the power development construction were estimated to be factored into the logistics study for the access alternatives.

Task 3, Hydrology, continued with the quarterly progress review meeting being held on August 18-20, 1981. The meeting addressed the major work load to be completed and established priorities for this information required for the final draft of the feasibility report. Professor R. Carlson, Acres' Consultant, reviewed R&M's Regional Flood Studies Report. Historical storms were analyzed to estimate the probable maximum flood (PMF). The HEC-2 model and the ice simulation model are being calibrated. Based on temperature modeling results, intake structure designs are being studied. Studies on post-project water temperatures have commenced.

R&M reduced the 1980 and 1981 data to date during the month. Through-the-hydrograph sampling and suspended sediment samples were collected. A purchase order to MRI was issued to process all data tapes collected to June 1981. The climatic summaries for Watana and Devil Canyon are expected by mid-September. A plan of study for navigation space studies on the Lower Susitna was prepared with the Alaska Department of Natural Resources.

Task 4, Seismic Studies, continued with a site visit by the Task Supervisor for the purpose of reviewing the progress of the field activities.

WCC commenced an analysis of historic events in and surrounding the Talkeetna terrain. Analysis of worldwide Benioff zone earthquakes also commenced during the month. Field mapping has been completed along thirteen faults and lineaments at both damsites. Preparation for the 1981 final field season will begin in early September. The trenching program has been completed.

Task 5, Geotechnical Investigations, continued with ongoing field activities; reduction and analysis of data, and engineering layouts, design, and cost estimates. Acres' comments on photo interpretation have been forwarded to R&M for finalization. Subsurface drilling continued throughout the month of August.

Nothing has been discovered, to date, during drilling at the powerhouse that would adversely affect the suitability of the area for a powerhouse. All

drilling in this area is to be completed by the end of September. Fracture logging of cores recovered during 1981 continued during the month. Diamond drilling was completed for BH-1 and BH-3 at the Watana site. Auger drilling of the borrow areas was completed.

R&M activities for the month included the drafting of terrain unit maps and summary report. This report has been reviewed by Acres and returned to R&M for finalization. Auger drilling was completed at Borrow Area D, and samples for testing were taken from Borrow Areas H and D. Fault trench excavations were completed.

Task 6, Design Development, continued by updating the design criteria report. A revised section of the main dam with steeper side slopes has been derived. A dynamic analysis of the arch dam based on finite element analysis has commenced. Alternative spillway schemes for Watana have been estimated, and cascade schemes have been developed. Devil Canyon spillway alternatives of flip bucket and stilling basin schemes are being analyzed. Preliminary camp designs and arrangements were produced during the month. Revised camp loadings have been received, and layout revisions are ongoing. Free-flow and submerged tunnel schemes are being developed in conjunction with schemes for low level releases for the Watana site. The Devil Canyon diversion scheme tunnel diameter/cofferdam height optimization study is being revised because of new tailwater elevations and hydraulic parameters.

Task 7, Environmental Studies, continued with emphasis on coordination of information flow between Acres, ADF&G, TES, and other subcontractors. Report schedules were drafted and information priorities established. Acres participated in the first meeting of the Fisheries Mitigation Task Force. A response was prepared to APA's comments regarding the environmental portion of the Development Selection Report.

TES participated in report scheduling and coordination discussions. Contractual matters were discussed with Acres and an escalation report prepared.

The TES Resident Manager planned and conducted a tour of the Susitna Project area for Mr. Q. Edison of FERC. A separate helicopter tour of the Project area was also conducted by TES Resident Manager for eight members of the Susitna Steering Committee. Discussions were held with Acres and FO&A regarding the Work Package 4 Forecast. The field portion of the 1981 Cultural Resources Analysis Program ended with a total of 110 sites located since project initiation. All cultural material from reconnaissance and systematically tested sites has been catalogued and accessioned into the University of Alaska Museum.

Preliminary land use data was supplied to the Alaska Department of Natural Resources. The Recreation Planning Group Leader met with the Recreation Planning Coordinator at the University of Alaska.

Six subtask leaders from TES conducted a helicopter overflight of the proposed transmission line corridors. Meetings were also held with agencies to gather pertinent information. TES participated in the Fisheries Mitigation Task Force meeting and continued to assist ADF&G in field activities and report preparation.

Wildlife ecology field studies continued with work on radio tracking and avian surveys. Dr. Banfield spent several days in the field to review the potential for impacts to the Nelchina caribou herd. The Wildlife Ecology Group Leader held meetings with ADF&G and the University of Alaska concerning schedules and data requirements. Plant ecology field studies continued, and a helicopter overflight of the proposed access road route was conducted.

Task 8, Transmission, continued with the first draft of the Preliminary Transmission System Analysis planning memorandum which will review the work to June 15 in electric system studies. Commonwealth Associates has reviewed and concurred with Acres' conductor selection for the Devil Canyon to Anchorage transmission line. A copy of the Susitna transmission lines system planning criteria and single-line diagram was forwarded to Commonwealth for their review. Work on the transmission line routing is awaiting the results of field studies by other tasks.

Task 9, Construction Cost Estimates and Schedules, continued with the Task Supervisor and Acres' Senior Cost Estimator visiting the site to review the methods of construction to be utilized at Watana and Devil Canyon. The trip emphasized borrow material sources and excavation and foundation requirements. Also, a review of the access road alternatives was discussed. Discussions were held with FMA, and a cost-estimate package was received and reviewed. A meeting was held with a representative of Morris and Knudson to review construction methods used in this region.

Task 11, Marketing and Finance, continued with several investment banking firm representatives visiting the site during the month.

Task 12, Public Participation, continued with Acres reviewing a newsletter prepared by APA. A discussion was held on the public comments regarding access road routing alternatives.

Task 13, Administration, continued with the updating of the project schedule. The subcontractors have submitted their cost escalation figures for 1980 and the first half of 1981. Acres is currently analyzing these figures.

Task 14, ADF&G Support, continued at a low level of activity during the month. Negotiations were concluded regarding outdoor storage at the existing warehouse for winter storage of boats and equipment.

TASK 1 - POWER STUDIES

Task complete.
TSI

TASK 2 - SURVEY AND SITE FACILITIES

ACRES ACTIVITIES

Subtask 2.02 - Provision of Field Camps and Associated Logistics Support

Flight services continued to High Lake Lodge from Alyeska Air Services at Merrill Field. Periodic flights by Larry's Flying Service in Fairbanks were made to the site to ferry University of Alaska field personnel.

Camp occupancy at both High Lake Lodge and the Watana camp remained at full levels throughout the month. Demobilization of the 15-person archaeological camp was planned at the end of the month. Total personnel in the field during the month peaked at approximately 75 for Acres and subcontractors, exclusive of ADF&G personnel.

Subtask 2.06 - Right of Entry

The last trenching site to explore seismic geology on the Talkeetna Thrust was cleared.

Subtask 2.10 - Access Roads

Indirectly, under Task 9, major quantities for the power development construction were estimated. The major quantities of mechanical and electrical equipment included turbines, generators, gates, valves, and other appurtenant items. These quantities will be factored into the logistics study for the access alternatives. Environmental data gathering, being carried out under Task 7, is almost complete.

TASK 3 - HYDROLOGY

ACRES ACTIVITIES

General

The quarterly progress review meeting was held during August 18-20, 1981, in R&M's offices. G. Krishnan of Acres was in Anchorage to conduct the meetings. Overall project progress is satisfactory. Several aspects of the studies need to be accelerated to meet the revised deadline of March 15, 1982, for the final draft feasibility report. The meeting addressed the major work load to be completed in the next few months and set priorities to ensure timely information transmittal to other study participants.

Subtask 3.03 - Field Data Collection and Processing

Routine monitoring of R&M field work and processing of data continued.

Subtask 3.05 - Flood Studies

The Regional Flood Studies Report prepared by R&M was reviewed by Acres' consultant, Professor R. Carlson, of the University of Alaska, and his comments were discussed with R&M. A final response to Dr. Carlson's comments has been sent to him. R&M will make minor alterations to their report before final issue. Detailed analyses have been performed to estimate the PMF and associated dew point values. Historical storms have been analyzed for revised flood reconstitution studies and revised SSARR model runs were made to estimate the probable maximum flood in the basin. Minor refinement to the SSARR model parameters is being made prior to finalizing the PMF estimates.

Subtask 3.06 - Hydraulic and Ice Studies

Computer runs were completed for the river reach between Chulitna confluence and Portage Creek to calibrate the HEC-2 open water model. The reach between Deadman Creek and Devil Creek is now being analyzed. Work continued on data input and calibrating of the ice simulation model. Based on the results of the reservoir temperature modeling, intake structure designs are being studied. Studies on post-project water temperatures below the dams are underway.

Subtask 3.07 - Sediment Yield and River Morphology

The work plan formulated by R&M for morphological studies has been finalized. Acres is exploring possible involvement of Dr. C. R. Neill of the University of Alberta as expert consultant to review R&M's work.

Subtask 3.10 - Lower Susitna Studies

Several hydrologic analyses of historical river flows required for environmental assessment of pre-project conditions have been carried out by R&M and USGS under Acres' direction. A meeting with TES on September 1, 1981, has been arranged to finalize formats and schedule for information transmittal.

R&M ACTIVITIES

Subtask 3.03 - Field Data Collection and Processing

All USGS and R&M stream gages are operating satisfactorily. R&M reduced the 1980 and the first half of 1981 data during the month. Minor maintenance was performed on several glacier snowmeters. The Martek water quality monitor was repaired and recalibrated by Martek and then installed in the Susitna River. Through-the-hydrograph sampling was performed three times at Vee Canyon and twice at Gold Creek. Suspended sediment data and water quality data were gathered at the same time. The second bedload sampling trip was conducted by USGS and R&M with no problem. Suspended sediment samples were collected for the settling column studies. All climatic stations are operating well. A purchase order was issued to MRI to process all data tapes collected through June 1981. The climatic summaries are expected by mid-September for the Watana and Devil Canyon sites.

Subtask 3.05 - Flood Studies

R&M responded to the comments made by Dr. Carlson, University of Alaska.

Subtask 3.06 - Hydraulic and Ice Studies

Calibration and verification of the HEC-2 water surface profile model were completed for the river between Devil Canyon and Talkeetna, and the results were transmitted to Acres as water surface elevations at selected cross sections.

Subtask 3.07 - Sediment Yield and River Morphology Studies

A literature search on the trap efficiency of lakes and glacial rivers and of the settling characteristics of glacial suspended sediment was initiated. The final report on the river will be delivered September 11. An extensive interim report on the river morphology from Devil Canyon to the confluence of the Susitna, Chulitna, and Talkeetna Rivers will be completed by early September.

Subtask 3.10 - Lower Susitna Studies

R&M is nearing completion of flow duration and low- and high-flow analyses of major rivers in the Susitna River system as input to Subtasks 3.04, 3.07, and 3.10. A plan of study for navigation studies near major boat-launching sites on the Lower Susitna was prepared with the Alaska Department of Natural Resources.

TASK 4 - SEISMIC STUDIES

ACRES ACTIVITIES

During the first week of August, the Task Supervisor visited the project site to review the progress of the field activities. A brief discussion was held with the WCC field team as to the approach and preliminary findings on the ongoing field studies. It was agreed that WCC will excavate a trench across the Susitna Feature to increase the confidence level in resolution of the feature.

A review of the letter describing alternative approaches to preparation of the long-term seismologic monitoring program manual was completed by the Acres' Buffalo office. Recommendations were sent to Acres' Alaska office for further review.

WCC ACTIVITIES

Subtask 4.08 - Preliminary Dam Stability Analysis

This task is included as part of Subtask 4.13.

Subtask 4.09 - Long-term Seismologic Monitoring Program

Analysis of historic events in and adjacent to the Talkeetna Terrain has commenced. This analysis is based on interpretation of seismograms recorded at the

time of the events in the 1920s and 1940s. Preliminary results from this analysis are expected in early September 1981.

Analysis of worldwide Benioff Zone earthquakes has commenced. This analysis of the locations of large earthquakes on the Benioff Zone is expected to be completed by early September 1981.

Work on the network monitoring manual will commence in September 1981. Alternatives are being reviewed.

Subtask 4.10 - Reservoir-Induced Seismicity

A statistical model of the relationship between reservoir-induced seismicity and in situ, noninduced seismicity has been developed. This model will be used to provide input for the seismic exposure analysis of ground motion for dam design.

Subtask 4.11 - Seismic Geology Field Studies

Field mapping has been completed along the thirteen faults and lineaments at both damsites. Preparation for the 1981 final field review will commence on September 1, 1981.

The trenching program has been completed with the excavation of two trenches across the Talkeetna thrust fault and one trench across the Susitna feature. Trench T-1 was excavated south of Fog Creek and east of Stephan Lake. Trench T-2 was excavated south of Talkeetna Hill, west of the confluence of the Talkeetna River and Iron Creek. Trench S-1 was excavated near Deadman Creek, east of Deadman Mountain. Dr. Kerry Sieh of Caltech assisted Woodward-Clyde Consultants' field personnel in the trench logging.

All trenches have been logged and photographed. The trenches have been left open at present and will be backfilled after the review in September 1981.

Phil Birkhahn and Jon Lovgreen of WCC met informally with George Plafker and Bela Csejtey of the U.S. Geological Survey on July 30, 1981, respectively. Selected locations along the Talkeetna thrust fault and Susitna feature were examined. The purpose of the meetings was to exchange information informally on these two features.

Subtask 4.14 - Dam Stability Consulting Services

Consulting services were provided by Maury Power at Acres' request to establish earthquake input parameters for preliminary dynamic response analysis of Watana dam.

TASK 5 - GEOTECHNICAL INVESTIGATIONS

ACRES ACTIVITIES

General

Acre's work on Task 5 through the month of August has involved continued field

activities and reduction and interpretation of data necessary for engineering layouts, design, and cost estimates.

Subtask 5.02 - Photo Interpretation

Acres' comments on photo interpretation have been forwarded to R&M for their cooperation and finalization. The final report for R&M is expected during September 1981.

Subtask 5.05 - Exploratory Program Design (1981)

Work under this subtask consisted of locating holes in the proposed powerhouse area on the right abutment at Watana. Work continued in defining the soil and rock testing programs for both sites.

Subtask 5.06 - Exploratory Program (1981)

Subsurface drilling of the Watana site continued throughout the month of August. BH-1 was drilled on the right abutment at Watana to investigate the seismic line anomaly downstream from the proposed centerline. BH-13 was relocated from the proposed "Fins" structure and drilled into the area of the proposed powerhouse on the right abutment. The rock quality in this hole was good to excellent. Nothing was found in the hole that would adversely impact the suitability of the area for a powerhouse. A second powerhouse hole is proposed to be drilled following completion of BH-13. All drilling onsite is expected to be completed by the end of September.

Geologic logging of the Corps of Engineers and Bureau of Reclamation's cores from Watana and Devil Canyon was performed by Acres' personnel in Anchorage. Following this, additional field mapping in the reservoir areas will be performed in September. Data reduction and interpretation of all field work continued in the Buffalo office throughout the month.

Relogging of drill core for the 1980 program was completed in August. Fracture logging on core recovered during 1981 continued throughout the month. Diamond drilling was completed at BH-1 to 300 feet and BH-3 to 950 feet at the Watana site. Permeability testing was completed in BH-12. Auger drilling in the borrow areas was completed at all sites. Seismic geology trenching was completed.

Subtask 5.08 - Data Compilation

Preparation of geologic maps, cross sections, boring logs, and data lists continued through the month of August.

R&M ACTIVITIES

Subtask 5.20 - Photo Interpretation

Draft terrain unit maps and summary report have been reviewed by Acres American and returned to R&M for revision and inclusion of north access corridor photo mapping.

Subtask 5.05 - Exploratory Program Design, 1981

Planning, scheduling, and preparation for field programs continued.

Subtask 5.06 - Exploratory Program, 1981

Auger drilling was completed in Borrow Area D, and samples from Areas H and D were returned to R&M's lab for testing. Testing schedules are currently being developed. Three holes were drilled in the Devil Canyon area to explore for impermeable materials.

Fault trench excavations were completed. Trenches have been left open for review.

Survey ties for seismic lines, test pits, test holes, and diamond boreholes were ongoing.

Diamond core drilling and pressure testing were completed for BH-W1 and BH-W3 at Watana.

TASK 6 - DESIGN DEVELOPMENT

ACRES ACTIVITIES

Subtask 6.09 - Design Criteria for the Watana Development

Subtask 6.10 - Design Criteria for the Devil Canyon Development

An updated copy of the design criteria has been substantially completed.

Subtask 6.11 - Preliminary Design of Watana Dam

A revised section of the main dam with steeper upstream slopes has been derived based on further discussions and review of world experiences. A dynamic analysis of the arch dam based on finite element analysis has commenced.

Subtask 6.15 - Watana Spillway Alternatives

Alternative spillway schemes have been costed and alternative flip bucket and cascade schemes have been developed in conjunction with valve releases acting on the service spillway.

Subtask 6.16 - Devil Canyon Spillway Alternatives

Further comparison of flip bucket and stilling basin schemes has continued in conjunction with valve type releases to replace the submerged orifice spillway and reduce nitrogen supersaturation and downstream erosion.

Subtask 6.20 - Access and Camp Facilities

Preliminary camp designs and layouts were produced during the report period.

Revised camp loadings have been received, and revised camp layouts are proceeding. A minimum of two alternative camp concepts are being evaluated along with a minimum of two camp locations.

Subtask 6.21 - Watana Diversion Scheme

Free-flow and submerged tunnel schemes are being developed in conjunction with schemes for low-level releases. Incorporation of the permanent low-level outlet into one of the diversion tunnels has necessitated revising the tunnel-diameter/cofferdam-height optimization study. Work is continuing on the design of the low-level outlet. Preliminary design of the cofferdam continued and a cross section was developed.

Subtask 6.22 - Devil Canyon Diversion Scheme

The tunnel-diameter/cofferdam height optimization study is being revised to incorporate new tailwater elevations and other hydraulic parameters. Preliminary design of the cofferdam continued in conjunction with Subtask 6.21. The optimum diameter and the height of the upstream cofferdam have been established.

TASK 7 - ENVIRONMENTAL STUDIES

ACRES ACTIVITIES

Subtask 7.01 - Administration

Numerous discussions were held with ADF&G, TES, and other subcontractors regarding coordination of information transfers between various task supervisors. Discussions were also held with APA regarding the formal agency coordination process. Responses to APA's comments on the environmental portion of the Development Selection Report were prepared.

Subtask 7.05 - Socioeconomic Analysis

Discussions were held with TES regarding development of the Work Package 4 Forecast and information required to conduct the socioeconomic analysis.

Subtask 7.08 - Recreation Planning

Discussions were held with TES regarding distribution of the second questionnaire on recreation plans and the interrelationship of access road and recreation planning studies.

Subtask 7.09 - Transmission Analysis

A meeting was held with TES to discuss transmission route selection. The environmental section of the Transmission Corridor Screening Report was revised to depict the methodology and results more clearly.

Subtask 7.10 - Fish Ecology Studies

Acres' Environmental Coordinator attended the Fisheries Mitigation Task Force

meeting in Seattle. Extensive discussion was pursued to ensure compatibility with the Wildlife Task Force.

Subtask 7.11 - Wildlife Ecology Studies

Discussions were held with TES concerning downstream moose studies and schedule of input from ADF&G to TES for the feasibility report.

Subtask 7.14 - Access Route Analysis

Discussions were held with TES regarding their input into the access route analysis.

TES ACTIVITIES

Subtask 7.01 - Administration

By telephone and meeting, TES discussed the proposed October workshop with members of APA's Public Participation staff. TES was subsequently informed by Acres that no formal workshop would be held.

TES received comments on the draft Schedule of Work Products distributed on July 23, 1981. The ADF&G big game team, ADF&G fish team, and Acres have all reported that it will not be possible to meet all the requests described in this memorandum.

An updated TES Information Needs List and Schedule was transmitted to Acres. This list itemizes the input by TES and Acres, Acres' other subcontractors, and ADF&G.

TES completed general cost and budget reviews for Task 7. As requested by Acres, TES submitted an escalation report covering the first half of 1981 and a list of project personnel and salaries.

The TES Resident Manager coordinated a tour of the Susitna Project area for Mr. Q. Edson, FERC. The TES Environmental Study Manager then accompanied Mr. Edson, Jim Gill, and Robert Mohn in the field as the environmental programs, project scope, and preliminary findings were reviewed.

In addition, a tour of the Susitna Project area was arranged for eight members of the Susitna Steering Committee. The TES Resident Manager also conducted a tour of the Watana camp, archaeology camp, and archaeology field activities at the Butte Lake site for Mr. Bruce Bedard, APA Native Inspector and Contract Compliance Agent.

Subtask 7.02 - Field Monitoring

The end of August 1981 brought with it the completion of various aspects of the summer field program. As a result, the TES Field Representative was finalizing office matters and preparing to leave the field. She will return periodically over the late fall-early winter months as field activities of TES subcontractors dictate.

Subtask 7.05 - Socioeconomic Analysis

Discussions were held between the TES Environmental Studies Director and Group Leader for Socioeconomic Analysis and John Hayden of Acres concerning development of the Work Package 4 Forecast. As directed, TES/FO&A will proceed with the current scope of work, i.e., generic forecast, pending receipt of new ISER map outputs.

Acres' Environmental Coordinator and the Group Leader discussed types of information necessary to proceed with the socioeconomic analysis. While in Alaska during August, the Group Leader participated in an overflight of the proposed transmission corridors.

During August, the Socioeconomic Consultants prepared and transmitted to TES an analysis of socioeconomic factors related to access alternatives.

Subtask 7.06 - Cultural Resources Analysis

The field portion of the 1981 program ended on August 31. During the three-and-one-half-month field season, 54 survey locales and Borrow Area C were examined for cultural resources. In addition, areas associated with geotechnical programs were also examined at the reconnaissance level. Based on this work, 73 new sites were located and documented. This brings the total number of sites located during both field seasons to 110. In addition to locating and re-ordering sites, 16 sites were subjected to systematic testing. All cultural material from both reconnaissance and systematically tested sites has been catalogued and accessioned into the University of Alaska Museum. Carbon samples have been submitted for C14 dating in hopes of obtaining dates for cultural units, as well as for assisting in dating the volcanic tephras noted in the area. At present, the preparation of graphics is underway and will continue for the next few months. Cultural resource investigators participated in an overflight and limited ground-testing of proposed transmission corridors. One archaeological site was found.

An APA photographer visited the project and took photographs of the archaeology tent camp, as well as, a systematic test site.

Subtask 7.07 - Land Use Analysis

During August, the Group Leader participated in the overflight of transmission corridors. Land use and aesthetic factors were assessed. While in Alaska, the TES Group Leader met with DNR to assist in analysis of project flows and relationships to navigational use. Locations for the installation of additional transects were identified based on existing and potential use of Susitna channels, sloughs, and tributaries. Preliminary data were also supplied to DNR concerning historical and present use of the Susitna drainage. The Group Leader also met with Acres' instream flow consultant to aid in coordination of the overall hydrologic assessment.

Meetings were held with the Principal Investigator and other land use team members concerning the outline for report preparation. Land use and aesthetic concerns were discussed in relation to Exhibit E regulations and incorporation of data in the report.

Subtask 7.08 - Recreation Planning

The Group Leader reviewed the draft recreation plan outline and content as they stand to date. Comments were transmitted to the recreation planning coordinator in meetings held at the University of Alaska. Minor changes will be incorporated into subsequent drafts, and the means for incorporation of additional data as they become available was determined. This related primarily to selection of an access plan and the upcoming participation survey.

The recreation planning team provided a working draft copy of the survey instrument to be used.

Subtask 7.09 - Transmission Line Analysis

In August, the TEST Group Leader traveled to Anchorage, Fairbanks, and the Watana Base Camp to review transmission corridors. On August 13, representatives of six Task 7 subtasks flew the entire proposed primary corridor. The subtask areas of socioeconomic, cultural resources, land use, recreation, transmission, and plant ecology were involved in the fly over. In addition, frequent stops were made to check for cultural resources and to verify plant community types previously mapped.

Following the overflight, ground visits were made to selected line locations in both the southern and northern study areas. In addition, contacts with agencies were held to gather information pertinent to the corridor route selection process. Also, maps requested by Acres and needed for corridor route selection were provided by TES.

Subtask 7.10 - Fish Ecology Studies

The major activity of the Fish Ecology Study Team during the month was an August 10 and 11 meeting held in Seattle, which was attended by members of the Fisheries Mitigation Task Force Technical Group.

Alaska-based activities included the continuation of assistance to the field operations and report preparations being undertaken by ADF&G. Additional dissolved gas measurements were taken in the Devil Canyon region with supersaturated values being reported.

Additional activities included the continuation of literature searches with more emphasis on impact and mitigation issues, subarctic and arctic lakes, and estuarine studies of relevance to the Susitna project.

Subtask 7.11 - Wildlife Ecology Studies

During the early part of August, the Wildlife Ecology Group Leader visited Alaska with Dr. A. W. F. Banfield to review the potential for impacts on the Nelchina caribou herd. Dr. Banfield spent several days in the field and gained familiarity with the key portions of the caribou range that may be impacted by the project, including all of the access route alternatives. Mr. Reed visited

Drs. Kessel and Gipson in Fairbanks to discuss upcoming schedule and report commitments. He also visited Mr. Karl Schneider of ADF&G in Anchorage to discuss the ability of ADF&G to provide necessary information needed for the preparation of an impact statement. Mr. Schneider indicated that it would be impossible for all portions of the big game report to be ready by the requested deadline of November 2, 1981; however, he will give priority to key information needs and forward the data as soon as available.

Progress was made in the preparation of the habitat value analysis. Although this approach was initially proposed to assist in the selection of a preferred access route, the results will be useful on other aspects of the Susitna Project. All wildlife subcontractors and consultants submitted recommendations concerning their review of the access route alternatives.

Field work by the furbearer investigators continued and centered around the collection of data on red foxes. Six more foxes were fitted with radio collars and five more active dens were located. The monitoring of fox activity around active den sites continued during August. Several surveys of ground squirrel abundance were conducted in alpine areas.

At the present time, only one functional radio collar remains on a marten. Plans for fall include the capture of additional martens for the purpose of radio collaring. The furbearer investigators continued their analysis of aerial transect data collected during 1980.

During the month, post-breeding censusing of birds on the low birch and the alpine plots continued, measuring of habitat variables was completed, and the general bird surveys were continued. Tabulation of the summer's bird data continued. Additional small mammal traplines were established in selected habitats and habitat variables measured; and the lines established in 1980 on the intensive study plots were trapped for a fall sample.

Subtask 7.12 - Plant Ecology

With approval of Acres, TES requested R&M Consultants to obtain additional 35mm photographs of the downstream floodplain. Photos were taken on August 24 when the flow at Gold Creek was estimated at 32,000 cubic feet per second. These photos will be used to determine the extent of habitat types at a given flow in the area downstream from Devil Canyon.

The AES continued work in the downstream area. Additional sampling was performed following initial statistical testing of data adequacy.

J. McMullen and Dot Helm participated in a helicopter overflight of a northern transmission line segment, primarily for vegetation mapping. This effort was very important due to the lack of aerial photos between clear MEWS and Healy.

Dr. Hugo Sjors, an expert in bog and peatlands in northern climates who is with Uppsala University in Sweden, was visiting Alaska in August. The AES had corresponded with Dr. Sjors, and a trip was arranged into the Upper Basin. He provided insight into the ecology of the wetlands of the area and answered questions on potential impacts.

AES prepared a report on the various access road alternatives. After review by TES, it was revised and submitted to the Access Road Study Group Leader.

Subtask 7.14 - Access Route Analysis

C. Baumgartner (TES Group Leader) traveled to Alaska in early August to fly all viable access routes, particularly new alignments of the northern route to the Denali Highway, and alignments in Stephan Lake and Fog Lake area.

In addition, while in Alaska she met with several subcontractors to discuss their analysis of alternative access plans and their input into the recommendations for the best access plan.

She also met with the U.S. F&WS staff (Anchorage) to discuss Habitat Evaluation Procedures Analyses that they have done in the past. Although not discussed, TES is attempting to use a modified Habitat Evaluation Procedure in relation to access for Susitna.

TES also coordinated with N. Gutcher of R&M with regard to any new road analyses developments (including scheduling related to Access Plans).

Upon returning to Phoenix, the study emphasis shifted to a commencement of analysis of input from subcontractors regarding plan recommendations and preliminary efforts on report preparation for Access Plan recommendations.

Subtask 7.15 - Preparation of FERC Application

TES received comments from Acres and TES subcontractors on the draft outline for the abstract, feasibility report and license application, which was distributed on July 31, 1981.

STEPHEN R. BRAUND & ASSOCIATES ACTIVITIES

Separate field trips to Talkeetna and the McKinley and Cantwell areas were taken for data collection purposes. Data have been filed into topical categories following preliminary analysis and organization. Review of the APA's public testimony and correspondence files continued. Numerous meetings between Tom Lonner and Stephen Braund were held to discuss various aspects of the project.

TASK 8 - TRANSMISSION

ACRES ACTIVITIES

The notes of meetings during the month of April with several utilities were forwarded in final form to the utilities and APA.

Subtask 8.01 - Transmission Line Corridor Screening

The draft of the closeout report was completed and distributed internally for review.

Subtask 8.02 - Electric System Studies

Work continued on the first draft of a planning memorandum entitled, "Preliminary Transmission System Analysis." This memorandum will review all the work completed on electric system studies up to June 15, 1981.

During this period, Commonwealth Associates reviewed Acres' conductor selection of 954 kcmil for the transmission line from Devil Canyon to Anchorage and concurred with the conclusions. A letter confirming the results of this review was received from APA. APA did not comment on Acres' selection of 795 kcmil for the lines from Devil Canyon to Fairbanks. A telephone discussion was held with Commonwealth with reference to the insulation level of the Susitna transmission lines. A copy of system-planning criteria and single-line diagram was forwarded to Commonwealth.

Subtask 8.03 - Transmission Line Route Selection 1981

It is expected that the results of field studies by other tasks will be available in the near future.

TASK 9 - CONSTRUCTION COST ESTIMATES AND SCHEDULES

ACRES ACTIVITIES

Acres' Senior Cost Estimator and Task 9 Coordinator visited Anchorage and the Susitna site during early August. A review of the methods of construction to be employed at both Watana and Devil Canyon was made with particular emphasis placed on borrow material sources and excavation requirements. In addition, a review was made of the alternative access road routing from both the Denali Highway and the Parks Highway. Proposed locations for the Watana campsite and airstrip were also reviewed.

Discussions were held with Frank Moolin & Associates, and a cost information package prepared by them was received and reviewed. Discussions were also held with R&M concerning access road locations and the proposed airstrip site. In addition, a brief discussion was held with a senior representative of Morrison-Knudsen.

Work on Task 9 during the latter part of August included an assembly of information gathered in Alaska as a step towards the production of preliminary estimates and schedules required for Watana and Devil Canyon during October and November.

TASK 11 - MARKETING AND FINANCE

ACRES ACTIVITIES

Several representatives of investment banking firms, including First Boston, visited the site accompanied by Eric Yould and Jim Gill on August 6.

TASK 12 - PUBLIC PARTICIPATION

ACRES ACTIVITIES

During August, Acres reviewed a draft of a newsletter, as prepared by APA. An environmental workshop was discussed, and it was decided that the workshop was

not required at this time. Also discussed were public comments on the access road decisions.

TASK 13 - ADMINISTRATION

ACRES ACTIVITIES

Subtask 13.04 - Develop Schedule Control System

Work continued on monitoring and updating the project schedule to September 7, 1981.

Subtask 13.05 - Cost Control

Work continued with an in-house computer providing a parallel cost report to the present Lanier System. An edited computer report will be submitted to APA for review in the near future.

During the month, the subcontractors submitted their revised escalation calculations for 1980, plus their escalation estimates for the six-month period ending June 1981. Acres is in the process of tabulating and analyzing the effects of this escalation. Other administrative functions continued routinely.

TASK 14 - ADF&G SUPPORT

ACRES ACTIVITIES

Purchasing for ADF&G support continued at a relatively low level of activity. Negotiations were concluded with the warehouse owner for provision of the adjacent storage yard for winter boat storage.

DATA PROCESSING

Review of computer data input form design for the various project sections was undertaken by the newly hired Data Control Clerk. Some refinement was required which will facilitate processing of data collected in the field.

The Programmer and Biometrician traveled to Fort Collins, Colorado to participate in the U.S. Fish and Wildlife Services Instream Flow Group computer analysis course. The course covered the theoretical background and general instructions to the IFG's Water Surface Profile, IFG-4 and Habitat computer simulation models.

The last two weeks of August saw input and analysis on data necessary for completion of the adult chinook salmon report. Daily thermograph data supplied by the AH project for selected Susitna and tributary sites were pulled together. Sex, length and age composition data collected at the 5 fishwheel sites was analyzed. Graphic presentations and analysis techniques were also considered.

FIELD STUDIES

The impoundment area was sampled for the fourth time this summer between August 13 and 26. Eight streams were sampled with both angling and set gear. Angling, however, was the most productive fish capture technique.

Arctic grayling dominated the combined gear catch with 306 fish taken. A breakdown of area of capture for these and other species are listed in Table 1 from the trip report.

Catch rates were the lowest of any survey in the impoundment area to date with an angling CPUE of 4.6 grayling per hour. High or muddy water was encountered on Watana, Jay, Kosina and Deadman creeks. Air temperatures dipped to 20°F at night and the water temperature in Goose Creek was measured at 40°F.

An electro-shocker was used to sample areas of Goose and Fog Creeks, and the clearwater slough upstream from Jay Creek. The conductivity of the waters ranged from 60 to 400 mhos/cm in the areas electroshocked. The ridged one-piece electrodes appeared to be more effective than the flexible four-piece electrodes. The reason is not known at this time. A number of juvenile fish taken by electroshocker were preserved for subsequent identification and for the first time during the impoundment surveys, an adult Dolly Varden was taken from a backwater area of Fog Creek.

A total of 320 fish were tagged on this trip. Table 3 from the trip report lists the numbers and species tagged. There were a total of 84 tag recoveries plus two grayling that had lost tags.

The west bank of the Oshetna River was fished for the first time since the first trip to the impoundment area. This was because the river is too wide to cast across and on this trip a small raft was available to cross over. With crews fishing both sides, 38 fish were caught from the west bank (5% recaptures) and 50 fish (24% recaptures) from the east bank.

During the first several days, water levels on the Mainstem Susitna were the highest seen on any trip. By the trip's end however, they were only slightly above the levels normally experienced this summer.

The un-named lake within the proposed impoundment area was again sampled. A total of 25 lake trout and 14 grayling were caught with 12 and 10 respectively, tagged. The lake trout were found to be in spawning condition and most were captured in less than 4 feet of water.

Indian and Portage Creeks were also sampled this trip. In Indian Creek the catch included 154 juvenile chinook, 42 Dolly Varden and 1 rainbow trout. The Portage Creek catch included 109 juvenile chinook, 104 Dolly Varden and 1 rainbow trout. The Dolly Varden ranged to 165 mm and are believed to be sexually mature. Five grayling were also tagged in a Portage Creek pool about 10 miles upstream from the Susitna River confluence.

Resident and Juvenile Anadromous project sampling on the lower river reaches is continuing. Trip reports for the first half of the month from the Yentna Camp crew indicate that 48 hour surveys were conducted at 12 habitat locations between Alexander and Willow Creeks. A total of 246 fish were captured. All species with the exception of burbot, showed a decline in numbers over previous catches in this reach. A total of 25 fish were tagged and released. These were 14 burbot, 9 sucker and 2 rainbow trout.

The Delta Islands section and upstream section of the river to the Parks Highway Bridge is extremely dangerous during high water periods which were experienced during the first half of the month. Shifting substrate, log jams and sweepers make sampling conditions hazardous.

A total of 1238 fish were captured from August 8th to the 15th in the reach that includes Goose Creek, Sheep Creek Slough and the Kashwitna River. Of these, chinook 0+ represented 52% and coho 0+ represented 35%. In numbers, fish captured 696 chinook 0+, 23 chinook 1+, 469 coho 0+, 60 coho 1+, 6 coho 2+, 13 adult Dolly Varden, 7 adult burbot, 28 cottid and 36 stickleback. Fourteen resident fish were tagged of which 11 were Dolly Varden. Approximately one half of these fish were taken in a trap constructed by modifying a minnow trap.

A trip in the Talkeetna area between August 8th and the 14th produced 22 chinook 0+, 1 chinook 1+, 220 coho 0+, 96 coho 1+, 2 grayling, 6 sucker, 17 burbot, 14 cottid and 98 stickleback. Eleven of the burbot were tagged and released for attempted recapture this winter.

A second trip to the Talkeetna reach resulted in the capture of 28 chinook 0+, 2 chinook 1+, 430 coho 0+, 41 coho 1+, 15 rainbow trout, 1 Arctic Grayling, 1 sucker, 1 round whitefish, 1 humpback whitefish, 22 burbot, 28 cottid and 280 stickleback. A total of 16 burbot, 1 grayling, 8 rainbow trout and 1 sucker were tagged and released.

The water levels were reported to be lower on the second Talkeetna trip than the first.

Through August 16, the Gold Creek crew took 297 chinook 0+ of which 80% were taken from the 4th of July Creek site, 83 coho 0+, 8 rainbow trout,

September 10, 1981

2 grayling, 3 sucker, 17 burbot, 8 sculpin, 3 Dolly Varden and 1 stickleback. Eight of the burbot and 3 rainbow trout were tagged and released. A reduction in gill net effort was necessary because of floating debris and milling adult salmon at the habitat locations.

The Aquatic Habitat and Instream Flow crews continued to monitor physical and chemical parameters of the aquatic environment. AH personnel accompanied the RJ crews to all sites sampled as well as 5 selected habitat locations. Temperature, dissolved oxygen, pH, specific conductance and turbidity data for all general habitat locations sampled to date has been summarized for data processing. Data relevant to the chinook salmon report in progress is receiving priority treatment.

Several thermographs have been lost to flood conditions and will have to be replaced. In instances where thermographs were lost, the banks along with numbers of trees had collapsed into the river. In other cases, the thermographs are believed to be attached to their securing lines but buried under several feet of deposited silt and gravel or lodged in log jams. Some staff gages show up to 2 feet of silt deposition.

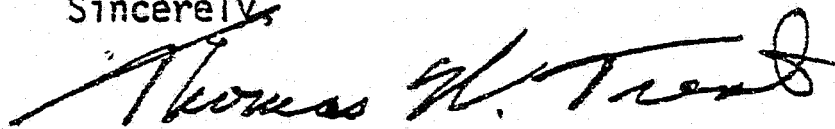
The Adult Anadromous project went smoothly this month with the gear performing well. Some fishing time was lost due to flooding but the gear was not substantially damaged.

Previously unknown spawning sloughs were discovered by the Gold Creek and sunshine crews. Two discoveries are significant - one slough is being utilized by approximately 200 adult salmon of various species and another by approximately 50 sockeyes.

The radio telemetry crew completed tracking operations on chinook salmon and are currently tracking 12 chum and several coho salmon. Analysis of the chinook tracking data was undertaken for the species/subject report on chinook salmon in September.

Daily and cumulative fish counts by species from the Talkeetna, Sunshine, Yentna and Su Station sonar counters are included which display seasons sonar activity to date. Fishwheel catches and unadjusted sonar and fishwheel summaries are included as supporting data.

Sincerely,



Thomas W. Trent
Aquatic Studies Coordinator
Su Hydro Aquatic Studies
Telephone: (907) 274-7583

cc: V. Lucid
J. Gill
D. Schmidt
D. Wozniak
M. Warner

Attachments

Table 1. Fish captured by species and stream, Susitna River Impoundment Studies, August 13-26, 1981.

STREAM/DATE	GRAYLING				BURBOT	OTHER
	TOTAL ALL AREAS	STUDY AREA	NUMBER TAGGED	SCALES		
Oshetna River 8/14-8/16	73	47	65	7	-	3 Round Whitefish 13 Longnose Sucker 3 Cottid
Goose Creek 8/16-8/18	41	36	34	15	3	3 Longnose Sucker
Jay Creek 8/18-8/20	21	18	17	6	4	8 Round Whitefish 18 Longnose Sucker
Kosina Creek 8/19-8/21	73 ^{1/}	19	63 ^{1/}	11	1	1 Round Whitefish 1 Longnose Sucker
Watana Creek 8/21-8/23	17	17	10	9	4	1 Round Whitefish 4 Longnose Sucker 3 Cottid
Deadman Creek 8/21-8/23	23 ^{1/}	4	23 ^{1/}	3	-	-
Tsusena Creek 8/23-8/25	53 ^{1/}	18	49 ^{1/}	9	-	1 Cottid
Fog Creek 8/24-8/26	5	4	3	-	-	3 Cottid
TOTALS	306	163	264	60	12	13 Round Whitefish 39 Longnose Sucker 10 Cottid
Includes fish captured in upper pools which we shuttled into by helicopter				22		

Table 3. Fish tagged through August trip, Susitna Impoundment Studies, 1981.

<u>STREAM</u>	<u>DATES</u>	<u>GRAYLING</u>	<u>(CUM.)</u>	<u>BURBOT</u>	<u>(CUM.)</u>	<u>ROUND WHITEFISH</u>	<u>(CUM.)</u>	<u>LONGNOSE SUCKER</u>	<u>(CUM.)</u>
Oshetna	8/14-16	65	(293)	-	(0)	3	(3)	12	(13)
Goose	8/16-18	34	(344)	3	(4)	-	(0)	3	(12)
Jay	8/18-20	17	(307)	2	(4)	6	(7)	17	(25)
Kosina	8/19-21	63	(492)	1	(2)	-	(0)	1	(1)
Watana	8/21-23	10	(167)	4	(9)	-	(0)	4	(42)
Deadman	8/21-23	23	(236)	-	(0)	-	(0)	-	(3)
Tsusena	8/23-25	49	(261)	-	(0)	-	(0)	-	(0)
23 Fog	8/24-26	3	(69)	-	(0)	-	(0)	-	(0)
TOTALS	8/14-26	264	(2169)	10	(19)	9	(10)	37	(96)

TOTAL ALL SPECIES: 320

TOTAL ALL SPECIES TO DATE: 2294

Table / . Yentna south bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June														
28	1	24	1	1	3	3	2	2	1	1	0	0	7	7
29	1	24	3	4	20	23	7	9	3	4	0	0	33	40
30	1	24	5	9	23	46	3	12	3	7	0	0	34	74
July														
1	1	12.5	2	11	14	60	1	13	0	7	0	0	17	91
2	1	6	0	11	0	60	0	13	0	7	0	0	0	91
3	1	24	3	14	26	86	0	13	0	7	0	0	29	120
4	1	24	2	16	21	107	2	15	1	8	0	0	26	146
5	1	23	1	17	8	115	6	21	1	9	0	0	16	162
6	1	24	1	18	8	123	3	24	0	9	0	0	12	174
7	1	24	5	23	13	136	9	33	0	9	0	0	27	201
8	1	24	0	23	34	170	13	46	0	9	2	2	49	250
9	1	24	4	27	50	220	19	65	3	12	1	3	77	327
10	1	22.5	1	28	348	568	18	83	5	17	0	3	372	699
11	1	16.2	0	28	307	875	3	86	1	18	0	3	311	1010
12	1	15.2	1	29	280	1155	0	86	0	18	0	3	281	1291
13	1	14.6	0	29	341	1496	3	89	7	25	0	3	351	1642
14	1	14.5	0	29	540	2036	9	98	2	27	1	4	552	2194
15	1	13.8	0	29	756	2792	10	108	5	32	1	5	772	2966
16	1	16	0	29	158	2950	2	110	1	33	1	6	162	3128
17	1	21.5	0	29	252	3202	0	110	8	41	0	6	260	3388
18	1	14	0	29	111	3313	5	115	6	47	0	6	122	3510
19	1	14.2	0	29	130	3443	12	127	19	66	2	8	163	3673
20	1	13	0	29	79	3522	11	138	11	77	2	10	103	3776
21	1	14.5	0	29	163	3685	22	160	11	88	3	13	199	3975
22	1	14.2	1	30	224	3909	22	182	20	108	17	30	284	4259
23	1	15	0	30	202	4111	93	275	23	131	32	62	350	4609
24	1	13.8	0	30	163	4274	95	370	26	157	20	82	304	4913
25	1	15	0	30	100	4374	112	482	28	185	5	87	245	5158
26	1	13.5	0	30	44	4418	38	520	10	195	16	103	108	5266
27	1	17	0	30	29	4447	48	568	12	207	17	120	106	5372

Table . Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
July														
28	1	20.5	0	30	42	4489	122	690	37	244	71	191	272	5644
29	1	13	0	30	76	4565	203	893	42	286	58	249	379	6023
30	1	12.8	0	30	101	4666	259	1152	55	342	112	361	528	6551
31	1	10	0	30	55	4721	151	1303	26	368	70	431	302	6853
August														
1	1	11.7	0	30	35	4756	100	1411	35	403	102	533	280	7133
2	1	15.7	0	30	30	4786	49	1460	6	409	42	575	127	7260
3	1	23.5	0	30	21	4807	4	1464	1	410	20	595	46	7306
4	1	24	0	30	14	4821	22	1486	11	421	27	622	74	7380
5	1	24	0	30	15	4836	27	1513	18	439	47	669	107	7487
6	1	24	0	30	14	4850	86	1599	24	463	35	704	159	7646
7	1	24	0	30	8	4858	39	1638	15	478	43	747	105	7751
8	1	24	0	30	3	4861	26	1664	22	500	22	769	73	7824
9	1	24	0	30	9	4870	5	1669	10	510	12	781	36	7860
10	1	24	0	30	5	4875	6	1675	4	514	7	788	22	7882
11	1	24	0	30	2	4877	2	1677	7	521	9	797	20	7902
12	1	24	0	30	4	4881	1	1678	4	525	1	798	10	7912
13	1	7.75	0	30	0	4881	0	1678	2	527	0	798	2	7914
14	1	3	0	30	1	4882	1	1689	1	528	1	799	4	7918
15	1	24	0	30	0	4882	1	1680	2	530	6	805	9	7927
16	1	24	0	30	1	4883	2	1682	0	530	9	814	12	7939
17	1	20	0	30	1	4883	0	1688	6	533	5	819	14	7953
18	1	14	0	30	1	4884	2	1690	1	534	9	828	13	7966
19	1	10.3	0	30	0	4884	4	1694	3	537	2	830	9	7975
20	1	24	0	30	0	4884	3	1697	2	539	1	831	6	7981
21	1	22.5	0	30	3	4887	3	1700	2	541	0	831	8	7989
22	1	24	0	30	2	4889	6	1706	26	567	6	837	40	8029
23	1	24	0	30	1	4890	9	1715	8	575	6	843	24	8053
24	1	24	0	30	2	4892	9	1724	5	580	2	845	18	8071
25	1	24	0	30	0	4892	1	1725	4	584	3	848	8	8079
26	1	24	0	30	0	4892	0	1725	2	586	1	849	3	8082

Table 2. Yentna north bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June														
26	1	24	1	1	0	0	0	0	0	0	0	0	0	1
27	1	24	2	3	0	0	0	0	0	0	0	0	2	3
28	1	24	0	3	1	1	0	0	0	0	0	0	1	4
29	1	23	0	3	5	6	1	1	2	2	0	0	8	12
30	1	24	0	3	14	20	1	2	1	3	0	0	16	28
July														
1	1	0	0	3	0	20	0	2	0	3	0	0	0	28
2	1	0	0	3	0	20	0	2	0	3	0	0	0	28
3	1	5	0	3	0	20	0	2	0	3	0	0	0	28
4	1	24	2	5	21	41	2	4	1	4	0	0	26	54
5	1	24	1	6	17	58	15	19	0	4	0	0	33	87
6	1	24	3	9	23	81	9	28	1	5	0	0	36	123
7	1	24	4	13	10	91	8	36	0	5	1	1	23	146
8	1	24	0	13	41	132	27	63	1	6	0	1	69	215
9	1	18	2	15	11	143	9	72	2	8	0	1	24	239
10	1	22	1	16	37	180	47	119	4	12	0	1	89	328
11	1	21.5	0	16	2	182	1	120	4	16	0	1	7	335
12	1	24	0	16	15	197	4	124	4	20	0	1	23	358
13	1	22.5	0	16	37	234	2	126	4	24	0	1	43	401
14	1	24	0	16	39	273	5	131	5	29	0	1	49	450
15	1	24	0	16	41	314	7	138	3	32	0	1	51	501
16	1	15.8	0	16	22	336	0	138	1	33	0	1	23	524
17	1	9.5	0	16	26	362	1	139	1	34	0	1	28	552
1/18	1	21.5	0	16	167	529	10	149	21	55	2	3	200	752
19	1	13.8	1	17	295	824	20	169	34	89	7	10	357	1109
20	1	14.0	0	17	245	1069	54	223	52	141	1	11	352	1461
21	1	13.0	0	17	190	1259	33	256	40	181	4	15	267	1728
22	1	13.8	0	17	313	1572	21	277	67	248	15	30	416	2144
23	1	15.8	0	17	187	1759	18	295	106	354	27	57	338	2482
24	1	10.4	0	17	85	1844	14	309	32	386	4	61	135	2617
25	1	14.8	0	17	54	1898	9	318	8	394	2	63	73	2690

1/ New location

Table . Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHITHOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
July														
26	1	11.8	0	17	59	1957	25	343	17	411	9	72	110	2800
27	1	17.2	0	17	35	1992	12	355	28	439	11	83	86	2886
28	1	22.2	0	17	23	2015	11	366	7	446	8	91	49	2935
29	1	24	0	17	9	2024	4	370	5	451	1	92	19	2954
30	1	16.5	0	17	4	2028	1	371	2	453	0	92	7	2961
2/31	1	24	0	17	4	2032	3	374	1	454	1	93	9	2970
August														
1	1	15.5	0	17	2	2034	0	374	0	454	0	93	2	2972
2	1	15.6	0	17	2	2036	6	380	5	459	2	95	15	2987
3	1	23.5	0	17	3	2039	4	384	9	468	10	105	26	3013
4	1	24	0	17	6	2045	66	450	43	511	20	125	135	3148
5	1	24	0	17	20	2065	110	560	44	555	25	150	199	3347
6	1	24	0	17	7	2072	136	696	44	599	29	179	216	3563
7	1	24	0	17	5	2077	140	836	16	615	14	193	175	3738
8	1	24	0	17	7	2084	79	915	31	646	17	210	134	3872
9	1	24	0	17	5	2089	25	940	21	667	7	217	58	3930
10	1	24	0	17	3	2092	10	950	11	678	4	221	28	3958
11	1	16.5	0	17	0	2092	5	955	16	694	8	229	29	3987
12	1	24	0	17	1	2093	4	959	5	699	3	232	13	4000
13	1	24	0	17	2	2095	1	960	7	706	2	234	12	4012
14	1	23	0	17	0	2095	0	960	0	706	1	235	1	4013
15	1	24	0	17	2	2097	2	962	11	717	2	237	17	4030
16	1	24	0	17	1	2098	2	964	8	725	2	239	13	4043
17	1	22	0	17	0	2098	2	966	9	734	8	247	19	4062
18	1	24	0	17	0	2098	7	973	6	740	4	251	17	4079
19	1	9.2	0	17	0	2098	3	976	2	742	3	254	8	4087
20	1	24	0	17	0	2098	5	981	13	755	2	256	20	4107
21	1	24	0	17	0	2098	4	985	19	774	3	259	26	4133
22	1	24	0	17	0	2098	4	989	14	788	1	260	19	4152
23	1	24	0	17	1	2099	5	994	13	801	5	265	24	4176
24	1	24	0	17	0	2099	5	999	11	812	4	269	20	4196

2/ Discovered a hole in livebox through which fish were escaping

Table 3: Sunshine east bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June														
19	1	12	19	19	0	0	0	0	0	0	0	0	19	19
20	1	1	1	20	0	0	0	0	0	0	0	0	1	20
21	1	6	1	21	0	0	0	0	0	0	0	0	1	21
22	1	23	16	37	0	0	0	0	0	0	0	0	16	37
23	1	23.5	28	65	1	1	0	0	0	0	0	0	29	66
24	1	22.5	35	100	0	1	0	0	0	0	0	0	35	101
25	1	23	37	137	0	1	0	0	0	0	0	0	37	138
26	1	23	18	155	0	1	0	0	0	0	0	0	18	156
27	2	27	21	176	0	1	0	0	0	0	0	0	21	177
28	2	46.5	14	190	0	1	0	0	0	0	0	0	14	191
29	2	47.5	10	200	3	4	0	0	0	0	0	0	13	204
30	2	47.5	6	206	2	6	0	0	0	0	0	0	8	212
July														
1	2	47	19	225	7	13	0	0	0	0	0	0	26	238
2	2	45.5	51	276	10	23	0	0	0	0	0	0	61	299
3	2	46	52	328	17	40	1	1	0	0	0	0	70	369
4	2	48	87	415	43	83	2	3	2	2	0	0	134	503
5	2	48	38	453	38	121	1	4	6	8	0	0	83	586
6	2	47.5	32	485	72	193	3	7	5	13	0	0	112	698
7	2	48	20	505	55	248	4	11	10	23	0	0	89	787
8	2	47	9	514	20	268	0	11	6	29	0	0	35	822
9	2	47.5	8	522	10	278	1	12	2	31	0	0	21	843
10	2	28.5	2	524	7	285	3	15	1	32	0	0	13	856
11	1	12	0	524	0	285	0	15	0	32	0	0	0	856
12	1	24	0	524	0	285	0	15	0	32	0	0	0	856
13	1	24	0	524	0	285	0	15	0	32	0	0	0	856
14	1	24	0	524	0	285	0	15	1	33	0	0	1	857
15	1	24	1	525	46	331	0	15	1	34	0	0	48	905
16	1	24	1	526	171	502	0	15	0	34	0	0	172	1077
17	2	28.5	1	527	441	943	4	19	0	34	0	0	446	1523
18	2	41.5	1	528	562	1605	11	30	1	35	0	0	675	2198

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Table . Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
July														
19	2	43	0	528	669	2274	3	33	0	35	0	0	672	2870
20	2	35	0	528	606	2880	5	38	2	37	0	0	617	3883
21	2	43.5	0	528	638	3518	8	46	4	41	0	0	650	4533
22	2	44	0	528	794	4312	22	68	31	72	0	0	847	4980
23	2	48	1	529	671	4983	64	132	133	205	1	1	870	5850
24	2	48	0	529	406	5389	49	181	104	309	1	2	560	6410
25	2	48	1	530	463	5852	102	283	108	417	0	2	674	7084
26	2	48	0	530	416	6268	109	392	116	533	1	3	642	7726
27	2	29.5	0	530	169	6437	86	478	97	630	4	7	356	8082
28	2	46	0	530	373	6810	465	943	618	1248	3	10	1459	9541
29	2	28.5	0	530	114	6924	189	1132	210	1458	6	16	519	10060
30	2	48	0	530	180	7104	317	1449	286	1744	20	36	803	10863
31	2	47.5	0	530	117	7221	457	1906	359	2103	10	46	943	11806
August														
1	2	48	0	530	24	7305	597	2503	361	2464	24	70	1066	12872
2	2	33.83	0	530	0	7305	11	2514	0	2464	0	70	11	12883
3	2	35.5	0	530	10	7315	109	2623	7	2471	1	71	127	13010
4	2	46.5	0	530	26	7341	357	2980	150	2621	4	75	537	13547
5	2	41	1	531	49	7390	357	3337	85	2706	22	97	514	14061
6	2	47.5	1	532	56	7446	538	3875	288	2994	27	124	910	14971
7	2	47.5	0	532	50	7496	471	4346	255	3249	34	158	810	15781
8	2	47.5	1	533	93	7589	493	4839	197	3446	75	233	859	16640
9	2	48	0	533	32	7621	271	5110	31	3477	23	256	357	16997
10	2	48	0	533	1	7622	60	5170	9	3486	6	262	76	17073
11	2	48	0	533	9	7631	118	5288	39	3525	27	289	193	17266
12	2	48	1	534	9	7640	132	5420	66	3591	32	321	240	17506
13	2	48	0	534	10	7650	77	5497	19	3610	13	334	119	17625
14	2	48	0	534	6	7656	63	5560	18	3628	8	342	95	17720
15	2	48	0	534	9	7665	38	5598	23	3651	11	353	81	17801
16	2	48	0	534	13	7678	32	5630	27	3678	13	366	85	17886
17	2	48	1	535	39	7717	169	5799	259	3937	72	438	540	18426
18	2	45.5	1	536	45	7762	195	5994	554	4491	104	542	899	19325

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Table 4. Sunshine west bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHITNOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June														
24	1	3.5	1	1	0	0	0	0	0	0	0	0	1	1
25	1	23.5	3	4	0	0	0	0	0	0	0	0	3	4
26	1	23.5	4	8	0	0	0	0	0	0	0	0	4	8
27	1	24	2	10	0	0	0	0	0	0	0	0	2	10
28	1	12.5	1	11	0	0	0	0	0	0	0	0	1	11
29	1	13	1	12	0	0	0	0	0	0	0	0	1	12
30	1	22	2	14	0	0	0	0	0	0	0	0	2	14
July														
1	1	22	9	23	0	0	0	0	0	0	0	0	9	23
2	1	23	8	31	0	0	0	0	0	0	0	0	8	31
3	1	23.5	9	40	0	0	0	0	0	0	0	0	9	40
4	2	15	5	45	4	4	0	0	0	0	0	0	9	49
5	2	39	12	57	14	18	0	0	0	0	0	0	26	75
6	2	47.5	6	63	9	27	0	0	0	0	0	0	15	90
7	2	41.3	3	66	5	32	0	0	0	0	0	0	8	98
8	2	45.5	3	69	5	37	0	0	0	0	0	0	8	106
9	2	47.5	0	69	1	38	0	0	0	0	0	0	1	107
10	2	48	0	69	1	39	0	0	0	0	0	0	1	108
11	2	45.5	0	69	1	40	0	0	1	1	0	0	2	110
12	2	36	0	69	0	40	0	0	0	1	0	0	0	110
13	2	48	0	69	0	40	0	0	0	1	0	0	0	110
14	2	48	0	69	1	41	0	0	0	1	0	0	1	111
15	2	48	2	71	6	47	0	0	0	1	0	0	8	119
1/16	2	39	0	71	5	52	0	0	0	1	0	0	5	124
17	1	24	0	71	1	53	0	0	0	1	0	0	1	125
18	1	24	0	71	6	59	0	0	0	1	0	0	6	131
19	1	24	0	71	11	70	1	1	0	1	0	0	12	143
20	1	11.3	0	71	7	77	0	1	0	1	0	0	7	150
21	1	20	0	71	55	132	0	1	0	1	0	0	55	205
22	2	35	1	72	101	233	1	2	1	2	0	0	104	309
23	2	33.5	0	72	71	304	0	2	0	2	0	0	71	380

1/ Fish wheels inoperable due to flooding.

Table . Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
July														
24	2	40	0	72	67	371	2	4	1	3	0	0	70	450
25	2	26	0	72	47	418	1	5	1	4	0	0	49	499
26	2	48	0	72	199	617	10	15	7	11	0	0	216	715
27	2	42	0	72	123	740	14	29	1	12	1	1	139	854
28	2	44	1	73	189	929	29	58	19	31	0	1	238	1092
29	2	22	0	73	62	991	5	63	11	42	0	1	78	1170
30	2	45	1	74	130	1121	34	97	30	72	25	26	220	1390
31	2	48	1	75	91	1212	33	130	31	103	21	47	177	1567
August														
1	2	40.33	0	75	74	1286	74	204	42	145	34	81	224	1791
2	1	20.75	0	75	2	1288	1	205	0	145	0	81	3	1794
3	2	-	-	75	-	1288	-	205	-	145	-	81	-	1794
4	2	-	-	75	-	1288	-	205	-	145	-	81	-	1794
5	2	23	0	75	14	1302	21	226	21	166	16	97	72	1866
6	2	47.5	0	75	54	1356	110	336	96	262	70	167	330	2196
7	2	48	1	76	58	1414	161	497	95	357	87	254	402	2598
8	2	46	0	76	36	1450	67	564	51	408	98	352	252	2850
9	2	46	0	76	14	1464	26	590	15	423	29	381	84	2934
10	2	32	0	76	2	1466	12	602	2	425	5	386	21	2955
11	2	21.25	0	76	1	1467	3	605	5	430	7	393	16	2971
12	1	11	0	76	2	1469	3	608	7	437	4	397	16	2987
13	1	13	0	76	0	1469	0	608	4	441	0	397	4	2991
14	1	24	0	76	0	1469	0	608	2	443	0	397	2	2993
15	2	30	0	76	2	1471	0	608	1	444	3	400	6	2999
16	2	48	0	76	1	1472	0	608	5	449	8	408	14	3013
17	2	43	0	76	6	1478	0	608	44	493	27	435	77	3090
18	2	45	0	76	9	1487	1	609	46	539	80	515	136	3226
19	2	43	0	76	15	1502	0	609	20	559	55	570	90	3316
20	2	42.5	0	76	29	1531	3	612	57	616	207	777	296	3612
21	2	48	0	76	13	1544	0	612	15	631	156	933	184	3796

Table . Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
July														
27	2	47	0	101	10	47	1	1	11	20	0	0	22	759
28	2	47	1	102	31	78	3	4	25	45	1	1	61	230
29	2	48	1	103	12	90	1	5	10	55	1	2	25	255
30	2	48	0	103	6	96	1	6	21	76	3	5	31	286
31	2	48	1	104	15	111	8	14	29	105	1	6	54	340
August														
1	2	48	0	104	31	142	4	18	34	139	0	6	69	409
2	2	-	-	104	-	142	-	18	-	139	-	6	-	409
3	1	.5	0	104	0	142	0	18	0	139	0	6	0	409
4	1	24	0	104	1	143	0	18	1	140	0	6	2	411
5	2	36.5	2	106	5	148	10	28	15	155	3	9	35	446
6	2	48	0	106	10	158	29	57	28	183	9	18	76	522
7	2	48	0	106	8	166	51	108	60	243	8	26	127	649
8	2	48	0	106	7	173	76	184	51	294	12	38	146	795
9	2	47.5	0	106	0	173	4	188	2	296	0	38	6	801
10	2	48	0	106	1	174	0	188	1	297	0	38	2	803
11	2	48	0	106	2	176	2	190	3	300	1	39	8	811
12	2	48	0	106	3	179	5	195	9	309	8	47	25	836
13	2	48	0	106	2	181	0	195	5	314	0	47	7	843
14	2	47.5	0	106	0	181	1	196	0	314	0	47	1	844
15	2	42.75	0	106	0	181	0	196	0	314	0	47	0	844
16	1	11.75	0	106	0	181	0	196	2	316	0	47	2	846
17	2	36.25	0	106	4	185	1	197	3	319	1	48	9	855
18	2	44	0	106	3	188	7	204	34	353	7	55	51	906
19	2	48	0	106	0	188	11	215	37	390	4	59	52	958
20	2	48	0	106	1	189	4	219	13	403	9	68	27	985
21	2	48	0	106	1	190	0	219	0	403	0	68	1	986
22	2	48	0	106	0	190	0	219	1	404	0	68	1	987
23	2	48	0	106	5	195	2	221	10	414	12	80	29	1016
24	2	48	0	106	1	196	0	221	22	436	14	94	37	1053
25	2	48	0	106	0	196	1	222	17	453	14	108	32	1085

Table 6. Talkeetna west bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CITNOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June														
26	1	15.8	9	9	0	0	0	0	0	0	0	0	0	9
27	1	23.5	4	13	0	0	0	0	0	0	0	0	4	13
28	1	23	1	14	0	0	0	0	0	0	0	0	1	14
29	1	24	1	15	0	0	0	0	0	0	0	0	1	15
30	1	22.5	0	15	0	0	0	0	0	0	0	0	0	15
July														
1	2	28	1	16	0	0	0	0	0	0	0	0	1	16
2	2	38.5	3	19	0	0	0	0	0	0	0	0	3	19
3	2	42	1	20	0	0	0	0	0	0	0	0	1	20
4	2	48	0	20	0	0	0	0	0	0	0	0	0	20
5	2	47.5	3	23	0	0	0	0	0	0	0	0	3	23
6	2	48	0	23	0	0	0	0	0	0	0	0	0	23
7	2	48	0	23	1	1	0	0	0	0	0	0	1	24
8	2	48	0	23	0	1	0	0	0	0	0	0	0	24
9	2	46	1	24	0	1	0	0	0	0	0	0	1	25
10	1	5.5	0	24	0	1	0	0	0	0	0	0	0	25
1/11-17	2	0	-	24	-	1	-	0	-	0	-	0	-	25
18	1	8.5	0	24	0	1	0	0	0	0	0	0	0	25
19	1	24	0	24	0	1	0	0	0	0	0	0	0	25
20	1	24	0	24	0	1	0	0	1	1	0	0	1	26
21	2	29.5	0	24	1	2	0	0	0	1	0	0	1	27
22	2	38	0	24	0	2	0	0	1	2	0	0	1	28
23	2	48	0	24	11	13	0	0	3	5	0	0	14	42
24	2	48	3	27	12	25	0	0	3	8	0	0	18	60
25	2	48	0	27	8	33	2	2	2	10	0	0	12	72
26	2	46	0	27	6	39	0	2	3	13	0	0	9	81
27	2	48	0	27	3	42	3	5	5	18	0	0	11	92
28	2	47.5	1	28	19	61	2	7	15	33	0	0	37	129
29	2	47	0	28	10	71	5	12	14	47	1	1	30	159
30	2	46	0	28	15	86	2	14	24	71	1	2	42	201
31	2	48	0	28	13	99	12	26	36	107	1	3	62	263

1/ Fishwheels inoperable due to flooding

Table . Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
August														
1	2	41	0	28	15	114	20	46	38	145	0	3	73	336
2	0	-	-	28	-	114	-	46	-	145	-	3	-	336
3	0	-	-	28	-	114	-	46	-	145	-	3	-	336
4	1	10.5	0	28	0	114	0	46	2	147	0	3	2	338
5	2	31	0	28	10	124	9	55	44	191	3	6	66	404
6	2	48	0	28	6	130	11	66	28	219	5	11	50	454
7	2	48	0	28	8	138	26	92	49	268	4	15	87	511
8	2	48	0	28	11	149	27	119	41	309	9	24	88	519
9	2	46	0	28	3	152	1	120	1	310	0	24	5	524
10	2	47	0	28	0	152	0	120	3	313	1	25	4	528
11	2	32	0	28	0	152	0	120	1	314	0	25	1	529
12	2	36.5	0	28	0	152	2	122	3	317	2	27	7	536
13	1	23	0	28	0	152	0	122	0	317	0	27	0	536
14	-	-	-	28	-	152	-	122	-	317	-	27	-	536
15	-	-	-	28	-	152	-	122	-	317	-	27	-	536
16	1	6	0	28	0	152	0	122	0	317	0	27	0	536
17	2	35	0	28	1	153	0	122	0	317	0	27	1	537
18	2	42	0	28	2	155	2	124	15	332	4	31	23	570
19	2	48	0	28	4	159	2	126	30	362	14	45	50	720
20	2	48	0	28	2	161	3	129	12	374	9	54	26	746
21	2	48	0	28	1	162	2	131	7	381	6	60	16	762
22	2	48	0	28	0	162	0	131	0	381	0	60	1	762
23	2	48	0	28	0	162	0	131	16	397	20	80	36	798
24	2	47	0	28	8	170	6	137	37	434	48	128	99	897
25	2	47	0	28	5	175	1	138	27	461	19	147	52	949
26	2	48	0	28	1	176	1	139	31	492	11	158	44	993
27	2	48	0	28	2	178	5	144	29	521	18	176	54	1047
28	2	48	0	28	1	179	4	148	46	567	21	197	72	1119
29	2	48	0	28	0	179	0	148	34	601	70	217	54	1173
30	2	48	0	28	2	181	0	148	7	608	16	233	25	1198
31	2	48	0	28	0	181	0	148	4	612	26	259	30	1228
September														
1	2	48	0	28	1	182	0	148	11	623	27	286	39	1267

Table . Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
August														
1	2	41	0	28	15	114	20	46	38	145	0	3	73	386
2	0	-	-	28	-	114	-	46	-	145	-	3	-	386
3	0	-	-	28	-	114	-	46	-	145	-	3	-	386
4	1	10.5	0	28	0	114	0	46	2	147	0	3	2	388
5	2	31	0	28	10	124	9	55	44	191	3	6	66	404
6	2	48	0	28	6	130	11	66	28	219	5	11	50	454
7	2	48	0	28	8	138	26	92	49	268	4	15	87	541
8	2	48	0	28	11	149	27	119	41	309	9	24	88	629
9	2	46	0	28	3	152	1	120	1	310	0	24	5	634
10	2	47	0	28	0	152	0	120	3	313	1	25	4	638
11	2	32	0	28	0	152	0	120	1	314	0	25	1	639
12	2	36.5	0	28	0	152	2	122	3	317	2	27	7	646
13	1	23	0	28	0	152	0	122	0	317	0	27	0	646
14	-	-	-	28	-	152	-	122	-	317	-	27	-	646
15	-	-	-	28	-	152	-	122	-	317	-	27	-	646
16	1	6	0	28	0	152	0	122	0	317	0	27	0	646
17	2	35	0	28	1	153	0	122	0	317	0	27	1	647
18	2	42	0	28	2	155	2	124	15	332	4	31	23	670
19	2	48	0	28	4	159	2	126	30	362	14	45	50	720
20	2	48	0	28	2	161	3	129	12	374	9	54	26	746
21	2	48	0	28	1	162	2	131	7	381	6	60	16	762
22	2	48	0	28	0	162	0	131	0	381	0	60	0	762
23	2	48	0	28	0	162	0	131	16	397	20	80	36	798
24	2	47	0	28	8	170	6	137	37	434	48	128	99	897
25	2	47	0	28	5	175	1	138	27	461	19	147	52	949
26	2	48	0	28	1	176	1	139	31	492	11	158	44	993
27	2	48	0	28	2	178	5	144	29	521	18	176	54	1047
28	2	48	0	28	1	179	4	148	46	567	21	197	72	1119
29	2	48	0	28	0	179	0	148	34	601	70	217	54	1173
30	2	48	0	28	2	181	0	148	7	608	16	233	25	1198
31	2	48	0	28	0	181	0	148	4	612	26	259	30	1228
September														
1	2	48	0	28	1	182	0	148	11	623	27	286	39	1267

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Table 7. Curry east bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.
June														
15	1	24	3	3	0	0	0	0	0	0	0	0	3	3
16	1	18	1	4	0	0	0	0	0	0	0	0	1	4
17	1	24	1	5	0	0	0	0	0	0	0	0	1	5
18	1	17	1	6	0	0	0	0	0	0	0	0	1	6
19	1	12	4	10	0	0	0	0	0	0	0	0	4	10
20	1	24	5	15	0	0	0	0	0	0	0	0	5	15
21	1	24	6	21	0	0	0	0	0	0	0	0	6	21
22	1	24	7	28	0	0	0	0	0	0	0	0	7	28
23	1	24	14	42	0	0	0	0	0	0	0	0	14	42
24	1	24	5	47	0	0	0	0	0	0	0	0	5	47
25	1	24	10	57	0	0	0	0	0	0	0	0	10	57
26	1	22	8	65	0	0	0	0	0	0	0	0	8	65
27	1	24	3	68	0	0	0	0	0	0	0	0	3	68
28	1	23	3	71	0	0	0	0	0	0	0	0	3	71
29	1	22	1	72	0	0	0	0	0	0	0	0	1	72
30	1	6	0	72	0	0	0	0	0	0	0	0	0	72
July														
1	1	6	0	72	0	0	0	0	0	0	0	0	0	72
2	1	24	1	73	0	0	0	0	0	0	0	0	1	73
3	1	18	4	77	0	0	0	0	0	0	0	0	4	77
4	1	23	0	77	0	0	0	0	0	0	0	0	0	77
5	1	17	0	77	0	0	0	0	0	0	0	0	0	77
6	1	24	0	77	0	0	0	0	0	0	0	0	0	77
7	1	24	1	78	0	0	0	0	0	0	0	0	1	78
8	1	21	2	80	0	0	0	0	0	0	0	0	2	80
9	1	24	2	82	0	0	0	0	0	0	0	0	2	82
10	1	10	1	83	0	0	0	0	0	0	0	0	1	83
1/11-15	1	0	-	83	-	0	-	0	-	0	-	0	-	83
16	1	24	1	84	0	0	0	0	0	0	0	0	1	84
17	1	24	5	89	3	3	0	0	0	0	0	0	8	92
18	1	24	2	91	3	6	1	1	0	0	0	0	6	98

1/ Fishwheel inoperable due to flooding.

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Table . Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES		
			DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	
July															
19	1	22	2	93	0	6	0	1	0	0	0	0	0	2	100
20	1	24	2	95	2	8	0	1	0	0	0	0	0	4	104
21	1	23	1	96	2	10	1	2	1	1	0	0	0	5	109
22	1	24	2	98	9	19	1	3	0	1	0	0	0	12	121
23	1	24	1	99	3	22	0	3	0	1	0	0	0	4	125
24	1	24	2	101	3	25	1	4	2	3	0	0	0	8	133
25	1	23	1	102	7	32	0	4	0	3	0	0	0	8	141
26	1	24	1	103	13	45	0	4	5	8	0	0	0	19	160
27	1	24	0	103	14	59	1	5	5	13				20	180
28	1	24	1	104	19	78	1	6	5	18	0	0	0	26	206
29	1	24	0	104	27	105	2	8	22	40	0	0	0	51	257
30	1	24	0	104	16	121	2	10	8	48	0	0	0	26	283
31	1	24	0	104	33	154	8	18	37	85	0	0	0	78	361
August															
1	1	24	1	105	31	185	2	20	13	98	0	0	0	47	408
2	1	21	0	105	2	187	0	20	0	98	0	0	0	2	410
3															
4	1	12	1	106	12	199	1	21	18	116	1	1	1	33	443
5	1	24	0	106	41	240	8	29	45	161	6	7	7	100	543
6	1	24	0	106	18	258	32	61	77	238	3	10	10	130	673
7	1	23	0	106	18	276	11	72	60	298	5	15	15	94	767
8	1	23.5	0	106	10	286	17	89	48	346	3	13	13	78	845
9	1	23	0	106	14	300	6	95	14	360	1	19	19	35	880
10	1	23	0	106	3	303	4	99	16	376	4	23	23	27	907
11	1	23.5	0	106	16	319	3	102	26	402	1	24	24	46	953
12	1	23.5	0	106	2	321	7	109	30	432	1	25	25	40	993
13	1	24	0	106	9	330	8	117	44	476	3	28	28	64	1057
14	1	24	0	106	2	332	2	119	19	495	0	28	28	23	1080
15	1	24	0	106	3	335	2	121	15	510	2	30	30	22	1102
16	1	24	0	106	6	341	4	125	40	550	4	34	34	54	1156
17	1	24	0	106	3	344	3	128	31	581	4	38	38	41	1197

Table 8. Curry west bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.
June														
15	1	24	0	0	0	0	0	0	0	0	0	0	0	0
16	1	24	6	6	0	0	0	0	0	0	0	0	6	6
17	1	22	6	12	0	0	0	0	0	0	0	0	6	12
18	1	12	8	20	0	0	0	0	0	0	0	0	8	20
19	1	24	19	39	0	0	0	0	0	0	0	0	19	39
20	1	24	11	50	0	0	0	0	0	0	0	0	11	50
21	1	24	8	58	0	0	0	0	0	0	0	0	8	58
22	1	22	8	66	0	0	0	0	0	0	0	0	8	66
23	1	24	17	83	0	0	0	0	0	0	0	0	17	83
24	1	21	12	95	0	0	0	0	0	0	0	0	12	95
25	1	24	13	108	0	0	0	0	0	0	0	0	13	108
26	1	22	9	117	0	0	0	0	0	0	0	0	9	117
27	1	24	12	129	0	0	0	0	0	0	0	0	12	129
28	1	23	6	135	0	0	0	0	0	0	0	0	6	135
29	1	24	4	139	0	0	0	0	0	0	0	0	4	139
30	1	24	0	139	0	0	0	0	0	0	0	0	0	139
July														
1	1	24	2	141	0	0	0	0	0	0	0	0	2	141
2	1	24	4	145	0	0	0	0	0	0	0	0	4	145
3	1	24	6	151	0	0	0	0	0	0	0	0	6	151
4	1	22	5	156	0	0	0	0	0	0	0	0	5	156
5	1	16	1	157	0	0	0	0	0	0	0	0	1	157
6	1	24	0	157	0	0	0	0	0	0	0	0	0	157
7	1	24	0	157	0	0	0	0	0	0	0	0	0	157
8	1	24	6	163	0	0	0	0	0	0	0	0	6	163
9	1	24	1	164	0	0	0	0	0	0	0	0	1	164
10	1	6	0	164	0	0	0	0	0	0	0	0	0	164
1/11-17	1	0	-	164	-	0	-	0	-	0	-	0	-	164
18	1	24	0	164	0	0	0	0	0	0	0	0	0	164
19	1	14	1	165	0	0	0	0	0	0	0	0	1	165
20	1	24	1	166	0	0	0	0	1	1	0	0	2	167

1/ Fishwheel inoperable due to flooding.

Table . Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES		
			DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	
July															
19	1	14	1	165	0	0	0	0	0	0	0	0	0	1	165
20	1	24	1	166	0	0	0	0	1	1	0	0	0	2	167
21	1	24	2	168	0	0	0	0	1	2	0	0	0	3	170
22	1	24	1	169	0	0	0	0	0	2	0	0	0	4	171
23	1	24	0	169	4	4	0	0	0	2	0	0	0	4	175
24	1	24	1	170	5	9	0	0	1	3	0	0	0	7	182
25	1	23	0	170	2	11	0	0	2	5	0	0	0	4	186
26	1	24	0	170	1	12	0	0	0	5	0	0	0	5	187
27	1	24	1	171	2	14	0	0	1	6	0	0	0	6	191
28	1	19	0	171	5	19	1	1	0	6	0	0	0	6	197
29	1	24	1	172	1	20	1	2	6	12	0	0	0	9	206
30	1	20	1	173	1	21	0	2	2	14	0	0	0	4	210
31	1	24	0	173	5	26	5	7	10	24	0	0	0	6	230
August															
1	1	21.5	0	173	1	27	4	11	1	25	0	0	0	6	236
2/2	1	0	-	173	-	27	-	11	-	25	-	0	0	-	236
3															
4	1	3.5	0	173	0	27	0	11	1	26	0	0	0	1	237
5	1	24	0	173	3	30	11	22	10	36	1	1	1	25	262
6	1	21	1	174	3	33	7	29	10	46	0	1	1	21	283
7	1	23	1	175	5	38	13	42	6	52	1	2	2	26	309
8	1	23.5	2	177	4	42	18	60	7	59	3	5	5	34	343
9	1	24	0	177	2	44	1	61	0	59	2	7	7	5	348
10	1	23	0	177	1	45	2	63	2	61	1	8	8	6	354
11	1	24	0	177	0	45	2	65	1	62	0	8	8	3	357
12	1	24	0	177	0	45	0	65	4	66	0	8	8	4	361
13	1	24	0	177	0	45	2	67	0	66	1	9	9	3	364
14	1	6	0	177	0	45	1	68	0	66	0	9	9	1	365
2/15	1	0	-	177	-	45	-	68	-	66	-	9	9	-	365
" 16	1	0	-	177	-	45	-	68	-	66	-	9	9	-	365
" 17	1	0	-	177	-	45	-	68	-	66	-	9	9	-	365

2/ Fishwheel inoperative due to flooding.

Table 9. Susitna Station west bank unadjusted sonar counts by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	TOTAL DAILY COUNT	CHINOOK		SOCKEYE		PINK		CHUM		COHO	
		DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June											
27	60	0	0	60	60	0	0	0	0	0	0
28	63	0	0	63	123	0	0	0	0	0	0
29	370	3	3	367	490	0	0	0	0	0	0
30	429	3	6	426	916	0	0	0	0	0	0
July											
1	541	4	10	537	1453	0	0	0	0	0	0
2	1929	20	30	1860	3313	49	49	0	0	0	0
3	1109	11	47	1070	4383	28	77	0	0	0	0
4	550	3	44	478	4861	66	143	0	0	3	3
5	448	2	46	390	5251	54	197	0	0	2	5
6	377	2	48	328	5579	45	242	0	0	2	7
7	279	2	50	242	5821	33	275	0	0	2	9
8	231	2	52	226	6047	1	276	1	1	1	10
9	1358	9	61	1334	7381	6	282	3	4	6	16
10	5262	36	97	5166	12547	24	306	12	16	24	40
11	11930	0	97	11848	24395	82	388	0	16	0	40
12	15650	0	97	15650	40045	0	388	0	16	0	40
13	19747	0	97	19747	59792	0	388	0	16	0	40
14	22043	0	97	22043	81835	0	388	0	16	0	40
15	16970	0	97	16055	98690	0	388	115	131	0	40
16	10718	0	97	10676	109366	42	430	0	131	0	40
17	3830	0	97	3804	113170	0	430	26	157	0	40
18	4607	0	97	4392	117562	143	573	72	229	0	40
19	3632	0	97	3439	121001	110	683	0	229	83	123
20	5691	0	97	5054	126055	487	1170	19	248	131	254
21	8304	0	97	7711	133766	382	1552	40	288	171	425
22	7182	0	97	6808	140574	224	1776	75	363	75	500
23	7049	50	147	5960	146534	601	2377	50	413	388	888
24	4707	33	180	3210	149744	706	3083	325	738	433	1321
25	3262	0	180	1954	151698	835	3918	26	764	447	1768
26	1927	0	180	1066	152764	690	4608	0	764	171	1939
27	2124	0	180	1115	153879	690	5298	51	815	268	2207
28	3163	0	180	936	154815	1420	6718	35	850	772	2979
29	2698	0	180	682	155497	1584	8302	45	895	387	3366
30	2431	0	180	974	156471	1184	9486	0	895	273	3639
31	2480	0	180	1127	157598	902	10388	113	1008	338	3977

Table 10. Susitna Station east bank unadjusted sonar counts by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	TOTAL DAILY COUNT	CHINOOK		SOCKEYE		PINK		CHUM		COHO	
		DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June											
27	116	12	12	46	46	39	39	18	18	1	
28	101	10	22	41	87	34	73	15	33	1	
29	76	8	30	31	118	25	98	12	45	0	
30	124	13	43	50	168	41	139	19	64	1	
July											
1	246	25	68	100	268	82	221	37	101	2	
2	211	22	90	86	354	70	291	32	133	1	
3	173	18	108	70	424	58	349	26	159	1	
4	180	19	127	73	497	60	409	27	186	1	
5	193	20	147	79	576	64	473	29	215	1	
6	292	30	177	119	695	97	570	44	259	2	1
7	288	30	207	116	811	96	666	44	303	2	1
8	402	41	248	164	975	134	800	61	364	2	1
9	538	55	303	219	1194	179	979	82	446	3	1
10	2913	300	603	1183	2377	971	1950	441	887	18	30
11	2014	0	603	1520	3897	307	2257	187	1074	0	30
12	788	0	603	595	4492	120	2377	73	1147	0	30
13	2136	0	603	1613	6105	325	2702	198	1345	0	30
14	13519	0	603	10207	16312	2059	4761	1253	2598	0	30
15	22080	0	603	16670	32982	3363	8124	2047	4645	0	30
16	21731	0	603	16407	49389	3310	11434	2014	6659	0	30
17	20738	0	603	15658	65047	3158	14592	1922	8581	0	30
18	14904	0	603	11252	76299	2270	16862	1382	9963	0	30
19	14186	0	603	10710	87009	2161	19023	1315	11278	0	30
20	13288	0	603	10032	97041	2024	21047	1232	12510	0	30
21	21019	0	603	15870	112911	3201	24248	1948	14458	0	30
22	13051	91	694	4411	117322	6226	30474	1109	15567	1214	125
23	21019	147	841	7104	124426	10026	40500	1787	17354	1955	320
24	24137	169	1010	8158	132584	11513	52013	2052	19406	2245	545
25	17310	87	1097	6526	139110	7218	59231	1194	20600	2285	773
26	14840	74	1171	5595	144705	6188	65419	1024	21624	1959	969
27	18303	92	1263	6900	151605	7632	73051	1263	22887	2416	1211
28	16141	80	1343	6085	157690	6731	79782	1114	24001	2131	1424
29	11155	0	1343	3718	161408	4306	84088	1468	25469	1663	1590
30	7307	0	1343	2435	163843	2821	86909	962	26431	1089	1699
31	6290	0	1343	2096	165939	2428	89337	828	27259	938	1793

Table // . Yentna Station south bank unadjusted sonar counts by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	TOTAL DAILY COUNT	CHINOOK		SCKEYE		PINK		CHUM		COHO	
		DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June											
30	295	43	43	200	200	26	26	26	26	0	0
July											
1	377	45	88	310	510	22	48	0	26	0	0
2	371	41	129	319	829	11	59	0	26	0	0
3	483	50	179	433	1202	0	59	0	26	0	0
4	259	20	199	209	1471	20	79	10	36	0	0
5	162	10	209	81	1552	61	140	10	46	0	0
6	201	17	226	134	1686	50	190	0	46	0	0
7	339	63	289	163	1849	113	303	0	46	0	0
8	164	0	289	114	1963	43	346	0	46	7	7
9	318	17	306	206	2169	79	425	12	58	4	11
10	4406	13	319	4124	6293	212	637	57	115	0	11
11	4507	0	319	4448	10741	45	682	14	129	0	11
12	8843	35	354	8808	19549	0	682	0	129	0	11
13	10558	0	354	10262	29811	85	767	211	340	0	11
14	15885	0	354	15535	45346	254	1021	64	404	32	43
15	15291	0	354	14970	60316	199	1220	107	511	15	58
16	9243	0	354	9022	69338	111	1331	55	566	55	113
17	5576	0	354	5403	74741	0	1331	173	739	0	113
18	5762	0	354	5244	79985	236	1567	282	1021	0	113
19	6190	0	354	4940	84925	458	2025	718	1739	74	187
20	7259	0	354	5568	90493	777	2802	777	2516	137	324
21	8620	0	354	7060	97553	957	3759	474	2990	129	453
22	11748	47	401	9269	106822	905	4664	822	3812	705	1158
23	10467	0	401	6039	112861	2784	7448	691	4503	953	2111
24	7400	0	401	3967	116828	2316	9764	636	5139	481	2592
25	6644	0	401	2711	119539	3036	12800	757	5896	140	2732
26	4767	0	401	1940	121479	1678	14478	443	6339	706	3438
27	3387	0	401	928	122407	1534	16012	383	6722	542	3980
28	4885	0	401	752	123159	2194	18206	664	7386	1275	5255
29	3579	0	401	716	123875	1918	20124	397	7783	548	5803
30	4051	0	401	774	124649	1989	22113	429	8212	859	6662
31	2374	0	401	432	125081	1187	23300	204	8416	551	7213
August											
1	3476	0	401	435	125516	1341	24641	435	8851	1265	8478
2	2342	0	401	553	126069	904	25545	110	8961	775	9253
3	961	0	401	438	126507	84	25629	21	8982	418	9671

Table 2. Yentna Station north bank unadjusted sonar counts by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	TOTAL DAILY COUNT	CHINOOK		SCKEYE		PINK		CHUM		COHO	
		DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June											
29	188	0	0	188	118	23	23	47	47	0	0
30	319	0	0	279	397	20	43	20	67	0	0
July											
1	395	2/									
2	599	2/									
3	1/	2/									
4	1/										
5	1/										
6	226	19	19	144	541	57	100	6	73	0	0
7	245	43	62	107	648	85	185	0	73	10	10
8	363	0	0	216	864	142	327	5	78	0	10
9	266	22	84	123	987	99	426	22	100	0	10
10	137	2	86	57	1044	72	498	6	106	0	10
11	151	0	86	43	1087	22	520	86	192	0	10
12	61	0	86	39	1126	11	531	11	203	0	10
13	174	0	86	150	1276	8	539	16	219	0	10
14	451	0	86	359	1635	46	585	46	265	0	10
15	470	0	86	378	2013	64	649	28	293	0	10
16	377	0	86	361	2374	0	649	16	309	0	10
17	438	0	86	406	2780	16	665	16	325	0	10
18	277	0	86	231	3011	14	679	29	354	3	13
19	234	1	87	193	3204	13	692	22	376	5	18
20	245	0	87	171	3375	37	729	36	412	1	19
21	273	0	87	194	3569	34	763	41	453	4	23
22	398	0	87	299	3868	21	784	64	517	14	37
23	539	0	87	298	4166	29	813	169	686	43	80
24	668	0	87	421	4587	70	883	158	844	19	99
25	702	0	87	520	5107	86	969	77	921	19	118
26	2516	0	87	1349	6456	571	1540	390	1311	205	324
27	1913	0	87	778	7234	266	1806	624	1935	245	569
28	1251	0	87	588	7822	280	2086	179	2114	204	773
29	908	0	87	430	8252	191	2277	239	2353	48	821
30	1700	0	87	971	9223	243	2520	486	2839	0	821
31	1418	0	87	631	9854	473	2993	157	2996	157	978
August											
1	615	0	87	615	10469	0	2993	0	2996	0	978
2	395	0	87	52	10521	158	3151	133	3129	52	1030
3	575	0	87	66	10587	89	3240	199	3328	221	1251

1/ Sonar operations halted due to high water conditions.

2/ Fishwheel operations halted due to high water conditions.

Table 13. Talkeetna Station east bank unadjusted sonar counts by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	TOTAL DAILY COUNT	CHINOOK		SCKEYE		PINK		CHUM		COHO	
		DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June											
22	56	56	56	0	0	0	0	0	0	0	0
23	49	49	105	0	0	0	0	0	0	0	0
24	26	26	131	0	0	0	0	0	0	0	0
25	27	27	158	0	0	0	0	0	0	0	0
26	37	37	195	0	0	0	0	0	0	0	0
27	31	31	226	0	0	0	0	0	0	0	0
28	19	19	245	0	0	0	0	0	0	0	0
29	12	12	257	0	0	0	0	0	0	0	0
30	11	11	268	0	0	0	0	0	0	0	0
July											
1	4	4	272	0	0	0	0	0	0	0	0
2	29	29	301	0	0	0	0	0	0	0	0
3	22	22	323	0	0	0	0	0	0	0	0
4	28	28	351	0	0	0	0	0	0	0	0
5	24	24	375	0	0	0	0	0	0	0	0
6	17	17	392	0	0	0	0	0	0	0	0
7	29	29	421	0	0	0	0	0	0	0	0
8	7	7	428	0	0	0	0	0	0	0	0
9	4	4	432	0	0	0	0	0	0	0	0
10	4	4	436	0	0	0	0	0	0	0	0
11	I/										
12	I/										
13	I/										
14	I/										
15	I/										
16	I/										
17	0	0	436	0	0	0	0	0	0	0	0
18	4	4	440	0	0	0	0	0	0	0	0
19	11	11	451	0	0	0	0	0	0	0	0
20	14	14	465	0	0	0	0	0	0	0	0
21	15	3	468	6	6	0	0	6	6	0	0
22	32	0	468	22	28	0	0	10	16	0	0
23	47	11	479	29	57	0	0	7	23	0	0
24	63	0	479	63	120	0	0	0	23	0	0
25	93	10	489	62	182	0	0	21	44	0	0

I/ Fishwheel and sonar operation halted due to high water conditions.

Table . . Continued.

DATE	TOTAL	CHINOOK		SOCKEYE		PINK		CHUM		COHO	
	DAILY COUNT	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
July											
26	109	0	489	85	267	0	0	24	68	0	0
27	165	0	489	75	342	7	7	83	151	0	0
28	268	5	494	135	477	13	20	110	260	5	5
29	305	12	506	146	623	13	33	122	383	12	17
30	531	0	506	103	726	17	50	359	742	52	69
31	469	9	515	130	856	69	119	252	994	9	78
August											
1	474	0	515	213	1069	27	146	234	1246	0	78
2	13	1/									
3	35	1/									
4	71	1/									
5	331	19	534	47	1116	95	241	142	1317	28	106
6	204	0	534	27	1143	78	319	75	1534	24	130
7	415	0	534	20	1163	216	535	145	1679	34	164
8	299	0	534	14	1174	156	691	104	1783	25	189
9	176	0	534	0	1174	117	808	59	1842	0	189
10	92	0	534	46	1120	0	808	46	1888	0	189
11	101	0	534	25	1245	25	833	38	1926	13	202
12	136	0	534	39	1284	0	833	97	2023	0	202
13	111	0	534	32	1316	0	833	79	2102	0	202
14	37	0	534	0	1316	0	833	37	2139	0	202
15	41	0	534	0	1316	0	833	41	2180	0	202
16	29	0	534	0	1316	0	833	29	2209	0	202
17	142	0	534	63	1379	16	849	47	2256	16	218
18	291	0	534	17	1396	40	889	194	2450	40	258
19	241	0	534	0	1396	51	940	172	2622	18	276
20	231	0	534	9	1405	34	974	111	2733	77	353

1/ Fishwheel halted due to high water conditions.

Table 14. Talkeetna Station west bank unadjusted sonar counts by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	TOTAL DAILY COUNT	CHINOOK		SOCKEYE		PINK		CHUM		COHO	
		DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June											
22	67	67	67	0	0	0	0	0	0	0	0
23	71	71	138	0	0	0	0	0	0	0	0
24	49	49	187	0	0	0	0	0	0	0	0
25	41	41	228	0	0	0	0	0	0	0	0
26	40	40	268	0	0	0	0	0	0	0	0
27	28	28	296	0	0	0	0	0	0	0	0
28	38	38	334	0	0	0	0	0	0	0	0
29	17	17	351	0	0	0	0	0	0	0	0
30	9	9	360	0	0	0	0	0	0	0	0
July											
1	18	18	378	0	0	0	0	0	0	0	0
2	22	22	400	0	0	0	0	0	0	0	0
3 2/	13	0	400	0	0	0	0	0	0	0	0
4 2/	14	0	400	0	0	0	0	0	0	0	0
5 2/	22	0	400	0	0	0	0	0	0	0	0
6 2/	33	0	400	0	0	0	0	0	0	0	0
7	32	0	400	32	32	0	0	0	0	0	0
8 2/	28	0	400	0	32	0	0	0	0	0	0
9 2/	10	0	400	0	32	0	0	0	0	0	0
10 2/	7	0	400	0	32	0	0	0	0	0	0
11 1/											
12 1/											
13 1/											
14 1/											
15 1/											
16 2/	8	0	400	0	32	0	0	0	0	0	0
17 2/	11	0	400	0	32	0	0	0	0	0	0
18	2	0	400	2	34	0	0	0	0	0	0
19	5	0	400	5	39	0	0	0	0	0	0
20	5	0	400	0	39	0	0	5	5	0	0
21	7	0	400	7	46	0	0	0	5	0	0
22	45	0	400	0	0	0	0	45	50	0	0
23	87	0	400	68	114	0	0	19	69	0	0
24	95	16	416	63	177	0	0	16	85	0	0
25	137	0	416	91	268	23	23	23	108	0	0
26	116	0	416	77	345	0	23	39	147	0	0
27	74	0	416	20	365	20	43	34	181	0	0
28	346	9	425	178	543	19	62	140	321	0	0
29	382	0	425	127	670	64	126	178	499	13	13
30	608	0	425	217	887	29	155	347	846	15	28
Total	673	0	425	141	1028	131	286	391	1237	10	38

1/ Fishwheels and sonars not operational

2/ No apportionments as a result of no fishwheel catches

Table 1. Anadromous Investigations, Su Hydro Studies, 1981. Sunshin Station east bank unadjusted sonar counts by species, Adult

DATE	TOTAL DAILY COUNT		CHINOOK		SOCKEYE		PINK		CHUM		COHO	
	COUNT	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY
31	15531	0	1578	1578	25174	7027	57357	3378	50494	550	831	550
30	15480	0	1578	1578	5283	6352	50570	3550	17118	552	811	552
29	11578	0	1578	1578	5402	4274	13318	4023	13888	534	388	534
28	8566	0	1578	1578	5047	3879	8474	5844	8837	52	152	52
27	2904	0	1578	1578	3011	1004	2522	1801	891	88	152	88
26	2783	0	1578	1578	3415	1157	4521	1514	2190	0	38	38
25	7323	55	1578	1578	4603	1500	3134	1558	3078	0	38	38
24	2933	0	1578	1578	3921	780	1634	1198	5748	54	38	54
23	6375	13	1578	1578	4849	457	874	1070	1220	13	14	13
22	7435	0	1578	1578	664	152	447	315	480	0	1	0
21	2292	0	1578	1578	2493	84	521	42	168	0	1	0
20	2982	0	1578	1578	2904	60	507	18	153	0	1	0
19	2886	0	1578	1578	2857	29	147	0	102	0	1	0
18	2612	0	1578	1578	3477	39	88	10	102	0	1	0
17	260	0	1578	1578	290	0	91	0	92	0	1	0
16	202	1	1578	1578	504	0	49	0	92	0	1	0
15	150	5	1578	1578	447	0	49	3	92	0	1	0
14	45	0	1609	0	335	0	49	45	95	0	1	0
13												
12												
11												
10	21	9	1609	9	335	14	49	2	20	0	1	0
9	77	19	1600	29	309	10	32	19	42	0	1	0
8	65	11	1281	32	580	16	52	0	52	0	1	0
7	65	6	1270	43	542	2	9	7	52	1	1	1
6	64	18	1264	45	505	4	4	4	19	0	0	0
5	134	27	1246	65	160	5	4	13	12	0	0	0
4	29	32	1489	50	98	5	5	5	5	0	0	0
3	43	33	1424	10	78	0	0	0	0	0	0	0
2	45	35	1451	10	68	0	0	0	0	0	0	0
1	36	24	1389	15	28	0	0	0	0	0	0	0
June												
30	24	32	1362	22	46	0	0	0	0	0	0	0
29	12	12	1333	0	24	0	0	0	0	0	0	0
28	68	68	1318	0	24	0	0	0	0	0	0	0
27	42	42	1250	0	24	0	0	0	0	0	0	0
26	65	65	1208	0	24	0	0	0	0	0	0	0
25	191	191	1146	0	24	0	0	0	0	0	0	0
24	583	583	922	0	24	0	0	0	0	0	0	0
23	696	696	675	0	24	0	0	0	0	0	0	0

1 Fishwheel and sonar operations halted 7-11 to 7-13 due to high water conditions.

3) Fishweirs and seines not operational due to flooding.

DATE	NO. OF WEIRS	NO. OF SEINES	NO. OF FISH	NO. OF BIRDS	NO. OF MAMMALS	NO. OF AMPHIBIANS	NO. OF REPTILES	NO. OF INSECTS	NO. OF PLANTS	NO. OF FUNGI	NO. OF BACTERIA	NO. OF VIRUSES
05	184	0	254	1281	173	0	0	0	0	0	0	0
06	252	0	254	4181	24	0	0	0	0	0	0	0
07	235	0	254	2771	22	0	0	0	0	0	0	0
08	071	0	254	3771	071	0	0	0	0	0	0	0
09	84	0	254	2421	84	0	0	0	0	0	0	0
10	13	0	254	2421	0	0	0	0	0	0	0	0
11	11	0	254	2421	0	0	0	0	0	0	0	0
12	01	0	254	2421	0	0	0	0	0	0	0	0
13	44	0	254	2421	25	0	0	0	0	0	0	0
14	425	0	254	2421	33	0	0	0	0	0	0	0
15	444	0	254	2421	14	0	0	0	0	0	0	0
16	222	0	254	2421	211	0	0	0	0	0	0	0
17	152	0	254	0821	041	0	0	0	0	0	0	0
18	824	0	254	0411	0	0	0	0	0	0	0	0
19	1221	0	254	2421	1140	0	0	0	0	0	0	0
20	1221	0	254	2421	1140	0	0	0	0	0	0	0
21	1221	0	254	2421	1140	0	0	0	0	0	0	0
22	1221	0	254	2421	1140	0	0	0	0	0	0	0
23	1221	0	254	2421	1140	0	0	0	0	0	0	0
24	1221	0	254	2421	1140	0	0	0	0	0	0	0
25	1221	0	254	2421	1140	0	0	0	0	0	0	0
26	1221	0	254	2421	1140	0	0	0	0	0	0	0
27	1221	0	254	2421	1140	0	0	0	0	0	0	0
28	1221	0	254	2421	1140	0	0	0	0	0	0	0
29	1221	0	254	2421	1140	0	0	0	0	0	0	0
30	1221	0	254	2421	1140	0	0	0	0	0	0	0

Table continued.

Table 16. Sunshine Station west bank unadjusted sonar counts by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	TOTAL DAILY COUNT	CHINOOK		SOCKEYE		PINK		CHUM		COHO	
		DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June											
25	88	88	88	0	0	0	0	0	0	0	0
26	57	57	145	0	0	0	0	0	0	0	0
27	31	31	176	0	0	0	0	0	0	0	0
28	51	51	227	0	0	0	0	0	0	0	0
29	45	45	272	0	0	0	0	0	0	0	0
30	14	14	286	0	0	0	0	0	0	0	0
July											
1	46	46	332	0	0	0	0	0	0	0	0
2	51	51	383	0	0	0	0	0	0	0	0
3	30	30	413	0	0	0	0	0	0	0	0
4	90	55	468	35	35	0	0	0	0	0	0
5	110	48	516	62	97	0	0	0	0	0	0
6	58	31	547	37	134	0	0	0	0	0	0
7	67	29	576	38	172	0	0	0	0	0	0
8	39	19	595	20	192	0	0	0	0	0	0
9	13	0	595	13	205	0	0	0	0	0	0
10 ^{1/}											
11 ^{1/}											
12 ^{1/}											
13 ^{1/}											
14 ^{1/}											
15 ^{1/}											
16 ^{1/}											
17 ^{1/}											
18 ^{1/}											
19	184	0	595	169	374	0	0	15	15	0	0
20	233	0	595	233	607	0	0	0	15	0	0
21	124	0	595	120	727	2	2	2	17	0	0
22	2173	59	654	2114	2841	0	2	0	17	0	0
23	3456	0	654	3456	6297	0	2	0	17	0	0
24	3627	0	654	3225	9522	201	203	201	218	0	0
25	3240	0	654	2916	12438	162	365	162	380	0	0
26	1414	0	654	1284	13722	86	451	44	424	0	0
27	2310	0	654	1945	15667	309	760	28	452	28	28
28	3419	19	673	2551	18218	19	779	359	811	471	499
29	4525	0	673	3186	21404	335	1114	1004	1815	0	499
30	3122	22	695	1792	23196	506	1620	484	2299	318	817
31	2445	25	720	699	23895	726	2346	672	2971	323	1140
August											
1	2533	0	720	793	24688	884	3230	469	3440	387	1527

^{1/} Fishwheel and sonar operations halted 7-10 to 7-18 due to high water conditions.

CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL		
20400	20000	41 R	OPA	C2	2022	FIELD CAMP OPERATIONS	7SEP81	18JUN82	14SEP81	25JUN82	1	1	1	
20400	20600	41 R	OPA	C2	203	RESUPPLY & EMERGENCY SERVICE	7SEP81	18JUN82	14SEP81	25JUN82	1	1	1	
215A0	21380	0	OPA	1 C3	204XX	EXHIBIT F MATERIAL COMPLETE	7SEP81	4SEP81	30NOV81	27NOV81	12	11	1	
21000	21100	15 R	OPA	C2	206	RIGHT OF ENTRY	FIN	7SEP81	18DEC81	15MAR82	25JUN82	27	27	1
22300	22400	1 R	OPA	C3	210	ACCESS ROAD	CT-1	7SEP81	11SEP81	19OCT81	23OCT81	6	0	1
22400	22600	2	OPA	C3	210	ACCESS ROAD	CT-2	14SEP81	25SEP81	11JAN82	22JAN82	17	0	1
22600	22800	3 R	OPA	C3	210	ACCESS ROAD	FIN	28SEP81	14OCT81	25JAN82	12FEB82	17	8	1
36700	36800	31 R	OPB	1 C4	3022	FIELD DATA INDEX OPERATION	FIN	7SEP81	9APR82	14SEP81	16APR82	1	1	1
37600	37700	9 R	OPB	1 C4	3033	FIELD DATA COLLECTION 81-82	ST	7SEP81	6NOV81	14SEP81	13NOV81	1	0	1
37700	37800	22	OPB	1 C4	3033	FIELD DATA COLLECTION 81-82	FIN	9NOV81	9APR82	16NOV81	16APR82	1	1	1
33500	34600	2	OPB	1 C4	3041	WATER RSRCS-FLOW EXTENSION	FIN	7SEP81	18SEP81	30NOV81	11DEC81	12	12	1
333A0	34600	4	OPB	1 C4	3042	WATER RSRCS-FREQ ANALYSIS	FIN	7SEP81	20OCT81	16NOV81	11DEC81	10	10	1
34500	34600	14 R	OPB	1 C4	3043	WATER RSRCS-RESERVOIR STUDY	CT-3	7SEP81	11DEC81	7SEP81	11DEC81	0	0	1 CRITICAL
34600	34800	6	OPB	1 C4	3043	WATER RSRCS-RESERVOIR STUDY	FIN	14DEC81	22JAN82	21DEC81	29JAN82	1	0	1
35000	35200	4	OPB	1 C4	3044	WATER RSRCS-PRE&POST PROJECT	ST	14DEC81	8JAN82	14DEC81	8JAN82	0	0	1 CRITICAL
35200	35400	4	OPB	1 C4	3044	WATER RSRCS-PRE&POST PROJECT	FIN	11JAN82	5FEB82	11JAN82	5FEB82	0	0	1 CRITICAL
39600	39700	25 R	OPB	1 C4	3046	WATER RSRCS-GLACIAL STUDIES	ST	7SEP81	26FEB82	7SEP81	26FEB82	0	0	1 CRITICAL
39700	39800	3	OPB	1 C4	3046	WATER RSRCS-GLACIAL STUDIES	FIN	1MAR82	19MAR82	29MAR82	16APR82	4	4	1
35400	354A0	0	OPB	1 C4	304XX	EXHIBIT H MATERIAL COMPLETE		8FEB82	5FEB82	19APR82	16APR82	10	10	1
35400	354B0	0	OPB	1 C4	304XX	EXHIBIT I MATERIAL COMPLETE		8FEB82	5FEB82	19APR82	16APR82	10	10	1
31800	32000	10 R	OPB	1 C4	3053	FLOODS-RESERVOIR ROUTING	CT-1	7SEP81	13NOV81	21SEP81	27NOV81	2	0	1
32000	32200	5	OPB	1 C4	3053	FLOODS-RESERVOIR ROUTING	FIN	16NOV81	18DEC81	30NOV81	1JAN82	2	1	1
30400	30600	16 R	OPB	1 C4	3061	HYDRULICS & ICE WTR LVLS	FIN	7SEP81	25DEC81	14SEP81	1JAN82	1	0	1
39000	39100	8	OPB	1 C4	3063	HYDR&ICE-RESER SLIDE SURGE	FIN	7SEP81	30OCT81	21DEC81	12FEB82	15	15	1
35800	36000	6	OPB	1 C4	3071	SEDIMENT YIELD & DEPOSITION	FIN	7SEP81	16OCT81	5OCT81	13NOV81	4	0	1
33600	33800	12 R	OPB	1 C4	3072	RIVER MORPHOLOGY	CT-1	19OCT81	8JAN82	16NOV81	5FEB82	4	4	1
33800	34000	4	OPB	1 C4	3072	RIVER MORPHOLOGY	FIN	8FEB82	5MAR82	8FEB82	5MAR82	0	0	1 CRITICAL
31100	31300	10 R	OPB	1 C4	309	ACCESS ROADS HYDROLOGY		14SEP81	20NOV81	26OCT81	1JAN82	6	5	1
31400	31700	6	OPB	1 C4	3102	LWR SUSITNA STUDIES-FOLLOWUP	FIN	28DEC81	5FEB82	18JAN82	26FEB82	3	2	1
31500	31400	16 R	OPB	1 C4	3102	LWR SUSITNA STUDIES-FOLLOWUP	CT-1	7SEP81	25DEC81	14SEP81	1JAN82	1	0	1
46000	46200	6	OPB	1 C1	408	DAH STABILITY	FIN	7SEP81	16OCT81	17MAY82	25JUN82	36	36	1
42800	43000	27 R	OPA	C4	409	LONG TERM MONITORING PROGRAM		7SEP81	12MAR82	21DEC81	25JUN82	15	15	1
40200	41800	5 R	OPB	1 C1	410	RESERVOIR INDUCED SEISMICITY		7SEP81	9OCT81	14DEC81	15JAN82	14	9	1
42400	42600	16 R	OPA	C4	411	SEISMIC GEOLOGY-FIELD STUDY		7SEP81	25DEC81	8MAR82	25JUN82	26	24	1
41400	41600	12 R	OPB	1 C1	412	EVALUATION & REPORT DRAFT	ST	7SEP81	27NOV81	12OCT81	1JAN82	5	0	1
41600	41800	2	OPB	1 C1	412	EVALUATION & REPORT DRAFT	CT-1	30NOV81	11DEC81	4JAN82	15JAN82	5	0	1
41800	42000	4	OPB	1 C1	412	EVALUATION & REPORT DRAFT	FIN	14DEC81	8JAN82	18JAN82	12FEB82	5	5	1
44600	41800	14 R	OPB	1 C1	413	GROUND MOTION STUDIES	FIN	7SEP81	11DEC81	12OCT81	15JAN82	5	0	1
45600	41800	14 R	OPB	1 C1	414	DAH STABILITY CONSULTING		7SEP81	11DEC81	12OCT81	15JAN82	5	0	1
45400	45700	6	OPB	1 C1	415	SOIL SUSCEPTBTY-SEISMIC FAIL	FIN	7SEP81	16OCT81	21DEC81	29JAN82	15	15	1
526A0	52700	4 R	OPA	C4	506	1981 EXPLORATION PROGRAM	FIN	7SEP81	20OCT81	7SEP81	20OCT81	0	0	1 CRITICAL
53800	54000	9	OPB	1 C1	507	1982-4 PROGRAM DESIGN		7SEP81	6NOV81	16NOV81	15JAN82	10	0	1
53000	53200	4 R	OPB	1 C1	5082	DATA ASSEMBLY-1981 DRAFT	CT-1	7SEP81	20OCT81	7SEP81	20OCT81	0	0	1 CRITICAL
53200	53300	3	OPB	1 C1	5082	DATA ASSEMBLY-1981 DRAFT	FIN	5OCT81	23OCT81	25JAN82	12FEB82	16	0	1
53400	53500	3	OPB	1 C1	5083	DATA ASSEMBLY FINAL-DRAFT	ST	5OCT81	23OCT81	25JAN82	12FEB82	16	0	1
53500	53600	4	OPB	1 C1	5083	DATA ASSEMBLY FINAL-DRAFT	FIN	26OCT81	20NOV81	15FEB82	12MAR82	16	16	1
60806	60808	2 R	OPB	1 C6	608	UPDATE DESIGN CRITERIA(DC)	FIN	7SEP81	18SEP81	4JAN82	15JAN82	17	0	1
60909	60910	4	OPB	1 C4	609	UPDATE CRIT&ASSUMPTIONS(WAT)	FIN	7SEP81	20OCT81	7SEP81	20OCT81	0	0	1 CRITICAL
61009	61010	4	OPB	1 C4	610	UPDATE CRIT&ASSUMPTIONS(DC)	FIN	7SEP81	20OCT81	7SEP81	20OCT81	0	0	1 CRITICAL
61117	61118	9	OPB	1 C5	611	INCRP GENL AMENDMENTS (WAT)	CT-1	7SEP81	6NOV81	28SEP81	27NOV81	3	0	1
61118	61119	1	OPB	1 C5	611	INCRP GENL AMENDMENTS (WAT)	FIN	9NOV81	13NOV81	30NOV81	4DEC81	3	3	1

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CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
61134	61142	2	R	OPB 1 C5	611 DAM FOUNDATION TREATMENT-WAT	CT-1 7SEP81	18SEP81	9NOV81	20NOV81	9	0	1
61136	61143	2		OPB 1 C5	611 DESIGN DAM(WAT)	ST 7SEP81	18SEP81	5OCT81	16OCT81	4	0	1
61140	61144	6		OPB 1 C5	611 OPTIMIZE DAM HEIGHT	7SEP81	18OCT81	28SEP81	6NOV81	3	3	1
61143	61147	7		OPB 1 C5	611 DESIGN DAM(WAT)	CT-1 21SEP81	6NOV81	19OCT81	4DEC81	4	4	1
61145	61150	5		OPB 1 C5	611 ADJUST ALIGNMENT(WAT)	FIN 7SEP81	9OCT81	9NOV81	11DEC81	9	9	1
61147	61156	12		OPB 1 C5	611 DESIGN DAM(WAT)	FIN 7DEC81	26FEB82	7DEC81	26FEB82	0	0	1 CRITICAL
61148	61154	7		OPB 1 C5	611 DAM FOUNDATION TREATMENT-WAT	FIN 21SEP81	6NOV81	23NOV81	8JAN82	9	9	1
61158	61160	4	R	OPB 1 C5	611 DRAFT REPORT DRAWINGS(WAT)	ST 7SEP81	2OCT81	7SEP81	2OCT81	0	0	1 CRITICAL
61160	61162	3		OPB 1 C5	611 DRAFT REPORT DRAWINGS(WAT)	CT-1 5OCT81	23OCT81	5OCT81	23OCT81	0	0	1 CRITICAL
61162	61164	7		OPB 1 C5	611 DRAFT REPORT DRAWINGS(WAT)	CT-2 26OCT81	11DEC81	26OCT81	11DEC81	0	0	1 CRITICAL
61164	61168	5		OPB 1 C5	611 DRAFT REPORT DRAWINGS(WAT)	CT-3 14DEC81	15JAN82	14DEC81	15JAN82	0	0	1 CRITICAL
61168	61170	4		OPB 1 C5	611 DRAFT REPORT DRAWINGS(WAT)	CT-4 18JAN82	12FEB82	18JAN82	12FEB82	0	0	1 CRITICAL
61170	61172	4		OPB 1 C5	611 DRAFT REPORT DRAWINGS(WAT)	FIN 15FEB82	12MAR82	15FEB82	12MAR82	0	0	1 CRITICAL
61223	61224	5	R	OPB 1 C6	612 INCORP GENL AMENDMENTS(DC)	CT-1 7SEP81	9OCT81	14SEP81	16OCT81	1	0	1
61224	61226	1		OPB 1 C6	612 INCORP GENL AMENDMENTS(DC)	FIN 12OCT81	16OCT81	19OCT81	23OCT81	1	0	1
61244	61248	6		OPB 1 C6	612 OPTIMIZE DAM HEIGHT(DC)	FIN 7SEP81	16OCT81	28SEP81	6NOV81	3	3	1
61246	61249	5		OPB 1 C6	612 DESIGN DAM(DC)	CT-3 7SEP81	9OCT81	21SEP81	23OCT81	2	2	1
61249	61252	7		OPB 1 C6	612 DESIGN DAM(DC)	FIN 26OCT81	11DEC81	26OCT81	11DEC81	0	0	1 CRITICAL
61250	61254	7		OPB 1 C6	612 FOUNDATION TREATMENT(DC)	FIN 7SEP81	23OCT81	23NOV81	8JAN82	11	11	1
61256	61258	4	R	OPB 1 C6	612 DRAFT REPORT DWGS(DC)	ST 7SEP81	2OCT81	7SEP81	2OCT81	0	0	1 CRITICAL
61258	61260	3		OPB 1 C6	612 DRAFT REPORT DWGS(DC)	CT-1 5OCT81	23OCT81	5OCT81	23OCT81	0	0	1 CRITICAL
61260	61262	7		OPB 1 C6	612 DRAFT REPORT DWGS(DC)	CT-2 26OCT81	11DEC81	26OCT81	11DEC81	0	0	1 CRITICAL
61262	61264	5		OPB 1 C6	612 DRAFT REPORT DWGS(DC)	CT-3 14DEC81	15JAN82	14DEC81	15JAN82	0	0	1 CRITICAL
61264	61266	4		OPB 1 C6	612 DRAFT REPORT DWGS(DC)	CT-4 18JAN82	12FEB82	18JAN82	12FEB82	0	0	1 CRITICAL
61266	61268	4		OPB 1 C6	612 DRAFT REPORT DWGS(DC)	FIN 15FEB82	12MAR82	15FEB82	12MAR82	0	0	1 CRITICAL
61325	61330	2		OPB 1 C4	613 DAM SELECTION REPORT	ST 14DEC81	25DEC81	14DEC81	25DEC81	0	0	1 CRITICAL
61330	61335	2		OPB 1 C4	613 DAM SELECTION REPORT	CT-1 28DEC81	8JAN82	28DEC81	8JAN82	0	0	1 CRITICAL
61335	61340	2		OPB 1 C4	613 DAM SELECTION REPORT	CT-2 11JAN82	22JAN82	11JAN82	22JAN82	0	0	1 CRITICAL
61340	61345	2		OPB 1 C4	613 DAM SELECTION REPORT	CT-3 25JAN82	3FEB82	25JAN82	3FEB82	0	0	1 CRITICAL
61345	61350	1		OPB 1 C4	613 DAM SELECTION REPORT	FIN 8FEB82	12FEB82	8FEB82	12FEB82	0	0	1 CRITICAL
61408	61410	9		OPB 1 C4	614 UPDATE CRIT ASSUMPTIONS(SPWY)	FIN 7SEP81	6NOV81	5OCT81	4DEC81	4	0	1
61704	61705	9		OPB 1 C5	617 INCORP GENL AMENDMENTS (WAT)	CT-1 7SEP81	6NOV81	28SEP81	27NOV81	3	0	1
61705	61706	1		OPB 1 C5	617 INCORP GENL AMENDMENTS (WAT)	FIN 9NOV81	13NOV81	30NOV81	4DEC81	3	3	1
61716	61726	3	R	OPB 1 C5	617 OPT AGAINST DAM FREEBOARD	ST 7SEP81	25SEP81	16NOV81	4DEC81	10	0	1
61718	61734	7	R	OPB 1 C5	617 ADJUST ALIGNMENTS	FIN 26OCT81	11DEC81	23NOV81	8JAN82	4	4	1
61720	61728	6		OPB 1 C5	617 ENERGY DISSIPATION-WAT	CT-1 7SEP81	16OCT81	5OCT81	13NOV81	4	0	1
61721	61722	1		OPB 1 C5	617 PREL DESGN CHUTE/ROCK ANCRS	CT-1 7SEP81	11SEP81	28DEC81	1JAN82	16	2	1
61723	61724	2		OPB 1 C5	617 PREL DESGN CONTRL STRUCTURES	CT-1 7SEP81	18SEP81	14SEP81	25SEP81	1	0	1
61724	61730	4		OPB 1 C5	617 PREL DESGN CONTRL STRUCTURES	FIN 21SEP81	16OCT81	28SEP81	23OCT81	1	1	1
61728	61740	8		OPB 1 C5	617 ENERGY DISSIPATION-WAT	FIN 19OCT81	11DEC81	16NOV81	8JAN82	4	4	1
61732	61738	5		OPB 1 C5	617 OPT AGAINST DAM FREEBOARD	FIN 28SEP81	30OCT81	7DEC81	8JAN82	10	10	1
61736	61744	4		OPB 1 C5	617 PREL DESGN CHUTE/ROCK ANCRS	FIN 28SEP81	23OCT81	4JAN82	29JAN82	14	14	1
61742	61746	6		OPB 1 C5	617 DESGN GROUTING/DRAINAGE-WAT	7SEP81	16OCT81	18JAN82	26FEB82	19	19	1
61752	61762	2	R	OPB 1 C5	617 DESIGN CLOSURE/CONTRL STRUCT	ST 7SEP81	18SEP81	11JAN82	22JAN82	18	9	1
61758	61764	5	R	OPB 1 C5	617 DESIGN ENERGY DISSIPATION	ST 7SEP81	9OCT81	14DEC81	15JAN82	14	0	1
61760	61768	11		OPB 1 C5	617 DESIGN WATER PASSAGES	FIN 7SEP81	20NOV81	26OCT81	8JAN82	7	0	1
61764	61766	4		OPB 1 C5	617 DESIGN ENERGY DISSIPATION	CT-1 12OCT81	6NOV81	18JAN82	12FEB82	14	0	1
61770	61776	5		OPB 1 C5	617 DESIGN CLOSURE/CONTRL STRUCT	FIN 23NOV81	25DEC81	25JAN82	26FEB82	9	9	1
61772	61774	2		OPB 1 C5	617 DESIGN ENERGY DISSIPATION	FIN 9NOV81	20NOV81	15FEB82	26FEB82	14	14	1
61778	61780	4	R	OPB 1 C5	617 DRAFT REPORT DRAWINGS(WAT)	ST 7SEP81	2OCT81	7SEP81	2OCT81	0	0	1 CRITICAL
61780	61782	3		OPB 1 C5	617 DRAFT REPORT DRAWINGS(WAT)	CT-1 5OCT81	23OCT81	5OCT81	23OCT81	0	0	1 CRITICAL

ACRES AMERICAN SUSITNA HYDRO-ELECTRIC PROJECT

CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL	
61782	61784	7	OPB	1 C5	617 DRAFT REPORT DRAWINGS(WAT)	CT-2	26OCT81	11DEC81	26OCT81	11DEC81	0	0	1 CRITICAL
61784	61786	5	OPB	1 C5	617 DRAFT REPORT DRAWINGS(WAT)	CT-3	14DEC81	15JAN82	14DEC81	15JAN82	0	0	1 CRITICAL
61786	61788	4	OPB	1 C5	617 DRAFT REPORT DRAWINGS(WAT)	CT-4	18JAN82	12FEB82	18JAN82	12FEB82	0	0	1 CRITICAL
61788	61790	4	OPB	1 C5	617 DRAFT REPORT DRAWINGS(WAT)	FIN	15FEB82	12MAR82	15FEB82	12MAR82	0	0	1 CRITICAL
61803	61804	4 R	OPB	1 C6	618 INCORP GENL AMENDMENTS(DC)	CT-1	7SEP81	16OCT81	7SEP81	16OCT81	0	0	1 CRITICAL
61804	61806	1	OPB	1 C6	618 INCORP GENL AMENDMENTS(DC)	FIN	19OCT81	23OCT81	19OCT81	23OCT81	0	0	1 CRITICAL
61810	61838	14 R	OPB	1 C6	618 SPILLWAYS ENERGY DSSIPATINS		7SEP81	11DEC81	5OCT81	8JAN82	4	4	1
61814	61832	7 R	OPB	1 C6	618 ADJUST ALIGNMENTS(DC)	FIN	7SEP81	23OCT81	21SEP81	6NOV81	2	2	1
61822	61828	2	OPB	1 C6	618 PREL DESGN CONTRL STRUCT(DC)	CT-1	7SEP81	18SEP81	28SEP81	9OCT81	3	0	1
61824	61826	2	OPB	1 C6	618 OPT AGAINST DAM FREEBRD(DC)	CT-1	5OCT81	16OCT81	5OCT81	16OCT81	0	0	1 CRITICAL
61826	61834	7	OPB	1 C6	618 OPT AGAINST DAM FREEBRD(DC)	CT-2	19OCT81	4DEC81	19OCT81	4DEC81	0	0	1 CRITICAL
61828	61830	4	OPB	1 C6	618 PREL DESGN CONTRL STRUCT(DC)	FIN	21SEP81	16OCT81	12OCT81	6NOV81	3	3	1
61834	61840	5	OPB	1 C6	618 OPT AGAINST DAM FREEBRD(DC)	FIN	7DEC81	8JAN82	7DEC81	8JAN82	0	0	1 CRITICAL
61836	61844	4	OPB	1 C6	618 PREL DESGN CHUTE/ROCK ANCRS	FIN	7SEP81	2OCT81	12OCT81	6NOV81	5	5	1
61842	61846	6	OPB	1 C6	618 PREL DESGN GROUTING/DRAINAGE		19OCT81	27NOV81	18JAN82	26FEB82	13	13	1
61852	61854	5 R	OPB	1 C6	618 LL RELEASES ENERGY DSSIPATIN	ST	7SEP81	9OCT81	14DEC81	15JAN82	14	0	1
61856	61860	2	OPB	1 C6	618 LL RELEASES ENERGY DSSIPATIN	FIN	12OCT81	23OCT81	18JAN82	29JAN82	14	14	1
61862	61864	4 R	OPB	1 C6	618 DRAFT REPORT DWGS(DC)	ST	7SEP81	2OCT81	7SEP81	2OCT81	0	0	1 CRITICAL
61864	61866	3	OPB	1 C6	618 DRAFT REPORT DWGS(DC)	ST	5OCT81	23OCT81	5OCT81	23OCT81	0	0	1 CRITICAL
61866	61868	7	OPB	1 C6	618 DRAFT REPORT DWGS(DC)	CT-2	26OCT81	11DEC81	26OCT81	11DEC81	0	0	1 CRITICAL
61868	61870	5	OPB	1 C6	618 DRAFT REPORT DWGS(DC)	CT-3	14DEC81	15JAN82	14DEC81	15JAN82	0	0	1 CRITICAL
61870	61872	4	OPB	1 C6	618 DRAFT REPORT DWGS(DC)	CT-4	18JAN82	12FEB82	18JAN82	12FEB82	0	0	1 CRITICAL
61872	61874	4	OPB	1 C6	618 DRAFT REPORT DWGS(DC)	FIN	15FEB82	12MAR82	15FEB82	12MAR82	0	0	1 CRITICAL
61925	61930	2	OPB	1 C4	619 SPILLWAY SELECTION REPORT	ST	7SEP81	18SEP81	7DEC81	18DEC81	13	0	1
61930	61935	2	OPB	1 C4	619 SPILLWAY SELECTION REPORT	CT-1	21SEP81	2OCT81	21DEC81	1JAN82	13	0	1
61935	61940	4	OPB	1 C4	619 SPILLWAY SELECTION REPORT	CT-2	5OCT81	3OCT81	4JAN82	29JAN82	13	0	1
61940	61945	2	OPB	1 C4	619 SPILLWAY SELECTION REPORT	CT-3	2NOV81	13NOV81	1FEB82	12FEB82	13	0	1
61945	61950	2	OPB	1 C4	619 SPILLWAY SELECTION REPORT	CT-4	16NOV81	27NOV81	15FEB82	26FEB82	13	0	1
61950	61955	1	OPB	1 C4	619 SPILLWAY SELECTION REPORT	FIN	30NOV81	4DEC81	1MAR82	5MAR82	13	0	1
62024	62034	2 R	OPB	1 C5	620 DETERMINE SERVICES-H2O,ELEC,SEWGE		7SEP81	18SEP81	21DEC81	1JAN82	15	6	1
62026	62036	2 R	OPB	1 C5	620 DETERMINE HOUSING REQUIREMENT		7SEP81	18SEP81	21DEC81	1JAN82	15	6	1
62028	62029	2 R	OPB	1 C5	620 DETERMINE AUX REQUIREMENTS	ST	7SEP81	18SEP81	30NOV81	11DEC81	12	0	1
62028	62038	4	OPB	1 C5	620 DETERMINE AUXILIARY REQUIREMENTS		7SEP81	2OCT81	7OCT81	1JAN82	13	4	1
62029	62038	2	OPB	1 C5	620 DETERMINE AUX REQUIREMENTS	FIN	21SEP81	2OCT81	21DEC81	1JAN82	13	4	1
62030	62040	3	OPB	1 C5	620 IDENTIFY & EVALUATE SITES		12OCT81	3OCT81	14DEC81	1JAN82	9	0	1
62032	62042	3	OPB	1 C5	620 PRELIM LAYOUT OF TOWNSITE		21SEP81	9OCT81	14DEC81	1JAN82	12	3	1
62044	62046	4	OPB	1 C5	620 REVISE & FINALIZE LOAD PARAMETERS		2NOV81	27NOV81	4JAN82	29JAN82	9	0	1
62046	62048	2	OPB	1 C5	620 PREP DESIGN TRANSMITTAL		30NOV81	11DEC81	1FEB82	12FEB82	9	0	1
62050	62052	3	OPB	1 C5	620 FINALIZE DESIGN TRANSMITTAL		14DEC81	1JAN82	15FEB82	5MAR82	9	0	1
62110	62116	4 R	OPB	1 C5	621 DESGN CLOSURE/CONTRL STRUC	ST	7SEP81	2OCT81	12OCT81	6NOV81	5	5	1
62118	62122	12 R	OPB	1 C5	621 DESIGN WATER PASSAGES-WAY	FIN	23NOV81	12FEB82	11JAN82	2APR82	7	7	1
62120	62124	3 R	OPB	1 C5	621 DESIGN COFFERDAM HEIGHT	FIN	7SEP81	25SEP81	14SEP81	2OCT81	1	1	1
62123	62124	4 R	OPB	1 C5	621 DRAFT REPORT DRAWINGS(WAT)	ST	7SEP81	2OCT81	7SEP81	2OCT81	0	0	1 CRITICAL
62124	62126	3	OPB	1 C5	621 DRAFT REPORT DRAWINGS(WAT)	CT-1	5OCT81	23OCT81	5OCT81	23OCT81	0	0	1 CRITICAL
62126	62128	7	OPB	1 C5	621 DRAFT REPORT DRAWINGS(WAT)	CT-2	26OCT81	11DEC81	26OCT81	11DEC81	0	0	1 CRITICAL
62128	62130	5	OPB	1 C5	621 DRAFT REPORT DRAWINGS(WAT)	CT-3	14DEC81	15JAN82	14DEC81	15JAN82	0	0	1 CRITICAL
62130	62132	4	OPB	1 C5	621 DRAFT REPORT DRAWINGS(WAT)	CT-4	18JAN82	12FEB82	18JAN82	12FEB82	0	0	1 CRITICAL
62132	62134	4	OPB	1 C5	621 DRAFT REPORT DRAWINGS(WAT)	FIN	15FEB82	12MAR82	15FEB82	12MAR82	0	0	1 CRITICAL
62206	62212	2 R	OPB	1 C6	622 DESGN WATER PASSAGES(DC)	ST	7SEP81	18SEP81	28DEC81	8JAN82	16	0	1
62208	62214	3 R	OPB	1 C6	622 DESGN COFFERDAM HEIGHT(DC)	ST	7SEP81	25SEP81	8FEB82	26FEB82	22	0	1
62210	62216	3 R	OPB	1 C6	622 CLOSURE CONTROL STRUCTURE(DC)		7SEP81	16OCT81	28SEP81	6NOV81	3	3	1

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CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL		
62218	62222	12	OPB	1 C6	622 DESGN WATER PASSAGES(DC)	FIN	21SEP81	11DEC81	11JAN82	2APR82	16	16	1	
62220	62224	5	OPB	1 C6	622 DESGN COFFERDAM HEIGHT(DC)	FIN	28SEP81	30OCT81	1MAR82	2APR82	22	22	1	
62226	62228	4	R	OPB	1 C6	622 DRAFT REPORT DWGS(DC)	ST	7SEP81	20OCT81	7SEP81	20OCT81	0	0	1 CRITICAL
62228	62230	3	OPB	1 C6	622 DRAFT REPORT DWGS(DC)	CT-1	5OCT81	23OCT81	5OCT81	23OCT81	0	0	1 CRITICAL	
62230	62232	7	OPB	1 C6	622 DRAFT REPORT DWGS(DC)	CT-2	26OCT81	11DEC81	26OCT81	11DEC81	0	0	1 CRITICAL	
62232	62234	5	OPB	1 C6	622 DRAFT REPORT DWGS(DC)	CT-3	14DEC81	15JAN82	14DEC81	15JAN82	0	0	1 CRITICAL	
62234	62236	4	OPB	1 C6	622 DRAFT REPORT DWGS(DC)	CT-4	18JAN82	12FEB82	18JAN82	12FEB82	0	0	1 CRITICAL	
62236	62238	4	OPB	1 C6	622 DRAFT REPORT DWGS(DC)	FIN	15FEB82	12MAR82	15FEB82	12MAR82	0	0	1 CRITICAL	
62328	62332	3	OPB	1 C4	623 LAYDT SURFACE P/H T/R I 800 MW	7SEP81	25SEP81	2NOV81	20NOV81	8	0	1		
62330	62331	1	OPB	1 C4	623 COST LYOUT SURFACE U/G STRU	ST	7SEP81	11SEP81	14NOV81	20NOV81	10	2	1	
62331	62337	2	OPB	1 C4	623 DESIGN ENERGY DISSIPATION	CT-1	28SEP81	9OCT81	23NOV81	4DEC81	8	0	1	
62334	62336	1	GPR	1 C4	623 SELECT TYPE OF POWER HOUSE	12OCT81	16OCT81	7DEC81	11DEC81	8	0	1		
62337	62338	1	OPB	1 C4	623 DESIGN ENERGY DISSIPATION	FIN	12OCT81	16OCT81	7DEC81	11DEC81	8	0	1	
62340	62341	2	OPB	1 C4	623 REVIEW ALIGNMENTS-WAT.	CT-2	7SEP81	18SEP81	7SEP81	18SEP81	0	0	1 CRITICAL	
62341	62346	7	OPB	1 C4	623 REVIEW ALIGNMENTS-WAT	FIN	21SEP81	6NOV81	21SEP81	6NOV81	0	0	1 CRITICAL	
62342	62348	4	OPB	1 C4	623 REVIEW INTAKE WATER PASSAGES	21SEP81	16OCT81	19OCT81	13NOV81	4	0	1		
62344	62358	7	OPB	1 C4	623 OPTIMIZE POWER FACILITIES	19OCT81	4DEC81	14DEC81	29JAN82	8	2	1		
62350	62356	5	OPB	1 C4	623 PREL DESIGN INTAKE STRUCTURE	ST	19OCT81	20NOV81	16NOV81	18DEC81	4	0	1	
62352	62354	4	OPB	1 C4	623 PREL DESIGN WATER PASSAGES	ST	9NOV81	4DEC81	30NOV81	25DEC81	3	0	1	
62354	62360	2	OPB	1 C4	623 PREL DESIGN WATER PASSAGES	FIN	7DEC81	18DEC81	28DEC81	8JAN82	3	0	1	
62356	62364	6	OPB	1 C4	623 PREL DESIGN INTAKE STRUCTURE	FIN	23NOV81	1JAN82	21DEC81	29JAN82	4	4	1	
62362	62368	9	OPB	1 C4	623 PREL DESIGN OF POWERHOUSE	21DEC81	19FEB82	1FEB82	2APR82	6	6	1		
62370	62371	4	R	OPB	1 C4	623 DRAFT REPORT DRAWINGS(DC)	ST	7SEP81	20OCT81	7SEP81	20OCT81	0	0	1 CRITICAL
62371	62372	3	OPB	1 C4	623 DRAFT REPORT DRAWINGS(DC)	CT-1	5OCT81	23OCT81	5OCT81	23OCT81	0	0	1 CRITICAL	
62372	62373	7	OPB	1 C4	623 DRAFT REPORT DRAWINGS(WAT)	CT-2	26OCT81	11DEC81	26OCT81	11DEC81	0	0	1 CRITICAL	
62373	62374	5	OPB	1 C4	623 DRAFT REPORT DRAWINGS(WAT)	CT-3	14DEC81	15JAN82	14DEC81	15JAN82	0	0	1 CRITICAL	
62374	62375	4	OPB	1 C4	623 DRAFT REPORT DRAWINGS(WAT)	CT-4	18JAN82	12FEB82	18JAN82	12FEB82	0	0	1 CRITICAL	
62375	62378	4	OPB	1 C4	623 DRAFT REPORT DRAWINGS(WAT)	FIN	15FEB82	12MAR82	15FEB82	12MAR82	0	0	1 CRITICAL	
62436	62438	3	OPB	1 C4	624 COST LAYOUT IN 2B	7SEP81	25SEP81	23NOV81	11DEC81	11	0	1		
62440	62441	2	OPB	1 C4	624 REVIEW ALIGNMENTS(DC)	CT-2	7SEP81	18SEP81	12OCT81	23OCT81	5	0	1	
62441	62450	5	OPB	1 C4	624 REVIEW ALIGNMENTS(DC)	21SEP81	23OCT81	26OCT81	27NOV81	5	0	1		
62442	62443	4	OPB	1 C4	624 REVIEW INTAKE WATER PASSAGES	21SEP81	16OCT81	26OCT81	20NOV81	5	0	1		
62444	62452	7	OPB	1 C4	624 OPTIMIZE POWER FACILITIES	28SEP81	13NOV81	14DEC81	29JAN82	11	0	1		
62446	62458	10	OPB	1 C4	624 PREL DESIGN OF INTAKE	19OCT81	25DEC81	23NOV81	29JAN82	5	3	1		
62448	62454	6	OPB	1 C4	624 PREL DESIGN WATER PASSAGES	26OCT81	4DEC81	30NOV81	8JAN82	5	5	1		
62456	62460	9	OPB	1 C4	624 PREL DESIGN POWERHOUSE	16NOV81	15JAN82	1FEB82	2APR82	11	11	1		
62462	62464	4	R	OPB	1 C4	624 DRAFT REPORT DWGS(DC)	ST	7SEP81	20OCT81	7SEP81	20OCT81	0	0	1 CRITICAL
62464	62466	3	OPB	1 C4	624 DRAFT REPORT DWGS(DC)	CT-1	5OCT81	23OCT81	5OCT81	23OCT81	0	0	1 CRITICAL	
62466	62468	7	OPB	1 C4	624 DRAFT REPORT DWGS(DC)	CT-2	26OCT81	11DEC81	26OCT81	11DEC81	0	0	1 CRITICAL	
62468	62470	5	OPB	1 C4	624 DRAFT REPORT DWGS(DC)	CT-3	14DEC81	15JAN82	14DEC81	15JAN82	0	0	1 CRITICAL	
62470	62472	4	OPB	1 C4	624 DRAFT REPORT DWGS(DC)	CT-4	18JAN82	12FEB82	18JAN82	12FEB82	0	0	1 CRITICAL	
62472	62474	4	OPB	1 C4	624 DRAFT REPORT DWGS(DC)	FIN	15FEB82	12MAR82	15FEB82	12MAR82	0	0	1 CRITICAL	
62602	62604	3	OPB	1 C5	626 INCORP GENL AMENDMENTS (WAT)	ST	7SEP81	25SEP81	7SEP81	25SEP81	0	0	1 CRITICAL	
62604	62605	9	OPB	1 C5	626 INCORP GENL AMENDMENTS (WAT)	CT-1	28SEP81	27NOV81	28SEP81	27NOV81	0	0	1 CRITICAL	
62605	62606	1	OPB	1 C5	626 INCORP GENL AMENDMENTS (WAT)	FIN	30NOV81	4DEC81	30NOV81	4DEC81	0	0	1 CRITICAL	
62616	62620	3	OPB	1 C5	626 LAYOUT SURFACE P/H R/R CHANNEL	7SEP81	25SEP81	19OCT81	6NOV81	6	6	1		
62618	62619	1	OPB	1 C5	626 COST LAYOUT SURFACE U/G STRU	ST	7SEP81	11SEP81	26OCT81	30OCT81	7	0	1	
62619	62625	2	OPB	1 C5	626 COST LAYOUT SURFACE U/G STRU	CT-1	14SEP81	25SEP81	2NOV81	13NOV81	7	0	1	
62622	62624	1	OPB	1 C5	626 SELECT TYPE OF POWERHOUSE	28SEP81	20OCT81	16NOV81	20NOV81	7	0	1		
62625	62626	1	OPB	1 C5	626 COST LAYOUT SURFACE U/G STRU	FIN	28SEP81	20OCT81	16NOV81	20NOV81	7	0	1	
62628	62629	2	OPB	1 C5	626 REVIEW ALIGNMENTS	CT-2	7SEP81	18SEP81	7SEP81	18SEP81	0	0	1 CRITICAL	

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CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL	
62629	62634	7	OPB 1 C5	626 REVIEW ALIGNMENTS	FIN	21SEP81	6NOV81	21SEP81	6NOV81	0	0	1 CRITICAL
62630	62636	4	OPB 1 C5	626 REVIEW INTAKE WATER PASSAGES		21SEP81	16OCT81	19OCT81	13NOV81	4	0	1
62632	62646	7	OPB 1 C5	626 OPTIMIZE POWER FACILITIES		5OCT81	20NOV81	23NOV81	8JAN82	7	7	1
62638	62644	5	OPB 1 C5	626 PREL DESIGN INTAKE STRUCTURE	ST	19OCT81	20NOV81	16NOV81	18DEC81	4	0	1
62640	62642	4	OPB 1 C5	626 PREL DESIGN WATER PASSAGES	ST	9NOV81	4DEC81	30NOV81	25DEC81	3	0	1
62642	62648	2	OPB 1 C5	626 PREL DESIGN WATER PASSAGES	FIN	7DEC81	18DEC81	28DEC81	8JAN82	3	0	1
62644	62652	6	OPB 1 C5	626 PREL DESIGN INTAKE STRUCTURE	FIN	23NOV81	1JAN82	21DEC81	29JAN82	4	4	1
62650	62655	9	OPB 1 C5	626 PREL DESIGN OF POWERHOUSE(WAT)		21DEC81	19FEB82	1FEB82	2APR82	6	6	1
62656	62658	4 R	OPB 1 C5	626 DRAFT REPORT DRAWINGS(DC)	ST	7SEP81	2OCT81	7SEP81	2OCT81	0	0	1 CRITICAL
62658	62660	3	OPB 1 C5	626 DRAFT REPORT DRAWINGS(DC)	CT-1	5OCT81	23OCT81	5OCT81	23OCT81	0	0	1 CRITICAL
62660	62662	7	OPB 1 C5	626 DRAFT REPORT DRAWINGS(DC)	CT-2	26OCT81	11DEC81	26OCT81	11DEC81	0	0	1 CRITICAL
62662	62664	5	OPB 1 C5	626 DRAFT REPORT DRAWINGS(DC)	CT-3	14DEC81	15JAN82	14DEC81	15JAN82	0	0	1 CRITICAL
62664	62666	4	OPB 1 C5	626 DRAFT REPORT DRAWINGS(DC)	CT-4	18JAN82	12FEB82	18JAN82	12FEB82	0	0	1 CRITICAL
62666	62668	4	OPB 1 C5	626 DRAFT REPORT DRAWINGS(DC)	FIN	15FEB82	17MAR82	15FEB82	12MAR82	0	0	1 CRITICAL
62703	62704	6 R	OPB 1 C6	627 INCORP GENL AMENDMENTS(DC)	CT-1	7SEP81	16OCT81	7SEP81	16OCT81	0	0	1 CRITICAL
62704	62706	1	OPB 1 C6	627 INCORP GENL AMENDMENTS(DC)	FIN	19OCT81	23OCT81	19OCT81	23OCT81	0	0	1 CRITICAL
62716	62718	3	OPB 1 C6	627 COST LAYOUT IN 2B		7SEP81	25SEP81	23NOV81	11DEC81	11	6	1
62720	62721	2	OPB 1 C6	627 REVIEW ALIGNMENTS(DC)	CT-2	7SEP81	18SEP81	14SEP81	25SEP81	1	0	1
62721	62730	5	OPB 1 C6	627 REVIEW ALIGNMENTS(DC)		21SEP81	23OCT81	17OCT81	18DEC81	8	0	1
62722	62723	4	OPB 1 C6	627 REVIEW INTAKE WATER PASSAGES		21SEP81	16OCT81	28SEP81	23OCT81	1	0	1
62724	62732	7	OPB 1 C6	627 OPTIMIZE WATER FACILITIES		9NOV81	25DEC81	14DEC81	29JAN82	5	0	1
62726	62738	10	OPB 1 C6	627 PREL DESIGN OF INTAKE		19OCT81	25DEC81	23NOV81	29JAN82	5	5	1
62728	62734	6	OPB 1 C6	627 PREL DESIGN WATER PASSAGES		26OCT81	4DEC81	21DEC81	29JAN82	8	8	1
62736	62740	9	OPB 1 C6	627 PREL DESIGN POWERHOUSE		28DEC81	26FEB82	1FEB82	2APR82	5	5	1
62742	62744	4 R	OPB 1 C6	627 DRAFT REPORT DWGS(DC)	ST	7SEP81	2OCT81	7SEP81	2OCT81	0	0	1 CRITICAL
62744	62746	3	OPB 1 C6	627 DRAFT REPORT DWGS(DC)	CT-1	5OCT81	23OCT81	5OCT81	23OCT81	0	0	1 CRITICAL
62746	62748	7	OPB 1 C6	627 DRAFT REPORT DWGS(DC)	CT-2	26OCT81	11DEC81	26OCT81	11DEC81	0	0	1 CRITICAL
62748	62750	5	OPB 1 C6	627 DRAFT REPORT DWGS(DC)	CT-3	14DEC81	15JAN82	14DEC81	15JAN82	0	0	1 CRITICAL
62750	62752	4	OPB 1 C6	627 DRAFT REPORT DWGS(DC)	CT-4	18JAN82	12FEB82	18JAN82	12FEB82	0	0	1 CRITICAL
62752	62754	4	OPB 1 C6	627 DRAFT REPORT DWGS(DC)	FIN	15FEB82	17MAR82	15FEB82	12MAR82	0	0	1 CRITICAL
62810	62820	2	OPB 1 C4	628 POWER DEVELOPMENT REPORT	ST	28DEC81	8JAN82	4JAN82	15JAN82	1	0	1
62820	62830	2	OPB 1 C4	628 POWER DEVELOPMENT REPORT	CT-1	11JAN82	22JAN82	18JAN82	29JAN82	1	0	1
62830	62840	2	OPB 1 C4	628 POWER DEVELOPMENT REPORT	CT-2	25JAN82	5FEB82	1FEB82	12FEB82	1	0	1
62840	62850	2	OPB 1 C4	628 POWER DEVELOPMENT REPORT	CT-3	8FEB82	19FEB82	15FEB82	26FEB82	1	0	1
62850	62860	1	OPB 1 C4	628 POWER DEVELOPMENT REPORT	FIN	22FEB82	26FEB82	1MAR82	5MAR82	1	0	1
62902	62904	7	OPB 1 C5	629 DRAFT REPORT DWGS(DC)	ST	7SEP81	23OCT81	21SEP81	6NOV81	2	0	1
62904	62906	3	OPB 1 C5	629 DRAFT REPORT DWGS(DC)	CT-1	26OCT81	13NOV81	9NOV81	27NOV81	2	0	1
62906	62908	7	OPB 1 C5	629 DRAFT REPORT DWGS(DC)	CT-2	16NOV81	1JAN82	30NOV81	15JAN82	2	0	1
62908	62910	5	OPB 1 C5	629 DRAFT REPORT DWGS(DC)	CT-3	4JAN82	5FEB82	18JAN82	19FEB82	2	0	1
62910	62912	4	OPB 1 C5	629 DRAFT REPORT DWGS(DC)	CT-4	8FEB82	5MAR82	22FEB82	19MAR82	2	0	1
62912	62914	4	OPB 1 C5	629 DRAFT REPORT DWGS(DC)	FIN	8MAR82	2APR82	22MAR82	16APR82	2	0	1
62914	62916	0	OPB 1 C5	629XX EXHIBIT J MATERIAL COMPLETE		5APR82	2APR82	19APR82	16APR82	2	2	1
63002	63004	6 R	OPB 1 C6	630 DRAFT REPORT DRAWINGS(DC)	ST	7SEP81	16OCT81	7SEP81	16OCT81	0	0	1 CRITICAL
63004	63007	3	OPB 1 C6	630 DRAFT REPORT DRAWINGS(DC)	CT-1	19OCT81	6NOV81	19OCT81	6NOV81	0	0	1 CRITICAL
63006	63008	7	OPB 1 C6	630 DRAFT REPORT DRAWINGS(DC)	CT-2	9NOV81	25DEC81	30NOV81	15JAN82	3	0	1
63008	63010	5	OPB 1 C6	630 DRAFT REPORT DRAWINGS(DC)	CT-3	28DEC81	29JAN82	18JAN82	19FEB82	3	0	1
63010	63012	4	OPB 1 C6	630 DRAFT REPORT DRAWINGS(DC)	CT-4	1FEB82	26FEB82	22FEB82	19MAR82	3	0	1
63012	63014	4	OPB 1 C6	630 DRAFT REPORT DRAWINGS(DC)	FIN	1MAR82	26MAR82	22MAR82	16APR82	3	0	1
62860	62862	0	OPB 1 C4	630XX EXHIBIT M MATERIAL COMPLETE		1MAR82	26FEB82	19APR82	16APR82	7	0	1
63014	63016	0	OPB 1 C5	630XX EXHIBIT K MATERIAL COMPLETE		29MAR82	26MAR82	19APR82	16APR82	3	3	1
63125	63130	2	OPB 1 C4	631 PROJ FEASIBILITY REPORT	ST	9NOV81	20NOV81	18JAN82	29JAN82	10	0	1

CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL	
63130	63135	2	OPB 1 C4	631 PROJ FEASIBILITY REPORT	CT-1	23NOV81	4DEC81	1FEB82	12FEB82	10	10	1
63135	63140	2	OPB 1 C4	631 PROJ FEASIBILITY REPORT	CT-2	15FEB82	26FEB82	15FEB82	26FEB82	0	0	1 CRITICAL
63140	63145	2	OPB 1 C4	631 PROJ FEASIBILITY REPORT	CT-3	11MAR82	12MAR82	11MAR82	12MAR82	0	0	1 CRITICAL
63145	63150	1	OPB 1 C4	631 PROJ FEASIBILITY REPORT	FIN	15MAR82	19MAR82	15MAR82	19MAR82	0	0	1 CRITICAL
63150	63152	0	OPB 1 C4	631XX EXHIBIT L MATERIAL COMPLETE		22MAR82	19MAR82	19APR82	16APR82	4	4	1
6C100	6C200	5	R OPB 1 C2	637 UPDATE GENERATION PLAN		7SEP81	9OCT81	29MAR82	30APR82	29	37	1
6B800	6B900	41	R OPB 1 C2	638 LIAISON POWER ALTS CONSULTANT		7SEP81	18JUN82	14SEP81	25JUN82	1	1	1
71400	71600	0	OPB 1 C8	7011 STUDY COORD-ALTERNATIVE SITE	FIN	7SEP81	4SEP81	7SEP81	4SEP81	0	0	1 CRITICAL
71800	72000	0	OPB 1 C8	7012 STUDY COORD-PRELIM ALTERNATV	FIN	7SEP81	4SEP81	7SEP81	4SEP81	0	0	1 CRITICAL
72100	72200	20	R OPB 1 C8	7013 STUDY COORD-OPTIMIZED DESIGN	FIN	7SEP81	22JAN82	30NOV81	16APR82	12	12	1
79300	79400	10	R OPB 1 C8	702 MONITOR FIELD ACTIVITIES	CT-1	7SEP81	11JUN82	21SEP81	25JUN82	2	0	1
79400	79500	0	OPB 1 C8	702 MONITOR FIELD ACTIVITIES	FIN	14JUN82	11JUN82	28JUN82	25JUN82	2	2	1
72000	70600	17	R OPB 1 C8	7043 WTR RES-OPT WAT3DEVL CAN DES		7SEP81	1JAN82	21DEC81	16APR82	15	15	1
73100	73300	3	R OPB 1 C8	705 SOCIOECONOMIC ANALYSIS	CT-1	7SEP81	25SEP81	7SEP81	25SEP81	0	0	1 CRITICAL
73200	73400	9	OPB 1 C8	705 SOCIOECONOMIC ANALYSIS	FIN	15FEB82	16APR82	15FEB82	16APR82	0	0	1 CRITICAL
73300	73200	20	OPB 1 C8	705 SOCIOECONOMIC ANALYSIS	CT-2	28SEP81	12FEB82	28SEP81	12FEB82	0	0	1 CRITICAL
78700	79000	4	R OPB 1 C8	7041 CULTURAL ALTERNATIVE SITES	FIN	7SEP81	2OCT81	7SEP81	2OCT81	0	0	1 CRITICAL
78900	79000	4	R OPB 1 C8	7062 CULTURAL PRELIM ALTERNATIVES	ST	7SEP81	2OCT81	7SEP81	2OCT81	0	0	1 CRITICAL
79000	79100	10	OPB 1 C8	7062 CULTURAL PRELIM ALTERNATIVES	CT-1	5OCT81	11DEC81	5OCT81	11DEC81	0	0	1 CRITICAL
79100	79700	0	OPB 1 C8	7062 CULTURAL PRELIM ALTERNATIVES	FIN	14DEC81	11DEC81	14DEC81	11DEC81	0	0	1 CRITICAL
79300	79700	12	R OPB 1 C8	7063 CULTURAL-OPTIMIZED DESIGN	ST	7SEP81	27NOV81	21SEP81	11DEC81	2	2	1
79700	79800	18	OPB 1 C8	7063 CULTURAL-OPTIMIZED DESIGN	CT-1	14DEC81	16APR82	14DEC81	16APR82	0	0	1 CRITICAL
79800	79900	0	OPB 1 C8	7063 CULTURAL-OPTIMIZED DESIGN	FIN	19APR82	16APR82	19APR82	16APR82	0	0	1 CRITICAL
79900	799A0	0	OPB 1 C8	706XX EXHIBIT V MATERIAL COMPLETE		19APR82	16APR82	19APR82	16APR82	0	0	1 CRITICAL
75300	76000	6	OPB 1 C8	7071 LAND USE ALTERNATIVE SITES	FIN	12OCT81	20NOV81	19OCT81	27NOV81	1	0	1
75400	75300	5	R OPB 1 C8	7071 LAND USE ALTERNATIVE SITES	CT-1	7SEP81	9OCT81	14SEP81	16OCT81	1	0	1
75900	76000	8	OPB 1 C8	7072 LAND USE PRELIM ALTERNATIVES	ST	7SEP81	30OCT81	5OCT81	27NOV81	4	3	1
76000	76100	10	OPB 1 C8	7072 LAND USE PRELIM ALTERNATIVES	CT-1	23NOV81	29JAN82	30NOV81	5FEB82	1	0	1
76100	76800	0	OPB 1 C8	7072 LAND USE PRELIM ALTERNATIVES	FIN	1FEB82	29JAN82	8FEB82	5FEB82	1	0	1
76700	76800	15	OPB 1 C8	7073 LAND USE OPTIMIZED DESIGN	ST	7SEP81	18DEC81	26OCT81	5FEB82	7	6	1
76800	76900	20	OPB 1 C8	7073 LAND USE OPTIMIZED DESIGN	CT-1	1FEB82	18JUN82	8FEB82	25JUN82	1	0	1
76900	77000	0	OPB 1 C8	7073 LAND USE OPTIMIZED DESIGN	FIN	21JUN82	18JUN82	28JUN82	25JUN82	1	1	1
72500	72700	2	R OPB 1 C8	708 RECREATION PLANNING	CT-1	7SEP81	18SEP81	19OCT81	30OCT81	6	0	1
72600	72800	5	OPB 1 C8	708 RECREATION PLANNING	FIN	4JAN82	5FEB82	15MAR82	16APR82	10	10	1
72700	72600	15	R OPB 1 C8	708 RECREATION PLANNING	CT-2	21SEP81	1JAN82	2NOV81	12FEB82	6	0	1
73500	73600	8	R OPB 2 C8	7092 TRANS LINE ASSESS RTE SELCTN	CT-1	7SEP81	30OCT81	7SEP81	30OCT81	0	0	1 CRITICAL
73600	736B0	24	OPB 1 C8	7092 TRANS LINE ASSESS RTE SELCTN	FIN	2NOV81	16APR82	2NOV81	16APR82	0	0	1 CRITICAL
73800	74200	0	OPB 1 C8	7101 FISH ECOLOGY ALTERNATV SITES	FIN	14DEC81	11DEC81	21DEC81	18DEC81	1	0	1
73900	73700	7	R OPB 1 C8	7101 FISH ECOLOGY ALTERNATV SITES	CT-1	7SEP81	23OCT81	5OCT81	20NOV81	4	0	1
74100	74200	8	OPB 1 C8	7102 FISH ECOLOGY PRELIM ALTERNAT	ST	7SEP81	30OCT81	26OCT81	18DEC81	7	6	1
74200	74300	10	OPB 1 C8	7102 FISH ECOLOGY PRELIM ALTS	CT-1	14DEC81	19FEB82	21DEC81	26FEB82	1	0	1
74300	74600	0	OPB 1 C8	7102 FISH ECOLOGY PRELIM ALTERNAT	FIN	22FEB82	19FEB82	1MAR82	26FEB82	1	0	1
74500	74600	15	OPB 1 C8	7103 FISH ECOLOGY OPTIMIZED DESGN	ST	7SEP81	18DEC81	16NOV81	26FEB82	10	9	1
74600	74700	17	OPB 1 C8	7103 FISH ECOLOGY OPTIMIZED DESGN	CT-1	22FEB82	18JUN82	1MAR82	25JUN82	1	0	1
74700	74800	0	OPB 1 C8	7103 FISH ECOLOGY OPTIMIZED DESGN	FIN	21JUN82	18JUN82	28JUN82	25JUN82	1	1	1
75000	75100	10	OPB 1 C8	7111 WILDLIFE ECOLOGY ALTER SITES	FIN	23NOV81	29JAN82	30NOV81	5FEB82	1	0	1
750A0	75000	11	R OPB 1 C8	7111 WILDLIFE ECOLOGY ALTER SITES	CT-2	7SEP81	20NOV81	14SEP81	27NOV81	1	0	1
75500	75600	8	OPB 1 C8	7112 WILDLIFE ECOLOGY PRELM ALTER	ST	7SEP81	30OCT81	5OCT81	27NOV81	4	0	1
75600	75700	10	OPB 1 C8	7112 WILDLIFE ECOLOGY PRELM ALTER	CT-1	2NOV81	8JAN82	30NOV81	5FEB82	4	3	1
75700	76400	0	OPB 1 C8	7112 WILDLIFE ECOLOGY PRELM ALTER	FIN	1FEB82	29JAN82	8FEB82	5FEB82	1	0	1
76300	76400	15	OPB 1 C8	7113 WILDLIFE ECOLOGY OPTIM DESGN	ST	7SEP81	18DEC81	26OCT81	5FEB82	7	6	1

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ACRES AMERICAN SUSITNA HYDRO-ELECTRIC PROJECT

CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL		
76400	76500	20	OPB	1 C8	7113 WILDLIFE ECOLOGY OPTIM DESGN	CT-1	1FEB82	18JUN82	8FEB82	25JUN82	1	0	1	
76500	76600	0	OPB	1 C8	7113 WILDLIFE ECOLOGY OPTIM DESGN	FIN	21JUN82	18JUN82	28JUN82	25JUN82	1	1	1	
77200	77500	4	OPB	1 C8	7121 PLANT ECOLOGY ALTERNV SITES	FIN	2NOV81	27NOV81	2NOV81	27NOV81	0	0	1 CRITICAL	
77300	77200	8	R	OPB	1 C8	7121 PLANT ECOLOGY ALTERNV SITES	CT-1	7SEP81	30OCT81	7SEP81	30OCT81	0	0	1 CRITICAL
77400	77500	8	OPB	1 C8	7122 PLANT ECOLOGY PRELM ALTERNAT	ST	7SEP81	30OCT81	5OCT81	27NOV81	4	4	1	
77500	77600	10	OPB	1 C8	7122 PLANT ECOLOGY PRELM ALTERNAT	CT-1	30NOV81	5FEB82	30NOV81	5FEB82	0	0	1 CRITICAL	
77600	77900	0	OPB	1 C8	7122 PLANT ECOLOGY PRELM ALTERNAT	FIN	8FEB82	5FEB82	8FEB82	5FEB82	0	0	1 CRITICAL	
77800	77900	15	OPB	1 C8	7123 PLANT ECOLOGY OPTIMIZD DESGN	ST	7SEP81	18DEC81	26OCT81	5FEB82	7	7	1	
77900	78000	20	OPB	1 C8	7123 PLANT ECOLOGY OPTIMIZD DESGN	CT-1	8FEB82	25JUN82	8FEB82	25JUN82	0	0	1 CRITICAL	
78000	78100	0	OPB	1 C8	7123 PLANT ECOLOGY OPTIMIZD DESGN	FIN	28JUN82	25JUN82	28JUN82	25JUN82	0	0	1 CRITICAL	
710A0	74400	21	R	OPB	1 C8	714 ACCESS RD ENVIRONMENT ANALY	CT-1	7SEP81	29JAN82	14SEP81	5FEB82	1	0	1
74400	74000	10	OPB	1 C8	714 ACCESS RD ENVIRONMENT ANALY	FIN	1FEB82	9APR82	8FEB82	16APR82	1	1	1	
78200	78300	9	OPB	1 C8	715 PREP FOR FERC EXHIBIT-DRAFT	ST	7SEP81	6NOV81	4JAN82	5MAR82	17	17	1	
78300	78400	6	OPB	1 C8	715 PREP FOR FERC EXHIBIT-DRAFT	CT-1	8MAR82	16APR82	8MAR82	16APR82	0	0	1 CRITICAL	
78400	78500	0	OPB	1 C8	715 PREP FOR FERC EXHIBIT-DRAFT	FIN	19APR82	16APR82	19APR82	16APR82	0	0	1 CRITICAL	
78500	785A0	0	OPB	1 C8	715XX EXHIBIT W MATERIAL COMPLETE		19APR82	16APR82	19APR82	16APR82	0	0	1 CRITICAL	
78500	785B0	0	OPB	1 C8	715XX EXHIBIT S MATERIAL COMPLETE		19APR82	16APR82	17MAY82	14MAY82	4	4	1	
82800	83000	0	OPB	1 C3	80221 PRELIMINARY ELEC SYSTEM	FIN	7SEP81	4SEP81	7SEP81	4SEP81	0	0	1 CRITICAL	
85700	85800	27	R	OPB	1 C3	80222 RECOMMEND ELEC SYS	ST	7SEP81	12MAR82	7SEP81	12MAR82	0	0	1 CRITICAL
85800	85900	3	OPB	1 C3	80222 RECOMMEND ELEC SYS	FIN	15MAR82	2APR82	29MAR82	16APR82	2	2	1	
80800	81000	5	R	OPB	1 C3	803 FINAL ROUTE SELECTION 1981	CT-1	7SEP81	9OCT81	7SEP81	9OCT81	0	0	1 CRITICAL
81000	81200	6	OPB	1 C3	803 FINAL ROUTE SELECTION 1981	CT-2	12OCT81	20NOV81	12OCT81	20NOV81	0	0	1 CRITICAL	
81200	81400	0	OPB	1 C3	803 FINAL ROUTE SELECTION 1981	FIN	23NOV81	20NOV81	23NOV81	20NOV81	0	0	1 CRITICAL	
83200	83400	7	R	OPB	1 C3	804 TOWER HARDWARE&CONDUCTR STUDY	ST	7SEP81	23OCT81	21SEP81	6NOV81	2	0	1
83400	83600	2	OPB	1 C3	804 TOWER HARDWARE&CONDUCTR STUDY	CT-1	26OCT81	6NOV81	9NOV81	20NOV81	2	2	1	
83600	85400	10	OPB	1 C3	804 TOWER HARDWARE&CONDUCTR STUDY	FIN	23NOV81	29JAN82	23NOV81	29JAN82	0	0	1 CRITICAL	
84600	84800	8	OPB	1 C3	805 SUBSTATIONS	ST	7SEP81	30OCT81	12OCT81	4DEC81	5	0	1	
84800	85400	8	OPB	1 C3	805 SUBSTATIONS	FIN	2NOV81	25DEC81	7DEC81	29JAN82	5	5	1	
84000	84200	8	OPB	1 C3	806 DISPATCH CTR & COMMUNICATNS	ST	7SEP81	30OCT81	12OCT81	4DEC81	5	0	1	
84200	85400	8	OPB	1 C3	806 DISPATCH CTR & COMMUNICATNS	FIN	2NOV81	25DEC81	7DEC81	29JAN82	5	5	1	
85200	85400	1	R	OPB	1 C3	807 TRANS LINE COST ESTIMATES	ST	7SEP81	11SEP81	25JAN82	29JAN82	20	20	1
85400	85600	6	OPB	1 C3	807 TRANS LINE COST ESTIMATES	FIN	1FEB82	12MAR82	1FEB82	12MAR82	0	0	1 CRITICAL	
90400	90600	3	R	OPB	1 C7	901 ASSEMBLE COST-SCHEDULE DATA	FIN	7SEP81	25SEP81	19OCT81	6NOV81	6	6	1
90800	91000	6	OPB	1 C7	902 PREP PRELIM CST ESTIMATES	ST	7SEP81	16OCT81	28SEP81	6NOV81	3	3	1	
91200	91213	5	OPB	1 C7	903 COST ESTIMATE UPDATES	ST	9NOV81	11DEC81	7DEC81	8JAN82	4	4	1	
91213	91214	3	OPB	1 C7	903 COST ESTIMATE UPDATES	CT-1	11JAN82	29JAN82	11JAN82	29JAN82	0	0	1 CRITICAL	
91214	91216	4	OPB	1 C7	903 COST ESTIMATE UPDATES	CT-2	1FEB82	26FEB82	1FEB82	26FEB82	0	0	1 CRITICAL	
91216	91218	5	OPB	1 C7	903 COST ESTIMATE UPDATES	CT-3	1MAR82	2APR82	1MAR82	2APR82	0	0	1 CRITICAL	
91218	91400	2	OPB	1 C7	903 COST ESTIMATE UPDATES	FIN	5APR82	16APR82	5APR82	16APR82	0	0	1 CRITICAL	
91400	914A0	0	OPB	1 C7	903XX EXHIBIT N MATERIAL COMPLETE		19APR82	16APR82	19APR82	16APR82	0	0	1 CRITICAL	
91500	91800	6	OPB	1 C7	9041 ENGR COST & SCHEDULE PRELIM	ST	7SEP81	16OCT81	28SEP81	6NOV81	3	3	1	
92000	92013	5	OPB	1 C7	9042 ENGR COST & SCHEDULE FINAL	ST	9NOV81	11DEC81	7DEC81	8JAN82	4	0	1	
92013	92014	3	OPB	1 C7	9042 ENGR COST & SCHEDULE FINAL	CT-1	14DEC81	1JAN82	11JAN82	29JAN82	4	0	1	
92014	92016	4	OPB	1 C7	9042 ENGR COST & SCHEDULE FINAL	CT-2	4JAN82	29JAN82	1FEB82	26FEB82	4	0	1	
92016	92018	5	OPB	1 C7	9042 ENGR COST & SCHEDULE FINAL	CT-3	1FEB82	5MAR82	1MAR82	2APR82	4	0	1	
92018	92200	2	OPB	1 C7	9042 ENGR COST & SCHEDULE FINAL	FIN	8MAR82	19MAR82	5APR82	16APR82	4	0	1	
92200	922A0	0	OPB	1 C7	904XX EXHIBIT O MATERIAL COMPLETE		22MAR82	19MAR82	19APR82	16APR82	4	4	1	
92400	92600	12	OPB	1 C7	905 CONTINGENCY ANALYSIS	ST	9NOV81	29JAN82	9NOV81	29JAN82	0	0	1 CRITICAL	
60702	60704	0	H	OPB	1 C509CD	607 PRELIM WATANA DAM ALTERNATES		7SEP81	4SEP81	7SEP81	4SEP81	0	0	1 CRITICAL
60802	60808	2	H	OPB	1 C609	608 PRELIM DEVIL CANYON DAM ALT		7SEP81	18SEP81	7SEP81	15JAN82	17	0	1
60902	60910	4	H	OPB	1 C409	609 ESTAB WATANA DESIGN CRITERIA		7SEP81	2OCT81	7SEP81	2OCT81	0	0	1 CRITICAL

CFM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL		
61002	61010	4	H	OPB 1 C409	610 ESTAB DEVIL CANYN DESIGN CRITERIA	7SEP81	20CT81	7SEP81	20CT81	0	0	1 CRITICAL		
61102	61168	19	H	OPB 1 C509	611 PRELIM DESIGN WATANA DAM	7SEP81	15JAN82	7SEP81	15JAN82	0	0	1 CRITICAL		
61202	61264	19	H	OPB 1 C609	612 PRELIM DESIGN DEVIL CANYON DAM	7SEP81	15JAN82	7SEP81	15JAN82	0	0	1 CRITICAL		
61325	61350	9	H	OPB 1 C409	613 DAM SELECTION REPORT	14DEC81	12FEB82	14DEC81	12FEB82	0	0	1 CRITICAL		
61402	61410	9	H	OPB 1 C409	614 SPILLWAY DESIGN CRITERIA	7SEP81	6NOV81	7SEP81	4DEC81	4	0	1		
61502	61518	0	H	OPB 1 C509	615 WATANA SPILLWAY ALTERNATIVES	7SEP81	4SEP81	7SEP81	4SEP81	0	0	1 CRITICAL		
61602	61626	0	H	OPB 1 C609	616 DEVIL CANYON SPILLWAY ALTERNATIVE	7SEP81	4SEP81	7SEP81	4SEP81	0	0	1 CRITICAL		
61702	61786	19	H	OPB 1 C509	617 PRELIM DESIGN WATANA SPYLLUAY	7SEP81	15JAN82	28SEP81	15JAN82	0	0	1 CRITICAL		
61802	61870	19	H	OPB 1 C609	618 PRELIM DESIGN DEVIL CAN SPILLWAY	7SEP81	15JAN82	7SEP81	15JAN82	0	0	1 CRITICAL		
61925	61955	13	H	OPB 1 C409	619 SPILLWAY SELECTION REPORT	7SEP81	4DEC81	7DEC81	5MAR82	13	0	1		
62010	62052	17	H	OPB 1 C509	620 ACCESS & CAMP FACILITIES	7SEP81	1JAN82	30NOV81	5MAR82	9	0	1		
62102	62132	23	H	OPB 1 C509	621 WATANA DIVERSION SCHEMES	7SEP81	12FEB82	7SEP81	12FEB82	0	0	1 CRITICAL		
62202	62236	23	H	OPB 1 C609	622 DEVIL CANYON DIVERSION SCHEMES	7SEP81	12FEB82	20SEP81	12FEB82	0	0	1 CRITICAL		
62302	62374	19	H	OPB 1 C409	623 OPT WATANA POWER DEVELOPMENT	7SEP81	15JAN82	7SEP81	15JAN82	0	0	1 CRITICAL		
62402	62470	19	H	OPB 1 C409	624 OPT DEVL CAN POWER DEVELOPMENT	7SEP81	15JAN82	7SEP81	15JAN82	0	0	1 CRITICAL		
62502	62522	0	H	OPB 1 C409CO	625 OPTIMIZE DAM HEIGHTS	7SEP81	4SEP81	7SEP81	4SEP81	0	0	1 CRITICAL		
62602	62664	19	H	OPB 1 C509	626 PREL DESGN WATANA POWER DEVEL	7SEP81	15JAN82	7SEP81	15JAN82	0	0	1 CRITICAL		
62702	62750	19	H	OPB 1 C609	627 PREL DESGN DEVL CAN POWER DEVEL	7SEP81	15JAN82	7SEP81	15JAN82	0	0	1 CRITICAL		
62810	62860	9	H	OPB 1 C409	628 POWER DEVELOPMENT REPORT-DRAFT	28DEC81	26FEB82	4JAN82	5MAR82	1	0	1		
62902	62912	26	H	OPB 1 C509	629 WATANA GENERAL ARRANGEMENT	7SEP81	5MAR82	21SEP81	19MAR82	2	0	1		
63002	63014	29	H	OPB 1 C609	630 DEVL CANYON GENERAL ARRANGEMENT	7SEP81	26MAR82	7SEP81	16APR82	3	0	1		
63125	63150	19	H	OPB 1 C409	631 PROJECT FEASIBILITY REPORT-DRAFT	9NOV81	19MAR82	18JAN82	19MAR82	0	0	1 CRITICAL		
A1200	A1600	9	FLC	C110	1001 IMPACT OF NEW FERC REGULATIONS	7SEP81	6NOV81	30NOV81	29JAN82	12	11	1		
A3200	A2600	4	FLC	C110	10022 1ST UPDATE-REGULATORY REQ	7SEP81	20CT81	22MAR82	16APR82	28	28	1		
A3300	A2600	4	FLC	C110	10023 2ND UPDATE-REGULATORY REQ	30NOV81	25DEC81	22MAR82	16APR82	16	16	1		
A3600	A3800	5	FLC	C110	1003 DATA FROM OTHERS	7SEP81	9OCT81	12APR82	14MAY82	31	0	1		
A3800	A4000	0	FLC	C110	1003XX EXHIBIT A B & C MATERIAL COMPLETE	12OCT81	9OCT81	17MAY82	14MAY82	31	31	1		
A1400	A1600	9	R	FLC	C110	1004 COORD EXHIBIT PREPARATION	ST	23NOV81	22JAN82	30NOV81	29JAN82	1	0	1
A1600	A16A0	1	FLC	C110	1004 COORD EXHIBIT PREPARATION	CT-1	25JAN82	29JAN82	1FEB82	5FEB82	1	0	1	
A16A0	A1700	2	FLC	C110	1004 COORD EXHIBIT PREPARATION	CT-2	1FEB82	12FEB82	8FEB82	19FEB82	1	0	1	
A1700	A17A0	3	FLC	C110	1004 COORD EXHIBIT PREPARATION	CT-3	15FEB82	5MAR82	22FEB82	12MAR82	1	0	1	
A17A0	A17B0	2	FLC	C110	1004 COORD EXHIBIT PREPARATION	CT-4	8MAR82	19MAR82	15MAR82	26MAR82	1	0	1	
A17B0	A1800	3	FLC	C110	1004 COORD EXHIBIT PREPARATION	CT-5	22MAR82	9APR82	29MAR82	16APR82	1	1	1	
A1800	A2400	0	FLC	C110	1004 COORD EXHIBIT PREPARATION	FIN	19APR82	16APR82	19APR82	16APR82	0	0	1 CRITICAL	
A0400	A0600	10	FLC	C110	10051 PREPARE EXHIBIT E	30NOV81	5FEB82	4JAN82	12MAR82	5	4	1		
A0700	A0900	10	FLC	C110	10052 PREPARE EXHIBIT D	30NOV81	5FEB82	8MAR82	14MAY82	14	14	1		
A0800	A1000	10	FLC	C110	1006 PREPARE EXHIBIT R	ST	30NOV81	5FEB82	8FEB82	16APR82	10	10	1	
A0000	A0200	6	FLC	C110	1007 PREPARE EXHIBIT T	ST	14SEP81	23OCT81	21SEP81	30OCT81	1	0	1	
A0200	A1100	4	FLC	C110	1007 PREPARE EXHIBIT T	FIN	26OCT81	20NOV81	2NOV81	27NOV81	1	0	1	
A2200	A2400	6	FLC	C110	1008 PREP APPLICATN FORM-DRAFT	ST	4JAN82	12FEB82	8MAR82	16APR82	9	9	1	
A2400	A2600	0	FLC	C110	1008 PREP APPLICATN FORM-DRAFT	FIN	19APR82	16APR82	19APR82	16APR82	0	0	1 CRITICAL	
A2600	A2800	2	FLC	C110	1009 REVIEW AND CORRECT	19APR82	30APR82	19APR82	30APR82	0	0	1 CRITICAL		
A2800	A3000	2	FLC	C110	1010 EXTERNAL REVIEW	3MAY82	14MAY82	3MAY82	14MAY82	0	0	1 CRITICAL		
A3000	A3400	6	FLC	C110	10XXX PRINT LICENSE APPLICATION	17MAY82	25JUN82	17MAY82	25JUN82	0	0	1 CRITICAL		
B0000	B0200	41	R	FLC	C210	1101 PROJECT OVERVIEW	7SEP81	18JUN82	14SEP81	25JUN82	1	1	1	
B0400	B0600	31	R	FLC	C210	1102 INTERNAL REPORTS	7SEP81	9APR82	14SEP81	16APR82	1	0	1	
B0600	B06A0	0	FLC	C210	1102XX EXHIBIT U MATERIAL COMPLETE	12APR82	9APR82	19APR82	16APR82	1	1	1		
B1200	B1400	21	R	FLC	C210	1103 SUSITNA BASE PLAN RISK ANALY ST	7SEP81	29JAN82	7SEP81	29JAN82	0	0	1 CRITICAL	
B1400	B1600	0	FLC	C210	1103 SUSITNA BASE PLAN RISK ANALY FIN	1FEB82	29JAN82	1FEB82	29JAN82	0	0	1 CRITICAL		
B1600	B1800	21	FLC	C210	1104 SUSITNA BASE PLAN EXTEN/REVIS	1FEB82	25JUN82	1FEB82	25JUN82	0	0	1 CRITICAL		
B2000	B2200	30	FLC	C210	1105 SUSITNA FINANCE RISK ANALYSIS	7SEP81	2APR82	30NOV81	25JUN82	12	12	1		

CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
B2400	B2600	24	FLC	C210	1106 RESOLUTION TAX ISSUE	7SEP81	19FEB82	11JAN82	25JUN82	18	18	1
B2800	B3000	30	FLC	C210	1107 IDENTIFY PARTIES INTEREST	7SEP81	2APR82	30NOV81	25JUN82	12	12	1
B3200	B3400	30	FLC	C210	1108 REVENUE ASSURANCE	7SEP81	2APR82	21SEP81	16APR82	2	0	1
B3600	B3800	31 R	FLC	C210	1109 LIAISON APA BOND UNDERWRITER	7SEP81	9APR82	14SEP81	16APR82	1	1	1
B3400	B34A0	0	FLC	C210	1109XX EXHIBIT B MATERIAL COMPLETE	5APR82	2APR82	19APR82	16APR82	2	2	1
C0600	C0800	4	OPB	1 C810	12022 CONDUCT PUBLIC MEETING #2	28SEP81	23OCT81	30NOV81	25DEC81	9	0	1
C1200	C1400	4	OPB	1 C810	12023 CONDUCT PUBLIC MEETING #3	18JAN82	12FEB82	22MAR82	16APR82	9	9	1
C0200	C0400	3 R	OPB	1 C810	12031 CONDUCT WORKSHOPS 1,2,3	7SEP81	25SEP81	9NOV81	27NOV81	9	0	1
C0800	C1000	12	OPB	1 C810	12032 CONDUCT WORKSHOPS 4,5,6	26OCT81	15JAN82	28DEC81	19MAR82	9	0	1
C1600	D1200	41 R	OPB	1 C810	1204 PREP PUBLISH DISTRIB MATERIAL	7SEP81	18JUN82	14SEP81	25JUN82	1	1	1
C1800	D1200	41 R	OPB	1 C810	1205 PREP MAINTATN ACTION LIST	7SEP81	18JUN82	14SEP81	25JUN82	1	1	1
D1000	D1200	41 R	FSB	2 C310	13013 PROJECT PROCED MANUAL-UPDATE	7SEP81	18JUN82	14SEP81	25JUN82	1	1	1
D2200	D2400	41 R	FSB	2 C310	13042 SCHEDULE CONTROL SYS UPDATE	7SEP81	18JUN82	14SEP81	25JUN82	1	1	1
D2800	D3000	41 R	FSB	2 C310	13052 COST CONTROL SYSTEM-OF	7SEP81	18JUN82	14SEP81	25JUN82	1	1	1
D3400	D3600	41 R	FSB	2 C310	13062 MANPOWER LOADNG SCHED-UPDATE	7SEP81	18JUN82	14SEP81	25JUN82	1	1	1
D3800	D4000	41 R	FSB	2 C310	1310 SUB CONTRACT ADMINISTRATION	7SEP81	18JUN82	14SEP81	25JUN82	1	1	1
D1200	D1300	0		10 XXX	XXX PROJECT COMPLETE XXX	28JUN82	25JUN82	28JUN82	25JUN82	0	183	1 CRITICAL

CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
10000	10500	0	C	OPB 1 C2	101	REVIEW OF METHODOLOGIES						COMPLETE
10400	10500	0	C	OPB 1 C2	102	FCST PEAK LOAD DEMAND TRANS						COMPLETE
12100	11800	0	C	OPB 1 C2	103	INDENT OF POWER ALTERNAT						COMPLETE
11800	11900	0	C	OPB 1 C2	108	TERMINATION REPORT						COMPLETE
20200	20300	0	C	OPA C2	2021	FIELD CAMP SET-UP						COMPLETE
20300	20400	0	C	OPA C2	2021	FIELD CAMP SET-UP						COMPLETE
21200	21500	0	C	OPA C2	204	LAND STATUS RESEARCH						COMPLETE
21600	21700	0	C	OPA C2	205	LAND ACQUISITION ANALYSIS						COMPLETE
21700	220A0	0	C	OPA C2	205	LAND ACQUISITION ANALYSIS						COMPLETE
220A0	22000	0	C	OPA C2	205	LAND ACQUISITION ANALYSIS						COMPLETE
20800	21000	0	C	OPA C2	206	RIGHT OF ENTRY						COMPLETE
25000	25200	0	C	OPA C3	207	SITE SPECIFIC SURVEYS						COMPLETE
25200	25400	0	C	OPA C3	207	SITE SPECIFIC SURVEYS						COMPLETE
25400	25500	0	C	OPA C3	207	SITE SPECIFIC SURVEY						COMPLETE
23000	23200	0	C	OPA C3	2081	AIR PHOTOS & MAPPING-1980						COMPLETE
23200	23400	0	C	OPA C3	2081	AIR PHOTOS & MAPPING-1980						COMPLETE
24000	24100	0	C	OPA C3	2082	AIR PHOTOS & MAPPING-1981						COMPLETE
24100	241A0	0	C	OPA C3	2082	AIR PHOTOS & MAPPING-1981						COMPLETE
241A0	24200	0	C	OPA C3	2082	AIR PHOTOS & MAPPING-1981						COMPLETE
23600	23800	0	C	OPA C3	209	CONTROL NETWORK SURVEYS						COMPLETE
22200	22300	0	C	OPA C3	210	ACCESS ROAD						COMPLETE
25600	26600	0	C	OPA C4	211	HAP & PHOTO SEARCH						COMPLETE
26400	26600	0	C	OPA C4	212	FIELD RECON FOR RSRVR CLEAR						COMPLETE
26600	26800	0	C	OPA C4	212	FIELD RECON FOR RSRVR CLEAR						COMPLETE
27600	27700	0	C	OPA C3	213	MARKETABLY & DISPOSAL STDY						COMPLETE
27700	27200	0	C	OPA C3	213	MARKETABLY & DISPOSAL STDY						COMPLETE
27000	27200	0	C	OPA C3	214	CST ESTHTS RSVR CLEARING						COMPLETE
27200	27400	0	C	OPA C3	214	CST ESTHTS RSVR CLEARING						COMPLETE
25800	26000	0	C	OPA C4	215	SLOPE EROSION & STBLTY STUDY						COMPLETE
26000	26200	0	C	OPA C4	215	SLOPE EROSION & STBLTY STUDY						COMPLETE
24400	24600	0	C	OPA C3	216	HYDROGRAPHIC SURVEYS						COMPLETE
24600	24800	0	C	OPA C3	216	HYDROGRAPHIC SURVEYS						COMPLETE
32600	32800	0	C	OPB 1 C4	301	REVIEW AVAILABLE MATERIAL						COMPLETE
32800	33000	0	C	OPB 1 C4	301	REVIEW AVAILABLE MATERIAL						COMPLETE
36200	36400	0	C	OPB 1 C4	3021	FIELD DATA INDEX-SETUP						COMPLETE
36400	36600	0	C	OPB 1 C4	3021	FIELD DATA INDEX-SETUP						COMPLETE
36600	36700	0	C	OPB 1 C4	3022	FIELD DATA INDEX OPERATION						COMPLETE
37000	37200	0	C	OPB 1 C4	3031	FIELD DATA COLLECTION-SPECS						COMPLETE
37400	37500	0	C	OPB 1 C4	3032	FIELD DATA COLLECTION 80-81						COMPLETE
37500	37600	0	C	OPB 1 C4	3032	FIELD DATA COLLECTION 80-81						COMPLETE
32800	33200	0	C	OPB 1 C4	3041	WATER RSRCS-FLOW EXTENSION						COMPLETE
33200	33300	0	C	OPB 1 C4	3041	WATER RSRCS-FLOW EXTENSION						COMPLETE
33300	333A0	0	C	OPB 1 C4	3042	WATER RSRCS-FERG ANALYSIS						COMPLETE
34200	34400	0	C	OPB 1 C4	3043	WATER RSRCS-RESERVOIR STUDY						COMPLETE
34400	344A0	0	C	OPB 1 C4	3043	WATER RSRCS-RESERVOIR STUDY						COMPLETE
344A0	34500	0	C	OPB 1 C4	3043	WATER RSRCS-RESERVOIR STUDY						COMPLETE
33700	33900	0	C	OPB 1 C4	3045	EVAPORATION STUDIES						COMPLETE
32700	32900	0	C	OPB 1 C4	3051	FLOODS-FREQUENCY ANALYSIS						COMPLETE
32300	32400	0	C	OPB 1 C4	3052	FLOODS PMF REVIEW						COMPLETE
32800	32300	0	C	OPB 1 C4	3052	FLOODS PMF REVIEW						COMPLETE
31600	31800	0	C	OPB 1 C4	3053	FLOODS-RESERVOIR ROUTING						COMPLETE

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ACRES AMERICAN SUSITNA HYDRO-ELECTRIC PROJECT

CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
30000	30200	0	C OPB 1 C4	3061 HYDRS&ICE-CHANNEL WTR LVLS	ST						COMPLETE
30200	30400	0	C OPB 1 C4	3061 HYDRS & ICE WTR LVLS	CT-1						COMPLETE
38800	39000	0	C OPB 1 C4	3063 HYDR&ICE-RESER SLICE SURGE	ST						COMPLETE
39200	392A0	0	C OPB 1 C4	3064 HYDR & ICE-RSVR TEMP REGIME	ST						COMPLETE
392A0	39300	0	C OPB 1 C4	3064 HYDR & ICE RSVR TEMP REGIME	FIN						COMPLETE
35400	35800	0	C OPB 1 C4	3071 SEDIMENT YIELD & DEPOSITION	ST						COMPLETE
33400	33600	0	C OPB 1 C4	3072 RIVER MORPHOLOGY	ST						COMPLETE
38000	38200	0	C OPB 1 C4	3081 TRANSMN LINE-FRLM PARAMTR							COMPLETE
38200	38400	0	C OPB 1 C4	3082 TRANSMN LINE-DET PARAMTR	ST						COMPLETE
38400	38600	0	C OPB 1 C4	3082 TRANSMN LINE-DET PARAMTR	FIN						COMPLETE
30800	31000	0	C OPB 1 C4	3101 LWR SUSITNA STUDIES-PRELIM	ST						COMPLETE
31000	31200	0	C OPB 1 C4	3101 LWR SUSITNA STUDIES-PRELIM	FIN						COMPLETE
31200	31500	0	C OPB 1 C4	3102 LWR SUSITNA STUDIES-FOLLOWUP	ST						COMPLETE
43100	43200	0	C OPB 1 C1	401 REVIEW AVAILABLE DATA	ST						COMPLETE
43200	43400	0	C OPB 1 C1	401 REVIEW AVAILABLE DATA	CT-1						COMPLETE
43400	41200	0	C OPB 1 C1	401 REVIEW AVAILABLE DATA	FIN						COMPLETE
44000	44200	0	C OPA C4	402 SHORT TERM MONITORNG PROGRAM	ST						COMPLETE
44200	41200	0	C OPA C4	402 SHORT TERM MONITORNG PROGRAM	FIN						COMPLETE
40000	40200	0	C OPB 1 C1	403 PRELIM RESERVR INDUCD SEISMIC							COMPLETE
40300	40600	0	C OPB 1 C1	404 REMOTE SENSING IMAG ANALYSIS	ST						COMPLETE
40600	40800	0	C OPB 1 C1	404 REMOTE SENSING IMAG ANALYSIS	CT-1						COMPLETE
40800	42000	0	C OPB 1 C1	404 REMOTE SENSING IMAG ANALYSIS	FIN						COMPLETE
42200	42400	0	C OPA C4	405 SEISMIC GEOLOGIC RECONASANCE							COMPLETE
41000	41200	0	C OPB 1 C1	406 PRELIM EVALUATN&REPORT-DRAFT	ST						COMPLETE
41200	41400	0	C OPB 1 C1	406 PRELIM EVALUATION & REPORT	CT-1						COMPLETE
41300	41600	0	C OPB 1 C1	406 PRELIM EVAL & REPORT DRAFT	FIN						COMPLETE
44200	45000	0	C OPB 1 C1	407 PRELIM GROUND MOTION STUDIES							COMPLETE
45400	45800	0	C OPB 1 C1	408 DAM STABILITY	ST						COMPLETE
45800	46000	0	C OPB 1 C1	408 DAM STABILITY	CT-1						COMPLETE
44400	44500	0	C OPB 1 C1	413 GROUND MOTION STUDIES	ST						COMPLETE
44500	44600	0	C OPB 1 C1	413 GROUND MOTION STUDIES	CT-1						COMPLETE
45200	45300	0	C OPB 1 C1	415 SOIL SUSCEPTBY-SEISMIC FAIL	ST						COMPLETE
45300	45400	0	C OPB 1 C1	415 SOIL SUSCEPTBY-SEISMIC FAIL	CT-1						COMPLETE
50000	50200	0	C OPB 1 C1	501 DATA COLLECTION	ST						COMPLETE
50200	50400	0	C OPB 1 C1	501 DATA COLLECTION	CT-1						COMPLETE
50400	50600	0	C OPB 1 C1	501 DATA COLLECTION	FIN						COMPLETE
50200	51200	0	C OPB 1 C1	502 AIR PHOTO INTERPRETATION	ST						COMPLETE
51200	51600	0	C OPB 1 C1	502 AIR PHOTO INTERPRETATION	FIN						COMPLETE
50800	51600	0	C OPB 1 C1	503 1980 PROGRAM DESIGN							COMPLETE
51000	51600	0	C OPA C4	504 1980 EXPLORATION PROGRAM							COMPLETE
52000	52200	0	C OPB 1 C1	505 1981 PROGRAM DESIGN	ST						COMPLETE
52200	52600	0	C OPB 1 C1	505 1981 PROGRAM DESIGN	FIN						COMPLETE
52400	52600	0	C OPA C4	506 1981 EXPLORATION PROGRAM	ST						COMPLETE
52600	526A0	0	C OPA C4	506 1981 EXPLORATION PROGRAM	CT-1						COMPLETE
51400	51600	0	C OPB 1 C1	5081 DATA ASSEMBLY-1980-DRAFT	ST						COMPLETE
51600	51800	0	C OPB 1 C1	5081 DATA ASSEMBLY-1980-DRAFT	FIN						COMPLETE
52800	53000	0	C OPB 1 C1	5082 DATA ASSEMBLY-1981-DRAFT	ST						COMPLETE
60120	60122	0	C OPB 1 C4	601 REVIEW PREVIOUS STUDIES	ST						COMPLETE
60122	60125	0	C OPB 1 C4	601 REVIEW PREVIOUS STUDIES	FIN						COMPLETE
60200	60524	0	C OPB 1 C4	602 INVESTIGATE TUNNEL ALTERNATIVES							COMPLETE
60325	60330	0	C OPB 1 C4	603 EVAL ALT SUSITNA DEVELOPMENT	ST						COMPLETE

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CPM ANALYSIS LISTING

I-NODE	J-NODE	DJR	SELECT CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
60330	60335	0	C OPB 1 C4	603 EVAL ALT SUSITNA DEVELOPMENT							COMPLETE
60335	60340	0	C OPB 1 C4	603 EVAL ALT SUSITNA DEVELOPMENT							COMPLETE
60340	60345	0	C OPB 1 C4	603 EVAL ALT SUSITNA DEVELOPMENT							COMPLETE
60420	60425	0	C OPB 1 C4	604 DEVL CAN ARCH DAM EVALUATION							COMPLETE
60425	60430	0	C OPB 1 C4	604 DEVL CAN ARCH DAM EVALUATION							COMPLETE
60510	60520	0	C OPB 1 C4	6051 SELECT REPORT DRAFT							COMPLETE
60520	60522	0	C OPB 1 C4	6052 SELECT FINAL REPORT DRAFT							COMPLETE
60522	60524	0	C OPB 1 C4	6052 SELECT FINAL REPORT DRAFT							COMPLETE
60524	60528	0	C OPB 1 C4	6052 SELECT REPORT FINAL DRAFT							COMPLETE
60528	60530	0	C OPB 1 C4	6053 SELECT REPORT FINAL EDITION							COMPLETE
60612	60614	0	C OPB 1 C4	606 STAGED DEVELOPMENT ALT							COMPLETE
60614	60616	0	C OPB 1 C4	606 STAGED DEVELOPMENT ALT							COMPLETE
60616	60618	0	C OPB 1 C4	606 STAGED DEVELOPMENT ALT							COMPLETE
60702	60703	0	C OPB 1 C5	607 DEVELOP CONCEPTUAL PLAN(WAT)							COMPLETE
60703	60704	0	C OPB 1 C5	607 DEVELOP CONCEPTUAL PLAN(WAT)							COMPLETE
60802	60804	0	C OPB 1 C6	608 UPDATE DESIGN CRITERIA(DC)							COMPLETE
60804	60806	0	C OPB 1 C6	608 UPDATE DESIGN CRITERIA(DC)							COMPLETE
62506	62508	0	C OPB 1 C6	608 OPTIMIZE DAM HEIGHTS(DC)							COMPLETE
60902	60903	0	C OPB 1 C4	609 UPDATE DESIGN CRITERIA(WAT)							COMPLETE
60903	60904	0	C OPB 1 C4	609 UPDATE DESIGN CRITERIA(WAT)							COMPLETE
60904	60905	0	C OPB 1 C4	609 UPDATE DESIGN CRITERIA(WAT)							COMPLETE
60905	60906	0	C OPB 1 C4	609 UPDATE DESIGN CRITERIA(WAT)							COMPLETE
60907	60908	0	C OPB 1 C4	609 UPDATE CRIT&ASSUMPTIONS(WAT)							COMPLETE
60908	60909	0	C OPB 1 C4	609 UPDATE CRIT&ASSUMPTIONS(WAT)							COMPLETE
61002	61003	0	C OPB 1 C4	610 UPDATE DESIGN CRITERIA(WAT)							COMPLETE
61003	61004	0	C OPB 1 C4	610 UPDATE DESIGN CRITERIA(DC)							COMPLETE
61004	61005	0	C OPB 1 C4	610 UPDATE DESIGN CRITERIA(DC)							COMPLETE
61005	61006	0	C OPB 1 C4	610 UPDATE DESIGN CRITERIA(DC)							COMPLETE
61007	61008	0	C OPB 1 C4	610 UPDATE CRIT&ASSUMPTIONS(DC)							COMPLETE
61008	61009	0	C OPB 1 C4	610 UPDATE CRIT&ASSUMPTIONS(DC)							COMPLETE
61102	61103	0	C OPB 1 C5	611 DEV ENGRG SKCHS/LAYOTS(WAT)							COMPLETE
61103	61104	0	C OPB 1 C5	611 DEV ENGRG SKCHS/LAYOTS(WAT)							COMPLETE
61104	61105	0	C OPB 1 C5	611 DEV ENGRG SKCHS/LAYOTS(WAT)							COMPLETE
61105	61106	0	C OPB 1 C5	611 DEV ENGRG SKCHS/LAYOTS(WAT)							COMPLETE
61108	61110	0	C OPB 1 C5	611 DEV DWGS/COST COMPRISN(WAT)							COMPLETE
61110	61111	0	C OPB 1 C5	611 DEV DWGS/COST COMPRISN(WAT)							COMPLETE
61111	61112	0	C OPB 1 C5	611 DEV DWGS/COST COMPRISN(WAT)							COMPLETE
61112	61114	0	C OPB 1 C5	611 DEV DWGS/COST COMPRISN(WAT)							COMPLETE
61116	61117	0	C OPB 1 C5	611 INCORP GENL AMENDMENTS (WAT)							COMPLETE
61120	61122	0	C OPB 1 C5	611 DESIGN DAM(WAT)							COMPLETE
61124	61126	0	C OPB 1 C5	611 DAM FOUNDATION TREATMENT-WAT							COMPLETE
61128	61130	0	C OPB 1 C5	611 OPTIMIZE DAM HEIGHT							COMPLETE
61132	61138	0	C OPB 1 C5	611 ADJUST ALIGNMENT(WAT)							COMPLETE
61138	61146	0	C OPB 1 C5	611 ADJUST ALIGNMENT(WAT)							COMPLETE
61202	61204	0	C OPB 1 C6	612 DEV ENGRG SKCHS/LAYOTS(DC)							COMPLETE
61204	61206	0	C OPB 1 C6	612 DEV ENGRG SKCHS/LAYOTS(DC)							COMPLETE
61206	61208	0	C OPB 1 C6	612 DEV ENGRG SKCHS/LAYOTS(DC)							COMPLETE
61208	61210	0	C OPB 1 C6	612 DEV ENGRG SKCHS/LAYOTS(DC)							COMPLETE
61212	61214	0	C OPB 1 C6	612 DEV DWGS/COST COMPRISN(DC)							COMPLETE
61214	61216	0	C OPB 1 C6	612 DEV DWGS/COST COMPRISN(DC)							COMPLETE
61216	61218	0	C OPB 1 C6	612 DEV DWGS/COST COMPRISN(DC)							COMPLETE

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CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
61218	61220	0	C	OPB 1 C6	612 DEV DWGS/COST COMPRISN(DC)							FIN COMPLETE
61222	61223	0	C	OPB 1 C6	612 INCORP GENL AMENDMENTS(DC)							ST COMPLETE
61228	61229	0	C	OPB 1 C6	612 DESIGN DAM(DC)							ST COMPLETE
61229	61230	0	C	OPB 1 C6	612 DESIGN DAM(DC)							CT-1 COMPLETE
61232	61234	0	C	OPB 1 C6	612 OPTIMIZE DAM HEIGHT(DC)							ST COMPLETE
61236	61240	0	C	OPB 1 C6	612 DESIGN DAM(DC)							CT-2 COMPLETE
61238	61242	0	C	OPB 1 C6	612 FOUNDATION TREATMENT(DC)							ST COMPLETE
61402	61403	0	C	OPB 1 C4	614 SPILLWAY DESIGN CRITERIA							ST COMPLETE
61403	61404	0	C	OPB 1 C4	614 SPILLWAY DESIGN CRITERIA							CT-1 COMPLETE
61404	61405	0	C	OPB 1 C4	614 SPILLWAY DESIGN CRITERIA							CT-2 COMPLETE
61405	61406	0	C	OPB 1 C4	614 SPILLWAY DESIGN CRITERIA							FIN COMPLETE
61407	61408	0	C	OPB 1 C4	614 UPDATE CRIT2ASSUMPTIONS(SPWY)							ST COMPLETE
61502	61503	0	C	OPB 1 C5	615 DEV ENGRG SKCHS/LAYOTS(WAT)							ST COMPLETE
61503	61504	0	C	OPB 1 C5	615 DEV ENGRG SKCHS/LAYOTS(WAT)							CT-1 COMPLETE
61504	61505	0	C	OPB 1 C5	615 DEV ENGRG SKCHS/LAYOTS(WAT)							CT-2 COMPLETE
61505	61506	0	C	OPB 1 C5	615 DEV ENGRG SKCHS/LAYOTS-WAT/SYFIN							ST COMPLETE
61507	61508	0	C	OPB 1 C5	615 DEV ENGRG SKCHS/LAYOTS-WAT/SYST							ST COMPLETE
61508	61510	0	C	OPB 1 C5	615 DEV ENGRG SKCHS/LAYOTS-WAT/SYFIN							CT-2 COMPLETE
61510	61511	0	C	OPB 1 C5	615 DEV DWGS/COST COMPRISN(WAT)							CT-2 COMPLETE
61511	61512	0	C	OPB 1 C5	615 DEV DWGS/COST COMPRISN(WAT)							CT-2 COMPLETE
61512	61514	0	C	OPB 1 C5	615 DEV DWGS/COST COMPRISN-WAT/SYFIN							ST COMPLETE
61515	61516	0	C	OPB 1 C5	615 SELECT SPILLWAY FORMAT							ST COMPLETE
61516	61518	0	C	OPB 1 C5	615 SELECT SPILLWAY FORHAT							FIN COMPLETE
61602	61604	0	C	OPB 1 C6	616 DEV ENGRG SKCHS/LAYOTS(DC)							ST COMPLETE
61604	61606	0	C	OPB 1 C6	616 DEV ENGRG SKCHS/LAYOTS(DC)							CT-1 COMPLETE
61606	61608	0	C	OPB 1 C6	616 DEV ENGRG SKCHS/LAYOTS(DC)							CT-2 COMPLETE
61608	61610	0	C	OPB 1 C6	616 DEV ENGRG SKCHS/LAYOTS(DC)							FIN COMPLETE
61612	61614	0	C	OPB 1 C6	616 DEV DWGS/COST COMPRISN(DC)							FIN COMPLETE
61614	61616	0	C	OPB 1 C6	616 DEV DWGS/COST COMPRISN(DC)							CT-1 COMPLETE
61616	61618	0	C	OPB 1 C6	616 DEV DWGS/COST COMPRISN(DC)							CT-2 COMPLETE
61618	61620	0	C	OPB 1 C6	616 DEV DWGS/COST COMPRISN(DC)							FIN COMPLETE
61622	61624	0	C	OPB 1 C6	616 SELECT SPILLWAY FORMAT							ST COMPLETE
61624	61626	0	C	OPB 1 C6	616 SELECT SPILLWAY FORMAT							FIN COMPLETE
61702	61704	0	C	OPB 1 C5	617 INCORP GENL AMENDMENTS (WAT)							ST COMPLETE
61708	61718	0	C	OPB 1 C5	617 ADJUST ALIGNMENTS							ST COMPLETE
61710	61720	0	C	OPB 1 C5	617 ENERGY DISSIPATION-WAT							ST COMPLETE
61712	61721	0	C	OPB 1 C5	617 PREL DESGN CHUTE/ROCK ANCRS							ST COMPLETE
61714	61723	0	C	OPB 1 C5	617 PREL DESGN CONTRL STRUCTURES							ST COMPLETE
61748	61750	0	C	OPB 1 C5	617 CONFIRM CONCEPT/ALIGNMENTS							ST COMPLETE
61750	61754	0	C	OPB 1 C5	617 CONFIRM CONCEPT/ALIGNMENTS							FIN COMPLETE
61756	61760	0	C	OPB 1 C5	617 DESIGN WATER PASSAGES							ST COMPLETE
61802	61803	0	C	OPB 1 C6	618 INCORP GENL AMENDMENTS(DC)							ST COMPLETE
61808	61814	0	C	OPB 1 C6	618 ADJUST ALIGNMENTS(DC)							ST COMPLETE
61812	61820	0	C	OPB 1 C6	618 PREL DESGN CHUTE/ROCK ANCRS							ST COMPLETE
61816	61824	0	C	OPB 1 C6	618 OPT AGAINST DAM FREEBRD(DC)							ST COMPLETE
61818	61822	0	C	OPB 1 C6	618 PREL DESGN CONTRL STRUCT(DC)							ST COMPLETE
61848	61850	0	C	OPB 1 C6	618 CONFIRM CONCEPT							ST COMPLETE
62010	62020	0	C	OPB 1 C5	620 ESTABLISH LOADING SCHEDULE							ST COMPLETE
62010	62022	0	C	OPB 1 C5	620 ESTAB PERMANENT OPERATING FORCE							ST COMPLETE
62102	62104	0	C	OPB 1 C5	621 CONFIRM CONCEPT							ST COMPLETE
62106	62112	0	C	OPB 1 C5	621 DESIGN WATER PASSAGES-WAT							ST COMPLETE

CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
62108	62114	0	C	OPB 1 C5	621 DESIGN COFFERDAM HEIGHT	ST						COMPLETE
62202	62204	0	C	OPB 1 C6	622 CONFIRM CONCEPT(DC)							COMPLETE
62302	62303	0	C	OPB 1 C4	623 DEV ENGRG SKCHS/LAYOTS(WAT)	ST						COMPLETE
62303	62304	0	C	OPB 1 C4	623 DEV ENGRG SKCHS/LAYOTS(WAT)	CT-1						COMPLETE
62304	62305	0	C	OPB 1 C4	623 DEV ENGRG SKCHS/LAYOTS(WAT)	CT-2						COMPLETE
62305	62306	0	C	OPB 1 C4	623 DEV ENGRG SKCHS/LAYOTS(WAT)	FIN						COMPLETE
62308	62310	0	C	OPB 1 C4	623 DEV DWGS/COST COMPRISN(WAT)	ST						COMPLETE
62310	62311	0	C	OPB 1 C4	623 DEV DWGS/COST COMPRISN(WAT)	CT-2						COMPLETE
62311	62312	0	C	OPB 1 C5	623 DEV DWGS/COST COMPRISN(WAT)	FIN						COMPLETE
62312	62314	0	C	OPB 1 C4	623 DEV DWGS/COST COMPRISN(WAT)	FIN						COMPLETE
62315	62316	0	C	OPB 1 C5	623 TAKEOFF FOR ALTNITIVE LAYOUT	ST						COMPLETE
62316	62318	0	C	OPB 1 C5	623 TAKEOFF FOR ALTNITIVE LAYOUT	FIN						COMPLETE
62320	62323	0	C	OPB 1 C4	623 REVIEW ALIGNMENTS-WAT	ST						COMPLETE
62322	62326	0	C	OPB 1 C4	623 LAYOT U/G P/H & TAILR C 800 MW	MW						COMPLETE
62323	62324	0	C	OPB 1 C4	623 REVIEW ALIGNMENTS-WAT	CT-1						COMPLETE
62402	62404	0	C	OPB 1 C4	624 DEV ENGRG SKCHS/LAYOTS(DC)	ST						COMPLETE
62404	62406	0	C	OPB 1 C4	624 DEV ENGRG SKCHS/LAYOTS(DC)	CT-1						COMPLETE
62406	62408	0	C	OPB 1 C4	624 DEV ENGRG SKCHS/LAYOTS(DC)	CT-2						COMPLETE
62408	62410	0	C	OPB 1 C4	624 DEV ENGRG SKCHS/LAYOTS(DC)	FIN						COMPLETE
62412	62414	0	C	OPB 1 C4	624 DEV DWGS/COST COMPRISN(DC)	ST						COMPLETE
62414	62416	0	C	OPB 1 C4	624 DEV DWGS/COST COMPRISN(DC)	CT-1						COMPLETE
62416	62418	0	C	OPB 1 C4	624 DEV DWGS/COST COMPRISN(DC)	CT-2						COMPLETE
62418	62420	0	C	OPB 1 C4	624 DEV DWGS/COST COMPRISN(DC)	FIN						COMPLETE
62422	62424	0	C	OPB 1 C4	624 TAKEOFFS ALTERNITIVE LAYOUT	ST						COMPLETE
62424	62426	0	C	OPB 1 C4	624 TAKEOFFS ALTERNITIVE LAYOUT	FIN						COMPLETE
62428	62429	0	C	OPB 1 C4	624 REVIEW ALIGNMENTS(DC)	ST						COMPLETE
62429	62432	0	C	OPB 1 C4	624 REVIEW ALIGNMENTS(DC)	CT-1						COMPLETE
62430	62434	0	C	OPB 1 C4	624 LAYOT U/G P/H & TAILR C 800 MW	MW						COMPLETE
62502	62504	0	C	OPB 1 C4	625 OPTIMIZE DAM HEIGHT							COMPLETE
62510	62512	0	C	OPB 1 C4	625 SELECT 2-LYOTS-DETAILED STDY							COMPLETE
62520	62521	0	C	OPB 1 C4	625 SELECT 2-LYOTS-DETAILED STDY	ST						COMPLETE
62521	62522	0	C	OPB 1 C4	625 SELECT 2-LYOTS-DETAILED STDY	FIN						COMPLETE
62608	62611	0	C	OPB 1 C5	626 REVIEW ALIGNMENTS	ST						COMPLETE
62610	62614	0	C	OPB 1 C5	626 LAYOUT U/G P/H & TAILR CHANNEL							COMPLETE
62611	62612	0	C	OPB 1 C5	626 REVIEW ALIGNMENTS	CT-1						COMPLETE
62702	62703	0	C	OPB 1 C6	627 INCORP GENL AMENDMENTS(DC)	ST						COMPLETE
62708	62709	0	C	OPB 1 C6	627 REVIEW ALIGNMENTS(DC)	ST						COMPLETE
62709	62712	0	C	OPB 1 C6	627 REVIEW ALIGNMENTS(DC)	CT-1						COMPLETE
62710	62714	0	C	OPB 1 C6	627 LAYOUT U/G P/H & TAILR CHAL							COMPLETE
6A500	6A600	0	C	OPB 1 C2	632 THERMAL GENERATION RESOURCE	ST						COMPLETE
6A600	6A700	0	C	OPB 1 C2	632 THERMAL GENERATION RESOURCE	CT1						COMPLETE
6A700	6A800	0	C	OPB 1 C2	632 THERMAL GENERATION RESOURCE	FIN						COMPLETE
6A900	6B100	0	C	OPB 1 C2	633 HYDRO GENERATION RESOURCES	ST						COMPLETE
6B100	6B200	0	C	OPB 1 C2	633 HYDRO GENERATION RESOURCES	CT-1						COMPLETE
6B200	6B300	0	C	OPB 1 C2	633 HYDRO GENERATION RESOURCES	FIN						COMPLETE
6B500	6B600	0	C	OPB 1 C8	6341 ENVIRONMENT ASSESSMENT	ST						COMPLETE
6B600	6B700	0	C	OPB 1 C8	6341 ENVIRONMENT ASSESSMENT	CT1						COMPLETE
6B700	6C300	0	C	OPB 1 C8	6341 ENVIRONMENT ASSESSMENT	FIN						COMPLETE
6C500	6C700	0	C	OPB 1 C8	6342 ENVIRONMENT ASSESSMENT-FINAL							COMPLETE
6C800	6C900	0	C	OPB 1 C2	635 LOAD MANAGE & CONSERVE							COMPLETE
6D100	6D200	0	C	OPB 1 C2	6361 GENERATION PLAN PARAMATERS							COMPLETE

CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
6D300	6D3A0	0	C	OPB 1 C2	6362	GENERAT PLAN ANALY & REPORT	ST					COMPLETE
6D3A0	6D400	0	C	OPB 1 C2	6362	GENERAT PLAN ANALY & REPORT	CT-1					COMPLETE
6D400	6D500	0	C	OPB 1 C2	6362	GENERAT PLAN ANALY & REPORT	CT-2					COMPLETE
6D500	6D600	0	C	OPB 1 C2	6362	GENERAT PLAN ANALY & REPORT	FIN					COMPLETE
71200	71400	0	C	OPB 1 C8	701	STUDY COORD-ALTERNATIVE SITE	CT-2					COMPLETE
70800	71000	0	C	OPB 1 C8	7011	STUDY COORD-ALTERNATIVE SITE	ST					COMPLETE
71000	71200	0	C	OPB 1 C8	7011	STUDY COORD-ALTERNATIVE SITE	CT-1					COMPLETE
71600	71800	0	C	OPB 1 C8	7012	STUDY COORD-PRELIM ALTERNATV	ST					COMPLETE
72000	72100	0	C	OPB 1 C8	7013	STUDY COORD-OPTIMIZED DESIGN	ST					COMPLETE
79200	79300	0	C	OPB 1 C8	702	MONITOR FIELD ACTIVITIES	ST					COMPLETE
71000	71100	0	C	OPB 1 C8	7041	WATER RESOURCE ALT SITES						COMPLETE
71600	70000	0	C	OPB 1 C8	7042	WTR RES-PRE WAT&DEVL CAN ALT						COMPLETE
73000	73100	0	C	OPB 1 C8	705	SOCIOECONOMIC ANALYSIS	ST					COMPLETE
78600	78800	0	C	OPB 1 C8	7061	CULTURAL ALTERNATIVE SITES	ST					COMPLETE
78800	78700	0	C	OPB 1 C8	7061	CULTURAL ALTERNATIVE SITES	CT-1					COMPLETE
75200	75400	0	C	OPB 1 C8	7071	LAND USE ALTERNATIVE SITES	ST					COMPLETE
72400	72500	0	C	OPB 1 C8	708	RECREATION PLANNING	ST					COMPLETE
71200	73500	0	C	OPB 1 C8	7091	TRANS LINE ASSESS SCREENING						COMPLETE
735A0	73500	0	C	OPB 1 C8	7092	TRANS LINE ASSESS R/E SELCYN	ST					COMPLETE
736A0	73900	0	C	OPB 1 C8	7101	FISH ECOLOGY ALTERNATV SITES	ST					COMPLETE
74900	749A0	0	C	OPB 1 C8	7111	WILDLIFE ECOLOGY ALTER SITES	ST					COMPLETE
749A0	750A0	0	C	OPB 1 C8	7111	WILDLIFE ECOLOGY ALTER SITES	CT-1					COMPLETE
77100	77300	0	C	OPB 1 C8	7121	PLANT ECOLOGY ALTERNATV SITES	ST					COMPLETE
71000	710A0	0	C	OPB 1 C8	714	ACCESS RD ENVIRONMENT ANALY	ST					COMPLETE
80000	80200	0	C	OPB 1 C3	801	SELECT INITIAL CORRIDORS	ST					COMPLETE
80200	80400	0	C	OPB 1 C3	801	SELECT INITIAL CORRIDORS	CT-1					COMPLETE
80400	80500	0	C	OPB 1 C3	801	SELECT INITIAL CORRIDORS	FIN					COMPLETE
81600	81800	0	C	OPB 1 C3	8021	LOAD FLOW ANALYSIS	ST					COMPLETE
81800	82800	0	C	OPB 1 C3	8021	LOAD FLOW ANALYSIS	FIN					COMPLETE
82400	82600	0	C	OPB 1 C3	80221	PRELIMINARY ELEC SYSTEM	ST					COMPLETE
82600	82800	0	C	OPB 1 C3	80221	PRELIMINARY ELFC SYSTEM	CT-1					COMPLETE
80600	80800	0	C	OPB 1 C3	803	FINAL ROUTE SELECTION 1981	ST					COMPLETE
90200	90400	0	C	OPB 1 C7	901	ASSEMBLE COST-SCHEDULE DATA	ST					COMPLETE
A2000	A1600	0	C	FLC C110	10021	ESTABLISH REGULATORY REQUIRE						COMPLETE
C0000	C0200	0	C	OPB 1 C810	12021	CONDUCT PUBLIC MEETING #1						COMPLETE
D0200	D0400	0	C	PSB 2 C310	13011	PROJECT PROCED MANUAL-DRAFT	ST					COMPLETE
D0400	D0600	0	C	PSB 2 C310	13011	PROJECT PROCED MANUAL-DRAFT	CT-1					COMPLETE
D0600	D0800	0	C	PSB 2 C310	13011	PROJECT PROCED MANUAL-DRAFT	FIN					COMPLETE
D0800	D1000	0	C	PSB 2 C310	13012	PROJECT PROCED MANUAL-FINAL						COMPLETE
D0000	D0600	0	C	PSB 2 C310	1302	FINANCIAL CONTROL PROCEDURES						COMPLETE
D1400	D1500	0	C	PSB 2 C310	1303	PROJECT MASTER SCHEDULE						COMPLETE
D2000	D2200	0	C	PSB 2 C310	13031	SCHEDULE CONTROL SYSTEM-DEV						COMPLETE
D2600	D2800	0	C	PSB 2 C310	13051	COST CONTROL SYSTEM-DEV						COMPLETE
D3200	D3400	0	C	PSB 2 C310	13061	HANPOWER LOADING SCHEDULE-DEV						COMPLETE
D1600	D0600	0	C	PSB 2 C410	1307	DEVELOP ACCOUNTING POLICIES						COMPLETE
D1800	D1900	0	C	PSB 2 C310	1308	DOCUMENTATION CONTROL						COMPLETE

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ACRES AMERICAN SUSITNA HYDRO-ELECTRIC PROJECT
C P N SCHEDULE

DESCRIPTION

I J B2
SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY
012201120012301220112001200122011201123012201120012301220112001220112301220122011200123
7418529629630741841851852185295296307417418529629630630741851852963073074174187418418529630

NO	DESCRIPTION	STATUS	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	
622	DESIGN WATER PASSAGES(DC)	FIN .	XXXXXXXXXX																					
622	DESIGN COFFERDAM HEIGHT(DC)	FIN .	XXXXX																					
622	DRAFT REPORT DWGS(DC)	ST	CCCL																					
622	DRAFT REPORT DWGS(DC)	CT-1.	CCL																					
622	DRAFT REPORT DWGS(DC)	CT-2.	CCCCCCL																					
622	DRAFT REPORT DWGS(DC)	CT-3.		CCCCCL																				
622	DRAFT REPORT DWGS(DC)	CT-4.			CCCL																			
622	DRAFT REPORT DWGS(DC)	FIN .																				CCCL		
623	LAYOUT SURFACE P/H T/R C 800 MW	XXX																						
623	COST LYOUT SURFACE U/G STRU	ST X																						
623	DESIGN ENERGY DISSIPATION	CT-1.	XX																					
623	SELECT TYPE OF POWER HOUSE	.	X																					
623	DESIGN ENERGY DISSIPATION	FIN .	X																					
623	REVIEW ALIGNMENTS-WAT	CT-2CL																						
623	REVIEW ALIGNMENTS-WAT	FIN .	CCCCCCL																					
623	REVIEW INTAKE WATER PASSAGES	.	XXXX																					
623	OPTIMIZE POWER FACILITIES	.	XXXXXXXX																					
623	PREL DESIGN INTAKE STRUCTURE	ST .	XXXXX																					
623	PREL DESIGN WATER PASSAGES	SI .	XXXX																					
623	PREL DESIGN WATER PASSAGES	FIN .		XX																				
623	PREL DESIGN INTAKE STRUCTURE	FIN .		XXXXXX																				
623	PREL DESIGN OF POWERHOUSE	.		XXXXXXXXXX																				
623	DRAFT REPORT DRAWINGS(DC)	ST	CCCL																					
623	DRAFT REPORT DRAWINGS(DC)	CT-1.	CCL																					
623	DRAFT REPORT DRAWINGS(WAT)	CT-2.	CCCCCCL																					
623	DRAFT REPORT DRAWINGS(WAT)	CT-3.		CCCCCL																				
623	DRAFT REPORT DRAWINGS(WAT)	CT-4.			CCCL																			
623	DRAFT REPORT DRAWINGS(WAT)	FIN .																						CCCL
624	COST LAYOUT IN 2B	XXX																						
624	REVIEW ALIGNMNETS(DC)	CT-2XX																						
624	REVIEW ALIGNMENTS(DC)	.	XXXXX																					
624	REVIEW INTAKE WATER PASSAGES	.	XXXX																					
624	OPTIMIZE POWER FACILITIES	.	XXXXXXXX																					
624	PREL DESIGN OF INTAKE	.	XXXXXXXXXX																					
624	PREL DESIGN WATER PASSAGES	.	XXXXXX																					
624	PREL DESIGN POWERHOUSE	.	XXXXXXXXXX																					
624	DRAFT REPORT DWGS(DC)	ST	CCCL																					
624	DRAFT REPORT DWGS(DC)	CT-1.	CCL																					
624	DRAFT REPORT DWGS(DC)	CT-2.	CCCCCCL																					
624	DRAFT REPORT DWGS(DC)	CT-3.		CCCCCL																				
624	DRAFT REPORT DWGS(DC)	CT-4.			CCCL																			
624	DRAFT REPORT DWGS(DC)	FIN .																						CCCL
626	INCRP GENL AMENDMENTS (WAT)	ST	CCL																					
626	INCRP GENL AMENDMENTS (WAT)	CT-1.	CCCCCCCCL																					
626	INCRP GENL AMENDMENTS (WAT)	FIN .																						
626	LAYOUT SURFACE P/H R/R CHANNEL	XXX																						
626	COST LAYOUT SURFACE U/G STRU	ST X																						
626	COST LAYOUT SURFACE U/G STRU	CT-1.	XX																					
626	SELECT TYPE OF POWERHOUSE	.	X																					
626	COST LAYOUT SURFACE U/G STRU	FIN .	X																					
626	REVIEW ALIGNMENTS	CT-2CL																						

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DESCRIPTION

I J 82
SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY
012201120012301220112001200122011201123012201120012301220112001220122011230122012201200123
7418529629630741841851852185295296307417418529629630630741851852963073074174187418418529630

NO.	DESCRIPTION	ST	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	
626	REVIEW ALIGNMENTS	FIN																						
626	REVIEW INTAKE WATER PASSAGES																							
626	OPTIMIZE POWER FACILITIES																							
626	PREL DESIGN INTAKE STRUCTURE	ST																						
626	PREL DESIGN WATER PASSAGES	SI																						
626	PREL DESIGN WATER PASSAGES	FIN																						
626	PREL DESIGN INTAKE STRUCTURE	FIN																						
626	PREL DESIGN OF POWERHOUSE(WAT)																							
626	DRAFT REPORT DRAWINGS(DC)	ST																						
626	DRAFT REPORT DRAWINGS(DC)	CT-1																						
626	DRAFT REPORT DRAWINGS(DC)	CT-2																						
626	DRAFT REPORT DRAWINGS(DC)	CT-3																						
626	DRAFT REPORT DRAWINGS(DC)	CT-4																						
626	DRAFT REPORT DRAWINGS(DC)	FIN																						
627	INCORP GENL AMENDMENTS(DC)	CT-1																						
627	INCORP GENL AMENDMENTS(DC)	FIN																						
627	COST LAYOUT IN 2B																							
627	REVIEW ALIGNMENTS(DC)	CT-2																						
627	REVIEW ALIGNMENTS(DC)																							
627	REVIEW INTAKE WATER PASSAGES																							
627	OPTIMIZE WATER FACILITIES																							
627	PREL DESIGN OF INTAKE																							
627	PREL DESIGN WATER PASSAGES																							
627	PREL DESGN POWERHOUSE																							
627	DRAFT REPORT DWGS(DC)	ST																						
627	DRAFT REPORT DWGS(DC)	CT-1																						
627	DRAFT REPORT DWGS(DC)	CT-2																						
627	DRAFT REPORT DWGS(DC)	CT-3																						
627	DRAFT REPORT DWGS(DC)	CT-4																						
627	DRAFT REPORT DWGS(DC)	FIN																						
628	POWER DEVELOPMENT REPORT	ST																						
628	POWER DEVELOPMENT REPORT	CT-1																						
628	POWER DEVELOPMENT REPORT	CT-2																						
628	POWER DEVELOPMENT REPORT	CT-3																						
628	POWER DEVELOPMENT REPORT	FIN																						
629	DRAFT REPORT DWGS(DC)	ST																						
629	DRAFT REPORT DWGS(DC)	CT-1																						
629	DRAFT REPORT DWGS(DC)	CT-2																						
629	DRAFT REPORT DWGS(DC)	CT-3																						
629	DRAFT REPORT DWGS(DC)	CT-4																						
629	DRAFT REPORT DWGS(DC)	FIN																						
629XX	EXHIBIT J MATERIAL COMPLETE																							
630	DRAFT REPORT DRAWINGS(DC)	ST																						
630	DRAFT REPORT DRAWINGS(DC)	CT-1																						
630	DRAFT REPORT DRAWINGS(DC)	CT-2																						
630	DRAFT REPORT DRAWINGS(DC)	CT-3																						
630	DRAFT REPORT DRAWINGS(DC)	CT-4																						
630	DRAFT REPORT DRAWINGS(DC)	FIN																						
630XX	EXHIBIT M MATERIAL COMPLETE																							
630XX	EXHIBIT K MATERIAL COMPLETE																							
631	PROJ FEASIBILITY REPORT	ST																						

ACRES AMERICAN SUSITNA HYDRO-ELECTRIC PROJECT
C P M SCHEDULE

DESCRIPTION

I J 82
SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY
012201120012301220112001200122011201123012201120012301220112001220122011230122011200123
7418529629630741841851852185295296307417418529629630430741851852963073074174187418418529630

82	DESCRIPTION	CT-1	CT-2	CT-3	FIN	ST	XX	CL	L
631	PROJ FEASIBILITY REPORT	CT-1.					XX		L
631	PROJ FEASIBILITY REPORT	CT-2.						CL	
631	PROJ FEASIBILITY REPORT	CT-3.						CL	
631	PROJ FEASIBILITY REPORT	FIN .							L
631XX	EXHIBIT L MATERIAL COMPLETE								L
637	UPDATE GENERATION PLAN				XXXXX				L
638	LIAISON POWER ALTS CONSULTANT				XX				L
7013	STUDY COORD-OPTIMIZED DESIGN	FIN			XXXXXXXXXXXXXXXXXXXXXXXXXXXX				L
702	MONITOR FIELD ACTIVITIES	CT-1			XX				L
702	MONITOR FIELD ACTIVITIES	FIN .							L
7043	WTR RES-OPT WAT&DEVL CAN DES				XXXXXXXXXXXXXXXXXXXX				L
705	SOCIOECONOMIC ANALYSIS	CT-1			CCCL				
705	SOCIOECONOMIC ANALYSIS	FIN .						CCCCCCCC	
705	SOCIOECONOMIC ANALYSIS	CT-2.			CCCCCCCCCCCCCCCCCCCC				
7061	CULTURAL ALTERNATIVE SITES	FIN			CCCL				
7062	CULTURAL PRELIM ALTERNATIVES	ST			CCCL				
7062	CULTURAL PRELIM ALTERNATIVES	CT-1.			CCCCCCCC				
7062	CULTURAL PRELIM ALTERNATIVES	FIN .							L
7063	CULTURAL-OPTIMIZED DESIGN	ST			XXXXXXXXXXXX				L
7063	CULTURAL-OPTIMIZED DESIGN	CT-1.			CCCCCCCCCCCCCCCCCCCC				
7063	CULTURAL-OPTIMIZED DESIGN	FIN .							L
706XX	EXHIBIT V MATERIAL COMPLETE								L
7071	LAND USE ALTERNATIVE SITES	FIN .			XXXXXXL				
7071	LAND USE ALTERNATIVE SITES	CT-1			XXXXXXL				
7072	LAND USE PRELIM ALTERNATIVES	ST			XXXXXXX				L
7072	LAND USE PRELIM ALTERNATIVES	CT-1.			XXXXXXXXXXL				
7072	LAND USE PRELIM ALTERNATIVES	FIN .							L
7073	LAND USE OPTIMIZED DESIGN	ST			XXXXXXXXXXXXXXXX				L
7073	LAND USE OPTIMIZED DESIGN	CT-1.						XXXXXXXXXXXXXXXXXXXXXXXXXX	
7073	LAND USE OPTIMIZED DESIGN	FIN .							L
708	RECREATION PLANNING	CT-1			XX				
708	RECREATION PLANNING	FIN .				XXXXX			L
708	RECREATION PLANNING	CT-2.			XXXXXXXXXXXXXXXX				L
7092	TRANS LINE ASSESS RTE SELCTN	CT-1			CCCCCCCC				
7092	TRANS LINE ASSESS RTE SELCTN	FIN .			CCCCCCCCCCCCCCCCCCCCCCCC				
7101	FISH ECOLOGY ALTERNATV SITES	FIN .							L
7101	FISH ECOLOGY ALTERNATV SITES	CT-1			XXXXXXX				L
7102	FISH ECOLOGY PRELIM ALTERNAT	ST			XXXXXXX				L
7102	FISH ECOLOGY PRELIM ALTS	CT-1.			XXXXXXXXXXL				
7102	FISH ECOLOGY PRELIM ALTERNAT	FIN .							L
7103	FISH ECOLOGY OPTIMIZED DESGN	ST			XXXXXXXXXXXXXXXX				L
7103	FISH ECOLOGY OPTIMIZED DESGN	CT-1.						XXXXXXXXXXXXXXXXXXXXXXXXXX	
7103	FISH ECOLOGY OPTIMIZED DESGN	FIN .							L
7111	WILDLIFE ECOLOGY ALTER SITES	FIN .			XXXXXXXXXXL				
7111	WILDLIFE ECOLOGY ALTER SITES	CT-2			XXXXXXXXXXL				
7112	WILDLIFE ECOLOGY PRELH ALTER	ST			XXXXXXX				L
7112	WILDLIFE ECOLOGY PRELH ALTER	CT-1.			XXXXXXXXXX				L
7112	WILDLIFE ECOLOGY PRELH ALTER	FIN .							L
7113	WILDLIFE ECOLOGY OPTIM DESGN	ST			XXXXXXXXXXXXXXXX				L
7113	WILDLIFE ECOLOGY OPTIM DESGN	CT-1.						XXXXXXXXXXXXXXXXXXXXXXXXXX	
7113	WILDLIFE ECOLOGY OPTIM DESGN	FIN .							L

