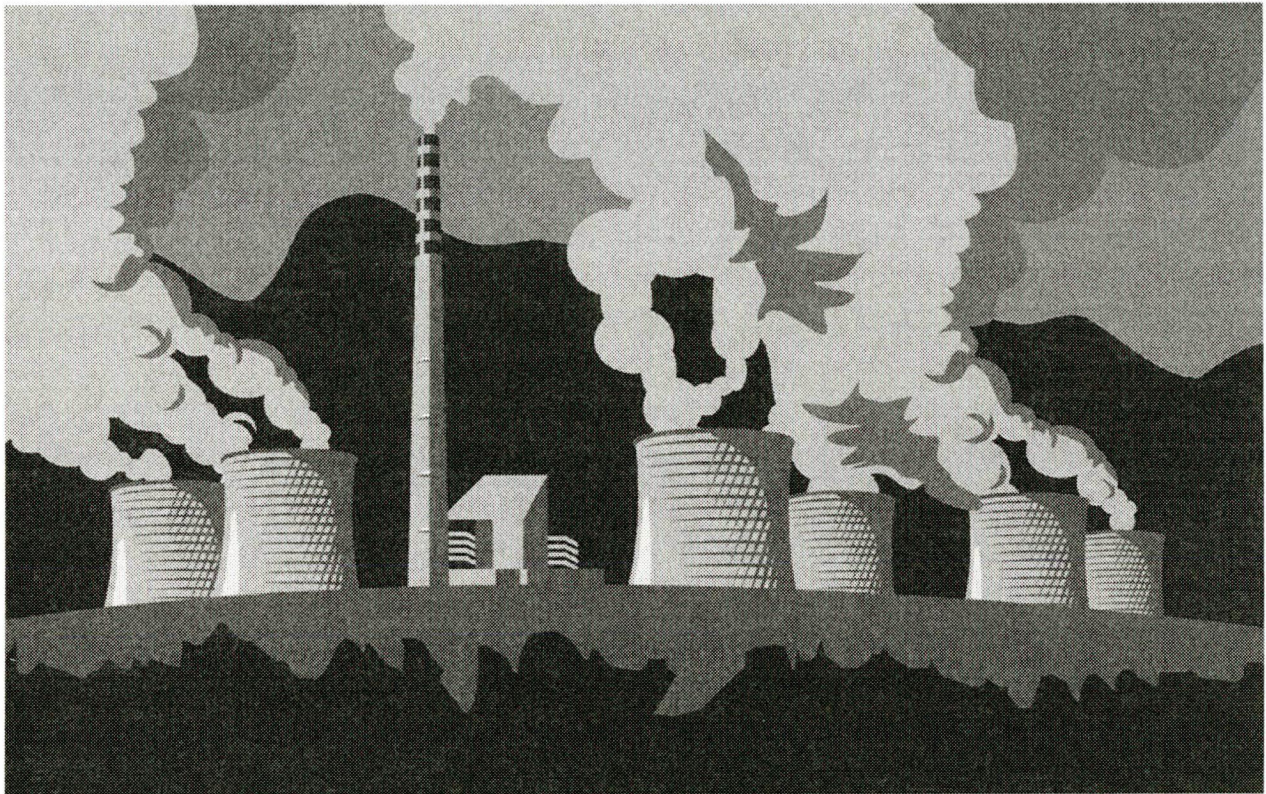


Colstrip corridor project



DATE 8/13/81

TRANSMITTAL FOR ADMINISTRATOR'S ACTION

TYPE OF DOCUMENT AND ADDRESSEE

Colstrip Project

ROUTING		TO	DATE		INITIALS	ORIGINATOR AND TYPIST	ROUTING	EXT	
ORDER	SYM		IN	OUT					
						MSherrrett:ck	EHA	4878	
1	EH	J. Frick	8-14	8-14	JF	<p>SUMMARY</p> <p>The attached Record of Decision (ROD) supersedes a ROD which was jointly issued by the USFS and BLM on September 21, 1979. Letters expressing BPA's agreement with the decisions contained in the original ROD were sent to the USFS and BLM on September 13, 1979. The new ROD describes Federal agency decisions on deviations on two segments of the previously selected transmission line corridor between Townsend and Garrison, Montana, and on the Garrison Substation site. BPA, BLM, and USFS will sign the new ROD in triplicate.</p> <p>Items attached:</p> <ol style="list-style-type: none"> Memorandum fo Administrator from Assistant Administrator for Engineering & Construction. Final Colstrip Project EIS; Corridor Option Summary; Original Record of Decision; Final Supplement to the Colstrip EIS; Comment Letter on the Final Supplement. Record of Decision. Letter from Administrator to Montana State Director, USDI Bureau of Land Management, requesting approval and signature of the ROD. (Signed 8-14 by Peter Johnson) Letter from Administrator to the Regional Forester, Region 1 USDA Forest Service, requesting approval and signature of the ROD. (Signed 8-14 by Peter Johnson) 			
2	E	J. Jones							
3	SJ	A. Morrell	8/14	8/14	am				
	AI	INFORMATION							
	AL	PUBLIC AFFAIRS							
4	AP	GEN. COUNSEL	8-14	8-14	MS				
	D	FINANCIAL MANAGEMENT							
	P	POWER MANAGEMENT							
5	O	OPERATION & MAINTENANCE							
5	E	ENGINEERING & CONSTRUCTION		8/14	ML				
7	S	MANAGEMENT SERVICES							
8	AE	INTERGOV'TAL RELATIONS							
9	AD	EXEC. ASST. TO THE ADMINISTRATOR	8-17	8/17	JK				
10	A	DEPUTY ADMINISTRATOR	8/17	8/17	JK				
11	A	ADMINISTRATOR	8-17	8/18	PTG				

Mail directly Return for mailing/processing

Call when signed NAME Clara Kinnee EXT 4878

Washington, D.C., Office contacted through _____ NAME _____ N/A

Does this document involve a change in the Administration's policy? yes no

Give brief background information (nature of problem, alternatives considered, etc.):

DATE 8/13/81

TRANSMITTAL FOR ADMINISTRATOR'S ACTION

TYPE OF DOCUMENT AND ADDRESSEE

Colstrip Project CAC 11111A

ROUTING		TO	DATE		INITIALS	ORIGINATOR AND TYPIST	ROUTING	EXT
ORDER	SYM		IN	OUT				
						MSherratt:ck	EHA	4878
1	EH	J. Frick				<p>SUMMARY</p> <p>The attached Record of Decision (ROD) supersedes a ROD which was jointly issued by the USFS and BLM on September 21, 1979. Letters expressing BPA's agreement with the decisions contained in the original ROD were sent to the USFS and BLM on September 13, 1979. The new ROD describes Federal agency decisions on deviations on two segments of the previously selected transmission line corridor between Townsend and Garrison, Montana, and on the Garrison Substation site. BPA, BLM, and USFS will sign the new ROD in triplicate.</p> <p>Items attached:</p> <ol style="list-style-type: none"> Memorandum fo Administrator from Assistant Administrator for Engineering & Construction. Final Colstrip Project EIS; Corridor Option Summary; Original Record of Decision; Final Supplement to the Colstrip EIS; Comment Letter on the Final Supplement. Record of Decision. Letter from Administrator to Montana State Director, USDI Bureau of Land Management, requesting approval and signature of the RDD. Letter from Administrator to the Regional Forester, Region 1 USDA Forest Service, requesting approval and signature of the ROD. 		
2	E	J. Jones						
3	SJ	A. Morrell						
	AI	INFORMATION						
	AL	PUBLIC AFFAIRS						
4	AP	GEN. COUNSEL	8-11	8-11	AS			
	D	FINANCIAL MANAGEMENT						
	P	POWER MANAGEMENT						
6	O	OPERATION & MAINTENANCE						
5	E	ENGINEERING & CONSTRUCTION						
7	S	MANAGEMENT SERVICES						
8	AE	INTERGOV'TAL RELATIONS						
9	AD	EXEC. ASST. TO THE ADMINISTRATOR						
10	A	DEPUTY ADMINISTRATOR						
11	A	ADMINISTRATOR						

Mail directly Return for mailing/processing

Call when signed NAME Clara Kinnee EXT 4878

Washington, D.C., Office contacted through _____ N/A

Does this document involve a change in the Administration's policy? yes no

Give brief background information (nature of problem, alternatives considered, etc.):

To: J. O. Hooson,

From: R. R. Eddy, Project Manager, Projects Engineering Section
Branch of Transmission Engineering - ETJ

Subject: Construction Cost and System Losses Determinants for
Colstrip TER Corridor Decision Process

As a supplement to the corridor decision process, four plan-of-service alternatives from the Colstrip Transmission Environmental Report (TER) were evaluated for cost (construction and sunk costs), and for energy losses. The four plans of service and their associated corridor alternatives are as follows:

1. Helena Alternative

A 500/230-kV substation at Helena. The applicant's proposed corridor is the only corridor option for this plan.

2. Great Falls Alternative

A 500/230-kV substation at the intersection of the 500-kV lines and the Great Falls-Ovando 230-kV line. The Great Falls corridor is the only corridor option for this plan.

3. Anaconda Alternative

A 500-kV station at Anaconda. The Butte-Anaconda corridor is the only option for this plan.

4. Garrison Alternative

A 500/230-kV substation in the Garrison area. The remaining corridor options, Helena-MacDonald Pass, Helena-Avon Valley, Townsend-Boulder, and Trident-Boulder are all options within this alternative.

The 500-kV substation on the Colstrip transmission system between Broadview and Hot Springs could provide support to the Anaconda and Great Falls areas via 500/230-kV transformation and 230-kV line additions. Support to Anaconda will be needed shortly after Colstrip Units 3 and 4 go on line. Support to Great Falls will not be needed until the 1990's.

The initial amount of 230-kV construction, needed for support to Anaconda, would depend on the location of the 500-kV substation. The Anaconda alternative would require no significant initial 230-kV line construction to reinforce the Anaconda area. About 25 miles, 70 miles, and 120 miles of 230-kV transmission line would be needed initially in the Garrison, Helena, and Great Falls Alternatives, respectively.

In the 1990's, about 40 miles of 230-kV transmission line would be needed to support the Great Falls area from the 500-kV substation in the Great Falls Alternative. About 90 miles, 135 miles, and 160 miles of line would be needed in the Helena, Garrison, and Anaconda Alternatives, respectively. Since the distance from Broadview to Great Falls is about 160 miles, Great Falls could be supported from Broadview as well as from Anaconda and probably Garrison.

To summarize, the amount of 230-kV line construction needed initially would be lower in the Anaconda and Garrison Alternatives. Ultimately, if 230-kV support were provided to Great Falls in the 1990's, the total 230-kV line additions to support Anaconda and Great Falls would be about equal in all of the alternatives.

Power flow studies for evaluation of losses were based on the August peak load condition and included 230-kV support to Anaconda from the 500-kV system. For the four plans mentioned, it was assumed the 500-kV lines from Colstrip to Hot Springs would be owned by the Montana Power Company (MPC) and would be built according to the MPC design described in the TER. Since BPA may build a portion of the line from Hot Springs through Garrison to some interconnection on the applicant's corridor east of Garrison, the Garrison alternative was also evaluated for losses, assuming BPA would own and design a part of the line.

Table I shows the annual MW loss difference between the five plans using the Helena alternative as the base. Note that the BPA-build option was the lowest loss plan, primarily because the BPA portion uses larger conductors to provide more capacity

for future generation and to reduce losses.

TABLE I

Plan of Service Alternative	MW Loss Difference		
	Total System	BPA	MPC
Helena	0	0	0
Great Falls	+10.5	+1.3	+7.9
Anaconda	-8.3	-1.7	-6.5
Garrison	-4.6	+0.3	-4.1
BPA-Build	-9.0	+9.7	-17.9

Table II shows the cost of line construction for each corridor option and includes sunk costs should a corridor other than the applicant's approved route be selected. Because the Colstrip to Broadview segment (Segment "A") is common to all routes, it is excluded in this table. The costs for the MPC-build portions are based on figures from a letter to John Elizalde from John Evans on June 2, 1977, (\$474,000/corridor mile + 10% to -5% depending on terrain). Note that the costs for the BPA-build options are 7-12% higher again because BPA's design uses larger conductors to provide loss savings and future capacity.

TABLE II

Corridor Option	Plan of Service Alternative	Construction Cost \$ Million	
		MPC Build	MPC + BPA Build
Approved Route	Helena	154.3	N.A.
Great Falls	Great Falls	163.9	N.A.
Helena-MacDonald Pass	Garrison	161.6	179.2
Helena-Avon Valley	Garrison	161.5	176.5
Townsend-Boulder	Garrison	160.9	182.8
Trident-Boulder	Garrison	163.9	N.A.
Butte-Anaconda	Anaconda	171. ⁵ / ₈	N.A.

Table III shows the relative annual cost differences (including cost of losses) between the several alternatives using the approved route (Helena plan of service) as the basis for comparison.

TABLE III

Corridor Option	Plan of Service Alternative	Annual Cost \$ Million Difference	
		MPC	MPC + BPA
Approved Route	Helena	0	N.A.
Great Falls	Great Falls	+2.9	N.A.
Helena-MacDonald Pass	Garrison	+0.1	-1.6
Helena-Avon Valley	Garrison	+0.1	-1.5
Townsend-Boulder	Garrison	0	-1.8
Trident-Boulder	Garrison	+0.4	N.A.
Butte-Anaconda	Anaconda	+0.7	N.A.

RREddy:lm

cc:

M. Klinger - E
 D. H. Porter - EOHC
 E. F. Fischer
 E. H. Wirtz - ETL
 C. F. Clark - ET
 L. E. Bradshaw - ETJ
 Official File - ET

REPLY TO: 1990 Special Plans and Studies

MAY 15 1979

SUBJECT: Colstrip Corridor Option Summary

TO: Interagency Option Committee



This memo summarizes my notes on:

1. Accomplishments during our May 8-10 meeting in Missoula.
2. Tasks necessary to complete the committee's charter.
3. Assignments to complete No. 2 above.

I would appreciate your review and responses especially those related to the tasks and assignments. May I have your thoughts by May 24? Our final committee meeting to complete both the option document and management briefing is tentatively scheduled for May 30-31 in Billings (beginning at 8 a.m. on May 30 in Granite Towers Bldg.).

A. Accomplishments on May 8-10 included:

1. The Option Summary was updated and revised to reflect public comments to the draft EIS, and changes in information since publication of the draft option document in November 1978. This included a revision of the corridor advantages and disadvantages tables to more accurately present the key decision factors.
2. An evaluation key developed for the potential impact symbols used in the major corridor decision chart. Subsequent evaluations using the symbols should be more consistent and traceable.
3. It was agreed to recommend that the Option Summary be completed and published without staff conclusions and recommendations. The conclusions and recommendations will be included in the management briefings and any subsequent Record of Decision resulting from the decisions of the three agency managers.

I discussed the O.S. with EIS Manager Ron Wilkerson on May 14. He agreed with our proposal to publish using the November 1978 draft format. This means completing the final O.S. and mailing to BPA by June 20.

4. A general management briefing outline was prepared and agreed to.

B. Tasks and assignments to complete the committee's charter are:

I. Prepare Revised Option Summary

A. Update writeup for each section

Cover)	
Introduction)	
Interagency Cooperative Process)	
Action Required by Federal)	Hoosen
Agencies)	
Federal Management Options)	
Corridor Options)	
Analysis Summary)	
o Master Table Sheets)	
(John H. send))	
o Type)	Reinsel
Consideration Charts)	
o Cartography)	
o Printing)	
Public Involvement Summary		Reinsel

B. Send all material to Reinsel for assembling--if large number of O.S. necessary, print through BPA.

II. Prepare Management Briefing

Objective - To present a concise summary of the information needed by the agency managers to recommend preferred corridor.

A. Summary of process leading to the corridor recommendation		Darby (Draft for 5/30)
- Work management plan, TER, EIS, Option Document		Evans "
B. Slide presentation		
- EIS slides		Hoosen "
- Slides of major corridor considerations		
C. Option Conclusions and Recommendations		Each O.S. member prepare first cut individually

III. Hold Management Briefing

Proposed Format

INTERAGENCY CORRIDOR RECOMMENDATION MEETING

(FS, BPA, BLM)

<u>Time</u>	<u>Discussion</u>	<u>Responsibility</u>
8 - 9	Present summary of process leading to the corridor recommendations - Work management plan - TER - EIS - Option document	Option Committee
9 - 9:30	Present slide presentation on project - EIS slide show - Slides of major corridor considerations	Option Committee
9:30-10	Present option committee conclusions and recommendations	Option Committee
10-10:45	Discussion of corridor recommendations and decision factors	Agency Managers
10:45 - 11:15	Identify interagency recommendation	Agency Managers

IV. Prepare and submit Record of Decision
Resulting from Manager Meeting -
Submit with Option Document to
Secretaries of Agriculture, Interior,
and Energy.

I propose that we complete all the listed assignments prior to our May 30 meeting. I plan to have the tables and charts completed by next week and sent to you for review prior to the May 30 meeting.

It is still necessary for us to schedule the management decision meeting. If we follow Interior's present decision process, a joint agency corridor recommendation should be prepared by the July 30 FEIS filing date. The recommendation(s) could then be sent directly to the concerned Secretaries for their consideration in the project decision. Please let me know your meeting date preferences.

As a matter of record, it was my understanding from discussions with Al Evans that the BLM State Director has been delegated the decision responsibility for Interior in any interagency deliberation leading to a preferred corridor and final corridor selection.



EARL REINSEL
Forester
Option Committee Chairman

Enclosure - 5/8-10 Attendance List

Distribution: BLM, Billings
(Dave Darby, Al Evans)
BPA, Portland
(John Hoosen, Elmer Wirtz)

cc: PP&B-Reid, Reinsel (2)
BPA, Spokane-R. Wilkerson
Lolo-Tribe

COLSTRIP OPTION DOCUMENT MEETING

May 8-10, 1979

Missoula, Montana

Elmer H. Wirtz		BPA
Ray Breuninger)	Montana DNRC
)	
Claude Roswurm) 5/8 only	BLM
)	
Neil F. Morck)	BLM (Billings)
Dave Darby		BLM
Al Evans		BLM (Billings)
Earl Reinsel		FS
Earl Skogley		BPA - (MUS-Bozeman)
John Hoosen		BPA
Darrell Sall		BLM (Missoula)

COLSTRIP CORRIDOR DECISION BRIEFING

Missoula, Montana

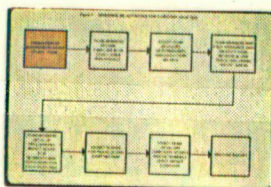
August 29, 1979

I. ANALYSIS PROCESS

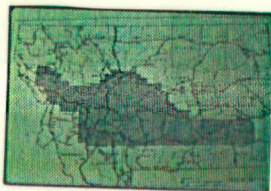
1 Analysis and evaluation of potential transmission corridors for the Colstrip Project was based on the work management plan developed for this purpose by BPA, BLM, and FS, Interagency Steering Committee.



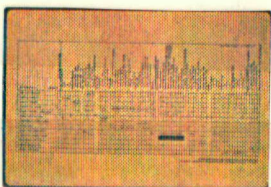
2 The Transmission Corridor Analysis process is illustrated by these steps. An interdisciplinary, interagency study team was organized to conduct the study.



3 A study area was delineated to encompass all reasonable possibilities for locating the transmission corridor. This was based largely on previous studies by the applicant and the state.



4 "Data Items" and "Determinants" were developed. All important resources which had a reasonable chance of being impacted by the transmission corridor were included. Resources likely to have no significant impact were not included.



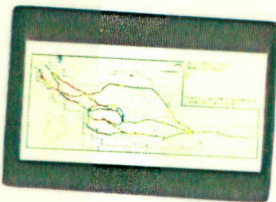
5 Many corridor segments were analyzed and evaluated. Those with highest potential impacts were eliminated at an early stage, leaving a reasonable number of alternatives to study in more detail.



6 The process included mapping of each resource so that the distance of each environmentally sensitive area crossed by a segment could be measured.



7 Impact ratings were calculated, based on distance of sensitive area crossed, relative importance of the resource, and the potential seriousness of impact.



8 The analysis completed was documented in a Transmission Environmental Report (TER). This provided the basis for the transmission portion of the EIS.



9 An Option Summary was prepared. I summarized the major points reported in the TER, and EIS, as well as other non-environmental decision factors and public and agency input.



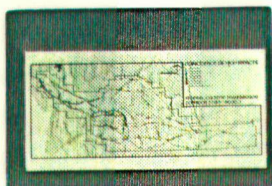
II. The factors considered in developing corridor advantages and disadvantages:

10



- overall environmental impact

11



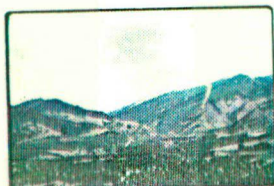
- coincidence of high potential impacts for various resources shows those areas which would be most influenced by transmission lines.

12



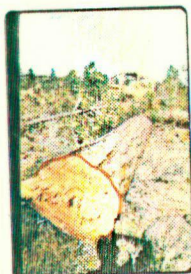
- visual impacts would result.

13



- visual impacts would result.

14



- commercial forests would be crossed.

15



Impacts on agricultural lands would result.
Both on dryland areas -

16



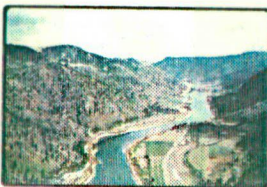
- and irrigated fields.

17



Special management areas and unique resources
were considered.

18



Recreation sites and values are important
considerations.

19



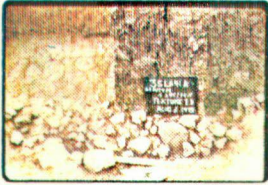
Fish and wildlife resources include a wide
range of species --

20



- including threatened and endangered species.

21



Cultural resources should be protected.

22



Impacts on residential areas certainly cannot be overlooked.

23



Non-environmental aspects add to the relative advantages and disadvantages of various corridors, including --

24



- annual construction costs which include capital costs, amortization and the cost of energy losses.

25



- corridor length,

26



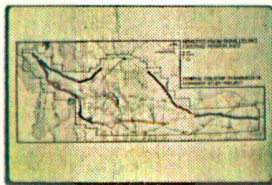
- whether or not the Flathead Reservation is to be crossed,

27



- the potential for paralleling existing powerlines (and its benefits or detriments),

28



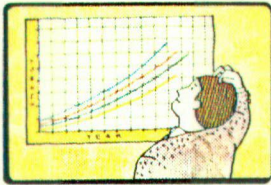
- This slide illustrates the area where paralleling was factored into the analysis.

29



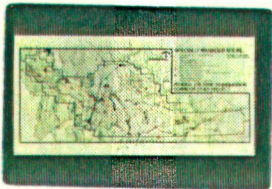
Present project approval by the State is a consideration.

30



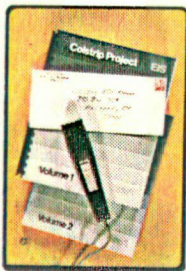
Implementation schedule or project delays may be important.

31



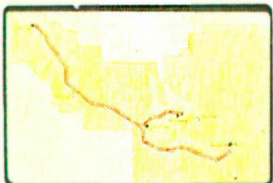
The corridor selected should ideally represent maximum compatability with Federal Land use Plans (also other governmental entities).

32



Public and Agency comments and concerns must be considered.

33



And finally, whether or not BPA is to build a portion of the lines may influence the selection of a corridor.

III. Specific public and agency concerns which evolved from hearings and letters after the draft documents were filed are illustrated in the following slides:

34



Projector I

Agricultural interests expressed concerns in crossing ag lands because of problems with farming around towers--

Projector II

Slide II-1 showing areas of concern by farmers and ranchers

35



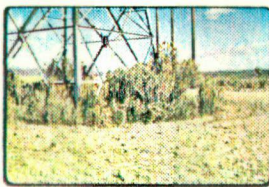
-- problems with irrigation near transmission lines --

36



-- aerial spraying operations, and similar activities.

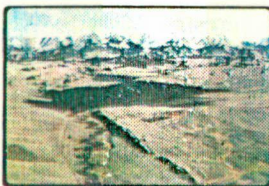
37



The Meagher Co. Planning Bd. expressed concerns related to weed and erosion problems, public access to private lands --

Slide II-2 showing area of Meagher Co. crossed by segment C,

38



-- and opening up a new corridor north of the Crazy Mts. when one already exists south of the Mts.



Projector I

Projector II

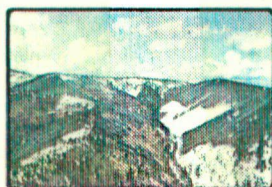
39



The Fish and Wildlife Service has expressed their preference for a corridor which would represent the least overall impact to fish and wildlife.

Slide II-3 showing preferred corridor in green.

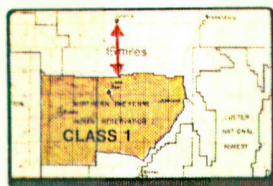
40



The cooperative elk-logging study group does not want segment H used because this would disrupt their long-term study

Slide II-4 showing segment H (yellow).

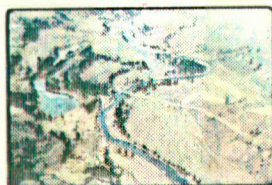
41



Tribal entities are concerned about the lines crossing the Flathead Reservation. Some residents have filed a petition favoring this under certain conditions.

Slide II-5 showing segments crossing the reservation (yellow).

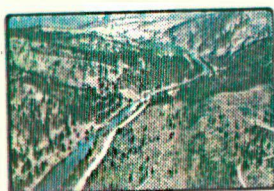
42



The HCERS (USDI) has expressed opposition to any new intrusions to the Blackfoot River --

Slide II-6 showing portions of segments B and G which are involved (yellow).

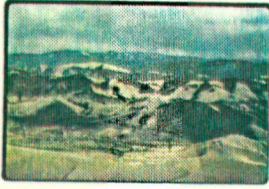
43



-- which includes nationally recognized scenic and recreational resources.



44



Projector I

A large number of residents of the N.W. Helena Valley filed petitions against crossing their lands.

Projector II

Slide II-7 with Segment E, highlighted (yellow).

45



The BIA expressed concerns related to the transmission corridors, but did not specify a preferred location.

Blank

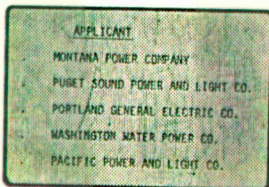
46



The EPA prefers the lowest impact corridor (except they recommend by-passing the Flathead Reservation by using the high-impact Siegal Pass segments).

Slide II-8 with lowest impact corridor plus Siegel Pass arm (green).

47



Montana Power Company expressed their preference for the State-approved applicant's proposed corridor.

Slide II-9 applicant's in green.

The Applicant's proposed corridor Projector II has been approved by the BNR&C, but there are several specific problems related to its routing. Some major areas of concern include:

48



- High TER score (due to high visual, Slide II-9 recreation waterway, State Parks cont. and Recreation Area, and commercial forest impacts)

49



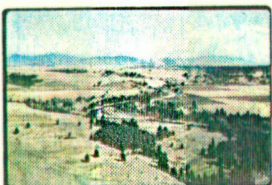
- It crosses the Colorado-Union-ville-Travis Planning Unit (F.S.) Point out area on segment

50



- It passes near the National Bison Range Point out area on segment

51



- It crosses the Blackfoot River and Clearwater River in problem areas Point out area on segment

Projector II

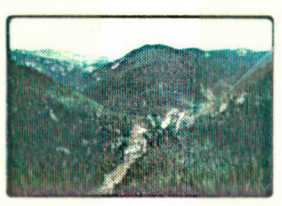
52



- It crosses 30 miles of Grizzly critical habitat

Point out area on segment G.

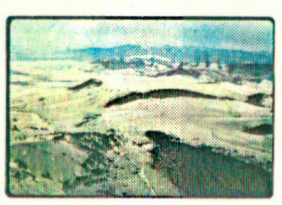
53



- The area in the Flathead Reservation it crosses has been designated by the tribes as "Primitive Area."

Point out area on segment G.

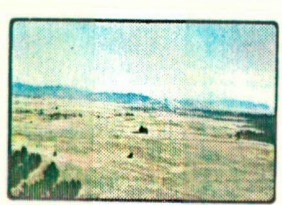
54



- There are specific expressed public concerns in the Helena area --

Point out area on segment G.

55



- and the Ovardo area.

Point out area on segment G.

V. High Environmental Impact

Corridors which differ little in

overall TER score include these

Project II

56



- High scores are due mainly to the Siegel Pass area

Slide II-10/w
four corridors
in yellow

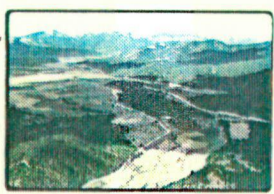
57



- problems in the vicinity of Paradise

Point out area
on segment m₃

58



- crossing segment H where current land uses conflict

59



- segment G which has many coincident high-impact resources --

60



- and the Rogers Pass area on segment B.



VI. The four lowest environmental impact corridors (which differ little from one another, but average about 7 percent less than the four above are shown here

Projector II

61

Flathead Pass slide

Some problem areas exist along these corridors also, one of the most serious being crossing

Slide II-11 with low impact corridor in green.

62

"

Flathead Pass in the Bridger Mts.

Point out other problem areas.

VII. BPA-Build. If BPA builds a portion of the lines the major differences from an environmental standpoint include:

Slide II-12 showing BPA Build portions of segments.

63



- Differences in amounts of agricultural land taken out of production --

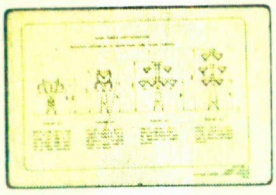
64



- where only one tower would replace two.



65



- Visual differences due to taller towers --

Projector II

Slide II-13

66



- and narrower right-of-way --

67



- where one line requires only 125 feet ROW as compared to 300 feet on the two lines.

- and less forest clearing on the narrower ROW.





United States Department of the Interior

BUREAU OF LAND MANAGEMENT
222 North 32nd Street
P.O. Box 30157
Billings, Montana 59107

September 21, 1979

Dear Concerned Citizen:

The Forest Service and the Bureau of Land Management have made a final decision which identifies a transmission line corridor across federal lands to accommodate the Colstrip project.

Our conclusion, based upon several years of detailed environmental studies and careful evaluation of public views and environmental and other concerns, is that the Townsend-Boulder corridor is the most suitable route for transmitting power generated by Colstrip Units 3 and 4. A record of this decision is attached. The decision is based on evaluations of nine corridor alternatives using a system which identified and compared factors important in selecting a corridor.

Since the corridor is two miles wide, centerline evaluation will be required to determine the exact location of the right-of-way within the corridor, as well as special stipulations and environmental protection measures.

Although the corridor approved by the Forest Service and the Bureau of Land Management crosses the Flathead Indian Reservation, this does not supersede the rights of the Confederated Salish and Kootenai tribes. The decision only indicates, as required under the National Environmental Policy Act, that the corridor is judged to have the least overall impact and is preferred without regard to specific jurisdiction.

In the event arrangements cannot be made to cross the Flathead Indian Reservation, an alternative routing is identified. The identified alternate routing is through Siegel Pass to Plains unless Bonneville Power Administration/Forest Service studies now underway identify a more suitable alternative.

In closing, we thank each of you who participated in this process. Your comments and concerns were an important part of the decision. Although not everyone's desires and concerns can be satisfied, we believe the decision identifies the best transmission facility location if Colstrip Units 3 and 4 are constructed.

Sincerely,

for Robert W. Larsen
Tom Coston
Regional Forester, Region One
USDA, Forest Service

Edwin Zaidlicz
Edwin Zaidlicz
State Director, Montana
USDI, Bureau of Land Management

RECORD OF DECISION

COLSTRIP PROJECT FEDERAL TRANSMISSION CORRIDOR

USDA - Forest Service, Region One
USDI, Bureau of Land Management, Montana

INTRODUCTION

The Montana Power Company, acting as a member and on behalf of the five Colstrip project management companies, proposed in 1973 and 1976, a location and requested right-of-way across federal lands for two 500-kV electric transmission lines between Colstrip, Montana, and Hot Springs, Montana.

Federal lands crossed by the proposed line are managed by the U.S. Department of Agriculture, Forest Service, and the U.S. Department of the Interior, Bureau of Land Management (the federal agencies). The federal agencies prepared an Environmental Impact Statement (EIS) which considered the impacts on all ownerships. The EIS evaluated the applicant's proposal and several alternative 2-mile wide corridors. The Final EIS and accompanying Colstrip Federal Corridor Option Summary were filed with the Environmental Protection Agency on August 3, 1979. These documents and a Transmission Environmental Report (TER), the source document for the transmission portion of the EIS, provided the assessment leading to this decision. This decision considers all public comment provided throughout this effort.

Non-federal lands along the proposed line are under siting jurisdiction of the State of Montana Major Facilities Siting Act. The Montana Board of Natural Resources and Conservation (BNRC) approved the applicant's proposed transmission facilities and Colstrip generating plants 3 and 4 in 1976. That approval was subsequently challenged in the courts and was upheld by the Montana Supreme Court on September 17, 1979.

STATEMENT OF DECISION

The Bureau of Land Management and Forest Service jointly approve the Townsend-Boulder corridor (see map) to accommodate the construction of transmission facilities across Bureau of Land Management and Forest Service administered lands. The Townsend-Boulder corridor is the environmentally

preferred corridor. This corridor generally follows a location from Colstrip through Broadview to Townsend, thence to Boulder, Garrison, Missoula, northward across the Flathead Indian Reservation* and terminates at Hot Springs. The corridor crosses approximately 31 miles of National Forest system lands and 21 miles of lands administered by the Bureau of Land Management.

ALTERNATIVES AND DECISION RATIONALE

A total of nine corridors were analyzed in detail. Environmental and other advantages and disadvantages of these corridors are reflected in the Federal Corridor Option Summary. Of the nine corridors, five have significantly greater environmental impact potential than the other four. They are:

- Applicant's proposed corridor
- Siegel Pass
- Great Falls
- Helena-MacDonald Pass
- Trident-Siegel Pass

These were eliminated from further consideration.

Major reasons for the greater environmental impact potential of these five corridors are:

- Very high combined potential impacts on Segments M₁, R, and M₃ (Siegel Pass and Trident-Siegel Pass corridors)
- Major conflicts with land use plans and high potential environmental impacts on Segment H (Siegel Pass corridor)
- Very high combined potential impacts on Segment G (Applicant's Proposed and Great Falls corridors)
- Very high combined potential environmental impacts in the western (mountainous area on both sides of and across Rogers Pass) portion of Segment B (Great Falls corridor)
- Very high environmental impact on Segment F (MacDonald Pass corridor)

*In the event that arrangements cannot be made for crossing the Flathead Indian Reservation, an alternate routing is identified. The identified alternative corridor is through Siegel Pass to Plains unless BPA/FS studies now underway identify a more suitable alternative.

The remaining four corridors are considered environmentally preferable. These four corridors are comparable in environmental impact. They are:

- Trident-Boulder
- Butte-Anaconda
- Townsend-Boulder
- Helena-Avon Valley

Reasons for Selection of Townsend-Boulder Corridor

In selecting a corridor from these remaining four options, the federal agencies analyzed:

- Colstrip to Broadview
- Broadview to Townsend or Trident
- Townsend or Trident to Garrison
- Garrison to Hot Springs (or Plains)

Colstrip To Broadview is a common eastern segment for each of the above alternatives. Alternatives to this segment were eliminated early in the process because of greater environmental and socioeconomic impacts.

Garrison to Hot Springs. All four of the best options use the same location through this western zone. This is I, J, K, L. These segments represent the lowest potential impacts. Accordingly agreement was reached on a common west leg for the corridor.

Broadview to Townsend or Trident. The four options represent two alternatives for corridors in this area: (1) Broadview to Townsend via Segment C₁, passing north of the Crazy Mountains and Bridger Mountains; (2) Broadview to Trident via Segment D₁, passing south of the Crazy Mountains and through Flathead Pass in the Bridger Mountains. Segments C₁ and D₁ do not terminate at a common point at their west end but are of almost identical length and have almost identical total potential environmental impact. D₁ has a slight overall benefit compared to C₁ with the potential for paralleling existing transmission corridors is considered. However, C₁ avoids crossing the sensitive area of Flathead Pass and has less potential agricultural impact. The northern leg (C₁) also follows the corridor approved by Montana's Board of Natural Resources and Conservation. Accordingly, the federal agencies favored C₁, for the above reasons.

Townsend or Trident to Garrison. The two remaining central portion options include the Helena-Avon Valley corridor and the Townsend-Boulder corridor. The Townsend-Boulder corridor is preferred because it has less visual impact, avoids sensitive land use and population impacts in the Helena vicinity, and the electrical system needs are best met by this option.

The federal agencies selected the Townsend-Boulder corridor. The approved corridor extends from Colstrip to near Townsend, thence to Boulder, Garrison, Missoula, across the Flathead Indian Reservation to Hot Springs, Montana.

IMPLEMENTATION

Implementation of the decision affecting federal lands will not occur until at least 45 days from the date that the record is transmitted to the Environmental Protection Agency and made available to the public. This decision is subject to administrative review (appeal) pursuant to 36 CFR 211.19 for National Forest system lands only. Any notice of appeal must be filed within 45 days from the date of this record of decision. The federal agencies will return the present right-of-way applications from the Montana Power Company following publication of the notice of the federal corridor decision. The federal agencies will request the company to amend and reapply to the Forest Service and Bureau of Land Management based upon the approved corridor. The federal agencies must approve the centerline and develop right-of-way occupancy stipulations before any construction can proceed. The stipulations will include site-specific measures to protect the environment during preconstruction, construction, and operation of the transmission facility on federal lands.

The above steps involve only the estimated 52 miles of federal land along the Townsend-Boulder corridor. The federal land managing agencies do not exercise jurisdiction on the crossing of private, State, or Indian land along the approved corridor.

OTHER CONSIDERATIONS

Coordination With State of Montana. The federal agencies have maintained close consultation with the State of Montana during development of the federal corridor decision. This was deemed necessary since no single agency, State or Federal, has complete approval or certification authority for a project of this magnitude. The federal corridor follows the route approved by the Montana Board of Natural Resources and Conservation from Colstrip to Townsend, but diverges at that point.

BPA Construction Decision. The Bonneville Power Administration has indicated its intent to honor a request by Montana Power Company to build the portion of the line from Townsend to Hot Springs along the federally approved corridor.

Flathead Indian Reservation. While the corridor approved by the federal agencies includes the crossing of the Flathead Indian Reservation, this in no way supersedes the rights of the Confederated Salish and Kootenai Tribes.

Hot Springs-Bell Study. A federal study (Hot Springs-Bell) will continue on alternative transmission ties from western Montana into the BPA power grid at the Bell substation near Spokane, Washington, in conjunction with the preparation of environmental studies and a revised EIS for the Hot Springs-Bell 500-kV transmission line.

Decision Statement Approval: _____

Sept. 21, 1979
(Date)

for Robert W. Lance
Regional Forester, Region One
USDA, Forest Service

Edwin Daudig
State Director, Montana
USDI, Bureau of Land Management

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Decision Statement Approval:

Sept. 21, 1979
(Date)

for Robert W. Lance
Regional Forester, Region One
USDA, Forest Service

Edwin Dardic
State Director, Montana
USDI, Bureau of Land Management

DRAFT

COLSTRIP CORRIDOR RECOMMENDATION OUTLINE

(For Briefing Session)

I. Decision Factors and Background Information

- A. The primary source of information for a corridor option decision is the Transmission Environmental Report (TER).
- B. The corridor option decision should be made following consideration of other important factors, including system needs, costs, energy conservation, project status, and any special problems.
- C. Any corridor decision is connected to final decisions on the construction of Colstrip Units 3 and 4 and related coal mining operations. This decision is still pending and will not be made until legal issues are settled and state and federal agencies can act on the applications.

Problem

II. Analysis of Applicant's Proposed Corridor

- A. Proposed routing of the Applicant's Proposed Corridor starts at Colstrip and parallels the existing corridor to an existing substation at Broadview. It then proceeds westerly and north of the Crazy and Bridger Mountains, crossing the Missouri River south of Townsend. From this point the corridor goes northwesterly, crossing south of Helena, over the continental divide at Mullen Pass, past Nevada Lake, Helmville, Placid Lake, and through the Flathead Indian Reservation to Hot Springs.
- B. Advantages of Applicant's Proposed Corridor
 1. This entire corridor has been approved by the Board of Montana Department of Natural Resources and Conservation (BNR&C). The

centerline location has been approved from Colstrip to near Townsend. The recent (June 4, 1979) "Additional Findings of Fact and Conclusions of Law" submitted by the BNR&C pursuant to the State Supreme Court order of April 10, 1979, reaffirms the Board's decision to approve the Applicant's Proposed Corridor.

2. The lowest initial construction costs are required on this corridor, which is the shortest of all corridor options.
3. This corridor is highly adaptable to long-range electrical plans of Montana and the region.
4. Potential impacts to Fish and Wildlife are relatively low for this corridor, except on segment G where they are high.

C. Disadvantages of Applicant's Proposed Corridor

1. This corridor option has the second highest overall environmental impact (TER) score. This high impact score derives from high potential impacts on visual resources, recreation waterways, state parks and recreation areas, and commercial forests.
2. The corridor crosses the Colorado-Unionville-Travis Planning Unit, RARE II Area I-742, passes near the National Bison Range, the Blackfoot River Resource Conservation Area and Recreation Corridor, and the Blackfoot-Clearwater Wildlife Management Area.
3. A high amount of expressed public concern has been recorded from residents in the Helena and Ovando areas.

D. Other Considerations

1. This corridor is the most direct route (431.3 miles) of all options and crosses the least state and private land (326.5 miles).
2. It crosses 20 miles of irrigated and 83 miles of non-irrigated farmland. These values represent midrange impacts compared to other options.
3. The corridor crosses the Flathead Indian Reservation, and no by-pass option is provided.
4. Portions of this corridor are opposed by the Meagher County Planning Board (segment C₁), the Fish and Wildlife Service-USDI (segment G), Tribal entities (segment G), Heritage Conservation and Recreation Service-USDI (segment G), Northwest Helena Valley residents (segment E₁), and the U.S. Environmental Protection Agency (entire corridor from Broadview to Hot Springs).

III. Agency Recommendations

A. State Agencies

1. The Board of the Department of Natural Resources and Conservation has approved the Applicant's Proposed Corridor.
2. An Interagency Study Group (state and federal) is conducting a long-term Elk-Logging Study in the Chamberlain Creek area of segment H. Personnel of this group and its steering committee highly recommend that no transmission lines be introduced into this area until the study is completed in September 1984.

B. Federal Agencies

1. Fish and Wildlife Service (USDI) - Personnel from the Billings area office expressed a preferred route from the standpoint of preservation of fish and wildlife resources. Their preferred corridor is the same as the Siegel Pass Alternative Corridor, except that the routing northwest from segment J would cross the Flathead Reservation (segments K and L) rather than over Siegel Pass (segments M₁-R-M₃).
2. Heritage Conservation and Recreation Service (USDI) - The Director of the HCRS expressed the view that because the Applicant's Proposed (and the Great Falls Alternative) Corridor would create impacts on the nationally-recognized scenic and recreational values of the Blackfoot River, his agency will continue to oppose any proposed alignment which introduces new intrusions to this portion of the Blackfoot River. The agency recommends that serious consideration be given to alternative alignments which would avoid this area (segment G).
3. Bureau of Indian Affairs (USDI) - The Flathead Agency made a number of recommendations relative to the draft documents, but made no recommendations concerning corridor preferences. The Northern Cheyenne Agency expressed concerns relative to mining and generation, but not to transmission aspects.
4. Environmental Protection Agency - The Regional Administrator of the EPA recommends that a route with the lowest environmental impact be chosen, and that this low impact route through segment J should be combined with the Siegel Pass link (segments M₁-R-M₃) to avoid the problem of crossing the Flathead Reservation. It is further recommended that proper mitigation of impacts, water quality in particular, be a requirement of any transmission line.

5. Other Agencies - Additionally, comments were received from the Department of Agriculture (FS and REA), the Department of Army (COE), and Department of Energy (BPA). No recommendations relative to preferred corridor options were made by these agencies.

C. Relationship to Northern Tier Pipeline Corridor Options

1. The State's preferred location for the Northern Tier Pipeline Corridor is the same in some areas as that for certain of the Colstrip transmission corridor options.
 - a. The Northern Tier Pipeline Company proposed the Ninemile Creek Alternative (crossing Siegel Pass) to avoid crossing the Flathead Indian Reservation.
 - 1) From Plains to a point near the confluence of the Blackfoot and Clark Fork Rivers, the two corridors would coincide (if the Siegel Pass link for a powerline corridor is utilized).
 - 2) From near Helena to south of Townsend the Northern Tier corridor would parallel the Colstrip corridor options which pass through Helena.
2. In some areas the preferred or alternative corridor location for the pipeline deviates from those of the powerline corridors.
 - a. The preferred routing for the pipeline currently appears to pass toward the northeast to Bonner along State Highway 200 to Greenough and then east across the Garnet Range to near Helmville. From here it again parallels the Applicant's Proposed Transmission Corridor to the Helena area and on to Townsend.

- b. From Townsend eastward, the pipeline corridor angles toward the northeast where it does not coincide with any Colstrip powerline corridor option. The reason for this is the different destination of the two corridors (north-central Minnesota vs. southeastern Montana).
3. Major reasons for deviations in corridor option locations for the two types of corridors involve differences in potential environmental impacts.
 - a. Construction and operation of a buried pipeline would impact surface and ground water resources to a much greater extent than would an aerial power transmission line.
 - b. A pipeline corridor along the Clark Fork River from Bonner to Garrison would involve 11 crossings of the river and very extensive potential environmental impacts, both during construction and operation (in the event of a break and leakage).
 - c. Major differences in impacts on visual and other resources make it more acceptable to route a pipeline through stable mountainous areas.

IV. Staff Recommendations by Interagency TER Group

A. High Environmental Impact Corridors

1. Corridor options with highest potential environmental impacts (based on TER analysis) are:
 - a. Siegel Pass
 - b. Applicant's Proposal

- c. Trident-Siegel Pass
 - d. Great Falls
2. Major reasons for the higher potential environmental impacts on these corridors are:
- a. Very high combined potential impacts on segments M₁, R, and M₃ (Siegel Pass and Trident-Siegel Pass corridors).
 - b. Major conflicts with land use plans and high potential environmental impacts on segment H (Siegel Pass corridor).
 - c. Very high combined potential impacts on segment G (Applicant's Proposed and Great Falls corridors).
 - d. Very high combined potential environmental impacts in the western (mountainous areas on both sides of and across Rogers Pass) portion of segment B (Great Falls corridor).
3. Including other decision factors (system needs, costs, energy conservation, adaptability to long range electrical plans) in a comparison between these four corridor options and those of lesser potential environmental impact does not alter their position as the four least desirable options (see charts in Federal Corridor Option Summary for comparisons).
4. For these reasons, the staff recommendation is to release the Siegel Pass, Trident-Siegel Pass, and Great Falls alternative corridors from further consideration. The Applicant's Proposed, because of its status as the corridor recommended by the State BNR&C, should be carried over for further consideration.

B. Low Environmental Impact Corridors

1. Corridor options with lowest combined potential environmental impacts (based on TER analysis) are:
 - a. Trident-Boulder
 - b. Butte-Anaconda
 - c. Townsend-Boulder
 - d. Helena-Avon Valley
2. The four corridor options in 1 above differ in total potential environmental impact (TER score) by less than 4 percent, and average about 7 percent less than the Applicant's Proposed Corridor. (The Interagency-Interdisciplinary TER Study Team considered that score differences of more than 5 percent were required to indicate significant differences among alternatives.)
3. Segments I, J, K, and L are common to all of these options. These segments represent the lowest potential impact routing through the western portion of the study area.
4. The four options represent two alternatives for corridors in the eastern portion of the study area: (1) Broadview to Townsend via segment C₁ on the Applicant's Proposed routing passing north of the Crazy Mountains and Bridger Mountains; (2) Broadview to Trident via segment D₁ passing south of the Crazy Mountains and through Flathead Pass in the Bridger Mountains.
 - a. These two segments (C₁ vs. D₁), although they do not terminate at a common point at their west end, are of

almost identical length and have almost identical total potential environmental impact.

- b. A slight overall benefit is reflected for D₁ over C₁ when the potential for paralleling existing transmission corridors is included.
 - c. Segment C₁ appears to be a preferable corridor segment when considering that it has already been approved by the BNR&C, and it avoids crossing Flathead Pass (an area with particular constraints and requirements).
5. The four options represent two alternatives in the central portion of the study area for each of the two segments C₁ and D₁.
- a. A decision as to which of these four options would represent the best corridor should be based on a number of key issues. The relative comparison among these four options and the Applicant's Proposed Corridor, considering potential environmental impacts and other key issues, is illustrated in the following chart:

Key issue comparison for corridor options (5) with least potential environmental impact.

Decision Factor	Alternative Corridor				
	Trident-Boulder	Butte-Anaconda	Townsend-Boulder	Helena-Avon Valley	Applicant's Proposed
Potential Environmental Impact (TER Score)					
Near to People & Travelways (Visibility)					
Mountain Crossings (Special Problems)					
Agricultural Land (Relative Impacts)					
Prior Corridor and Center-line Approval (BNR&C)					
Potential for Paralleling Existing Lines (Benefits)					
Affect on Communities (Proximity)					
Costs (Construction and Annual)					
System Needs (Re: State and Regional Planning)					
Crossing Flathead Reservation					

- Most desirable selection relative to other options.
- Less desirable selection relative to other options.
- Least desirable selection relative to other options.

C. Option Decision Statement

1. Based on these comparisons, the overall best corridor option is the Townsend-Boulder Alternative Corridor.
2. A summary of reasons for this selection includes:
 - a. All four options (not including Applicant's Proposed) differ less than 4 percent in total potential environmental impact.
 - b. All four options share the same low potential impact segment in the western portion of the study area (segments I, J, K, and L).
 - c. The Townsend-Boulder alternative would have the least visibility in the eastern and central portions (Broadview to Garrison; segments C₁ and O).
 - d. Trident-Boulder and Butte-Anaconda alternatives pose special problems in the Flathead Pass area of the Bridger Mountains (segment D₁).
 - e. Townsend-Boulder and Helena-Avon Valley influence much less agricultural land (segments C₁ and O; C₁-S, C₃, C₄, E₁, E₂, and P) than would Trident-Boulder or Butte-Anaconda (segments D₁, D₂, D₃, and D₄; D₁, Q, D₄).
 - f. Entire Butte-Anaconda and Trident-Boulder corridor would require BNR&C approval, whereas Townsend-Boulder and Helena-Avon Valley alternatives already have approval to Townsend or Helena, as well as centerline approval to near Townsend.

- g. Affects on communities due to corridor proximity would be greatest on the Butte-Anaconda and Helena-Avon Valley alternatives.
- h. The Butte-Anaconda option represents a disadvantage from the standpoint of length, construction costs, annual transmission costs, and energy conservation.
- i. System needs in relation to statewide and regional plans are met by the Townsend-Boulder corridor option.
- j. The advantages of the Applicant's Proposed Corridor, including its status of having State BNR&C approval, do not appear to be adequate to compare with the above stated advantages of the Townsend-Boulder or other low environmental impact alternative corridor option.
- k. All five of these options share the common problem of crossing the Flathead Indian Reservation.

V. Siegel Pass By-Pass to the Flathead Indian Reservation

- A. In the event that it is not possible to utilize a corridor across the Flathead Indian Reservation (segments K and L), the alternative would be to follow segments M₁, R, and M₃ over Siegel Pass and thence to Plains.
 - 1. This alternative would involve a considerable increase in costs to the environment as well as posing some critical location problems and increased dollar costs.
 - 2. A comparison in TER score for each of the resource determinants on these two links is presented in the following table:

TER Scores*

(Scores from P VI-4a
(Table VI-1) TER)

	Corridor K-L (Reservation Route)	Corridor M ₁ R M ₃ (Siegel Pass)
Length:	51.8 miles	56.2 miles
Fish and Wildlife	120	294
Land Suitability	158	162
Surface Water	52	62
Veg. Cover	208	246
Un. Nat. Res.	0	9
Agr. Lands	96	180
Comm. For. Land	108	246
Rangeland	52	170
Rec. Resources	197	319
Pre. and Hist.	195	165
Human Pop.	195	193
Visual Res.	327	470
TOTAL		
	1,708	2,516
Paralleling adjustment	- 229	0
	1,479	2,516

*Higher scores, or numerical presentation of impact severity, indicate greater undesirable environmental impact on these resource categories. From Colstrip Transmission Environmental Report (TER).

3. The quantitative information from which these TER scores were partially derived are presented in the following data summary table:

Data Summary From
P VI-6a
(Table VI-3) TER

	Corridor K-L (Reservation Route)	Corridor M ₁ R M ₃ (Siegel Pass)
Fed. Lands	0.7 miles	26.9 miles
Reserv. Lands	48.3 miles	0 miles
St. and Private Lands	2.8 miles	29.3 miles
Total Forest Land Cut	395 acres	885 acres
Agr. Land/Irrig. Land	40/1.5 acres	23/3.3 acres
-- No high sediment risk soils either way --		
Waterbodies crossed	30	38
Recreation, Waterway	7	10
St. Parks-Rec. Areas	2	1
Scenic Travelways (crossed)	9	6
(miles paralleled)	30 miles	53 miles
Historic Trails	0	0
Nat. Reg. & Hist. Sites	1	6
Elk Winter Range/ Key Elk Areas	1/0	18/2

-- No grizzly critical habitat on either --

4. Differences between crossing Flathead Reservation over segments K and L vs. crossing Siegel Pass to Plains over segments M₁R-M₃ include:
- a. Total TER score for M₁-R-M₃ is 2516 as compared to 1479 for K-L (adjusted for paralleling); an increase of 70 percent. Nearly all determinant scores are equal to or higher on the former link than on the latter (only Prehistoric and Historic is the exception).
 - b. There is a large difference in the amount of federal lands crossed (0.7 miles via the Reservation and 26.9 miles via Siegel Pass), and in state and private lands crossed (2.8 miles vs. 29.3 miles). Mostly Tribal Lands would be crossed in the Reservation.
 - c. The potential for total forest land cut is more than twice as great over Siegel Pass (885 vs. 395 acres).
 - d. Slight advantages for the Siegel Pass link include 23 as compared to 40 acres of dryland farming potentially removed from production, fewer state parks and recreation areas influenced (1 vs. 2), and fewer scenic travelways crossed (6 vs.9).
 - e. Other differences of importance are:
 - 1) A critical location problem exists in the vicinity of Paradise (segment M₃) where the community occupies a very narrow, steep-sided valley.
 - 2) A new substation would have to be built at Plains, increasing project costs, if the Siegel Pass link is selected.

VI. BPA-Build Alternatives

- A. BPA has been asked by Montana Power Company to construct part of the lines. Two possibilities have been explored:
1. On the Helena Alternative Corridor (Avon Valley), the Hot Springs to Garrison portion of the line would be built on existing right-of-way by BPA on double-circuit towers. From Garrison to the Applicant's Proposed corridor in the Blossburg area, BPA would build the line on new right-of-way on double circuit towers. East of Blossburg the lines would be constructed by the applicant along the state-approved corridor.
 2. On the Townsend-Boulder Alternative Corridor, the Hot Springs to Garrison portion of the line would be built on existing right-of-way by BPA on double circuit towers. From Garrison to the Applicant's Proposed Corridor near Townsend, BPA would build the line on new right-of-way. East of Townsend, the lines would be constructed by the applicant on the state-approved corridor.
- B. Any BPA decision to construct a portion of the lines is contingent upon the overall federal corridor decision and other factors. Some of these factors are:
1. Potential environmental impacts (TER analysis) are only slightly altered on a BPA build corridor. No differences in corridor rankings result from these alterations.
 - a. Fewer acres of agricultural land are potentially removed from production due to fewer towers and no guy lines.
 - b. Fewer acres of forest land are potentially cut due to narrower right-of-way.

- c. Visual impact are altered: increased due to taller towers; decreased as a result of narrower right-of-way.
 - d. The TER analysis is based largely on distances of environmentally sensitive areas crossed. The BPA-build options do not change this aspect of the analysis.
2. BPA double-circuit towers are adaptable to future expansion or upgrading capacity of the line.
 3. The reliability of double circuits on one tower is a concern. This potential problem would be less serious west of the Garrison substation.
 4. Construction costs are greater for building the BPA double-circuit towers.
 5. The BPA build portion of the corridor would not be subject to the Montana Facility Siting Act.
 6. A federally-built and maintained portion of lines would result in decreased tax revenue to the state.
 7. BPA has an existing right-of-way through the Flathead Indian reservation.
 8. A BPA-build portion west of Townsend (or Blossburg) would not conflict with BNR&C approval of the Applicant's Proposed Corridor from Colstrip to Townsend (or Blossburg).

VII. Decision Implementation

- A. Recent CEQ requirements state that no decision implementation may take place prior to 30 days after filing of the final EIS for public review. August 2013

AUG 14 1981

EHA

Administrator - A

/s/ ~~MARVIN~~ KLINGER

Marvin Klinger, Asst. Administrator
for Engineering & Construction - E

Record of Decision on the Supplement to the Colstrip Project Environmental
Impact Statement

The attached Record of Decision supersedes the previous interagency Record of Decision for the Colstrip Project which was issued on September 21, 1979. Based on supplemental environmental studies and extensive public involvement, the U.S. Department of Agriculture Forest Service (USFS), the U.S. Department of Interior Bureau of Land Management (BLM), and the Bonneville Power Administration (BPA), recommend deviations from the previously selected corridor in the Boulder and Deer Lodge Valley areas. These new corridors, together with those previously approved, will accommodate construction of two 500-kV electric transmission lines between Colstrip and Hot Springs, Montana. The Record of Decision also selects a new location for the Garrison Substation.

The Record of Decision was prepared in accordance with the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR, Part 1505.2). It describes the alternative corridors and substation sites that were evaluated in the Final Supplement to the Colstrip Environmental Impact Statement. The environmental consequences of the alternatives, the rationale of the involved Federal agencies with respect to the merits or shortcomings of the alternatives, and the proposed mitigation measures to be undertaken, are described. Finally, the ROD discusses the relationships between this corridor, the Colstrip-Townsend transmission line currently under construction, and the Garrison-Spokane corridor currently under study.

The Final Supplement to the Colstrip Project Environmental Impact Statement is attached for your reference. Also attached for your consideration is a comment received on the Final Supplement. It is recommended that the proposal, as described in the Final Supplement to the EIS, be adopted. This decision is judged to achieve a balance between environmental suitability and cost and engineering considerations. The Record of Decision contains all pertinent information necessary to support the recommendation and to meet NEPA and regulatory requirements.

To allow simultaneous signature of the Record of Decision, triplicate originals have been prepared. Letters transmitting these originals to Michael Penfold, Montana State Director, Bureau of Land Management, and Thomas Coston, Regional Forester, Region 1, U.S. Forest Service, are attached for your signature. It is requested that these letters be transmitted immediately so that simultaneous signature of the ROD may occur on August 18, 1981.

If, after considering the recommendation, it is your decision to proceed with the proposal, it would be appropriate for you to sign the Record of Decision on August 18, 1981. If this is your decision, the other parties will be notified, and authenticated copies of the ROD sent to them.

Following signature of the ROD by all parties, the following actions will be taken:

- A Notice of availability will be published in the Federal Register;
- The Record of Decision will be distributed to the involved public and to Federal agencies;
- Development of the proposed facilities will proceed; and
- We will be committed to those mitigation commitments made in the Record of Decision.

Attachments:

Record of Decision
Final Supplement to Colstrip Project EIS
Comment on Final Supplement

KABarnhart/MSherrett:ck(EHA-0524E)

cc:

Deputy Administrator - A
O. Halvorson - AP
W. Helm - EB
J. Frick - EH
J. Jones - EH
T. Wagenhoffer - EK
C. Perigo - EKO
L. Wilkerson - EL
R. Perlas - EN
E. Wirtz - ENO
D. Perry - EO
C. Clark - ET
L. Bradshaw - ETJ
G. Eskridge - ETJ-21
V. Williams - ETM
R. Beraud - ETMA
B. Rogers - O
R. Nishi - OW
R. Goranson - OWE
J. Kiley - SJ
Official File - EHA

DATE August 14, 1981

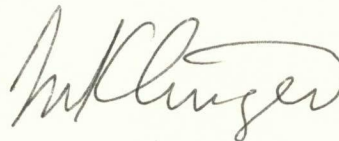
In reply
refer to EHA

UNITED STATES GOVERNMENT

Memorandum

TO Administrator - A

FROM Marvin Klinger, Asst. Administrator
for Engineering & Construction - E



SUBJECT Record of Decision on the Supplement to the Colstrip Project Environmental
Impact Statement

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Record of Decision
Final Supplement to Colstrip Project EIS
Comment on Final Supplement

KABarnhart/MSherrett:ck(EHA-0524E)

cc:

Deputy Administrator - A
O. Halvorson - AP
W. Helm - EB
J. Frick - EH
J. Jones - EH
T. Wagenhoffer - EK
C. Perigo - EKO
L. Wilkerson - EL
R. Perlas - EN
E. Wirtz - ENO
D. Perry - EO
C. Clark - ET
L. Bradshaw - ETJ
G. Eskridge - ETJ-21
V. Williams - ETM
R. Beraud - ETMA
B. Rogers - O
R. Nishi - OW
R. Goranson - OWE
J. Kiley - SJ
Official File - EHA

EHA

AUG 14 1981

Mr. Thomas Coston
Regional Forester
USDA Forest Service, Region 1
Federal Building
Missoula, Montana 59801

Dear Mr. Coston:

I have enclosed the Record of Decision on the Supplement to the Colstrip Project EIS. It was prepared in accordance with the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR, Part 1505.2). It describes the alternative routes and substations that were evaluated in supplemental environmental studies. The environmental consequences of the alternatives, the rationale of the involved Federal agencies with respect to the merits or shortcomings of the alternatives, and the proposed mitigation measures to be undertaken, are described. Finally, the ROD discusses the relationships between corridor decisions for the Colstrip-Townsend transmission line and the Garrison-Spokane transmission line currently under study.

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In accordance with previous agreements, BLM will arrange for publication of a Notice of Availability in the Federal Register and distribute the Record of Decision.

Sincerely,

(SGD) Peter T. Johnson

Peter T. Johnson
Administrator

Enclosures

Record of Decision
Final Supplement to Colstrip Project Final EIS
Comment Letter

cc:

Michael J. Penfold, BLM

MSherrett/KBarnhart:ck(EHA-0526E)

bcc:

Admin. Chron File - A
Deputy Administrator - A
J. Jura - AD
D. Schausten - AE
O. Halvorson - AP
M. Klinger - E
J. Jones - E
J. Frick - EH
B. Rogers - O
S. Efferding - S
A. Morrell - SJ
Official File - EHA



Department of Energy

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

OFFICE OF THE ADMINISTRATOR

AUG 14 1981

In reply refer to: EHA

Mr. Thomas Coston
Regional Forester
USDA Forest Service, Region 1
Federal Building
Missoula, Montana 59801

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Sincerely,

Peter T. Johnson
Administrator

Enclosures

Record of Decision
Final Supplement to Colstrip Project Final EIS
Comment Letter

cc:

Michael J. Penfold, BLM

KAB

AUG 14 1981

EHA

Mr. Michael J. Penfold
State Director
U.S. Department of Interior
Bureau of Land Management
P.O. Box 30157
Billings, Montana 59107

Dear Mr. Penfold:

I have enclosed the Record of Decision on the Supplement to the Colstrip Project EIS. It was prepared in accordance with the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR, Part 1505.2). It describes the alternative routes and substations that were evaluated in supplemental environmental studies. The environmental consequences of the alternatives, the rationale of the involved Federal agencies with respect to the merits or shortcomings of the alternatives, and the proposed mitigation measures to be undertaken, are described. Finally, the ROD discusses the relationships between corridor decisions for the Colstrip-Townsend transmission line and the Garrison-Spokane transmission line currently under study.

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In accordance with previous agreements, Al Evans of your staff should arrange for publication of a Notice of Availability in the Federal Register and distribution of copies of the Record of Decision to involved public and agencies.

Sincerely,

(SGD) Peter T. Johnson

Peter T. Johnson
Administrator

Enclosures:

Record of Decision
Final Supplement to Colstrip Project EIS
Comment Letter

cc:

Thomas Coston, USFS

KABarnhart/MSherrett:ck(EHA-0528E)

bcc:

Admin. Chron File - A
Deputy Administrator - A
J. Jura - AD
D. Schausten - AE
O. Halvorson - AP
M. Klinger - E
J. Jones - E
J. Frick - EH
B. Rogers - O
S. Efferding - S
A. Morrell - SJ
Official File - EHA



Department of Energy

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

OFFICE OF THE ADMINISTRATOR

AUG 14 1981

In reply refer to: EHA

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State Director
U.S. Department of Interior
Bureau of Land Management
P.O. Box 30157
Billings, Montana 59107

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Sincerely,

Peter T. Johnson
Administrator

Enclosures:

Record of Decision
Final Supplement to Colstrip Project EIS
Comment Letter

cc:

Thomas Coston, USFS

phone
Contact name # -

FOR IMMEDIATE RELEASE
Tuesday, August 18, 1981

MISSOULA, MONT. -- A Record of Decision stating the location of a 500-kilovolt transmission line ^{corridor} between Townsend and Garrison, Mont., ~~has been~~ ^{WAS} signed ^{today} by Federal agencies involved in the preparation of the Final Supplement to the Colstrip Project Environmental Impact Statement.

The U.S. Forest Service, the Bureau of Land Management and the Bonneville Power Administration also decided the location of a substation ^{near} ~~in the area of~~ Garrison, Mont.

The corridors selected by the Federal agencies are:

The Boulder Alternative in the Boulder, Mont. area, which skirts the Boulder Basin Valley rather than crossing the ^{valley} center; the Black Mountain AAA Alternative in the Deer Lodge Valley Area, which also follows a path along the edge of the valley rather than across the ^{valley} center.

The substation site selected is site 3A, located four miles southwest of Garrison, Mont., in the Pikes Peak Creek Area.

These corridor segments and the substation site are changes from those originally selected by the Federal agencies in a Record of Decision issued Sept. 21, 1979. The remainder of the originally-designated corridor is unchanged.

Public concern regarding impacts of portions of the originally selected corridor led to a reopening of the decisionmaking process, an evaluation of new alternatives and the decisions on the new corridor segments and substation site.

Copies of the official Record of Decision will be mailed to persons on the Colstrip EIS mailing list. Copies may also be obtained by request from the following Federal officials:

~~Earl Reinsel
Forester
USDA Forest Service
P.O. Box 7669
Missoula, MT 59807~~

~~John O. Hooson
Engineering and Construction
Environmental Coordinator - EHA
Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208~~

~~Neil Morck
USDI Bureau of Land Management
222 N. 32nd Street
P.O. Box 30157
Billings, MT 59107~~

This represents the official Federal agencies' decision on corridor and subsite which was announced earlier as Federal proposal.

#

BONNEVILLE POWER ADMINISTRATION

Office of the Administrator

J. O. Hanson
TO ~~Mr. Klingler~~ - _____ Date 8-24
_____ 5

Comments Action Information

Copy of incoming letter
only to ① M. Klingler
② J. O. Hanson
Jms
J25

FROM

Pessie

ADDRESS

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

FEDERAL BUILDING
P.O. BOX 7669
MISSOULA, MONTANA 59807

OFFICIAL FILE COPY	
File	Date
	AUG 24 1981
Referred To:	
Action Taken:	
<input type="checkbox"/> ANS.	<input type="checkbox"/> NO REPLY
By	Date
	1990
	AUG 20 1981

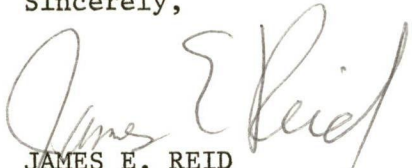
USDOE, Bonneville Power Administration
Peter T. Johnson
P.O. Box 3621
Portland, OR 97208



Dear Mr. Johnson:

Enclosed is the Record of Decision on the Final Supplement (FES 81-25) to the Colstrip Project EIS (FES 79-29) which was signed August 18, 1981, by Deputy Regional Forester Curtis L. Smith for Regional Forester Tom Coston.

Sincerely,


JAMES E. REID
Director of Planning,
Programing & Budgeting

Enclosure

cc: RF
PP&B - Reinsel (3)
BLM - Penfold

RECORD OF DECISION

On The

FINAL SUPPLEMENT (FES 81-25)

To The

COLSTRIP PROJECT EIS (FES 79-29)

INTRODUCTION

The U.S. Department of Interior, Bureau of Land Management (BLM), and the U.S. Department of Agriculture, Forest Service (FS), jointly approved a two-mile-wide transmission line corridor from Colstrip to Hot Springs in a Record of Decision (ROD) dated September 21, 1979. Bonneville Power Administration (BPA) concurred with the BLM and FS decision, expressing its intent to build a double-circuit 500-kV transmission line in the designated corridor, starting from its interconnection in the Townsend vicinity with the facilities built by Montana Power Company (MPC), extending to a new 500-kV substation in the vicinity of Garrison, Montana, and continuing to an interconnection with the existing Federal grid in the area of Hot Springs and Plains, Montana.

Following the corridor decision, the BLM, FS, and BPA agreed to a centerline evaluation process and held public meetings in the Townsend, Boulder, and Deer Lodge areas. A number of landowners and members of the general public expressed concern at the meetings over the centerline locations and impacts the transmission line would have. Alternative transmission line locations were suggested, some deviating from the designated corridor.

BLM, FS, and BPA agreed to reopen the decisionmaking process on the location of the designated corridor in the Boulder and Deer Lodge areas. A Final Supplement to the Colstrip Project EIS was prepared, analyzing possible corridor variations in the Boulder and Deer Lodge areas, and alternate substation locations in the Deer Lodge-Garrison-Gold Creek vicinity. The EIS Supplement was prepared cooperatively by BLM, FS, and BPA, with BLM as the lead agency. The final Supplement was filed with the Environmental Protection Agency on July 17, 1981 (46 FR 37083).

DECISION

A new transmission line corridor has been selected for portions of the Colstrip Project (see attached map). As described in the Final Supplement to the Colstrip Project EIS, the decisions are:

- in the Boulder Valley area, the Boulder corridor alternative;
- in the Deer Lodge Valley area, the Black Mountain AAA corridor alternative; and
- Substation Site 3A in the Garrison area.

Other portions of the designated corridor remain unchanged.

The Bureau of Land Management and Forest Service jointly approve and select this corridor for construction of transmission facilities across Federal lands. This approval is subject to the issuance of a crossing permit containing appropriate conditions under the Federal Land Policy and Management Act (FLPMA). The Bonneville Power Administration also approves and selects this corridor and will proceed with land and right-of-way acquisition, construction, and subsequent operation and maintenance of the proposed facilities (including the substation).

ALTERNATIVES AND DECISION RATIONALE

1. Boulder & Basin Areas

Three alternate corridors were analyzed in the Supplement to the Final Colstrip Project EIS. They are: the Boulder corridor; the designated (previously selected) corridor; and the Basin corridor.

The designated (previously selected) corridor was identified as the environmentally preferred alternative based on application of the original Colstrip corridor analysis process documented in the Colstrip Transmission Environmental Report (TER).

Considerations and decision rationale relative to the three corridors considered are as follows:

--Boulder: The Boulder corridor is the selected corridor. Its principle distinction from the designated corridor is that it extends along the edge of the Boulder-Basin Valley rather than through the center of the valley. While the TER rating analysis shows less impact from crossing the Boulder-Basin Valley (designated corridor), residents within the valley expressed great concern and sensitivity to the impact of such a corridor. In this farming community, concern for impacts to agricultural lands was of great importance. As the Boulder Alternative avoids farmlands, this was a factor governing its selection.

Strong local concern for the visual impact of the designated corridor also was a consideration in selecting the Boulder corridor. It was felt that the striking visual presence of a corridor through the valley would adversely affect the esthetic quality of life within the Boulder-Basin community. These visual impacts will be mitigated by use of the Boulder corridor, placing the transmission line in the valley foothills.

Boulder-Basin Valley residents also expressed concern over the electrical effects of high voltage transmission lines, requesting that the selected corridor be as distant as possible from population centers. Although harmful electrical effects are not foreseen, this concern is minimized through use of the Boulder corridor.

Finally, the Boulder corridor utilizes a vacated telephone line right-of-way, thus further minimizing environmental impacts.

For these reasons, selection of the Boulder alternative was judged an acceptable trade-off despite its higher impact and somewhat greater construction cost.

--Basin: This corridor is considered second best of the three corridor options. Impacts are similiar to those of the Boulder corridor. However, the analysis indicated that the Basin corridor has slightly greater environmental impacts to commercial forest land and historic sites. It would not utilize the vacant telephone line right-of-way. Construction costs are also somewhat higher than for the Boulder corridor.

--Designated: The designated corridor, as indicated above, is the environmentally preferable alternative. However, due to strong local concerns, greater agricultural impacts, and greater visual impact, it was not selected.

2. Deer Lodge Valley Area

Twelve alternative corridors were considered in the Deer Lodge Valley area. The Designated Corridor and Alternative C were both considered environmentally preferred alternatives. For reasons specified below, the decision is to adopt the Black Mountain AAA alternative.

Environmental analysis criteria used in the decision process were published in the Final Supplement to the Colstrip Project EIS. On the basis of these criteria, six of the alternatives in the Deer Lodge Valley were found to have greater overall adverse impact and thus were rejected. These corridors were:

1. Alternative B
2. Alternative D
3. Alternative E
4. Alternative F
5. Black Mountain A Alternative
6. Thunderbolt Mountain A Alternative.

Criteria on which these alternatives were eliminated from further consideration are as follows:

1. Greater length. Alternatives E and F have the highest construction costs and electrical losses as well as the highest overall adverse environmental impact potential.

2. Alternative D crosses wetlands and a State wildlife refuge. Adverse impacts to water-associated birds would be unmitigatable. Alternative D also has high visual impact to Interstate Highway 90 and the town of Warm Springs, Montana, and the greatest impact on big game winter range.

3. Alternative B, the Black Mountain A alternative, and the Thunderbolt Mountain A alternative all cross the Deer Lodge Valley, which is highly unacceptable to landowners and residents. All three of the alternatives have a relative high impact rating as compared to other alternatives. They also cross an unacceptable amount of irrigated and potentially irrigable lands.

4. The Black Mountain A alternative, and Alternatives D, E, and F have a high impact potential to deer and elk critical winter range.

The six remaining corridor alternatives have the least overall impacts. They are:

- | | |
|-----------------------------------|--------------------------------|
| 1. Black Mountain AA Alternative | 4. Thunderbolt AA Alternative |
| 2. Black Mountain AAA Alternative | 5. Thunderbolt AAA Alternative |
| 3. Designated Corridor | 6. Alternative C |

Of these remaining alternatives, the AA segment of the Black Mountain and the Thunderbolt AA alternative were eliminated from selection for four major reasons:

1. Their proximity to two farmsteads in the Warm Springs Creek area.
2. They cross more irrigated and irrigable land than the other alternatives.
3. They cross both Interstate Route 90 and State Route 12.
4. They cross both the Clark Fork and Little Blackfoot Rivers.

The TER rating system, which is a useful and valid analytical tool, indicates that the designated corridor and Alternative C would have less adverse environmental impact. On this basis, they are environmentally preferred. However, consideration of additional relevant factors leads to the decision, as in the Boulder-Basin Valley, that alternatives which avoid the middle of the valley are preferable. Following are the reasons:

--The Designated Corridor and Alternative C would extend through the center of Deer Lodge Valley, whereas the Black Mountain AAA and Thunderbolt AAA alternatives run along the edge of the valley, skirting the populated areas.

--The Black Mountain AAA and Thunderbolt AAA alternatives cross less irrigated farmland, especially considering the centerlines where these two alternatives cross one-fourth or less of the irrigated lands.

--Community representatives in the Deer Lodge Valley have expressed great sensitivity to the agricultural and visual impacts that would result from the selection of either the designated corridor or Alternative C.

There are two remaining alternatives--Black Mountain AAA and Thunderbolt Mountain AAA. Of these two, Black Mountain AAA is chosen because:

--About one-half the wetland area is crossed, which is in keeping with the spirit of Executive Order 11990, Protection of Wetlands (42 FR 26961, May 24, 1977). This Executive Order requires agencies to "minimize the destruction, loss, or degradation of wetlands." The temporary disturbance to wet areas caused by construction will also be less and it will be easier to build tower footings.

--Black Mountain is better able to absorb the visual disturbance caused by the transmission line as it will be perceived by viewers. Visual impact TER rating is higher for Black Mountain, but considering that the Black Mountain alternative can better absorb the visual impact, Black Mountain is the overall better alternative.

--Black Mountain AAA avoids a greater area of high alpine habitat where the growing season is shorter and temperatures are lower. High areas are harder to revegetate, have snow cover for a longer season, and thus are harder in which to build. Although the difference in elevation is not great, about 500-800 feet, this results in a big difference in the ability of the ground cover to heal itself after disturbance.

--Reliability of service is substantially diminished at higher elevations because higher elevations lead to greater icing conditions. Snows are deeper and last longer, resulting in access problems for maintenance and repair. Reliability is particularly important for a double-circuit line of this size, where it is the major East-West transmission intertie and there are no suitable backup systems. Black Mountain AAA offers greater reliability.

--A better access road system exists for the Black Mountain AAA alternative. All of this corridor has some kind of existing road and comparatively little will have to be built. On the Thunderbolt Mountain AAA alternative, 4 miles of corridor are without existing roads.

--The "per-mile impact" of each alternative is about the same (EIS Final Supplement, Table 7). This fact, in itself, does not favor either alternative, but it shows that the alternatives are closer environmentally than would otherwise be indicated by their cumulative scores shown on Table 8 (EIS Final Supplement).

--Thunderbolt Mountain is a more "natural" area and choosing the Black Mountain alternative helps preserve this aspect: The Black Mountain alternative has areas that have been logged.

--Despite the fact that Black Mountain AAA has an approximately \$2.5 million higher estimated construction cost, this extra cost is a small fraction of total project cost. This expenditure is well justified considering the advantages in reliability and other factors listed here.

--The National Park Service has said the Black Mountain alternative has the least visual impact considering Grant-Kohrs Ranch. The Fish and Wildlife Service has indicated that Black Mountain is the best alternative on Deer Lodge Valley.

3. Garrison Substation

Four alternative substation sites were analyzed in the EIS Supplement. The Pikes Peak Creek site (Site 3A) is chosen. The environmentally preferred alternative was the Gold Creek site because soils are suitable and services are nearby. All corridor alternatives could terminate at this site, and no transmission line corridor options to the west would be foreclosed.

The Dempsey Creek Substation Site (Site 1) was not selected for the following reasons: (1) it would require the selection of a corridor crossing the Deer Lodge Valley; (2) it was opposed by the residents of the Deer Lodge Valley; (3) it would not be suitable for use with the preferred corridor alternative; and (4) it would be located on critical deer and elk winter range.

The Spring Gulch Substation Site (Site-2) was not selected for the following reasons: (1) a corridor crossing the Deer Lodge Valley would be required; (2) opposition by residents of the Deer Lodge Valley; (3) it would not be suitable for use with the preferred corridor alternative; (4) susceptibility to soil erosion; and (5) it would be located on critical deer and elk winter range.

The Gold Creek Substation Site (Site 3) was not selected for the following reasons: (1) opposition by landowners and residents in the Gold Creek area; (2) \$1 to \$2 million would be required for the mitigation of noise impacts to nearby residences; and (3) it would be located within the Gold Creek Historic District, and (4) high visual impacts to local land owners would occur. While this is the environmentally preferred site, all substation sites are more or less equal and the EIS Final Supplement did "not reveal any great differences between them." This site was not chosen because the comparatively large expense (\$1 to \$2 million) necessary for noise mitigation outweighs the comparatively small environmental gain.

The Pikes Peak Creek Substation Site (Site 3A) is considered feasible for only the AAA Corridor Alternative. It has been termed the least unacceptable alternative by local landowners. It does not pose significant noise problems or the environmental problems of the other sites. It would, however, be susceptible to soil erosion during construction. It has the least visual impact of all sites and is environmentally acceptable to the

involved Federal agencies. Use of this site requires a substantial amount of road rebuilding (11,500 feet) and new road construction (7500 feet). An extra communication site and a distribution line to supply low voltage substation service power is required. Since more construction improvements are required for this site, it was not considered as desirable environmentally as Site 3. However, these differences are offset by its advantages in lower visual impact, lower costs for noise mitigation, avoidance of the Gold Creek Historic District, and greater public acceptance. For the above reasons, the Pikes Peak Creek Substation Site was selected.

MITIGATION MEASURES ADOPTED

Mitigation measures were developed and included in the original Colstrip Project EIS. Additional mitigation measures were developed and included in the Supplement to the Colstrip Project EIS. These mitigation measures are of a general nature and will apply to the amended Townsend-Garrison segments. Site specific measures will be developed during the centerline location and environmental analysis process.

The general and site specific measures will be developed for incorporation into a Project Plan for use on Federal lands during construction. The measures will also become part of Bonneville Power Administration construction contract specifications for use on non-Federal lands.

Adoption of these mitigation measures will insure all practicable means and measures have been taken to protect the environment from harm.

MONITORING AND ENFORCEMENT

Federal Lands: In accordance with existing memoranda of understanding between the Bonneville Power Administration, the Bureau of Land Management, and the Forest Service, the land management agencies will assign a project coordinator to monitor construction on Federal lands. The coordinator will be responsible for insuring that the measures agreed to in the Record of Decision, the right-of-way permit, and in BPA contract specifications, are carried out during construction. The project coordinator will fulfill this obligation by working through Bonneville's construction coordinator.

State and Private Lands: Bonneville Power Administration transmission and substation designers, land acquisition personnel, environmental specialists, and construction personnel will insure that mitigation measures identified in the Final EIS and Record of Decision are included in construction contract specifications. BPA will coordinate with the State of Montana in the establishment and enforcement of mitigation measures on state lands. These stipulations will be enforced by Bonneville construction inspectors and construction coordinator.

OTHER CONSIDERATIONS

Relationship to Colstrip-Townsend Segment and Colstrip Generating Unit 3: The Colstrip-Townsend segment of the original Colstrip-Townsend-Hot Springs designated corridor is presently under construction by the Montana Power Company. The change in designation as indicated in this Amended Record of Decision will have no effect on the Colstrip-Townsend segment. Completion of construction for the Colstrip-Townsend and Townsend-Garrison segments is required by October 1983 to facilitate the integration and testing of Colstrip Unit 3. These lines and the Garrison Substation must be in service to facilitate the interconnection with existing BPA and Montana Power Company transmission systems in the area.

Relationship to Garrison-Spokane Transmission Line: The Garrison-Spokane transmission line will provide electric transmission capability west from the Garrison Substation to BPA's Bell Substation near Spokane. The decision for the location of the Townsend-Garrison segment and the associated Garrison Substation site has considered the effect on reasonable alternative corridors west from the selected Garrison site. It has been determined that the selected Site 3A does not eliminate the choice of any corridors that have been identified through the scoping process conducted for the Garrison-Spokane revised EIS.

IMPLEMENTATION

The Forest Service and Bureau of Land Management will accept an application from Bonneville Power Administration only within the approved corridor. The Bureau of Land Management and Forest Service must approve the centerline, develop centerline specific stipulations, and issue a right-of-way permit before any construction can proceed. The right-of-way permit will include, by reference, a Project Plan which will provide detailed site-specific measures necessary to protect the environment during preconstruction and construction of the transmission facility on Federal lands.

On National Forest System lands only, this decision is subject to a formal administrative review process (appeal), pursuant to 36 CFR 211.19. No construction may begin on Forest System lands for 30 days following the signing of this ROD. Any notice of appeal must be filed within 45 days from the date of this ROD.

On BLM, state, and private lands, there is no formal administrative review process. On these lands construction may commence immediately following signing of the ROD.

Upon signature, notice of availability of this Record of Decision will be published in the Federal Register. Copies of the document will be sent to individuals and organizations included on the official EIS mailing list. In addition, the decision will be announced in local and area newspapers.

The Federal land management agencies are responsible for land allocation decisions for location of the transmission lines on lands they administer (Federal lands). BPA is responsible for location of the transmission line on non-Federal land (state and private lands). Consensus as to the decision among the Federal agencies is required because location across Federal lands will affect the location across non-Federal lands and vice versa. Each Federal decisionmaker, by signing an original copy of this ROD, is making a decision to the extent of each respective agency's jurisdiction.

Signed in triplicate original this 18 th day of August, 1981.

for 
Regional Forester, Region One
USDA, Forest Service

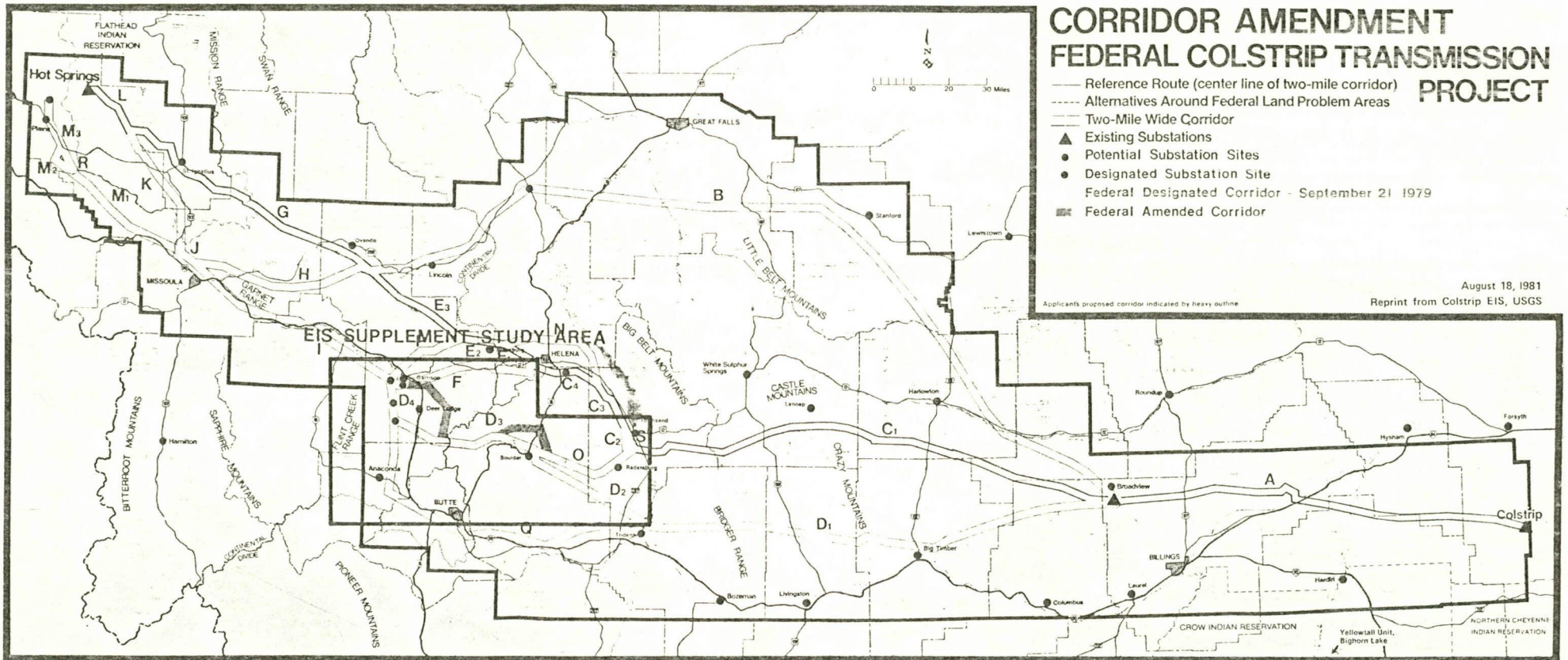
/s/ MICHAEL J. PENFOLD
State Director, Montana
USDI, Bureau of Land Management

/s/ PETER T. JOHNSON
Administrator
Bonneville Power Administration

Attachment

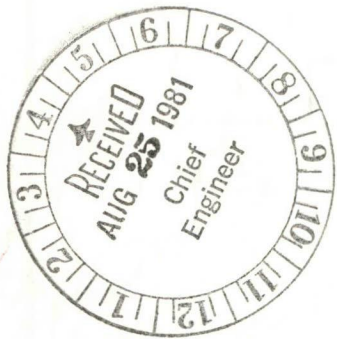
CORRIDOR AMENDMENT FEDERAL COLSTRIP TRANSMISSION PROJECT

- Reference Route (center line of two-mile corridor)
- - - Alternatives Around Federal Land Problem Areas
- Two-Mile Wide Corridor
- ▲ Existing Substations
- Potential Substation Sites
- Designated Substation Site
- Federal Designated Corridor - September 21 1979
- Federal Amended Corridor



August 18, 1981
Reprint from Colstrip EIS, USGS

Applicants proposed corridor indicated by heavy outline



RECORD OF DECISION

On The

FINAL SUPPLEMENT (FES 81-25)

To The

COLSTRIP PROJECT EIS (FES 79-29)

INTRODUCTION

The U.S. Department of Interior, Bureau of Land Management (BLM), and the U.S. Department of Agriculture, Forest Service (FS), jointly approved a two-mile-wide transmission line corridor from Colstrip to Hot Springs in a Record of Decision (ROD) dated September 21, 1979. Bonneville Power Administration (BPA) concurred with the BLM and FS decision, expressing its intent to build a double-circuit 500-kV transmission line in the designated corridor, starting from its interconnection in the Townsend vicinity with the facilities built by Montana Power Company (MPC), extending to a new 500-kV substation in the vicinity of Garrison, Montana, and continuing to an interconnection with the existing Federal grid in the area of Hot Springs and Plains, Montana.

Following the corridor decision, the BLM, FS, and BPA agreed to a centerline evaluation process and held public meetings in the Townsend, Boulder, and Deer Lodge areas. A number of landowners and members of the general public expressed concern at the meetings over the centerline locations and impacts the transmission line would have. Alternative transmission line locations were suggested, some deviating from the designated corridor.

BLM, FS, and BPA agreed to reopen the decisionmaking process on the location of the designated corridor in the Boulder and Deer Lodge areas. A Final Supplement to the Colstrip Project EIS was prepared, analyzing possible corridor variations in the Boulder and Deer Lodge areas, and alternate substation locations in the Deer Lodge-Garrison-Gold Creek vicinity. The EIS Supplement was prepared cooperatively by BLM, FS, and BPA, with BLM as the lead agency. The final Supplement was filed with the Environmental Protection Agency on July 17, 1981 (46 FR 37083).

DECISION

A new transmission line corridor has been selected for portions of the Colstrip Project (see attached map). As described in the Final Supplement to the Colstrip Project EIS, the decisions are:

- in the Boulder Valley area, the Boulder corridor alternative;
- in the Deer Lodge Valley area, the Black Mountain AAA corridor alternative; and
- Substation Site 3A in the Garrison area.

Other portions of the designated corridor remain unchanged.

The Bureau of Land Management and Forest Service jointly approve and select this corridor for construction of transmission facilities across Federal lands. This approval is subject to the issuance of a crossing permit containing appropriate conditions under the Federal Land Policy and Management Act (FLPMA). The Bonneville Power Administration also approves and selects this corridor and will proceed with land and right-of-way acquisition, construction, and subsequent operation and maintenance of the proposed facilities (including the substation).

ALTERNATIVES AND DECISION RATIONALE

1. Boulder & Basin Areas

Three alternate corridors were analyzed in the Supplement to the Final Colstrip Project EIS. They are: the Boulder corridor; the designated (previously selected) corridor; and the Basin corridor.

The designated (previously selected) corridor was identified as the environmentally preferred alternative based on application of the original Colstrip corridor analysis process documented in the Colstrip Transmission Environmental Report (TER).

Considerations and decision rationale relative to the three corridors considered are as follows:

--Boulder: The Boulder corridor is the selected corridor. Its principle distinction from the designated corridor is that it extends along the edge of the Boulder-Basin Valley rather than through the center of the valley. While the TER rating analysis shows less impact from crossing the Boulder-Basin Valley (designated corridor), residents within the valley expressed great concern and sensitivity to the impact of such a corridor. In this farming community, concern for impacts to agricultural lands was of great importance. As the Boulder Alternative avoids farmlands, this was a factor governing its selection.

Strong local concern for the visual impact of the designated corridor also was a consideration in selecting the Boulder corridor. It was felt that the striking visual presence of a corridor through the valley would adversely affect the esthetic quality of life within the Boulder-Basin community. These visual impacts will be mitigated by use of the Boulder corridor, placing the transmission line in the valley foothills.

Boulder-Basin Valley residents also expressed concern over the electrical effects of high voltage transmission lines, requesting that the selected corridor be as distant as possible from population centers. Although harmful electrical effects are not foreseen, this concern is minimized through use of the Boulder corridor.

Finally, the Boulder corridor utilizes a vacated telephone line right-of-way, thus further minimizing environmental impacts.

For these reasons, selection of the Boulder alternative was judged an acceptable trade-off despite its higher impact and somewhat greater construction cost.

--Basin: This corridor is considered second best of the three corridor options. Impacts are similiar to those of the Boulder corridor. However, the analysis indicated that the Basin corridor has slightly greater environmental impacts to commercial forest land and historic sites. It would not utilize the vacant telephone line right-of-way. Construction costs are also somewhat higher than for the Boulder corridor.

--Designated: The designated corridor, as indicated above, is the environmentally preferable alternative. However, due to strong local concerns, greater agricultural impacts, and greater visual impact, it was not selected.

2. Deer Lodge Valley Area

Twelve alternative corridors were considered in the Deer Lodge Valley area. The Designated Corridor and Alternative C were both considered environmentally preferred alternatives. For reasons specified below, the decision is to adopt the Black Mountain AAA alternative.

Environmental analysis criteria used in the decision process were published in the Final Supplement to the Colstrip Project EIS. On the basis of these criteria, six of the alternatives in the Deer Lodge Valley were found to have greater overall adverse impact and thus were rejected. These corridors were:

1. Alternative B
2. Alternative D
3. Alternative E
4. Alternative F
5. Black Mountain A Alternative
6. Thunderbolt Mountain A Alternative.

Criteria on which these alternatives were eliminated from further consideration are as follows:

1. Greater length. Alternatives E and F have the highest construction costs and electrical losses as well as the highest overall adverse environmental impact potential.

2. Alternative D crosses wetlands and a State wildlife refuge. Adverse impacts to water-associated birds would be unmitigatable. Alternative D also has high visual impact to Interstate Highway 90 and the town of Warm Springs, Montana, and the greatest impact on big game winter range.

3. Alternative B, the Black Mountain A alternative, and the Thunderbolt Mountain A alternative all cross the Deer Lodge Valley, which is highly unacceptable to landowners and residents. All three of the alternatives have a relative high impact rating as compared to other alternatives. They also cross an unacceptable amount of irrigated and potentially irrigable lands.

4. The Black Mountain A alternative, and Alternatives D, E, and F have a high impact potential to deer and elk critical winter range.

The six remaining corridor alternatives have the least overall impacts. They are:

- | | |
|-----------------------------------|--------------------------------|
| 1. Black Mountain AA Alternative | 4. Thunderbolt AA Alternative |
| 2. Black Mountain AAA Alternative | 5. Thunderbolt AAA Alternative |
| 3. Designated Corridor | 6. Alternative C |

Of these remaining alternatives, the AA segment of the Black Mountain and the Thunderbolt AA alternative were eliminated from selection for four major reasons:

1. Their proximity to two farmsteads in the Warm Springs Creek area.
2. They cross more irrigated and irrigable land than the other alternatives.
3. They cross both Interstate Route 90 and State Route 12.
4. They cross both the Clark Fork and Little Blackfoot Rivers.

The TER rating system, which is a useful and valid analytical tool, indicates that the designated corridor and Alternative C would have less adverse environmental impact. On this basis, they are environmentally preferred. However, consideration of additional relevant factors leads to the decision, as in the Boulder-Basin Valley, that alternatives which avoid the middle of the valley are preferable. Following are the reasons:

--The Designated Corridor and Alternative C would extend through the center of Deer Lodge Valley, whereas the Black Mountain AAA and Thunderbolt AAA alternatives run along the edge of the valley, skirting the populated areas.

--The Black Mountain AAA and Thunderbolt AAA alternatives cross less irrigated farmland, especially considering the centerlines where these two alternatives cross one-fourth or less of the irrigated lands.

--Community representatives in the Deer Lodge Valley have expressed great sensitivity to the agricultural and visual impacts that would result from the selection of either the designated corridor or Alternative C.

There are two remaining alternatives--Black Mountain AAA and Thunderbolt Mountain AAA. Of these two, Black Mountain AAA is chosen because:

--About one-half the wetland area is crossed, which is in keeping with the spirit of Executive Order 11990, Protection of Wetlands (42 FR 26961, May 24, 1977). This Executive Order requires agencies to "minimize the destruction, loss, or degradation of wetlands." The temporary disturbance to wet areas caused by construction will also be less and it will be easier to build tower footings.

--Black Mountain is better able to absorb the visual disturbance caused by the transmission line as it will be perceived by viewers. Visual impact TER rating is higher for Black Mountain, but considering that the Black Mountain alternative can better absorb the visual impact, Black Mountain is the overall better alternative.

--Black Mountain AAA avoids a greater area of high alpine habitat where the growing season is shorter and temperatures are lower. High areas are harder to revegetate, have snow cover for a longer season, and thus are harder in which to build. Although the difference in elevation is not great, about 500-800 feet, this results in a big difference in the ability of the ground cover to heal itself after disturbance.

--Reliability of service is substantially diminished at higher elevations because higher elevations lead to greater icing conditions. Snows are deeper and last longer, resulting in access problems for maintenance and repair. Reliability is particularly important for a double-circuit line of this size, where it is the major East-West transmission intertie and there are no suitable backup systems. Black Mountain AAA offers greater reliability.

--A better access road system exists for the Black Mountain AAA alternative. All of this corridor has some kind of existing road and comparatively little will have to be built. On the Thunderbolt Mountain AAA alternative, 4 miles of corridor are without existing roads.

--The "per-mile impact" of each alternative is about the same (EIS Final Supplement, Table 7). This fact, in itself, does not favor either alternative, but it shows that the alternatives are closer environmentally than would otherwise be indicated by their cumulative scores shown on Table 8 (EIS Final Supplement).

--Thunderbolt Mountain is a more "natural" area and choosing the Black Mountain alternative helps preserve this aspect: The Black Mountain alternative has areas that have been logged.

--Despite the fact that Black Mountain AAA has an approximately \$2.5 million higher estimated construction cost, this extra cost is a small fraction of total project cost. This expenditure is well justified considering the advantages in reliability and other factors listed here.

--The National Park Service has said the Black Mountain alternative has the least visual impact considering Grant-Kohrs Ranch. The Fish and Wildlife Service has indicated that Black Mountain is the best alternative on Deer Lodge Valley.

3. Garrison Substation

Four alternative substation sites were analyzed in the EIS Supplement. The Pikes Peak Creek site (Site 3A) is chosen. The environmentally preferred alternative was the Gold Creek site because soils are suitable and services are nearby. All corridor alternatives could terminate at this site, and no transmission line corridor options to the west would be foreclosed.

The Dempsey Creek Substation Site (Site 1) was not selected for the following reasons: (1) it would require the selection of a corridor crossing the Deer Lodge Valley; (2) it was opposed by the residents of the Deer Lodge Valley; (3) it would not be suitable for use with the preferred corridor alternative; and (4) it would be located on critical deer and elk winter range.

The Spring Gulch Substation Site (Site 2) was not selected for the following reasons: (1) a corridor crossing the Deer Lodge Valley would be required; (2) opposition by residents of the Deer Lodge Valley; (3) it would not be suitable for use with the preferred corridor alternative; (4) susceptibility to soil erosion; and (5) it would be located on critical deer and elk winter range.

The Gold Creek Substation Site (Site 3) was not selected for the following reasons: (1) opposition by landowners and residents in the Gold Creek area; (2) \$1 to \$2 million would be required for the mitigation of noise impacts to nearby residences; and (3) it would be located within the Gold Creek Historic District, and (4) high visual impacts to local landowners would occur. While this is the environmentally preferred site, all substation sites are more or less equal and the EIS Final Supplement did "not reveal any great differences between them." This site was not chosen because the comparatively large expense (\$1 to \$2 million) necessary for noise mitigation outweighs the comparatively small environmental gain.

The Pikes Peak Creek Substation Site (Site 3A) is considered feasible for only the AAA Corridor Alternative. It has been termed the least unacceptable alternative by local landowners. It does not pose significant noise problems or the environmental problems of the other sites. It would, however, be susceptible to soil erosion during construction. It has the least visual impact of all sites and is environmentally acceptable to the

involved Federal agencies. Use of this site requires a substantial amount of road rebuilding (11,500 feet) and new road construction (7500 feet). An extra communication site and a distribution line to supply low voltage substation service power is required. Since more construction improvements are required for this site, it was not considered as desirable environmentally as Site 3. However, these differences are offset by its advantages in lower visual impact, lower costs for noise mitigation, avoidance of the Gold Creek Historic District, and greater public acceptance. For the above reasons, the Pikes Peak Creek Substation Site was selected.

MITIGATION MEASURES ADOPTED

Mitigation measures were developed and included in the original Colstrip Project EIS. Additional mitigation measures were developed and included in the Supplement to the Colstrip Project EIS. These mitigation measures are of a general nature and will apply to the amended Townsend-Garrison segments. Site specific measures will be developed during the centerline location and environmental analysis process.

The general and site specific measures will be developed for incorporation into a Project Plan for use on Federal lands during construction. The measures will also become part of Bonneville Power Administration construction contract specifications for use on non-Federal lands.

Adoption of these mitigation measures will insure all practicable means and measures have been taken to protect the environment from harm.

MONITORING AND ENFORCEMENT

Federal Lands: In accordance with existing memoranda of understanding between the Bonneville Power Administration, the Bureau of Land Management, and the Forest Service, the land management agencies will assign a project coordinator to monitor construction on Federal lands. The coordinator will be responsible for insuring that the measures agreed to in the Record of Decision, the right-of-way permit, and in BPA contract specifications, are carried out during construction. The project coordinator will fulfill this obligation by working through Bonneville's construction coordinator.

State and Private Lands: Bonneville Power Administration transmission and substation designers, land acquisition personnel, environmental specialists, and construction personnel will insure that mitigation measures identified in the Final EIS and Record of Decision are included in construction contract specifications. BPA will coordinate with the State of Montana in the establishment and enforcement of mitigation measures on state lands. These stipulations will be enforced by Bonneville construction inspectors and construction coordinator.

OTHER CONSIDERATIONS

Relationship to Colstrip-Townsend Segment and Colstrip Generating Unit 3: The Colstrip-Townsend segment of the original Colstrip-Townsend-Hot Springs designated corridor is presently under construction by the Montana Power Company. The change in designation as indicated in this Amended Record of Decision will have no effect on the Colstrip-Townsend segment. Completion of construction for the Colstrip-Townsend and Townsend-Garrison segments is required by October 1983 to facilitate the integration and testing of Colstrip Unit 3. These lines and the Garrison Substation must be in service to facilitate the interconnection with existing BPA and Montana Power Company transmission systems in the area.

Relationship to Garrison-Spokane Transmission Line: The Garrison-Spokane transmission line will provide electric transmission capability west from the Garrison Substation to BPA's Bell Substation near Spokane. The decision for the location of the Townsend-Garrison segment and the associated Garrison Substation site has considered the effect on reasonable alternative corridors west from the selected Garrison site. It has been determined that the selected Site 3A does not eliminate the choice of any corridors that have been identified through the scoping process conducted for the Garrison-Spokane revised EIS.

IMPLEMENTATION

The Forest Service and Bureau of Land Management will accept an application from Bonneville Power Administration only within the approved corridor. The Bureau of Land Management and Forest Service must approve the centerline, develop centerline specific stipulations, and issue a right-of-way permit before any construction can proceed. The right-of-way permit will include, by reference, a Project Plan which will provide detailed site-specific measures necessary to protect the environment during preconstruction and construction of the transmission facility on Federal lands.

On National Forest System lands only, this decision is subject to a formal administrative review process (appeal), pursuant to 36 CFR 211.19. No construction may begin on Forest System lands for 30 days following the signing of this ROD. Any notice of appeal must be filed within 45 days from the date of this ROD.

On BLM, state, and private lands, there is no formal administrative review process. On these lands construction may commence immediately following signing of the ROD.

Upon signature, notice of availability of this Record of Decision will be published in the Federal Register. Copies of the document will be sent to individuals and organizations included on the official EIS mailing list. In addition, the decision will be announced in local and area newspapers.

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Signed in triplicate original this 18 th day of August, 1981.

THOMAS COSTON
Regional Forester, Region One
USDA, Forest Service

MICHAEL J. PENFOLD
State Director, Montana
USDI, Bureau of Land Management


Peter Johnson
Administrator
Bonneville Power Administration

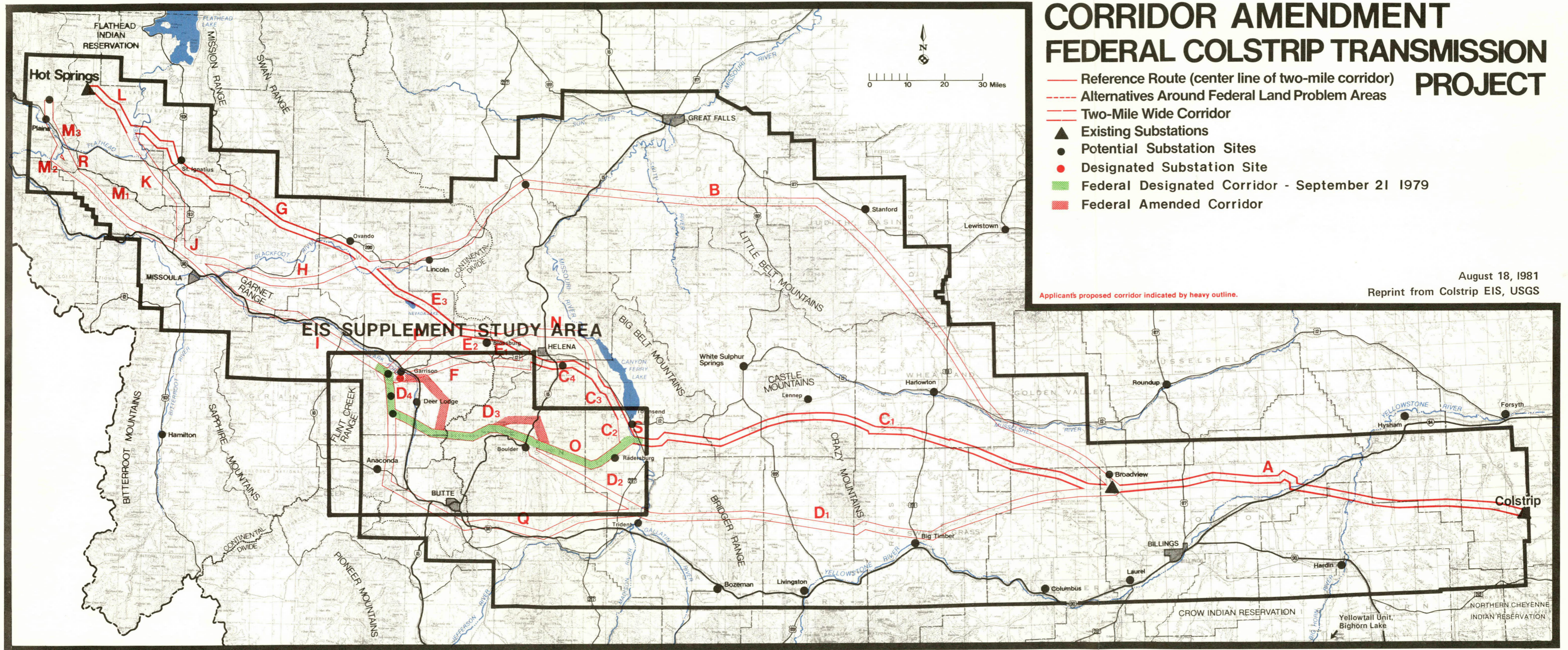
Attachment

CORRIDOR AMENDMENT FEDERAL COLSTRIP TRANSMISSION PROJECT

- Reference Route (center line of two-mile corridor)
- Alternatives Around Federal Land Problem Areas
- Two-Mile Wide Corridor
- Existing Substations
- Potential Substation Sites
- Designated Substation Site
- Federal Designated Corridor - September 21 1979
- Federal Amended Corridor

Applicant's proposed corridor indicated by heavy outline.

August 18, 1981
Reprint from Colstrip EIS, USGS



RECORD OF DECISION

On The

FINAL SUPPLEMENT (FES 81-25)

To The

COLSTRIP PROJECT EIS (FES 79-29)

KIAB

INTRODUCTION

The U.S. Department of Interior, Bureau of Land Management (BLM), and the U.S. Department of Agriculture, Forest Service (FS), jointly approved a two-mile-wide transmission line corridor from Colstrip to Hot Springs in a Record of Decision (ROD) dated September 21, 1979. Bonneville Power Administration (BPA) concurred with the BLM and FS decision, expressing its intent to build a double-circuit 500-kV transmission line in the designated corridor, starting from its interconnection in the Townsend vicinity with the facilities built by Montana Power Company (MPC), extending to a new 500-kV substation in the vicinity of Garrison, Montana, and continuing to an interconnection with the existing Federal grid in the area of Hot Springs and Plains, Montana.

Following the corridor decision, the BLM, FS, and BPA agreed to a centerline evaluation process and held public meetings in the Townsend, Boulder, and Deer Lodge areas. A number of landowners and members of the general public expressed concern at the meetings over the centerline locations and impacts the transmission line would have. Alternative transmission line locations were suggested, some deviating from the designated corridor.

BLM, FS, and BPA agreed to reopen the decisionmaking process on the location of the designated corridor in the Boulder and Deer Lodge areas. A Final Supplement to the Colstrip Project EIS was prepared, analyzing possible corridor variations in the Boulder and Deer Lodge areas, and alternate substation locations in the Deer Lodge-Garrison-Gold Creek vicinity. The EIS Supplement was prepared cooperatively by BLM, FS, and BPA, with BLM as the lead agency. The final Supplement was filed with the Environmental Protection Agency on July 17, 1981 (46 FR 37083).

DECISION

A new transmission line corridor has been selected for portions of the Colstrip Project (see attached map). As described in the Final Supplement to the Colstrip Project EIS, the decisions are:

- in the Boulder Valley area, the Boulder corridor alternative;
- in the Deer Lodge Valley area, the Black Mountain AAA corridor alternative; and
- Substation Site 3A in the Garrison area.

Other portions of the designated corridor remain unchanged.

The Bureau of Land Management and Forest Service jointly approve and select this corridor for construction of transmission facilities across Federal lands. This approval is subject to the issuance of a crossing permit containing appropriate conditions under the Federal Land Policy and Management Act (FLPMA). The Bonneville Power Administration also approves and selects this corridor and will proceed with land and right-of-way acquisition, construction, and subsequent operation and maintenance of the proposed facilities (including the substation).

ALTERNATIVES AND DECISION RATIONALE

1. Boulder & Basin Areas

Three alternate corridors were analyzed in the Supplement to the Final Colstrip Project EIS. They are: the Boulder corridor; the designated (previously selected) corridor; and the Basin corridor.

The designated (previously selected) corridor was identified as the environmentally preferred alternative based on application of the original Colstrip corridor analysis process documented in the Colstrip Transmission Environmental Report (TER).

Considerations and decision rationale relative to the three corridors considered are as follows:

--Boulder: The Boulder corridor is the selected corridor. Its principle distinction from the designated corridor is that it extends along the edge of the Boulder-Basin Valley rather than through the center of the valley. While the TER rating analysis shows less impact from crossing the Boulder-Basin Valley (designated corridor), residents within the valley expressed great concern and sensitivity to the impact of such a corridor. In this farming community, concern for impacts to agricultural lands was of great importance. As the Boulder Alternative avoids farmlands, this was a factor governing its selection.

Strong local concern for the visual impact of the designated corridor also was a consideration in selecting the Boulder corridor. It was felt that the striking visual presence of a corridor through the valley would adversely affect the esthetic quality of life within the Boulder-Basin community. These visual impacts will be mitigated by use of the Boulder corridor, placing the transmission line in the valley foothills.

Boulder-Basin Valley residents also expressed concern over the electrical effects of high voltage transmission lines, requesting that the selected corridor be as distant as possible from population centers. Although harmful electrical effects are not foreseen, this concern is minimized through use of the Boulder corridor.

Finally, the Boulder corridor utilizes a vacated telephone line right-of-way, thus further minimizing environmental impacts.

For these reasons, selection of the Boulder alternative was judged an acceptable trade-off despite its higher impact and somewhat greater construction cost.

--Basin: This corridor is considered second best of the three corridor options. Impacts are similar to those of the Boulder corridor. However, the analysis indicated that the Basin corridor has slightly greater environmental impacts to commercial forest land and historic sites. It would not utilize the vacant telephone line right-of-way. Construction costs are also somewhat higher than for the Boulder corridor.

--Designated: The designated corridor, as indicated above, is the environmentally preferable alternative. However, due to strong local concerns, greater agricultural impacts, and greater visual impact, it was not selected.

2. Deer Lodge Valley Area

Twelve alternative corridors were considered in the Deer Lodge Valley area. The Designated Corridor and Alternative C were both considered environmentally preferred alternatives. For reasons specified below, the decision is to adopt the Black Mountain AAA alternative.

Environmental analysis criteria used in the decision process were published in the Final Supplement to the Colstrip Project EIS. On the basis of these criteria, six of the alternatives in the Deer Lodge Valley were found to have greater overall adverse impact and thus were rejected. These corridors were:

- | | |
|------------------|--|
| 1. Alternative B | 4. Alternative F |
| 2. Alternative D | 5. Black Mountain A Alternative |
| 3. Alternative E | 6. Thunderbolt Mountain A Alternative. |

Criteria on which these alternatives were eliminated from further consideration are as follows:

1. Greater length. Alternatives E and F have the highest construction costs and electrical losses as well as the highest overall adverse environmental impact potential.

2. Alternative D crosses wetlands and a State wildlife refuge. Adverse impacts to water-associated birds would be unmitigatable. Alternative D also has high visual impact to Interstate Highway 90 and the town of Warm Springs, Montana, and the greatest impact on big game winter range.

3. Alternative B, the Black Mountain A alternative, and the Thunderbolt Mountain A alternative all cross the Deer Lodge Valley, which is highly unacceptable to landowners and residents. All three of the alternatives have a relative high impact rating as compared to other alternatives. They also cross an unacceptable amount of irrigated and potentially irrigable lands.

4. The Black Mountain A alternative, and Alternatives D, E, and F have a high impact potential to deer and elk critical winter range.

The six remaining corridor alternatives have the least overall impacts. They are:

- | | |
|-----------------------------------|--------------------------------|
| 1. Black Mountain AA Alternative | 4. Thunderbolt AA Alternative |
| 2. Black Mountain AAA Alternative | 5. Thunderbolt AAA Alternative |
| 3. Designated Corridor | 6. Alternative C |

Of these remaining alternatives, the AA segment of the Black Mountain and the Thunderbolt AA alternative were eliminated from selection for four major reasons:

1. Their proximity to two farmsteads in the Warm Springs Creek area.
2. They cross more irrigated and irrigable land than the other alternatives.
3. They cross both Interstate Route 90 and State Route 12.
4. They cross both the Clark Fork and Little Blackfoot Rivers.

The TER rating system, which is a useful and valid analytical tool, indicates that the designated corridor and Alternative C would have less adverse environmental impact. On this basis, they are environmentally preferred. However, consideration of additional relevant factors leads to the decision, as in the Boulder-Basin Valley, that alternatives which avoid the middle of the valley are preferable. Following are the reasons:

--The Designated Corridor and Alternative C would extend through the center of Deer Lodge Valley, whereas the Black Mountain AAA and Thunderbolt AAA alternatives run along the edge of the valley, skirting the populated areas.

--The Black Mountain AAA and Thunderbolt AAA alternatives cross less irrigated farmland, especially considering the centerlines where these two alternatives cross one-fourth or less of the irrigated lands.

--Community representatives in the Deer Lodge Valley have expressed great sensitivity to the agricultural and visual impacts that would result from the selection of either the designated corridor or Alternative C.

There are two remaining alternatives--Black Mountain AAA and Thunderbolt Mountain AAA. Of these two, Black Mountain AAA is chosen because:

--About one-half the wetland area is crossed, which is in keeping with the spirit of Executive Order 11990, Protection of Wetlands (42 FR 26961, May 24, 1977). This Executive Order requires agencies to "minimize the destruction, loss, or degradation of wetlands." The temporary disturbance to wet areas caused by construction will also be less and it will be easier to build tower footings.

--Black Mountain is better able to absorb the visual disturbance caused by the transmission line as it will be perceived by viewers. Visual impact TER rating is higher for Black Mountain, but considering that the Black Mountain alternative can better absorb the visual impact, Black Mountain is the overall better alternative.

--Black Mountain AAA avoids a greater area of high alpine habitat where the growing season is shorter and temperatures are lower. High areas are harder to revegetate, have snow cover for a longer season, and thus are harder in which to build. Although the difference in elevation is not great, about 500-800 feet, this results in a big difference in the ability of the ground cover to heal itself after disturbance.

--Reliability of service is substantially diminished at higher elevations because higher elevations lead to greater icing conditions. Snows are deeper and last longer, resulting in access problems for maintenance and repair. Reliability is particularly important for a double-circuit line of this size, where it is the major East-West transmission intertie and there are no suitable backup systems. Black Mountain AAA offers greater reliability.

--A better access road system exists for the Black Mountain AAA alternative. All of this corridor has some kind of existing road and comparatively little will have to be built. On the Thunderbolt Mountain AAA alternative, 4 miles of corridor are without existing roads.

--The "per-mile impact" of each alternative is about the same (EIS Final Supplement, Table 7). This fact, in itself, does not favor either alternative, but it shows that the alternatives are closer environmentally than would otherwise be indicated by their cumulative scores shown on Table 8 (EIS Final Supplement).

--Thunderbolt Mountain is a more "natural" area and choosing the Black Mountain alternative helps preserve this aspect: The Black Mountain alternative has areas that have been logged.

--Despite the fact that Black Mountain AAA has an approximately \$2.5 million higher estimated construction cost, this extra cost is a small fraction of total project cost. This expenditure is well justified considering the advantages in reliability and other factors listed here.

--The National Park Service has said the Black Mountain alternative has the least visual impact considering Grant-Kohrs Ranch. The Fish and Wildlife Service has indicated that Black Mountain is the best alternative on Deer Lodge Valley.

3. Garrison Substation

Four alternative substation sites were analyzed in the EIS Supplement. The Pikes Peak Creek site (Site 3A) is chosen. The environmentally preferred alternative was the Gold Creek site because soils are suitable and services are nearby. All corridor alternatives could terminate at this site, and no transmission line corridor options to the west would be foreclosed.

The Dempsey Creek Substation Site (Site 1) was not selected for the following reasons: (1) it would require the selection of a corridor crossing the Deer Lodge Valley; (2) it was opposed by the residents of the Deer Lodge Valley; (3) it would not be suitable for use with the preferred corridor alternative; and (4) it would be located on critical deer and elk winter range.

The Spring Gulch Substation Site (Site 2) was not selected for the following reasons: (1) a corridor crossing the Deer Lodge Valley would be required; (2) opposition by residents of the Deer Lodge Valley; (3) it would not be suitable for use with the preferred corridor alternative; (4) susceptibility to soil erosion; and (5) it would be located on critical deer and elk winter range.

The Gold Creek Substation Site (Site 3) was not selected for the following reasons: (1) opposition by landowners and residents in the Gold Creek area; (2) \$1 to \$2 million would be required for the mitigation of noise impacts to nearby residences; and (3) it would be located within the Gold Creek Historic District, and (4) high visual impacts to local landowners would occur. While this is the environmentally preferred site, all substation sites are more or less equal and the EIS Final Supplement did "not reveal any great differences between them." This site was not chosen because the comparatively large expense (\$1 to \$2 million) necessary for noise mitigation outweighs the comparatively small environmental gain.

The Pikes Peak Creek Substation Site (Site 3A) is considered feasible for only the AAA Corridor Alternative. It has been termed the least unacceptable alternative by local landowners. It does not pose significant noise problems or the environmental problems of the other sites. It would, however, be susceptible to soil erosion during construction. It has the least visual impact of all sites and is environmentally acceptable to the

involved Federal agencies. Use of this site requires a substantial amount of road rebuilding (11,500 feet) and new road construction (7500 feet). An extra communication site and a distribution line to supply low voltage substation service power is required. Since more construction improvements are required for this site, it was not considered as desirable environmentally as Site 3. However, these differences are offset by its advantages in lower visual impact, lower costs for noise mitigation, avoidance of the Gold Creek Historic District, and greater public acceptance. For the above reasons, the Pikes Peak Creek Substation Site was selected.

MITIGATION MEASURES ADOPTED

Mitigation measures were developed and included in the original Colstrip Project EIS. Additional mitigation measures were developed and included in the Supplement to the Colstrip Project EIS. These mitigation measures are of a general nature and will apply to the amended Townsend-Garrison segments. Site specific measures will be developed during the centerline location and environmental analysis process.

The general and site specific measures will be developed for incorporation into a Project Plan for use on Federal lands during construction. The measures will also become part of Bonneville Power Administration construction contract specifications for use on non-Federal lands.

Adoption of these mitigation measures will insure all practicable means and measures have been taken to protect the environment from harm.

MONITORING AND ENFORCEMENT

Federal Lands: In accordance with existing memoranda of understanding between the Bonneville Power Administration, the Bureau of Land Management, and the Forest Service, the land management agencies will assign a project coordinator to monitor construction on Federal lands. The coordinator will be responsible for insuring that the measures agreed to in the Record of Decision, the right-of-way permit, and in BPA contract specifications, are carried out during construction. The project coordinator will fulfill this obligation by working through Bonneville's construction coordinator.

State and Private Lands: Bonneville Power Administration transmission and substation designers, land acquisition personnel, environmental specialists, and construction personnel will insure that mitigation measures identified in the Final EIS and Record of Decision are included in construction contract specifications. BPA will coordinate with the State of Montana in the establishment and enforcement of mitigation measures on state lands. These stipulations will be enforced by Bonneville construction inspectors and construction coordinator.

OTHER CONSIDERATIONS

Relationship to Colstrip-Townsend Segment and Colstrip Generating Unit 3: The Colstrip-Townsend segment of the original Colstrip-Townsend-Hot Springs designated corridor is presently under construction by the Montana Power Company. The change in designation as indicated in this Amended Record of Decision will have no effect on the Colstrip-Townsend segment. Completion of construction for the Colstrip-Townsend and Townsend-Garrison segments is required by October 1983 to facilitate the integration and testing of Colstrip Unit 3. These lines and the Garrison Substation must be in service to facilitate the interconnection with existing BPA and Montana Power Company transmission systems in the area.

Relationship to Garrison-Spokane Transmission Line: The Garrison-Spokane transmission line will provide electric transmission capability west from the Garrison Substation to BPA's Bell Substation near Spokane. The decision for the location of the Townsend-Garrison segment and the associated Garrison Substation site has considered the effect on reasonable alternative corridors west from the selected Garrison site. It has been determined that the selected Site 3A does not eliminate the choice of any corridors that have been identified through the scoping process conducted for the Garrison-Spokane revised EIS.

IMPLEMENTATION

The Forest Service and Bureau of Land Management will accept an application from Bonneville Power Administration only within the approved corridor. The Bureau of Land Management and Forest Service must approve the centerline, develop centerline specific stipulations, and issue a right-of-way permit before any construction can proceed. The right-of-way permit will include, by reference, a Project Plan which will provide detailed site-specific measures necessary to protect the environment during preconstruction and construction of the transmission facility on Federal lands.

On National Forest System lands only, this decision is subject to a formal administrative review process (appeal), pursuant to 36 CFR 211.19. No construction may begin on Forest System lands for 30 days following the signing of this ROD. Any notice of appeal must be filed within 45 days from the date of this ROD.

On BLM, state, and private lands, there is no formal administrative review process. On these lands construction may commence immediately following signing of the ROD.

Upon signature, notice of availability of this Record of Decision will be published in the Federal Register. Copies of the document will be sent to individuals and organizations included on the official EIS mailing list. In addition, the decision will be announced in local and area newspapers.

The Federal land management agencies are responsible for land allocation decisions for location of the transmission lines on lands they administer (Federal lands). BPA is responsible for location of the transmission line on non-Federal land (state and private lands). Consensus as to the decision among the Federal agencies is required because location across Federal lands will affect the location across non-Federal lands and vice versa. Each Federal decisionmaker, by signing an original copy of this ROD, is making a decision to the extent of each respective agency's jurisdiction.

Signed in triplicate original this 18~~th~~ th day of August, 1981.

Regional Forester, Region One
USDA, Forest Service

State Director, Montana
USDI, Bureau of Land Management

(SGD) Peter T. Johnson

Administrator
Bonneville Power Administration

Attachment

JOHooson:ck(EHA-0488E)

RECORD OF DECISION

On The

FINAL SUPPLEMENT (FES 81-25)

To The

COLSTRIP PROJECT EIS (FES 79-29)

INTRODUCTION

The U.S. Department of Interior, Bureau of Land Management (BLM), and the U.S. Department of Agriculture, Forest Service (FS), jointly approved a two-mile-wide transmission line corridor from Colstrip to Hot Springs in a Record of Decision (ROD) dated September 21, 1979. Bonneville Power Administration (BPA) concurred with the BLM and FS decision, expressing its intent to build a double-circuit 500-kV transmission line in the designated corridor, starting from its interconnection in the Townsend vicinity with the facilities built by Montana Power Company (MPC), extending to a new 500-kV substation in the vicinity of Garrison, Montana, and continuing to an interconnection with the existing Federal grid in the area of Hot Springs and Plains, Montana.

Following the corridor decision, the BLM, FS, and BPA agreed to a centerline evaluation process and held public meetings in the Townsend, Boulder, and Deer Lodge areas. A number of landowners and members of the general public expressed concern at the meetings over the centerline locations and impacts the transmission line would have. Alternative transmission line locations were suggested, some deviating from the designated corridor.

BLM, FS, and BPA agreed to reopen the decisionmaking process on the location of the designated corridor in the Boulder and Deer Lodge areas. A Final Supplement to the Colstrip Project EIS was prepared, analyzing possible corridor variations in the Boulder and Deer Lodge areas, and alternate substation locations in the Deer Lodge-Garrison-Gold Creek vicinity. The EIS Supplement was prepared cooperatively by BLM, FS, and BPA, with BLM as the lead agency. The final Supplement was filed with the Environmental Protection Agency on July 17, 1981 (46 FR 37083).

DECISION

A new transmission line corridor has been selected for portions of the Colstrip Project (see attached map). As described in the Final Supplement to the Colstrip Project EIS, the decisions are:

- in the Boulder Valley area, the Boulder corridor alternative;
- in the Deer Lodge Valley area, the Black Mountain AAA corridor alternative; and
- Substation Site 3A in the Garrison area.

Other portions of the designated corridor remain unchanged.

The Bureau of Land Management and Forest Service jointly approve and select this corridor for construction of transmission facilities across Federal lands. This approval is subject to the issuance of a crossing permit containing appropriate conditions under the Federal Land Policy and Management Act (FLPMA). The Bonneville Power Administration also approves and selects this corridor and will proceed with land and right-of-way acquisition, construction, and subsequent operation and maintenance of the proposed facilities (including the substation).

ALTERNATIVES AND DECISION RATIONALE

1. Boulder & Basin Areas

Three alternate corridors were analyzed in the Supplement to the Final Colstrip Project EIS. They are: the Boulder corridor; the designated (previously selected) corridor; and the Basin corridor.

The designated (previously selected) corridor was identified as the environmentally preferred alternative based on application of the original Colstrip corridor analysis process documented in the Colstrip Transmission Environmental Report (TER).

Considerations and decision rationale relative to the three corridors considered are as follows:

--Boulder: The Boulder corridor is the selected corridor. Its principle distinction from the designated corridor is that it extends along the edge of the Boulder-Basin Valley rather than through the center of the valley. While the TER rating analysis shows less impact from crossing the Boulder-Basin Valley (designated corridor), residents within the valley expressed great concern and sensitivity to the impact of such a corridor. In this farming community, concern for impacts to agricultural lands was of great importance. As the Boulder Alternative avoids farmlands, this was a factor governing its selection.

Strong local concern for the visual impact of the designated corridor also was a consideration in selecting the Boulder corridor. It was felt that the striking visual presence of a corridor through the valley would adversely affect the esthetic quality of life within the Boulder-Basin community. These visual impacts will be mitigated by use of the Boulder corridor, placing the transmission line in the valley foothills.

Boulder-Basin Valley residents also expressed concern over the electrical effects of high voltage transmission lines, requesting that the selected corridor be as distant as possible from population centers. Although harmful electrical effects are not foreseen, this concern is minimized through use of the Boulder corridor.

Finally, the Boulder corridor utilizes a vacated telephone line right-of-way, thus further minimizing environmental impacts.

For these reasons, selection of the Boulder alternative was judged an acceptable trade-off despite its higher impact and somewhat greater construction cost.

--Basin: This corridor is considered second best of the three corridor options. Impacts are similar to those of the Boulder corridor. However, the analysis indicated that the Basin corridor has slightly greater environmental impacts to commercial forest land and historic sites. It would not utilize the vacant telephone line right-of-way. Construction costs are also somewhat higher than for the Boulder corridor.

--Designated: The designated corridor, as indicated above, is the environmentally preferable alternative. However, due to strong local concerns, greater agricultural impacts, and greater visual impact, it was not selected.

2. Deer Lodge Valley Area

Twelve alternative corridors were considered in the Deer Lodge Valley area. The Designated Corridor and Alternative C were both considered environmentally preferred alternatives. For reasons specified below, the decision is to adopt the Black Mountain AAA alternative.

Environmental analysis criteria used in the decision process were published in the Final Supplement to the Colstrip Project EIS. On the basis of these criteria, six of the alternatives in the Deer Lodge Valley were found to have greater overall adverse impact and thus were rejected. These corridors were:

1. Alternative B
2. Alternative D
3. Alternative E
4. Alternative F
5. Black Mountain A Alternative
6. Thunderbolt Mountain A Alternative.

Criteria on which these alternatives were eliminated from further consideration are as follows:

1. Greater length. Alternatives E and F have the highest construction costs and electrical losses as well as the highest overall adverse environmental impact potential.

2. Alternative D crosses wetlands and a State wildlife refuge. Adverse impacts to water-associated birds would be unmitigatable. Alternative D also has high visual impact to Interstate Highway 90 and the town of Warm Springs, Montana, and the greatest impact on big game winter range.

3. Alternative B, the Black Mountain A alternative, and the Thunderbolt Mountain A alternative all cross the Deer Lodge Valley, which is highly unacceptable to landowners and residents. All three of the alternatives have a relative high impact rating as compared to other alternatives. They also cross an unacceptable amount of irrigated and potentially irrigable lands.

4. The Black Mountain A alternative, and Alternatives D, E, and F have a high impact potential to deer and elk critical winter range.

The six remaining corridor alternatives have the least overall impacts. They are:

- | | |
|-----------------------------------|--------------------------------|
| 1. Black Mountain AA Alternative | 4. Thunderbolt AA Alternative |
| 2. Black Mountain AAA Alternative | 5. Thunderbolt AAA Alternative |
| 3. Designated Corridor | 6. Alternative C |

Of these remaining alternatives, the AA segment of the Black Mountain and the Thunderbolt AA alternative were eliminated from selection for four major reasons:

1. Their proximity to two farmsteads in the Warm Springs Creek area.
2. They cross more irrigated and irrigable land than the other alternatives.
3. They cross both Interstate Route 90 and State Route 12.
4. They cross both the Clark Fork and Little Blackfoot Rivers.

The TER rating system, which is a useful and valid analytical tool, indicates that the designated corridor and Alternative C would have less adverse environmental impact. On this basis, they are environmentally preferred. However, consideration of additional relevant factors leads to the decision, as in the Boulder-Basin Valley, that alternatives which avoid the middle of the valley are preferable. Following are the reasons:

--The Designated Corridor and Alternative C would extend through the center of Deer Lodge Valley, whereas the Black Mountain AAA and Thunderbolt AAA alternatives run along the edge of the valley, skirting the populated areas.

--The Black Mountain AAA and Thunderbolt AAA alternatives cross less irrigated farmland, especially considering the centerlines where these two alternatives cross one-fourth or less of the irrigated lands.

--Community representatives in the Deer Lodge Valley have expressed great sensitivity to the agricultural and visual impacts that would result from the selection of either the designated corridor or Alternative C.

There are two remaining alternatives--Black Mountain AAA and Thunderbolt Mountain AAA. Of these two, Black Mountain AAA is chosen because:

--About one-half the wetland area is crossed, which is in keeping with the spirit of Executive Order 11990, Protection of Wetlands (42 FR 26961, May 24, 1977). This Executive Order requires agencies to "minimize the destruction, loss, or degradation of wetlands." The temporary disturbance to wet areas caused by construction will also be less and it will be easier to build tower footings.

--Black Mountain is better able to absorb the visual disturbance caused by the transmission line as it will be perceived by viewers. Visual impact TER rating is higher for Black Mountain, but considering that the Black Mountain alternative can better absorb the visual impact, Black Mountain is the overall better alternative.

--Black Mountain AAA avoids a greater area of high alpine habitat where the growing season is shorter and temperatures are lower. High areas are harder to revegetate, have snow cover for a longer season, and thus are harder in which to build. Although the difference in elevation is not great, about 500-800 feet, this results in a big difference in the ability of the ground cover to heal itself after disturbance.

--Reliability of service is substantially diminished at higher elevations because higher elevations lead to greater icing conditions. Snows are deeper and last longer, resulting in access problems for maintenance and repair. Reliability is particularly important for a double-circuit line of this size, where it is the major East-West transmission intertie and there are no suitable backup systems. Black Mountain AAA offers greater reliability.

--A better access road system exists for the Black Mountain AAA alternative. All of this corridor has some kind of existing road and comparatively little will have to be built. On the Thunderbolt Mountain AAA alternative, 4 miles of corridor are without existing roads.

--The "per-mile impact" of each alternative is about the same (EIS Final Supplement, Table 7). This fact, in itself, does not favor either alternative, but it shows that the alternatives are closer environmentally than would otherwise be indicated by their cumulative scores shown on Table 8 (EIS Final Supplement).

--Thunderbolt Mountain is a more "natural" area and choosing the Black Mountain alternative helps preserve this aspect: The Black Mountain alternative has areas that have been logged.

--Despite the fact that Black Mountain AAA has an approximately \$2.5 million higher estimated construction cost, this extra cost is a small fraction of total project cost. This expenditure is well justified considering the advantages in reliability and other factors listed here.

--The National Park Service has said the Black Mountain alternative has the least visual impact considering Grant-Kohrs Ranch. The Fish and Wildlife Service has indicated that Black Mountain is the best alternative on Deer Lodge Valley.

3. Garrison Substation

Four alternative substation sites were analyzed in the EIS Supplement. The Pikes Peak Creek site (Site 3A) is chosen. The environmentally preferred alternative was the Gold Creek site because soils are suitable and services are nearby. All corridor alternatives could terminate at this site, and no transmission line corridor options to the west would be foreclosed.

The Dempsey Creek Substation Site (Site 1) was not selected for the following reasons: (1) it would require the selection of a corridor crossing the Deer Lodge Valley; (2) it was opposed by the residents of the Deer Lodge Valley; (3) it would not be suitable for use with the preferred corridor alternative; and (4) it would be located on critical deer and elk winter range.

The Spring Gulch Substation Site (Site 2) was not selected for the following reasons: (1) a corridor crossing the Deer Lodge Valley would be required; (2) opposition by residents of the Deer Lodge Valley; (3) it would not be suitable for use with the preferred corridor alternative; (4) susceptibility to soil erosion; and (5) it would be located on critical deer and elk winter range.

The Gold Creek Substation Site (Site 3) was not selected for the following reasons: (1) opposition by landowners and residents in the Gold Creek area; (2) \$1 to \$2 million would be required for the mitigation of noise impacts to nearby residences; and (3) it would be located within the Gold Creek Historic District, and (4) high visual impacts to local land owners would occur. While this is the environmentally preferred site, all substation sites are more or less equal and the EIS Final Supplement did "not reveal any great differences between them." This site was not chosen because the comparatively large expense (\$1 to \$2 million) necessary for noise mitigation outweighs the comparatively small environmental gain.

The Pikes Peak Creek Substation Site (Site 3A) is considered feasible for only the AAA Corridor Alternative. It has been termed the least unacceptable alternative by local landowners. It does not pose significant noise problems or the environmental problems of the other sites. It would, however, be susceptible to soil erosion during construction. It has the least visual impact of all sites and is environmentally acceptable to the

involved Federal agencies. Use of this site requires a substantial amount of road rebuilding (11,500 feet) and new road construction (7500 feet). An extra communication site and a distribution line to supply low voltage substation service power is required. Since more construction improvements are required for this site, it was not considered as desirable environmentally as Site 3. However, these differences are offset by its advantages in lower visual impact, lower costs for noise mitigation, avoidance of the Gold Creek Historic District, and greater public acceptance. For the above reasons, the Pikes Peak Creek Substation Site was selected.

MITIGATION MEASURES ADOPTED

Mitigation measures were developed and included in the original Colstrip Project EIS. Additional mitigation measures were developed and included in the Supplement to the Colstrip Project EIS. These mitigation measures are of a general nature and will apply to the amended Townsend-Garrison segments. Site specific measures will be developed during the centerline location and environmental analysis process.

The general and site specific measures will be developed for incorporation into a Project Plan for use on Federal lands during construction. The measures will also become part of Bonneville Power Administration construction contract specifications for use on non-Federal lands.

Adoption of these mitigation measures will insure all practicable means and measures have been taken to protect the environment from harm.

MONITORING AND ENFORCEMENT

Federal Lands: In accordance with existing memoranda of understanding between the Bonneville Power Administration, the Bureau of Land Management, and the Forest Service, the land management agencies will assign a project coordinator to monitor construction on Federal lands. The coordinator will be responsible for insuring that the measures agreed to in the Record of Decision, the right-of-way permit, and in BPA contract specifications, are carried out during construction. The project coordinator will fulfill this obligation by working through Bonneville's construction coordinator.

State and Private Lands: Bonneville Power Administration transmission and substation designers, land acquisition personnel, environmental specialists, and construction personnel will insure that mitigation measures identified in the Final EIS and Record of Decision are included in construction contract specifications. BPA will coordinate with the State of Montana in the establishment and enforcement of mitigation measures on state lands. These stipulations will be enforced by Bonneville construction inspectors and construction coordinator.

OTHER CONSIDERATIONS

Relationship to Colstrip-Townsend Segment and Colstrip Generating Unit 3: The Colstrip-Townsend segment of the original Colstrip-Townsend-Hot Springs designated corridor is presently under construction by the Montana Power Company. The change in designation as indicated in this Amended Record of Decision will have no effect on the Colstrip-Townsend segment. Completion of construction for the Colstrip-Townsend and Townsend-Garrison segments is required by October 1983 to facilitate the integration and testing of Colstrip Unit 3. These lines and the Garrison Substation must be in service to facilitate the interconnection with existing BPA and Montana Power Company transmission systems in the area.

Relationship to Garrison-Spokane Transmission Line: The Garrison-Spokane transmission line will provide electric transmission capability west from the Garrison Substation to BPA's Bell Substation near Spokane. The decision for the location of the Townsend-Garrison segment and the associated Garrison Substation site has considered the effect on reasonable alternative corridors west from the selected Garrison site. It has been determined that the selected Site 3A does not eliminate the choice of any corridors that have been identified through the scoping process conducted for the Garrison-Spokane revised EIS.

IMPLEMENTATION

The Forest Service and Bureau of Land Management will accept an application from Bonneville Power Administration only within the approved corridor. The Bureau of Land Management and Forest Service must approve the centerline, develop centerline specific stipulations, and issue a right-of-way permit before any construction can proceed. The right-of-way permit will include, by reference, a Project Plan which will provide detailed site-specific measures necessary to protect the environment during preconstruction and construction of the transmission facility on Federal lands.

On National Forest System lands only, this decision is subject to a formal administrative review process (appeal), pursuant to 36 CFR 211.19. No construction may begin on Forest System lands for 30 days following the signing of this ROD. Any notice of appeal must be filed within 45 days from the date of this ROD.

On BLM, state, and private lands, there is no formal administrative review process. On these lands construction may commence immediately following signing of the ROD.

Upon signature, notice of availability of this Record of Decision will be published in the Federal Register. Copies of the document will be sent to individuals and organizations included on the official EIS mailing list. In addition, the decision will be announced in local and area newspapers.

The Federal land management agencies are responsible for land allocation decisions for location of the transmission lines on lands they administer (Federal lands). BPA is responsible for location of the transmission line on non-Federal land (state and private lands). Consensus as to the decision among the Federal agencies is required because location across Federal lands will affect the location across non-Federal lands and vice versa. Each Federal decisionmaker, by signing an original copy of this ROD, is making a decision to the extent of each respective agency's jurisdiction.

Signed in triplicate original this _____th day of August, 1981.

Regional Forester, Region One
USDA, Forest Service

State Director, Montana
USDI, Bureau of Land Management

Administrator
Bonneville Power Administration

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