

ALASKA POWER AUTHORITY
SUSITNA HYDROELECTRIC PROJECT

ENVIRONMENTAL STUDIES
PROCEDURES MANUAL

SUBTASK 7.14
ACCESS ROAD ANALYSIS

**Terrestrial
Environmental
Specialists, Inc.**

ALASKA POWER AUTHORITY
SUSITNA HYDROELECTRIC PROJECT

ENVIRONMENTAL STUDIES
PROCEDURES MANUAL


SUBTASK 7.14
ACCESS ROAD ANALYSIS

Submitted by

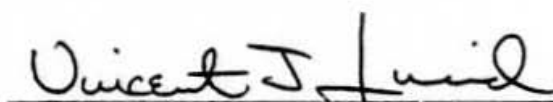
Terrestrial Environmental Specialists, Inc.

to

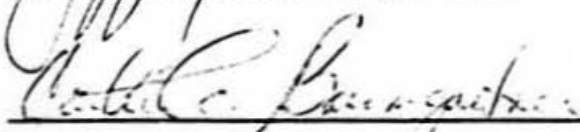
Acres American, Inc.



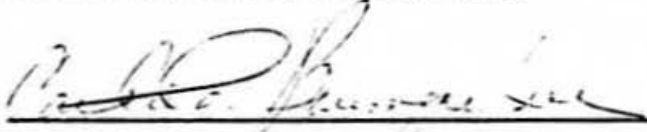
Environmental Study Manager (TES)



Environmental Study Director (TES)



Quality Assurance Coordinator (TES)



Group Leader (TES)

This procedures manual is a controlled document. Each copy is numbered and issued in trust to an individual whose name is recorded on a distribution log maintained by Terrestrial Environmental Specialists, Inc., in Phoenix, New York. Amendments to this document, as they are issued, will be sent to the authorized holder of each copy. Upon completion of the project (or by December 31, 1982) all copies of the manual are to be returned to Terrestrial Environmental Specialists, Inc.

Table of Contents

	<u>Page</u>
I. <u>INTRODUCTION</u>	1
II. <u>TECHNICAL PROCEDURES</u>	1
A. <u>SELECTION OF ACCESS ROUTE</u>	1
B. <u>IMPACT ASSESSMENT OF THE PREFERRED ACCESS ROUTE</u>	2
III. <u>DATA PROCEDURES</u>	3
IV. <u>QUALITY CONTROL</u>	3
V. <u>SCHEDULE</u>	3
VI. <u>PERSONNEL</u>	3

List of Figures

Figure 1. Schedule	4
------------------------------	---

I. INTRODUCTION

The objectives of this subtask are twofold: (1) to provide initial input into the selection of an environmentally sound access road to the dam sites, and (2) to provide for information dissemination and exchange to insure a thorough impact assessment of the preferred route and its associated facilities such as borrow areas and connecting haul roads in all appropriate environmental subtasks.

II. TECHNICAL PROCEDURES

A. SELECTION OF ACCESS ROUTE

TES, Inc. and some of its subcontractors will provide environmental input into an initial screening process of multiple proposed alternative access routes chosen by R&M Consultants, Inc. After initial screening, three proposed routes will be flown and photographed by R&M Consultants, Inc. These aerial photographs will be used in the environmental analysis, as will ground reconnaissance and existing information on similar land forms and habitat types. Environmental input at this stage will be solicited from various subtasks as follows:

Subtask 7.05 - Socioeconomic Analysis - Comparison of socioeconomic impacts on a local, regional and statewide basis resulting from construction of the various alternative routes, including long-term effects of increased access to the area.

Subtask 7.06 - Cultural Resource Investigation - Preliminary comparison of alternative routes in terms of probability of impacting cultural resources.

Subtask 7.07 - Land Use Analysis - Comparison of relative effects of the three alternative routes on future land use in the area. The land ownership question will be addressed under Task 2.

Subtask 7.08 - Recreation Planning - Initial comparison of effects of various routes on recreation potential and opportunities in the project area. This subtask will address concerns such as aesthetics, and the potentially far-reaching question of public access. The access route selection has a major effect on this subtask and will determine, to a large extent, the recreation plan developed for the project area.

Subtask 7.11 - Wildlife Ecology Studies - At this preliminary stage input will be requested with respect to effects of access road routes on major wildlife concentrations, migration routes, denning areas, and/or any endangered species locations that have been identified. This subtask will also address the question of impacts on wildlife related to hunter access and disturbance due to increased human activity.

Subtask 7.12 - Plant Ecology Studies - Aerial photographs will be analyzed and sensitive or important areas will be identified. If necessary, some ground reconnaissance will be conducted. This subtask will also address, from an environmental standpoint, the problems associated with erosion potential due to soils and topography.

It is expected that early input on route selection will be required from subtasks concerning socioeconomic analysis, land use analysis, and recreation planning. These disciplines may be concerned more with the origin of the access road rather than actual surveyed route. For example, a road originating at the Denali Highway will have considerably different effects than one originating from Gold Creek or the Parks Highway. Building an access route into a previously relatively inaccessible area in central Alaska is a major concern in each of these disciplines. An additional concern in all subtasks, but primarily in 7.05, 7.07, 7.08, and 7.11 is the policy which will be followed concerning the use of an access route by the public either during construction of the dam project or later, during its operation.

Certain subtasks (e.g. 7.06, portions of 7.11, and 7.12) may be more concerned with the surveyed route than with the point of origin. In these subtasks, ground disturbance, or location of the right-of-way with respect to an archeological site, denning area, or endangered species location will be important criteria in impact assessment.

Inputs from the various subtasks will be analyzed, and environmental constraints will be identified and evaluated. Specific locations of concern (e.g. wetlands, endangered species locations, wildlife concentrations, denning areas, migration routes, archeological sites) will be mapped along the various alternative routes. Positive and negative impacts of the routes (both right-of-way specific and those concerning origin of the access road) will be considered and the feasibility of avoidance or mitigation of adversely impacted areas will be determined. These environmental concerns will then be presented to R&M and Acres, both orally and as a letter-report, to be used in consideration and selection of a preferred route.

B. IMPACT ASSESSMENT OF THE PREFERRED ACCESS ROUTE

Once the preferred route to the dam sites is selected, more detailed biological information (wildlife ecology and plant ecology) will be collected along that specific route, and more detailed impact analyses will be performed under the socioeconomic, land use, and recreation subtasks. A cultural resource survey (See Subtask 7.06 Procedures Manual) will be performed along the preferred route. It is expected that fisheries data will be provided by ADF&G, and environmental impacts of the access road on any stream or other water body will be addressed by TES and its subcontractors.

The wildlife ecology studies will provide analysis of impacts with regard to big game migration patterns, preferred habitats, wildlife concentrations, and endangered species. The plant ecology subtask includes construction of a vegetation cover type map along the route and ground reconnaissance in areas of likely habitat for any listed or proposed endangered species.

The various subtasks listed above, where appropriate, will use some of the same procedures in assessing impacts of shorter roads associated with the project. These secondary roads include haul roads from borrow areas and roads connecting facilities associated with the construction and operation of the dam. The impact assessment procedures for these roads may in some cases be less detailed than for the access road; because these roads will be shorter, there will be fewer options as to their placement, and in some disciplines (e.g. socioeconomic analysis) the impacts will be less severe.

The results of the environmental impact assessments concerning access and secondary roads, and proposed mitigation measures will be included in study reports under the appropriate subtasks. That is, a separate report or chapter for access road studies is not anticipated.

III. DATA PROCEDURES

This subtask is concerned with synthesizing information initially collected under other subtasks and applying the specific appropriate information to an impact assessment of access road alternatives. After route selection by R&M and Acres, data specific to the preferred access road will also be collected under various other environmental subtasks. These data will be collected and handled in the same manner as all other information gathered in these subtasks.

IV. QUALITY CONTROL

Quality control procedures for storage of samples collected, data transfer, and storage of duplicate data sheets will be conducted as are quality control procedures for all aspects of the various subtasks which have input into the access road analysis.

V. SCHEDULE

Since the access road routing and design are primarily the responsibilities of R&M Consultants, Inc. (with input from the environmental studies, economic analysis, and public participation meetings), the schedule for Subtask 7.14 is to a large extent dependent on the schedule of R&M Consultants, Inc. Therefore, the schedule (Figure 1) is contingent upon the timing of aerial photography and the selection of the preferred route, as shown. The schedule is also dependent upon the timing of receipt of public comment at community meetings, as also shown in Figure 1.

VI. PERSONNEL

This subtask will require the coordination of numerous sources of information and the synthesis of various inputs from other subtasks in order to generate a cohesive analysis of impacts related to the placement, construction, and use of an access road into the project area.

Cathie A. Baumgartner of TES, Inc. will be in charge of coordination of the environmental aspects and inputs into selection and assessment of impacts of the access road. She will function as the liaison among specialists working on various environmental subtasks and between these specialists and R&M Consultants. Actual data collection, as well as impact analysis and recommended mitigation measures for specific impacts of the selected route, will be the responsibility of Group Leaders and Principal Investigators for the various subtasks involved. The qualifications of these personnel are found in the Procedures Manuals for those subtasks.

Ms. Baumgartner is highly qualified to perform her role in this subtask. Her ability to coordinate disparate disciplines, her organizational ability, and her attention to detail make her well-suited to this type of task. She will be assisted by Lewis M. Cutler of TES. Mr. Cutler has previous experience on other routing studies and is very familiar with the techniques and procedures to be used in the coordination and display of routing analyses. He is also familiar with potential impacts and possible mitigation procedures associated with rights-of-way.

