

**MINUTE ITEM**

This Calendar Item No. 13  
was approved as Minute Item  
No. 13 by the State Lands  
Commission by a vote of 3  
to 0 at its 2/17/87  
meeting.

**CALENDAR ITEM**

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**CERTIFICATION OF THE FINAL EIR/EIS AND  
APPROVAL OF GENERAL LEASE - RIGHT-OF-WAY USE**

**APPLICANT:** San Joaquin Valley Pipeline  
Company  
P. O. Box 2648  
Houston, Texas 77252

**AREA, TYPE LAND AND LOCATION:**  
A 0.116-acre parcel of tide and submerged land,  
located in Pacheco Creek at Martinez,  
Contra Costa County.

**LAND USE:** Construction and maintenance of a buried crude  
oil pipeline.

**TERMS OF PROPOSED LEASE:**  
Initial period: 25 years beginning March 1,  
1987.  
Surety bond: \$5,000.  
Public liability insurance: Combined single  
limit coverage of \$1,000,000.

**CONSIDERATION:** \$209 per annum; with the State reserving the  
right to fix a different rental on each  
fifth anniversary of the lease.

**BASIS FOR CONSIDERATION:**  
Pursuant to 2 Cal. Adm. Code 2003.

**APPLICANT STATUS:**  
Applicant is permittee of upland.

CALENDAR ITEM NO. 5 (CONT'D)

PREREQUISITE CONDITIONS, FEES AND EXPENSES:  
Filing fee has been received.

STATUTORY AND OTHER REFERENCES:

- A. P.R.C.: Div. 6, Parts 1 and 2; Div. 13.
- B. Cal. Adm. Code: Title 2, Div. 3; Title 14, Div. 6.

AB 884: 04/02/87 (Including 90-Day Extension).

OTHER PERTINENT INFORMATION:

1. The applicant proposes to construct a 258-mile heated crude oil pipeline in the San Joaquin Valley from Kernridge Oil Field to Martinez which will cross Pacheco Creek in Contra Costa County. The overall purpose of the proposed project is to transport 120,000 barrels per day of crude oil produced in the oil fields to Shell Oil Company Martinez oil refinery. Construction is slated to begin in late 1987, after all other approvals and permits are obtained. Therefore, the applicant requests a two-year construction period with a completion date of March 1, 1989.

Terms of the lease require the applicant to conduct spring botanical surveys preceding commencement of construction. The proposed survey work and those persons conducting the survey, as well as the results, must be approved by the State Lands Commission Executive Officer in consultation with United States Fish and Wildlife Service and the California Department of Fish and Game. Following construction completion, "as-built plans" are required to be submitted and approved.

The lease also requires the Lessee to install a remote control shut-off valve and a pressure-sensitive check-value at Pacheco Creek. These mechanisms are oil-spill safety measures required by EIR/EIS mitigation No. 7, as discussed in Exhibit "D" (CEQA findings).

CALENDAR ITEM NO. 70.2 (CONT'D)

2. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (14 Cal. Adm. Code 15025), the staff has caused to be prepared an EIR identified as EIR No. 405, State Clearinghouse No. 85122307. Such EIR was prepared and circulated for public review pursuant to the provisions of the CEQA.
3. The following significant environmental effects were identified in the EIR. These are discussed in detail in Exhibit "D" - CEQA Findings, which include proposed changes, alterations, or permit conditions which should be required in or incorporated into the proposed project:

**Geologic Hazards:** The Concord Fault could rupture the pipeline at Pacheco Creek causing a significant oil spill. In addition, the proposed storage tank at mid-station could be damaged by intense ground shaking or liquifaction.

**Soils:** Accelerated or recurrent erosion in areas of steep slope could hinder site rehabilitation following trenching activities. Disturbance of saline or alkali soils may prove difficult to rehabilitate.

**Surface Water:** Risk of oil spills in surface waters, including stream alteration or scour causing the pipeline to become exposed and damaged.

**Noise:** Short-term construction impacts on sensitive receptors.

**Land Use and Recreation:** Effects on recreation experience in Black Diamond Mines Regional Preserve and Bethany Reservoir State Park due to construction activities. Also, conflicts in land use relative to proposed future uses and adopted plans.

CALENDAR ITEM NO. 13 (CONT'D)

Visual Resources: Visual contrast of right-of-way and booster stations and microwave towers.

Paleontology: Loss or disturbance of significant fossil resources.

Cultural Resources: Loss or disturbance of sites eligible for the National Register of Historic Places.

Terrestrial and Aquatic Biology: Potential construction and operation impacts on species or communities, including special status species.

System Safety: Accidents related to systems failure or fires at booster stations.

Oil Spill Potential: Due to design or construction flaws; hazards or accidents; pressure or leaks; lack of security; or lack of organization.

History of Document Preparation

The required Notice of Preparation (NOP) dated January 16, 1986, was sent; as specified in the CEQA Guidelines to responsible agencies and other interested Federal, State and local agencies and jurisdictions.

On February 3rd and 4th two public hearings were conducted in Taft and Martinez respectively. These meetings were used to identify major issues and concerns. Comments received in response to the NOP and at the public "scoping" hearings were addressed in the Draft EIR/EIS.

CALENDAR ITEM NO. 70.4 (CONT'D)

Copies of the Draft EIR/EIS were submitted to the State Clearinghouse (OPR) on September 17, 1986. Approximately 250 copies of the document were mailed to responsible agencies, other local, State and Federal agencies and interested parties. The document was circulated for a 60-day review period.

The comment period ended on November 24, 1986. On November 6th and 17th two public hearings were held in Bakersfield and Martinez. No one appeared to present comments on the document at either of these hearings.

Twenty-three letters were received during the public comment period. The Final EIR/EIS addresses all comments received in these letters.

The Final EIR/EIS was distributed on January 30, 1987. Once again approximately 250 copies of the document were distributed.

5. This activity involves lands which have NOT been identified as possessing significant environmental values pursuant to P.R.C. 6370, et seq. However, the Commission has declared that all tide and submerged lands are "significant" by nature of their public ownership (as opposed to "environmental significant"). Since such declaration of significance is not based upon the requirements and criteria of P.R.C. 6370, et seq., use classifications for such lands have not been designated. Therefore, the finding of the project's consistency with the use classification as required by 2 Cal. Adm. Code 2954 is not applicable.

**FURTHER APPROVALS REQUIRED:**

California Air Quality, USFWS, USACOE, County of Contra Costa, California Department of Fish and Game.

EXHIBITS:

- A. Land Description.
- B. Location Map.
- C. Executive Summary.
- D. CEQA Findings.
- E. Statement of Overriding Considerations.

IT IS RECOMMENDED THAT THE COMMISSION:

1. CERTIFY THAT AN EIR NO. 405, STATE CLEARINGHOUSE NO. 85122307, WAS PREPARED FOR THIS PROJECT PURSUANT TO THE PROVISIONS OF THE CEQA AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.
2. ADOPT THE FINDINGS HERETO ATTACHED AS EXHIBIT "D" IN CONNECTION WITH THE PROJECT IN COMPLIANCE WITH THE CEQA (P.R.C. SECTION 21000 ET. SEQ.) AND THE STATE EIR GUIDELINES;
3. ADOPT THE STATEMENT OF OVERRIDING CONSIDERATIONS HERETO ATTACHED AS EXHIBIT "E";
4. FIND THAT THE SIGNIFICANT ENVIRONMENTAL VALUES ORIGINALLY IDENTIFIED PURSUANT TO P.R.C. 6370, ET SEQ., ARE NOT WITHIN THE PROJECT SITE AND WILL NOT BE AFFECTED BY THE PROPOSED PROJECT.
5. AUTHORIZE THE EXECUTIVE OFFICER TO EXAMINE, REVIEW, AND APPROVE, ON BEHALF OF THE COMMISSION, IN CONSULTATION WITH THE UNITED STATES FISH AND WILDLIFE SERVICE, AND THE CALIFORNIA DEPARTMENT OF FISH AND GAME, THE BOTANICAL SURVEY, SUCH APPROVAL TO OCCUR PRIOR TO CONSTRUCTION OF THE PIPELINE WITH A CONSTRUCTION LIMITING DATE FOR COMPLETION OF SUCH PIPELINE TO BE NO LATER THAN MARCH 1, 1989
6. AUTHORIZE ISSUANCE TO SAN JOAQUIN VALLEY PIPELINE COMPANY OF A 25-YEAR GENERAL LEASE - RIGHT-OF-WAY USE BEGINNING MARCH 1, 1987; IN CONSIDERATION OF ANNUAL RENT IN THE AMOUNT OF \$209, WITH THE STATE RESERVING THE RIGHT TO FIX A DIFFERENT RENTAL ON EACH FIFTH ANNIVERSARY OF THE LEASE; PROVISION OF A \$5,000 SURETY BOND; PROVISION OF PUBLIC LIABILITY INSURANCE FOR COMBINED SINGLE LIMIT COVERAGE OF \$1,000,000; FOR CONSTRUCTION AND MAINTENANCE OF A BURIED CRUDE OIL PIPELINE ON THE LAND DESCRIBED ON EXHIBIT "A" ATTACHED AND BY REFERENCE MADE A PART HEREOF.

(ADDED 2/13/87)

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**EXHIBIT "A"**

**LAND DESCRIPTION**

**W 23680**

A strip of tide and submerged land 22 feet wide in the State-owned bed of Pacheco Creek, Contra Costa County, California, the centerline of said strip being described as follows:

COMMENCING at Point "P-3" as described in the Public Agency Permit to the Contra Costa County Flood Control and Water Conservation District recorded in Book 5918, page 494, Official Records of Contra Costa County; thence from said point "P-3" S 90°54'41" E, 100.00 feet; thence S 82°23'30" W, 115.09 feet to the POINT OF BEGINNING; thence N 82°23'30" E, 230.18 feet to the end of the herein described line.

EXCEPTING THEREFROM any portion lying landward of the ordinary high water mark of Pacheco Creek.

**END OF DESCRIPTION**

PREPARED JANUARY 27, 1987 BY BOUNDARY SERVICES UNIT, M. L. SHAFER, SUPERVISOR.

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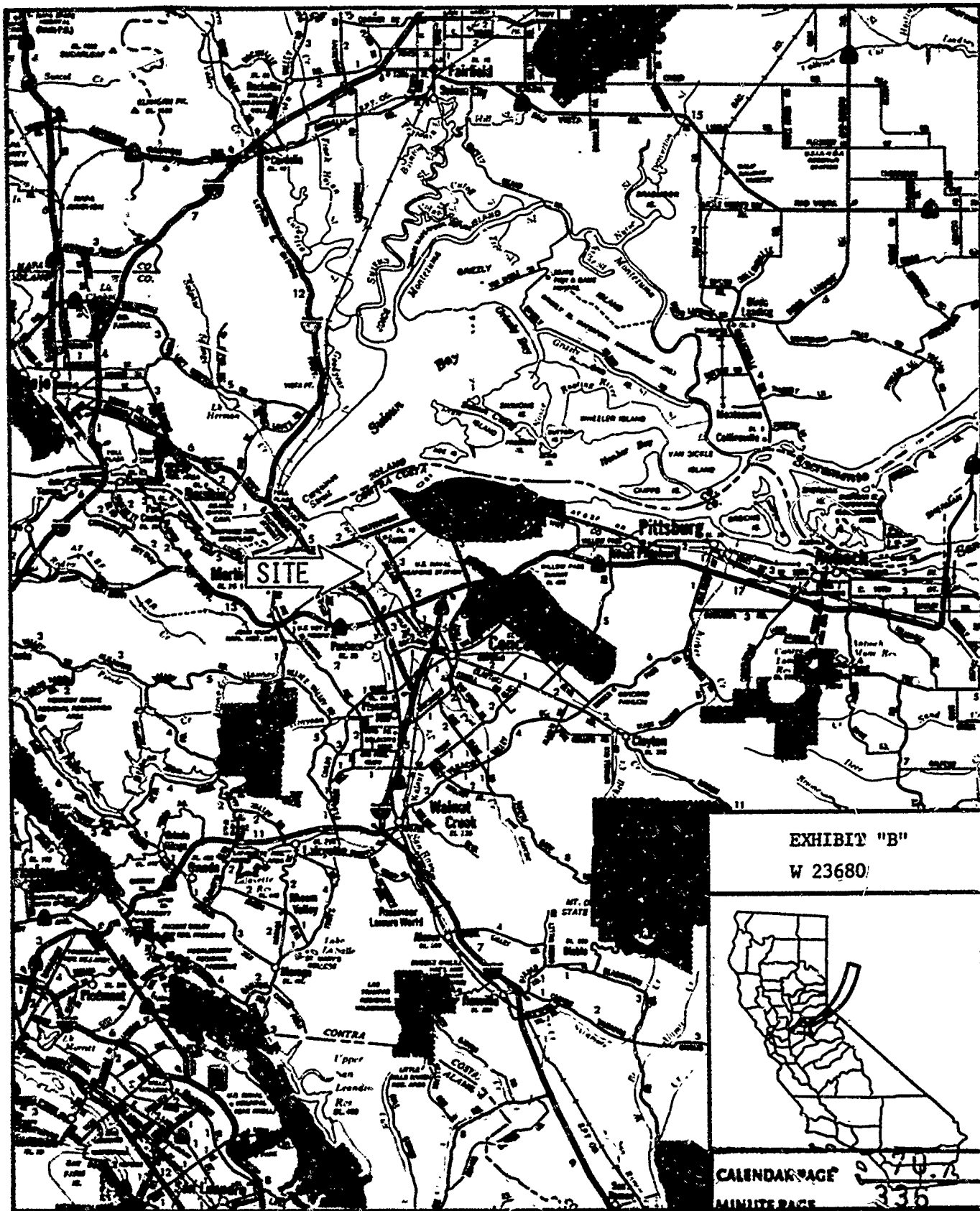


EXHIBIT "B"  
W 23680



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## EXHIBIT "C"

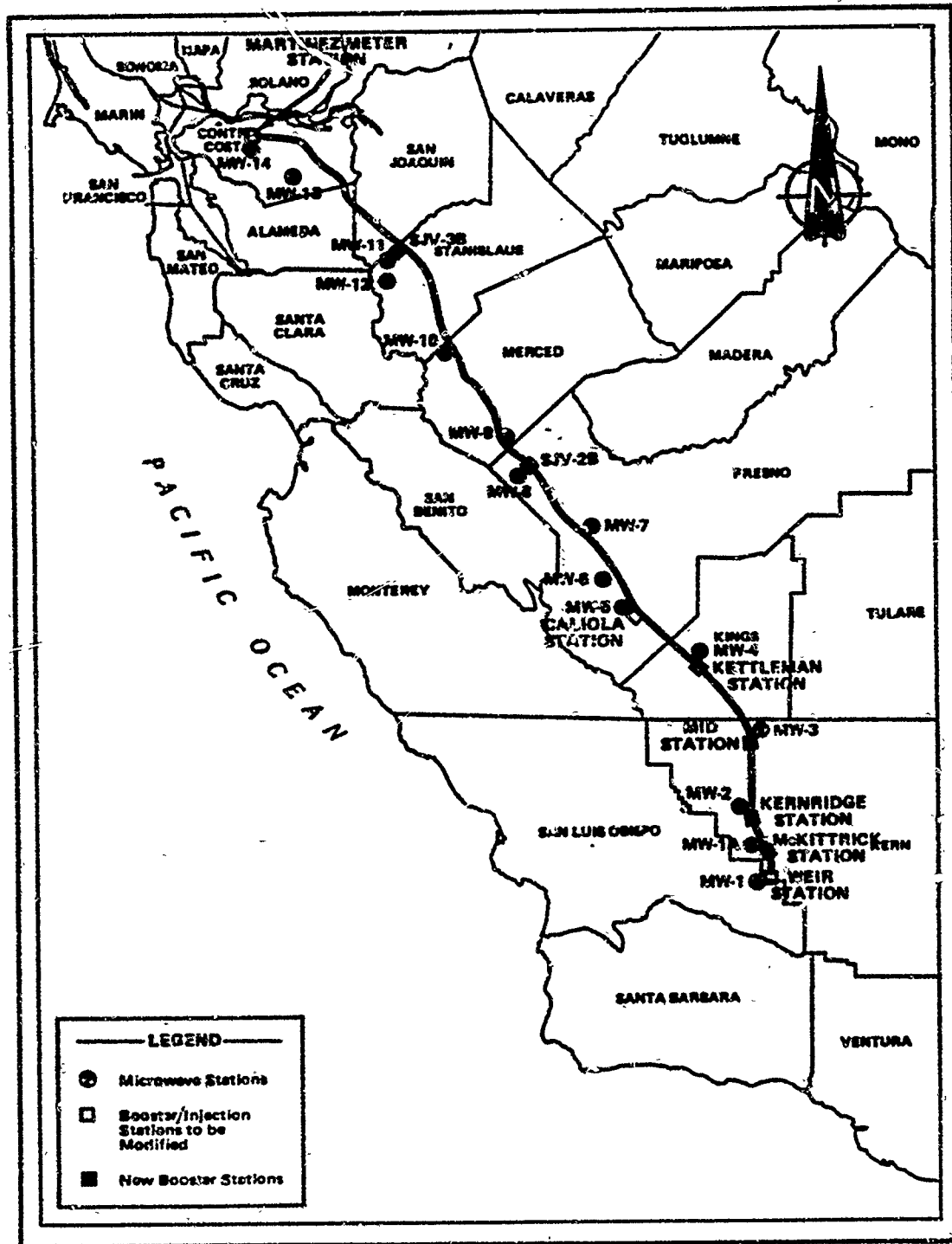
## EIR/EIS EXECUTIVE SUMMARY

## 1.1 INTRODUCTION

The San Joaquin Valley Pipeline Environmental Impact Report/Environmental Impact Statement (EIR/EIS) is issued jointly by the California State Lands Commission (SLC) and the U.S. Department of the Interior's Bureau of Land Management (BLM). The intent of the document is to fulfill the requirements of both the California Environmental Quality Act (CEQA) (under which SLC is the lead agency for this project) and the National Environmental Policy Act (NEPA) (under which BLM is the lead agency).

The proposed project includes the construction of a heated, buried crude oil pipeline and associated facilities, to transport 120,000 barrels per day (120 MBD) from existing oil fields in Kern County, California, to existing refining facilities in Martinez, Contra Costa County, California. The project sponsor, or applicant, the San Joaquin Valley Pipe Line Company (SJVPLC), is an affiliate of the Shell Oil Company. SJVPLC proposes to build this pipeline through the western San Joaquin Valley in order to transport the 120 MBD in a reliable, cost-effective manner. Shell currently transports 120 MBD from its Kern County oil fields to Martinez through exchange agreements involving a privately owned pipeline. The proposed action, therefore, will not in itself increase the production or refining of California crude oil.

Once a right-of-way across state and federal lands has been granted and the required permits and authorizations have been obtained for the project, the pipeline will be built in four segments, with pipe diameters ranging from 10.75 to 24 inches, for a total length of about 258 miles. In a generally northwest direction from Kern County, each segment will be built using a larger diameter pipe than the previous segment, to accept and transport the cumulative inputs from producing fields in the southern portion of the San Joaquin Valley. From its origin at Weir station in Kern County, the project will parallel Interstate Highway 5(1-5) through Kings, Fresno, Merced, Stanislaus, and San Joaquin counties. The pipeline will then proceed



**Figure 2-1 PROPOSED PIPELINE SYSTEM AND PROJECT COMPONENTS**  
 (SEE DETAILED PROJECT MAPS IN APPENDIX A)

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through the northeast corner of Alameda County and eastern Contra Costa County, before turning west along Suisun Bay, into the existing Martinez refinery.

The pipeline, planned for construction between mid-1987 and mid-1988, will follow existing pipeline and utility corridors for about 88% of its length, or 228 miles. Other project components include the construction of two new booster (pumping and heating) stations, the construction of 13 new microwave communication towers, and the modification of four of six existing booster and oil injection stations.

In addition to the proposed project, this EIR/EIS evaluates two minor alignment alternatives, an alternative booster station configuration, two alternative booster station power source configurations, an overhead aqueduct crossing alternative, and the no-project alternative. The Combination Route diverges from the proposed pipeline north of Lost Hills, California, and extends for about 44 miles. Major parts of this route alternative follow the proposed route; and at no point does it diverge more than 2 miles from the proposed route. This route is considered because, as a whole, it follows I-5 more closely than the corresponding portion of the proposed route and, thus, intrudes less upon undisturbed land. The Contra Loma Route diverges from the proposed route for a 3.5-mile stretch near the City of Pittsburg in Contra Costa County. It avoids areas of potential landsliding in this part of the county.

The three new booster station alternative (as compared to two new booster stations in the proposed action) is analyzed because it could allow greater operational flexibility over Segment 4 of the pipeline (Fresno County to Martinez); with this alternative, oil could be pumped and heated more efficiently, and a 20-inch or 24-inch pipe could be used over Segment 4 (Segment 4 of the proposed action is limited to the use of a 24-inch pipe).

The alternative power source configurations consist of electricity, rather than natural gas, to power the pumps, and either crude oil or natural gas, rather than the use of waste heat with natural gas backup, to heat the oil. These alternate configurations are proposed for analysis because they might be more economical than the proposed action.

The overhead aqueduct crossing alternative would substitute aerial crossings at six different portions of California Water Project and Bureau of Reclamation canals for the underground crossings proposed in the project for these points. This alternative would allay concerns that the California Department of Water Resources has expressed about underground crossings of its aqueducts.

Other alternatives to the various components of the proposed action were analyzed and eliminated from detailed analysis. Such alternatives included about a dozen routing variations, six of which were within Contra Costa County. In addition, two major route alternatives were analyzed at a conceptual level, one route along the

eastern edge of the San Joaquin Valley, and another that crossed the Coast Ranges and approached Martinez through the Santa Clara Valley. Other alternatives that were ultimately rejected included fiber-optic cables as a line communications medium, pipeline insulation, and alternative transportation means for the crude oil, involving a combination of truck, rail, and tanker transport.

SJVPLC has applied for right-of-way permits from BLM to cross federal land, and from SLC to cross land owned by the State of California. Because of its length and the resources it could potentially affect, the pipeline will require numerous other federal, state, and local permits before construction can begin. A list of required permits is contained in Table 1-1 of the Draft EIR/EIS, minor amendments to which are contained in Table 3-1 of this volume.

## 1.2 AREAS OF CONTROVERSY

Based on public input, scoping meetings, and agency responses to the Notice of Preparation circulated by SLC, several areas of controversy associated with the proposed action have been identified. The first is the potential for an oil spill at some point along the 258-mile pipeline over the life of the project, and the effects which a spill could have on water resources, terrestrial and aquatic biological resources, and adjacent land uses. The other area of controversy is the potential for impacting such rare, threatened, or endangered species as the San Joaquin kit fox, the blunt-nosed leopard lizard, and others, as well as the potential for reducing these species' critical habitats.

The question of oil spill potential is particularly controversial because of crude oil pipeline spills that have occurred over the past several years between Los Angeles and Martinez and because of the frequent seismic activity in the region. Statistics show that pipeline spills are rare, especially spills from new pipelines, and they are not often due to natural causes. Based on statistical probabilities, it is estimated that over the life of the project there would be three spills over 50 barrels, and six spills of between 5 and 50 barrels. However, despite the elaborate system safety and reliability measures associated with the proposed action, oil spills could occur over the life of the project due to impact damage or defective or corroded pipe. A wide variety of impacts could occur depending upon the location, volume, and timing of an oil spill. The concerns are surface water and groundwater pollution, damage to nearby biological resources, habitat destruction, temporary loss of agricultural/rangeland productivity, and degradation of scenic vistas. However, the most significant impact would be realized if a major spill reached reservoirs or aqueducts and contaminated these water supplies for Los Angeles and for irrigated agriculture.

Along the pipeline route, areas of controversy include pipeline construction through sensitive biological areas such as critical habitat for the blunt-nosed leopard lizard, salt marsh harvest mouse, giant kangaroo rat, and San Joaquin kit fox, and the Hoover's woolly star and Congdon's eatonella. Because the U.S. Fish and Wildlife Service (USFWS) considers these animals endangered and is likely to designate these two plant species as threatened or endangered, and the

California Dept. of Fish and Game's (CDFG) similar concerns about these species, intensive field surveys of these species were conducted as a condition of project approval. The results of these surveys have been integrated into this document.

### 1.3 MAJOR IMPACT CONCLUSIONS

The proposed route is generally aligned for much of its length within existing utility and transportation corridors. As a result, the project has no impacts which cannot be reduced by mitigation, and only a few impacts which remain significant after mitigation. Construction, operation, oil spill, and abandonment impacts of the proposed project are described in Chapter 4 of the Draft EIR/EIS. Mitigation measures are described in Chapter 6 of the Draft EIR/EIS, with some modifications and additions contained in Section 3.3 of this volume. Table 1-1 of this volume identifies the potentially significant impacts, their corresponding mitigation measures, and the residual impacts that would result from the mitigated action. The mitigation measures listed in the table are referenced by the same numbers used in Chapter 6 of the Draft EIR/EIS. Residual impacts remaining after mitigation are classified as either significant or not significant. The significant residual impacts include the following:

#### For Construction:

- o The total land requirement of almost 1,000 acres of permanent right-of-way and ancillary facilities; and
- o Localized revegetation problems or failure on slopes steeper than 18% (about 80 slopes).

#### For Operation:

- o The consequences of an exceptionally strong seismic event (greater than MMI VIII), which could result in a major spill and spill-related impacts to environmental resources. (Note: the probability of such an event is considered small.)

#### For Accidents:

- o Any spill greater than 5 barrels, or any spill to water. (From statistical probabilities, it is estimated that about six spills of greater than 5 barrels may occur over the life of the project.)

### 1.4 COMPARISON OF ALTERNATIVES

The FEIR/FEIS evaluates four project alternatives, any of which may be implemented independently of the others. This discussion briefly summarizes the advantages and disadvantages of each alternative compared to the aspect or portion of the proposed action that it would replace.

Other than the no-action alternative, the proposed route does not have an alternative that would constitute a distinctive and completely different alternate to the proposal. The reason is that the proposed

route has been aligned to avoid the rugged terrain of the Coastal Ranges as much as practicable while also avoiding highly productive agricultural land and irrigation systems in the San Joaquin Valley. For this reason, the proposed route crosses a multitude of toe slopes on the border between valley and foothills. Any route further west would encounter more difficult topographic constraints. Moreover, the proposed route follows existing transmission and transportation corridors to a large extent.

The route alternatives, or deviations, consist of the Combination Route and the Contra Loma Route. The Combination Route would follow existing rights-of-way slightly more closely than the corresponding portion of the proposed action, even though the separation between the two routes is very small (less than 2 miles). Because the Combination Route would add about 0.5 miles to the length of the pipeline, it would have slightly higher construction and operation costs. The Contra Loma Route would avoid landslide areas in a small portion of Contra Costa County, but it would pass through existing residential areas, unlike the segment it would replace, and therefore could create more difficult right-of-way and permit conditions.

The three new booster station alternative would achieve project objectives more economically because it would allow more efficient sizing and operation of pumps and heaters. It would also allow a 20-inch pipe to be installed over Segment 4, reducing the maximum potential oil spill over this segment. This alternative has similar environmental impacts as the proposed configuration.

The alternative power source configurations could also result in more economical operation of the pipeline, depending on the prices of natural gas, crude oil, and electricity. These alternative power configurations would use more energy than the proposed method, and in addition, will cause significantly higher air emissions if crude oil were to be burned as a source of heat.

Overhead aqueduct crossings would be a preferable method of crossing California Water Project canals compared to the proposed underground techniques, according to the California Department of Water Resources (see comment letter 17). They would also be less expensive. The disadvantages of these overhead crossings are that they would expose the pipeline to external damage, possibly causing spills into the aqueducts, and they are visually intrusive compared to underground crossings.

#### 1.5 AGENCY-PREFERRED ALTERNATIVE

Under NEPA, the Federal lead agency must identify its preferred alternative for projects for which an EIS is prepared. The preferred alternative stated below is not a final agency decision, but it is an indication of the federal agency's preliminary preference. The alternative identified below is preferred by BLM, the federal lead agency.

The Federal agency's preferred alternative is the proposed action as mitigated and described in this document.

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Table 1-1  
 FINAL (REVISED)  
 SUMMARY OF SIGNIFICANT IMPACTS FOR THE  
 SAN JOAQUIN VALLEY PIPELINE PROPOSAL

Resource Area	Impact Area	Significance of Potential Hazard or Impact		Mitigation Measure	Effectiveness	Residual Impact Significance	
		S	NS			S	NS
<b>GEOLOGY AND TOPOGRAPHY</b>							
<u>Construction</u>	1. Unique geological features	--	NAT	--	NAT	--	--
	2. Commercial resources	--	X	--	NAT	--	X
	3. Paleontological resources	--		See Paleontology below	--		
	4. Topographical modifications; requirement to cut steep slopes, particularly in Contra Costa County	--	X	See Soils below	Original contours and slopes will be restored as much as possible	--	X
	5. Requirement for occasional blasting of hard rock	--	X	2, 6	Noise from blasting or ricks to nearby construction crews will be minimized	--	X
<u>Operation</u>	None identified	--	--	--	--	--	--
<b>GEOLOGICAL HAZARDS</b>							
<u>Construction</u>	None identified	--	--	--	--	--	--
<u>Operation</u>	6. Potential pipeline rupture at Pacheco Creek	X	--	1, 3, 4, 7	Response action to a spill if one occurs at the Concord Fault will be accelerated		X(2)
	7. Need for special engineering design studies required to enhance safety of:						

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Table 1-1 (Cont.)

Resource Area	Impact Area	Significance of Potential Hazard or Impact		Mitigation Measure	Effectiveness	Residual Impact Significance	
		S	NS			S	NS
<b>GEOLOGICAL HAZARDS (Cont.)</b>							
	a) The pipe at Concord Fault	X	--	1, 4	Reduced potential for rupture due to maximum potential earthquake and fault movement (up to 3 feet laterally)	X	--
	b) Stability of storage tank at Mid station due to intense ground shaking or liquefaction	X	--	5	Reduced potential for damage to ancillary facilities	--	X
	8. Buoyancy and pipe instability in water-saturated zone (brackish marsh deposits)	--	X	3	The pipe will be prevented from floating and/or working its way to the surface	--	X
	9. Pipeline sited on landslide prone areas	--	X	9	Pipeline stability is enhanced; risk of exposure is minimal	--	X
	10. No rehabilitation and revegetation within one growing season due to the following factors:						
	a) Accelerated erosion and deposition due to slumping and steeply sloping terrain, particularly in Contra Costa County	X	--	8, 9, 10, 11, 12, 15, 16, 66, 67	These measures will restrict the impact to the sites having most severe limitations (e.g., slopes >18% and associated drainages)	X	--
	b) Salinity or alkalinity	X	--	8, 13, 15, 16	Saline soils will be rehabilitated and revegetated with adapted plant species	--	X

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**SOILS**

Construction

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Table 1-1 (Cont.)

Resource Area	Impact Area	Significance of Potential Hazard or Impact		Mitigation Measures	Effectiveness	Residual Impact Significance		
		S	NS			S	NS	
<b>SOILS (Cont.)</b>								
<u>Operation</u>	11. Reduced productivity due to horizon mixing and compaction, ponding of agricultural land	--	X	8, 16, 17	Original productivity will be restored on the right-of-way	--	X	
	12. Potential recurrent erosion problem on steep slopes and associated drainages	X	--	10, 14, 15	Right-of-way maintenance, including erosion control, where necessary will be implemented in perpetuity		X	
<b>SURFACE WATER</b>								
<u>Construction</u>								
1-8	13. Degradation of water quality below beneficial use criteria, due to any of the following factors:					--	--	
	a) Excessive disturbance in-stream and of the adjacent banks and land causing erosion and sedimentation	--	X	18, 23, 21	Silt loads are reduced	--	X	
	b) Release of hydrostatic test water and/or trench dewatering	--	X	19, 20, 24	Hydrostatic test water releases will be controlled to avoid scour and water quality degradation	--	X	
	c) Spill and fuel leaks	X	--	22	No oil will reach surface water resources	--	X	
	14. Stream bed alterations and scouring, and damage to aquatic habitat	--	X	18, 21, 68	Aquatic life will only be subject to short-term effects; there will be no significant change in the stream beds	--	X	

\*In Alameda and Contra Costa counties.

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Table 1-1 (Cont.)

Resource Area	Impact Area	Significance of Potential Hazard or Impact		Mitigation Measure	Effectiveness	Residual Impact Significance	
		S	NS			S	NS
<b>SURFACE WATER (Cont.)</b>							
	15. Construction of structures in 100-year flood zones	--	X	21	Pipeline stability is ensured in the case of an unusual flood	--	X
	16. Reductions in surface water volume	--	NAT	NAT	NAT		NAT
<u>Operation</u>	17. As for (14) above	--	X	68, 69	Scour will be prevented and risk of exposure of the pipeline will be reduced	--	X
	18. Oil spills	X	--	70, 102	Measure will reduce size of spill and spill impacts	X(2)	--
<b>GROUNDWATER</b>							
<u>Construction</u>	None identified						
<u>Operation</u>	19. A measurable reduction in water quality in an aquifer, due to major spill which is contained and cleaned up	--	X	100	If a spill occurs, it will not reach aquifers due to spill response	--	X
	20. Restrictions or reduction in available groundwater	--	NAT	NAT	NAT		NAT
<b>AIR QUALITY</b>							
<u>Construction</u>	21. Violation of national and state ambient air quality standards due to construction emissions	--	X	25, 26, 27	Construction emission will be negligible	--	X
<u>Operation</u>	22. As for (21) above due to booster station emissions standards due to construction emissions	--	X	25, 71	Negligible pollution from natural gas burning	--	X

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Table 1-1 (Cont.)

Resource Area	Impact Area	Significance of Potential Hazard or Impact		Mitigation Measure	Effectiveness	Residual Impact Significance		
		S	RS			S	RS	
AIR QUALITY (Cont.)								
	23.	Influence on areas already in attainment and sensitive receptors	--	X	NN	NN	--	X
SOCIOECONOMICS AND TRANSPORTATION								
	<u>Construction</u>							
	24.	Significant demand for temporary housing, for infrastructure	--	X	28, 33	Potential impacts 24 and 25 are not a feature of the project, mainly due to limited labor force	--	X
	25.	Water demand	--	X	NN	NN	--	X
	26.	Loss in tourist value	--	X	NN	NN	--	X
	27.	Loss in revenue for grazing BLM land	--	X	36	Loss will be minor, if any, and short-term; interference with grazing practices will be negligible	--	X
	28.	Unacceptable public risk	--	X	29	Risk associated with open trench and heavy equipment will be minimized	--	X
	29.	Traffic congestion, delays accidents, public inconvenience	--	X	28	Planned crossings of roads and maintenance of traffic flow	--	--
	<u>Operation</u>							
	30.	Negative change in local tax base	--	NAT	NAT	Potential impacts 30, 31, 34, and 35 are not a feature of the project and, at most, insignificant	--	NAT

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Table 1-1 (Cont.)

Resource Area	Impact Area	Significance of Potential Hazard or Impact		Mitigation Measure	Effectiveness	Residual Impact Significance		
		S	NS			S	NS	
<b>SOCIOECONOMICS AND TRANSPORTATION (Cont.)</b>								
	31. Change in property values	--	NAT	NAT	Potential impacts 34 and 35 are negligible	--	NAT	
	32. Change in water demand	--	X	NN	Approximately same as present	--	X	
	33. Change in population	--	X	NN	Negligible increase, if any	--	X	
	34. Unacceptable public risk	--	X	NN	Risk is acceptable as indicated by existing pipelines	--	X	
	35. Loss in tourist value	--	NAT	NAT	NAT		NAT	
<b>NOISE</b>								
	<u>Construction</u>							
	36. Construction equipment and activities exceed county guidelines	--	X	30, 31	People will experience exceedences (to about 60 dB(A)) only for a couple of days at specific points, only on work days during the day time, and not on weekends in recreation areas and elsewhere	--	X	
	36a. Sensitive receptors affected by short-term construction noise	X	--	31	Noise eliminated on weekends, but short-term noise will still affect the sensitive receptors listed in Table 4-13 of the Draft EIR/EIS during weekday construction.	X	--	
	<u>Operation</u>							
	37. As above, due to noise of booster station; long-term inconsistency with State of California land use criteria	--	X	72	Noise will be attenuated and will be audible only at and near the site; no noise-sensitive locations will be affected	--	X	
	38. Will exceed 55 dB(A) over the long-term	--	X	72	Only within about 250 feet from the facilities	--	X	

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Table 1-1 (Cont.)

Resource Area	Impact Area	Significance of Potential Hazard or Impact		Mitigation Measure	Effectiveness	Residual Impact Significance	
		S	NS			S	NS
<b>LAND USE AND RECREATION</b>							
<u>Construction</u>							
	39. Inconsistent with adopted land use plans. Relative to future land uses in Contra Costa, conflict: Stoneman Park and Reservoir; Kirker Pass and central landfill proposals and proposed residential development; proposed highway improvements; and Coalings Air Cargo Port and bike trails in Fresno County	X	(3) --	37	Further consultation with local planning authorities is required	--	(3) X
	40. Quality of recreation in Black Diamond Mines Regional Preserve (Contra Costa County) and Bethany Reservoir State Park	X	--	37	Planning the siting and timing of the construction will reduce the impacts and/or avoid them	--	X
	41. Increase in recreational demand	--	X	33	Not only will the project have an insignificant impact on recreational demand, the labor force will not use public facilities except for recreation	--	X
	42. Changes necessary in land use classification	--	X	32	After construction, most of the approximately 2,500 acres are returned to their original land use; existing utility corridors are used for about 80% of the route; no permanent conversion of prime agricultural land	--	X
	43. Volumes of waste relative to landfill capacity	--	X	35	Waste volumes are small	--	X

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Table 1-1 (Cont.)

Resource Area	Impact Area	Significance of Potential Hazard or Impact		Mitigation Measure	Effectiveness	Residual Impact Significance	
		S	NS			S	NS
<b>LAND USE AND RECREATION (Cont.)</b>							
<u>Operation</u>	44. As for (42), two new booster stations and microwave towers will preempt existing land use on less than 40 acres	--	X	32	Prime agricultural land not affected	--	X
	45. New access to previously inaccessible areas	--	X	73, 74	Gates will be installed to interfere with motorized access to sensitive areas if any are identified as public lands	--	X
<b>VISUAL RESOURCES</b>							
<u>Construction</u>	46. Visual contrast of the right-of-way	X	--	8, 11, 15, 38, 40, 41	No strong visual contrast will develop	--	X
	47. Visual contrast of booster stations and microwave towers; conflicts with special policies for scenic highway and Westley Rest Stop Park	X	--	38, 39	These mitigations will help to reduce the visual impacts of these features, but the residual impact is still significant.	X	--
<u>Operation</u>	48. Visual contrast upon abandonment	--	X	75	Sites will be restored to their original condition	--	X
<b>PALAEONTOLOGY</b>							
<u>Construction</u>	49. Loss or disturbance of significant paleontological resources	X	--	42, 43, 44, 45	With these mitigation measures, adverse impacts will be reduced to insignificance	--	X

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Table 1-1 (Cont.)

Resource Area	Impact Area	Significance of Potential Hazard or Impact S MS	Mitigation Measure	Effectiveness	Residual Impact Significance S MS
<b>PALEONTOLOGY (Cont.)</b>					
<u>Operation</u>	50. Sensitive resource areas becoming publicly known and accessible and unauthorized collection	-- X	73, 76	Unauthorized collection will be limited; area is presently accessible	-- X
<b>CULTURAL RESOURCES</b>					
<u>Construction</u>	51. The loss or disturbance of sites eligible for the NHP	X --	46, 47, 48, 49	With these mitigation measures, which include implementation of a cultural resources management plan, adverse impacts will be reduced to insignificance	-- X
<u>Operation</u>	52. Conflicts with features of ethnographic importance and the cultural heritage of Native American groups None identified	-- X	50, 51	Native American groups will be included in planning and mitigation measures to insure minimal conflict	-- X
<b>TERRESTRIAL AND AQUATIC RESOURCES</b>					
<u>Construction</u>	53. Impacts on species and communities	X --	52, 53, 54, 56, 57	Right-of-way habitats will be restored, raptor nesting sites will be avoided, and a range of other measures will ensure no significant impacts occur to aquatic and terrestrial plant and animal species	-- X

Table 1-1 (Cont.)

Resource Area	Impact Area	Significance of Potential Hazard or Impact S NS	Mitigation Measure	Effectiveness	Residual Impact Significance S NS
TERRESTRIAL AND AQUATIC RESOURCES (cont.)	Impacts on special status species	X	52, 53, 55, 56, 57, 58, 59, 60, 61, 62	With these mitigation measures and others that may be required by the Biological Opinion, adverse impacts will be reduced to insignificance	X
	54. Unauthorized collections	--	56	Potential impact is already possible due to general accessibility of the region; status quo will be maintained	X
	55. Contamination by herbicides; weed control	--	77	Weed control through application of a gravel layer is effective and has minimal impacts	X
	56. Spill impact on special status species habitat	X	78, 79	Measure ensures full-scale action; residual impact significance depends on safety factors	(2) X
SYSTEM SAFETY AND RELIABILITY	57. Impacts due to system failures and/or failure to follow procedures	X	80, 81, 83	Measures ensure applicable design codes and regulation apply to project trained operators, access to information and communications, oil movement control and instantaneous shut-off, if necessary	(2) X



Table 1-1 (Cont.)

Resource Area	Impact Area	Significance of Potential Hazard or Effect		Mitigation Measure	Effectiveness	Residual Impact Significance	
		S	NS			S	NS
<b>SYSTEM SAFETY AND RELIABILITY (Cont.)</b>							
	58. Maintenance-related system failures	X	--	82	Maintenance checks will ensure safety features are operational and the identification of hazards to the pipeline	X	(2) --
	59. Fires at booster stations	X	--	84, 85, 86, 87	When fires occur, they will be controlled	X	(2) --
	60. Fuel spills at booster stations	--	X	88	L.A.K. detection	--	X
<b>OIL SPILL POTENTIAL</b>							
	<u>Operation</u>						
	61. Spill impacts due to design or construction flaws	X	--	89, 91, 92, 93, 95, 101	Probability of a spill or leak is reduced	X	(2) --
	62. Spill impact due to geologic hazard or accidents	X	--	90	Probability is reduced by design	X	(5) --
	63. Spill impacts due to damage from pressure or leaks	X	--	93, 94, 97	Probability is reduced by systems design	X	(2) --
	64. Spill impacts due to lack of security	X	--	95, 98	Probability is reduced by inspection practices	X	(2) --
	65. Spill impacts due to lack of organization	X	--	99, 100	Size of spill is reduced by fast response; impact is mitigated by cleanup	X	(2) --

NA = Not applicable to the project.

X(2) = Significance of residual impacts cannot be determined; it is a function of many factors including the size of the spill, time of year, sensitivity of the resources, response action, etc.

X(3) = Significance of future land use conflicts must be resolved through the local land use planning process.

NN = Necessary.

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EXHIBIT D

**CEQA FINDINGS**

Explanatory Notes:

These findings are made by the State Lands Commission pursuant to Section 15091, Title 14, California Administrative Code, on the proposed San Joaquin Valley Pipeline Project EIR/EIS. All significant impacts of the project identified in the EIR/EIS are listed for both the proposed project and each major alternative analyzed:

Contra Loma Route  
Combination Route  
Three Booster Stations  
Alternative Power Sources  
Alternative Pipe Size  
Aqueduct Crossing  
No Project

The impacts are organized according to the resource affected (geology, visual, etc.), and the discussion states whether the impact is due to pipeline construction, normal operation, upset condition or abandonment.

For each significant impact, findings have been made as appropriate. For some of the impacts all three findings have been made:

- 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
- 2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- 3) Specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the final EIR.

Finding No. 1 is used extensively in this exhibit because the applicant, in a letter dated February 9, 1987, amended their application to incorporate all but two of the mitigation measures recommended in the FEIR/EIS. The remaining two

measures have been recommended for inclusion as conditions of project approval. Therefore, the project has been mitigat/ad to the full extent recommended in the FEIR/EIS. Where residual impacts remain significant, it is as a result of potential unforeseen events (accidents) the risk of which cannot feasibly be further reduced.

Although the State Lands Commission is the CEQA Lead Agency, it has jurisdiction only over a small part of the route and, thus, has limited power to require mitigation. Whenever finding No. 2 occurs, agencies with jurisdiction over the location and/or operation of the pipeline have been specified. It is these agencies, within their respective spheres of influence, which would have the ultimate responsibilities to adopt, implement and enforce the mitigation discussed. Finding No. 3 appears whenever an unavoidable significant impact has been identified and residual impact remains after application of all recommended mitigation. Due to the linear nature of the project, many such impacts have been identified along the length of the pipeline.

This impact is always specifically identified in the supporting discussions. The Statement of Overriding Considerations, Appendix E, applies to all such unavoidable impacts, as required by Sections 15092 and 15093, Title 14, California Administrative Code.

The appropriate findings are followed by a narrative of facts supporting them. When possible, reference is made to a specific (numbered) mitigation measure presented in the FEIR/EIS.

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GEOLOGIC HAZARD

IMPACT: Rupture of the pipeline during operation caused by seismic activity on the Concord Fault.

- FINDING:
- 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
  - 3) Specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the final EIR.

FACTS SUPPORTING THE FINDING:

The pipeline crosses a trace of the Concord Fault beneath the channel of Pacheco Creek. Although the unconsolidated material in Pacheco Creek presents less danger of rupture than bedrock would, the estimated maximum potential earthquake (Richter 7, Modified Mercalli Intensity (MMI) IX or X) still represents a significant risk. Mitigation measures 4 and 64 require special geologic and engineering study and design of this portion of the pipeline to assure it is constructed to meet the level of hazard present on the site. In addition, mitigation 4 requires storage of spill containment equipment at the Martinez Refinery. This measure will help, due to the proximity of the refinery to Pacheco Creek, to assure that any spill is responded to expeditiously. Specifically, the FEIR/EIS states:

[4] As identified by geotechnical studies of the route, the major concern with respect to seismic hazards is with the crossing of the Concord Fault under the Pacheco Creek. Because this active fault is so close to the refinery at Martinez, the proposed terminus of the pipeline, it is essentially unavoidable by any alternate route. A geologist will examine the pipeline trench for evidence of faulting during the centerline survey and during construction in this vicinity.

To mitigate potential damage to the pipeline and to minimize impacts in the event of a break or spill, the design of the pipeline will provide for lateral displacement of up to 30 feet, the maximum expected along this fault. Various engineering approaches will be evaluated; for example, an overhead crossing; or a wide,

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shallow, loosely backfilled trench; or a tube-in-tube bored undercrossing. Each of these approaches requires the use of flexible, high-tensile-strength steel pipe. Depending upon the angle at which the fault is crossed, provisions for extension or compression of the pipeline will be made. Oil spill containment equipment identified in the Oil Spill Contingency Plan will be stored near the fault at the refinery. See also measure [64].

- o Effectiveness: These engineering measures will reduce the probability of rupture in the event of a tremor or earth movement.

[64] On the basis of the data on the maximum probable Modified Mercalli Intensities (MMI) for the proposed pipeline route, the pipeline will be designed to tolerate an MMI of IX or X during its lifetime without rupturing.

- o Effectiveness: This measure will prevent damage to the system from surficial seismic events.

In combination, these measures substantially lessen the risk and consequences of a spill in this potentially hazardous and environmentally sensitive area. The applicant submitted a letter to the State Lands Commission on February 9, 1987, which amends their project to include these mitigation measures.

The FEIR/EIS also recommends the inclusion of mitigation measure 7, (as explained in response 8-7, Finalizing Addendum), which would require the installation of a remotely-operated valve upstream and a pressure sensitive check valve on the downstream side of the creek in lieu of the proposed manually operated block valves. Specifically, the FEIR/EIS states:

- o [7] The manually operated block valves at Pacheco Creek, which overlies a trace of the Concord Fault, will be automated to reduce shutoff time.

- o Effectiveness: This measure will reduce the size of a spill by the amount that would spill between the time of detection and manual shutoff of the block valves at this environmentally sensitive location. A spill would still be significant.

This measure will reduce the size of a spill by the amount that would spill between the time of detection and manual shutoff of the block valves at this environmentally sensitive location. The State Lands Commission, therefore,

makes this measure a condition (see lease condition No. 2, Oil Spill Protection) of project approval, because it will substantially lessen the consequences of a spill.

The combination of mitigation measures outlined above constitute prudent and reasonable efforts to reduce the risk and consequences of an oil spill at Pacheco Creek. They will not, however, guarantee that such a spill will never happen. If a spill does occur here, its effects would be significant. There are no alternative actions available which would eliminate these effects, except the no action (no project) alternative (see Discussion of Alternatives at the end of this exhibit). Therefore, the Commission also adopts the finding of overriding considerations in Exhibit E.

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GEOLOGIC HAZARD

IMPACT: Intense groundshaking during operation of the storage tank could cause instability.

FINDING: 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

FACTS SUPPORTING THE FINDING:

An 80,000 barrel oil storage tank is proposed at mid-station in Kern County. The specific site for this storage tank is in an area which is potentially subject to intense groundshaking and has a high groundwater table which could lead to liquefaction. Such geologic hazards could create stability problems with the tank. To reduce the risk of such hazards Mitigation 5 would require a site specific soil mechanics study and special foundation and/or tank design. Specifically, the FEIR/EIS states:

[5] The 80,000-barrel storage tank at Mid station could be subject to intense ground shaking and the high water table could lead to liquefaction during an earthquake. The tank will be built, following a soil mechanics study of the site, on a specially designed foundation, if necessary, and/or the tank will be compartmentalized to avoid sloshing of the contents, which damaged tanks during the Coalinga earthquake. The tank must be built to withstand an earthquake of at least MMI VIII.

o Effectiveness: Proper design of this particular storage tank will significantly diminish the risk of a major oil spill due to a major seismic event (MMI VIII).

The applicant has, in a letter to the State Lands Commission dated February 9, 1987, amended their application to incorporate this mitigation measure. Therefore, the project, as amended, will substantially lessen the risk of damage to the tank due to geologic hazards. The FEIR/EIS concludes that any residual impacts after such mitigation would be insignificant.

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SOILS

IMPACT: Failure of rehabilitation and revegetation due to accelerated soil erosion or slumping in areas of steep terrain.

- FINDING:
- 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
  
  - 3) Specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the final EIR.

FACTS SUPPORTING THE FINDING:

Construction of the pipeline could cause significant impacts on soils if rehabilitation or revegetation of disturbed areas is prevented for longer than one growing season. Revegetation efforts may fail due to soil erosion or slumping.

The potential for accelerated soil erosion, which could occur as sheet wash, rills, and gullies, exists in all counties where pipeline construction disturbs the soils and vegetative cover on steep and moderately steep slopes. The impact is potentially significant when the soils are thin and revegetation efforts may be only partially successful, or where rapid runoff, wind erosion, and evaporation compound the problem by removing soil materials and creating unfavorable seedbed conditions. The pipeline will be warm, and high permeability and evaporation will reduce soil moisture in the trench area, especially on sloping sites. These conditions are unfavorable for plant growth. Horizon mixing may also exacerbate revegetation problems.

Though the erodibility of soils may vary somewhat, in general, those areas along the proposed route where slopes are moderately steep to very steep (15% slopes and greater) will be especially susceptible to erosion problems. Also, slumping is a potential hazard on slopes greater than 15% where clay soils predominate. This impact potential exists in Alameda and Contra Costa counties, where the slopes are particularly steep (30% to over 50%) and significant slumping and erosion hazard occurs for several miles. Slumping soils and slope instability constitute a hazard to the construction work force, and after

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installation, to the pipeline, especially on cut-and-fill or benched sections of the right-of-way.

As initially proposed, the San Joaquin Valley Pipeline included specific provisions for soil conservation plans. The FEIR/EIS recommended additional mitigation measures (9, 10, 11, 12, 14, 15, 16, 65, 66 and 67) to supplement the soil conservation plans. These measures deal with: construction technique in landslide areas; trench fill material on slopes; runoff control; seed mixtures; permanent drainage and erosion control; monitoring revegetated sites; top soil segregation; long-term maintenance; and, oil spills. Specifically, the FEIR/EIS states:

Project description measures are appropriate, given the commitment made to site-specific soil conservation and revegetation criteria. Certain additional measures which need to be included are described below. None of the measures will be effective in and of themselves, but require implementation on an as-needed basis according to a site-specific conservation plan. Even under natural conditions, the ground vegetation cover (percent coverage) will be incomplete and the erosion hazard high where bare soil is exposed.

[9] Construction of segments of the pipeline through landslide-prone areas as identified on Table 4-2 will be accomplished when the soils are dry to minimize the likelihood of triggering renewed sliding. The pipeline will be placed at a depth greater than the maximum depth of geologically recent sliding at all locations where such sliding is observed during the centerline survey.

o Effectiveness: These measures will prevent impacts from landslides and ensure burial of the pipeline below any unstable overburden.

[10] On steep slopes the trench will not be filled with unconsolidated material that will desiccate due to heat and extreme permeability, will resist revegetation, and will wash out selectively, thus degrading the right-of-way and the surrounding environment at a fast rate. The soil conservation plan will require that revegetation is successfully reestablished. Permanent measures may also be required (see measure [14] below). From among the sites identified in Table 4-3 in Section 4.2.3 as difficult to revegetate, it is assumed that a residual impact will remain significant on all slopes of 18% or more (see Table 6-1).

- o Effectiveness: Although this will substantially reduce impacts, the impact will remain significant on steep slopes.

[11] Temporary soil erosion controls will be implemented until revegetation measures are applied during the proper seasonal period.

The potential for water erosion is greatest from November through April. Although disturbed areas of the route will have little potential for erosion from late Spring to mid-Fall, adequate measures for control of runoff should be in place before the winter rains begin and prior to beginning revegetation. In many areas, successful revegetation will be contingent upon the adequacy of the erosion control measures implemented and these will be continued until success is assured.

The SCS has developed standards and specifications for temporary and permanent erosion/sedimentation control, specifically for those regions of California crossed by the pipeline. Temporary soil erosion control structures are designed to temporarily control runoff until disturbed areas have become stabilized. Various temporary structures, such as diversion dikes, interceptor dikes, perimeter dikes, straw bail dikes, interceptor swales, stone outlet structures, sediment basins, and sediment traps, are proven effective measures when correctly implemented and maintained. They will be implemented where and when necessary as indicated in the soil conservation plan.

Seeding of rangeland areas can only be successful in late Fall to early Winter; October and November are the optimal months.

- o Effectiveness: Revegetation success is enhanced by seeding during October and November, and by implementing soil erosion controls (temporary or permanent) in advance of winter rains and prior to revegetation.

[12] Specialized recommendations for seed mixtures and seedbed preparation, which have been developed and tested by the SCS, will be incorporated in the right-of-way revegetation procedures. Grasses and seed mix applications recommended for rangeland revegetation in Kern, Kings, and Fresno counties are listed in Table 6-2. Seeding recommendations for Merced,

Stanislaus, San Joaquin, Alameda, and Contra Costa counties are given in Table 6-3. Generally, it is recommended that 2,000 pounds of straw mulch be applied per acre to newly seeded rangeland/grassland areas. Ammonium sulfate fertilizer should also be applied, at 500 pounds per acre. Native grass mixtures which do not impact existing communities will be specified when required and where necessary to avoid impacts.

- o Effectiveness: Site-specific recommendations for right-of-way revegetation will have the highest degree of success. The residual impact will be negligible when the right-of-way is returned to its original condition and properly revegetated.

[14] Severely destabilized areas will require long-term protection. Permanent drainage and erosion control structures will be installed if necessary; examples are water bars, diversions, protected drain outlets, level spreaders, or riprap. The stabilization effort will be continuous until it is effective.

- o Effectiveness: Measures will mitigate erosion-induced soil losses or extremely sensitive, unstable sites by soil conservation engineering practices. Residual long-term impact will be insignificant.

[15] The soil conservation plan will identify how and when monitoring of disturbed areas will be conducted and will identify monitoring criteria.

- o Effectiveness: The measure will ensure effective monitoring of areas where revegetation will be difficult.

[16] Topsoil segregation from underlying soil materials and return of the topsoil to the surface of the trench area will be practiced during construction of the entire route. Exceptions based on specific, unusual, or prohibitive conditions will be identified in the soil conservation plan. The shallow layer of topsoil, which may be 10 inches or less for certain soils, and the presence of saline subsoils which can contaminate the topsoil require that the depth of topsoiling be specified in the soil conservation plan. The plan will define the depth of topsoil to be conserved, taking into account the desirability of preserving root stock in areas covered by native vegetation.

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- o Effectiveness: This measure will reduce or eliminate revegetation problems caused by changes in soil chemistry or characteristics by preventing mixing of soil materials. Topsoil conservation could reduce the requirement for purchasing seed or native planting material. No residual impact.

[65] Right-of-way maintenance will include erosion control and revegetation as described in Section 6.1.2 (measures [9] to [12]), where the vegetative cover is insufficient and erosion is evident.

- o Effectiveness: This measure will reduce significant soil impacts to insignificant during operations.

[66] The right-of-way will be maintained in perpetuity, and mitigation measures [65] will be applied as necessary.

- o Effectiveness: This measure will avoid soil impacts during abandonment when the pipeline remains in the ground.

[67] Impacts on soils from an oil spill can be significantly reduced if, following removal of oil and highly contaminated soils, these soils are aerated by disc plowing and/or harrowing to ensure that microbial activity and oxidation degrade residual oils from the soils. Following thorough and standard cleanup procedures, the soils will be stabilized and revegetated as previously described for post-construction.

- o Effectiveness: These measures will accelerate recovery of the soils, promote new growth, and reduce the impact from a spill.

The applicant has, in a letter to the State Lands Commission dated February 9, 1987, amended their application to incorporate these mitigation measures. Therefore, the project, as amended, will substantially lessen the significant adverse impacts to soils identified in the FEIR/EIS.

However, the FEIR/EIS does conclude that residual impacts will still be significant even with monitoring and continuous rehabilitation efforts. These areas will represent a long-term impact if revegetation is not successful in the first growing season. The residual impact will, however, be limited to the steepest slopes. Because the Contra Loma alternative route traverses less steep terrain, residual impacts there could be expected to be less, although still significant (for a full

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discussion of the Contra Loma Route, see Alternatives at the end of this exhibit). Thus, the only alternative that would eliminate this impact is the no project alternative. Because all routes would have significant residual impacts, the Commission also adopts the finding of overriding consideration in Exhibit E.

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SOILS

IMPACT: Failure of rehabilitation and revegetation in areas of high soil salinity or alkalinity.

FINDING: 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

FACTS SUPPORTING THE FINDING:

Revegetation after construction and during operation is difficult in soils having high salinity or alkalinity. Standard seed/vegetation mixtures will not establish themselves in such soils. Successful revegetation requires the use of tolerant plant species. If revegetation is unsuccessful, significant soil erosion could result. As initially proposed, the San Joaquin Valley Pipeline included provisions for soil conservation plans. The FEIR/EIS recommended additional mitigation measures (13, 15 and 16) to supplement the soil conservation plans. These measures deal with: saline/alkali tolerant seed mixtures and vegetation; monitoring; and, top soil segregation. Specifically, the FEIR/EIS states:

[13] Saline rangeland and pasture soils encountered by the route in areas of high water table will be revegetated with an adapted species, such as salt grass (Distichlis spicata). Dry saline-alkali soils can be seeded with any of the grasses listed in Tables 6-2 and 6-3, with red brome being the most salt-tolerant.

The soil conservation plan will specify that Atriplex will be reseeded wherever it is removed. Desert saltbush (Atriplex polycarpa) and California buckwheat (Eriogonum fasciculatum) are commercially available for restoring shrub areas and are deemed to be of value as wildlife habitat. These plants have been found by the SCS to be hardy and very suitable species for restoring disturbed shrub areas.

Saline soil materials will be returned to the trench first and covered with topsoil to supply an appropriate substrate for the planting material.

o Effectiveness Saline soils will be difficult to revegetate, but can be successfully restored by

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conserving top soil and by using adapted native vegetation. The residual impact will not be significant.

[15] The soil conservation plan will identify how and when monitoring of disturbed areas will be conducted and will identify monitoring criteria.

- o Effectiveness: The measure will ensure effective monitoring of areas where revegetation will be difficult.

[16] Topsoil segregation from underlying soil materials and return of the topsoil to the surface of the trench area will be practiced during construction of the entire route. Exceptions based on specific, unusual, or prohibitive conditions will be identified in the soil conservation plan. The shallow layer of topsoil, which may be 10 inches or less for certain soils, and the presence of saline subsoils which can contaminate the topsoil require that the depth of topsoiling be specified in the soil conservation plan. The plan will define the depth of topsoiling to be conserved, taking into account the desirability of preserving root stock in areas covered by native vegetation.

- o Effectiveness: This measure will reduce or eliminate revegetation problems caused by changes in soil chemistry or characteristics by preventing mixing of soil materials. Topsoil conservation could reduce the requirement for purchasing seed or native planting material. No residual impact.

The applicant has, in a letter dated February 9, 1987, amended their application to incorporate these measures. Therefore, the project, as amended, will avoid or substantially lessen the significant adverse impacts to saline/alkali soils identified in the FEIR/EIS. The FEIR/EIR concludes that the residual impacts, after such mitigation, would be insignificant.

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SURFACE WATER

IMPACT: Leaks and spills from construction equipment onto surface waters.

FINDING: 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

FACTS SUPPORTING THE FINDING:

Leaks and spills of lubricating oil or equipment fuel during construction would be small, but could be significant if they reached surface waters, especially flowing streams. The FEIR/EIS contains mitigation measure 22 to eliminate this impact. Specifically, the FEIR/EIS states:

[22] Fueling and lubrication of construction equipment will occur away from aquatic habitats, at least one-eighth mile from Pacheco Creek, other flowing streams, canals, aqueducts, and riparian habitats. Any spills will be cleaned up.

o Effectiveness: This measure will prevent construction-related spills from impacting water resources. No residual impact.

The applicant, in their initial application incorporated this mitigation measure. Therefore, the project, as proposed, will avoid any significant adverse effects to surface water due to construction equipment refueling as identified in the FEIR/EIS. The FEIR/EIS concludes that the residual impacts, after such mitigation, would be insignificant.



SURFACE WATER

IMPACT: Accidents may cause oil spills which could reach surface waters.

- FINDING:
- 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
  - 2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency (Department of Water Resources and Bureau of Reclamation).
  - 3) Specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the final EIR.

FACTS SUPPORTING THE FINDING:

The maximum potential oil spill data indicate a wide range of spill volumes. Under the worst-case conditions, small drainages and water courses would be overwhelmed by these quantities of oil, and larger perennial streams and aqueducts would carry the oil many miles downstream. The most sensitive of the larger watercourses are the aqueducts which transport water to locations hundreds of miles away. Water from the California Aqueduct is treated prior to use for drinking water in the Central Valley. An oil spill reaching the aqueduct would adversely affect water treatment equipment, resulting in a significant adverse impact due to reduced drinking water supplies.

Water quality will be degraded by the more volatile fractions of the oil going into solution. Depending on the flow characteristics at the time of the spills, oil could be incorporated into the sediment of the stream bottom so that some oil would continue to be released after the surface spill was initially cleaned up. Duration of the water quality impacts would probably be only a few weeks after the oil was cleaned up, particularly for larger streams with a large enough flow to dilute any oil remaining. This would depend on the time of the year and the volume of flow in the intermediate drainages.

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The only sediment settling basin associated with the California Aqueduct that could be affected by the project is Arroyo Passajero. If an oil spill were to reach the basin, it might be contained on the surface long enough to be cleaned up. If not it could pass into the aqueduct and cause significant water quality degradation downstream. The likelihood of an oil spill occurring during a flood or sustained storm of sufficient magnitude to transport oil from the pipeline to the basin, a distance of 10 miles, is very small.

A catastrophic flood or release of water, such as could occur if the spillways on the O'Neill Forebay and San Luis Reservoir gave way, could uncover and wash out sections of pipeline, and thus cause an oil spill. This impact is significant but improbable.

The FEIR/EIS recommends measures 7, 70 and 102 to mitigate potential impacts to surface waters. Mitigation measure 7 was previously discussed (see geologic hazards) and recommended for inclusion as a condition of approval of the State Lands Commission lease. The inclusion of this measure could reduce the amount of oil spilled into Pacheco Creek by more than a factor of 3. Therefore, inclusion of this mitigation will substantially lessen the identified impact of such a spill on these surface waters (see Finding No. 1 above).

Similarly, the FEIR/EIS recommends measure 70 to mitigate impacts of a spill on the California Aqueduct and the Delta Mendota Canal. This measure requires placement of remotely operated block valves upstream and pressure sensitive check valves downstream at these locations (see Response 8-7 in the Finalizing Addendum). This would minimize shutoff time, thus substantially lessening the adverse impacts of such a spill. Specifically, the FEIR/EIS states:

[70] Automatic block valves will be installed at the above-ground crossings of the California Aqueduct at Milepost 160 and the Delta Mendota Canal at 164. The Oil Spill Contingency Plan will be updated to provide for containment equipment and personnel at strategic locations downstream. The equipment will include containment booms and sorbent materials.

- o Effectiveness: This measure will reduce oil spill impacts by minimizing shutoff and containment time, thus reducing impacts on wildlife and recreation at O'Neill Forebay and on downstream water supplies.

Mitigation measure 70 is not within the jurisdiction of the State Lands Commission. The letter submitted by the Department of Water Resources, dated November 19, 1986, indicates their intention to require shutoff valves at the aqueduct. They can and should require remotely operated valves as recommended in mitigation 70. The Delta-Mendota Canal is within the jurisdiction of the U.S. Bureau of Reclamation. In their letter of comment on the DEIR/EIS dated November 17, 1986, they made no comment about the Delta Mendota canal crossing. However, in communication with Bureau of Land Management, staff of the Bureau of Reclamation has indicated an intention to recommend such mitigation as a condition of approval. Since the San Joaquin Valley Pipeline will involve the Bureau of Reclamation's right-of-way and will require a permit, the Bureau can and should impose mitigation measure 70 as a condition of approval. Therefore, the State Lands Commission finds that these agencies have jurisdiction and can and should require mitigation 70 as a part of their approval of the project (see Finding #2 above).

Finally, the FEIR/EIS recommends that measure 102 be implemented. This would mitigate the effects of a spill by requiring an update of the Oil Spill Contingency Plan to include specific procedures and equipment to protect critical waterways. Specifically, the FEIR/EIS states:

[102] The Oil Spill Contingency Plan will be updated to include specific procedures and equipment to be used to prevent oil from entering the California Aqueduct or the San Joaquin River in the event of a major oil spill. Specifically, additions to the contingency plan will include methods for preventing oil from entering the California Aqueduct between Kettleman City and the O'Neill Forebay, a segment not protected by culverts or overchutes. In addition, the Oil Spill Contingency Plan will include site-specific detail of the cleanup methods and equipment; resources at risk; notification procedures; and personnel response items for each crossing of the California Aqueduct and for the crossings of the following streams:

<u>Stream</u>	<u>Milepost</u>
Los Gatos Creek -	79.3
Salt Creek	99.6
Panoche Creek	122.2
Little Panoche Creek	135.2
Ortigalita Creek	4 crossings
	- 146.9 - 148.3

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<u>Stream</u>	<u>Milepost</u>
Salt Creek	151.2
Garzas Creek	174.7
Orestimba Creek	179.4
Salado Creek	187.4
Del Puerto Creek	192.5
Corral Hollow Creek	210.3
Patterson Run	217.0

- o Effectiveness: This measure, combined with mitigation measure 79, will ensure that the Oil Spill Contingency Plan is as thorough as reasonably possible in limiting damage to sensitive resources from a major oil spill.

The applicant, in a letter to the State Lands Commission dated February 9, 1987, amended their application to incorporate this mitigation measure. Therefore, the project, as amended, will substantially lessen this significant adverse impact to surface waters as identified in the FEIR/EIS (see Finding #1 above).

The combination of mitigation measures outlined above constitute prudent and reasonable efforts to reduce the risk and consequences of an oil spill in surface waters. They will not, however, guarantee that such a spill will never happen. If a spill does occur, its effects would be significant. The 20" diameter pipe alternative would reduce spill size, but not to a level of insignificance. There are no alternatives which would eliminate these effects, except the no project alternative. Therefore, the Commission also makes the finding of overriding considerations (#3 above and Exhibit "E" following).

GROUNDWATER

IMPACT: Withdrawal of hydrostatic test water from an overdrafted groundwater basin.

FINDING: 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

FACTS SUPPORTING THE FINDING:

During construction, 63 acre-feet of water will be used to hydraulically test the integrity of the pipeline. This water will be provided by water districts; whether it will be supplied from surface or groundwater sources is presently unknown. It will be used repeatedly to test sections of the pipe until all of the line has been tested and the water is discharged. For comparison purposes, Kern County uses over 1 million acre-feet of water per year. Even in the western portion of Kern County along the proposed route, withdrawals of groundwater are 20,000 acre-feet per year. Thus, the planned 63 acre-feet withdrawal does not represent a significant impact on available groundwater supplies. However, the Kern County sub-basin is subject to overdraft. If the hydrostatic test water is withdrawn from this sub-basin, a significant impact would result if the basin is not recharged.

The applicant, in a letter to the State Lands Commission dated February 9, 1987, amended their application such that they commit to using no groundwater from an overdrafted sub-basin unless they are able to satisfy the affected water agency that no net water loss will result. This commits the applicant to finding water elsewhere, or arranging a satisfactory program of basin recharge. Therefore, as amended, the project will avoid the potential significant impact to an overdrafted groundwater identified in the FEIR/EIS and there will be no significant residual effects.

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NOISE

IMPACT: Noise impacts on sensitive receptors during construction.

- FINDING:
- 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
  - 3) Specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the final EIR.

FACTS SUPPORTING THE FINDING:

Most of the pipeline is located in sparsely populated areas where the noise from construction equipment will not have a significant impact. Areas of six counties, however, do contain sensitive receptors (homes, schools and recreation areas) which will experience significant noise impacts during the construction period (see Table 4-13, FEIR/EIS). Although this is a temporary impact, the FEIR/EIS recommends that it be mitigated with measure #31. This measure would prohibit weekend construction, the time when the most people are at home or using recreation facilities. Specifically, the FEIR/EIS states:

[31] There will be no weekend construction in sensitive residential and recreation areas.

- o Effectiveness: This measure avoids/mitigates impacts when most people are at home or using recreational facilities. Table 4-13, in Section 4.2.8, lists noise-sensitive areas for the project.

The applicant, in a letter to the State Lands Commission dated February 9, 1987, amended their application to incorporate this mitigation measure. Therefore, the project, as amended, will substantially lessen any significant adverse effects from noise as identified in the FEIR/EIS.

The FEIR/EIS concluded that the short-term, temporary residual noise impacts, after mitigation, will still be significant. There are no alternatives that will eliminate

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these impacts except the no project alternative (see discussion of Alternatives at the end of this exhibit). Therefore, the Commission also adopts the finding of overriding considerations in Exhibit E.

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LAND USE AND RECREATION

IMPACT: Conflicts with adopted land use plans or future land use proposals.

FINDING: 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

FACTS SUPPORTING THE FINDING:

The proposed pipeline is generally consistent with the planning objectives in the eight county areas. The fact that 228 miles (88%) of the proposed pipeline is aligned parallel and adjacent to existing rights-of-ways, as well as, the fact that it traverses largely rural land uses makes the project compatible with most adjacent land uses. Conflicts tend to occur with adjacent recreational facilities and with urban land uses where growth has resulted in development.

The DEIR/EIS identified potential land use conflicts in Contra Costa County with the proposed Stoneman Park reservoir and the Kirker Pass and central landfill proposals as significant impacts. Since publication of the draft EIR/EIS, minor realignments have been proposed by the applicant which resolve those conflicts (see responses #21-3 and #21-5 in the Finalizing Addendum). In addition, the FEIR/EIS identifies numerous proposed residential developments north of the alignment and proposed improvements to Highway 4 as other sources of conflict. The FEIR/EIS recommends mitigation measure 37 which involves coordination of construction schedules and minor adjustments of the final alignment during the local planning and permitting process. Specifically, the FEIR/EIS states:

[37] Potential land use conflicts, identified in Tables 4-15 and 4-16, will be resolved by fine-tuning of the final alignment in coordination with local planning agencies and regional authorities and State and Federal agencies, particularly in relation to BLM lands, Bureau of Reclamation lands, and Contra Costa County's Black Diamond Regional Preserve, landfill proposals, and residential development proposals (see Table 4-15 for complete listing).

- o Effectiveness: Significant land use impacts will be avoided by coordinated planning and fine-tuning of

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the final route alignment in these areas. The local land use planning process will resolve conflicts before issuing permits; hence, no residual impacts will remain when the permits are issued.

Potential land use conflicts with the proposed Coalinga Air Cargo Port in Fresno County were identified in the FEIR/EIS. The pipeline alignment does not cross this property, but borders it. If at some future date, expansion of this proposed facility were to be considered, the pipeline may present an impediment. As with Contra Costa County (above), the FEIR/EIS recommends measure 37 to mitigate this impact. In addition, in a letter to the State Lands Commission dated February 9, 1987, the applicant amended their application to incorporate this mitigation measure. Therefore, as amended, the project will avoid or substantially lessen the adverse impacts from conflicting land uses as identified in the FEIR/EIS. The FEIR/EIS concludes that there will be no significant residual impacts after such mitigation.

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LAND USE AND RECREATION

IMPACT: Conflicts with existing recreation areas.

FINDING: 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

FACTS SUPPORTING THE FINDING:

The proposed pipeline will cross the western edge of the Bethany Reservoir State Recreation Area. Pipeline construction will require approximately 2 acres of land now used exclusively for recreation. Similarly, the proposed route traverses the Black Diamond Mines Regional Preserve for less than half-a-mile. This preserve is a 3,400 acre park with a well developed system of hiking trails. Construction of the pipeline will require approximately 3.6 acres of land. The FEIR/EIS found these impacts to be significant and recommended measure 37 to mitigate them. This measure (as fully described in the prior impact discussion) would involve coordination of construction schedules and minor adjustments the alignment during the local planning and permitting process. The applicant, in a letter to the State Lands Commission dated February 9, 1987, amended their application to incorporate this measure. Therefore, as amended, the project will substantially lessen the adverse impacts from conflicting land uses adjacent to recreational areas as identified in the FEIR/EIS. The FEIR/EIS concludes that there will be no significant residual impacts after such mitigation.

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VISUAL

IMPACTS: Visual contrast of right-of-way following construction.

FINDING: 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

FACTS SUPPORTING THE FINDING:

The pipeline right-of-way mostly traverses rangelands, and the potential for significant impact exists for the short-term period during and shortly after construction. Pipeline construction involves considerable disruption of the vegetation cover and soil over an 80-foot-wide strip along the entire length of the right-of-way. The exposure of the bare soil, including temporary stockpiling of soil and equipment storage, create a strong contrast with the existing visual landscape along most of the route. Less visual contrast occurs where soil disturbance already exists because of agricultural activities, existing roads and powerline corridors, oil fields, and other activities. The construction of the pipeline will have the most visual contrast during and shortly after construction when soil and vegetation disturbances are greatest. These impacts are potentially significant only along parts of Segment 4 of the proposed alignment.

The FEIR/EIS recommends a number of measures to mitigate these impacts. These measures (11, 15, 40 and 41) involve: erosion control after site restoration; long-term monitoring of revegetation to assure success; use of grasses that are visually similar to adjacent ground cover; and, avoidance of large trees to the extent feasible. Specifically, the FEIR/EIS states:

[11] Temporary soil erosion controls will be implemented until revegetation measures are applied during the proper seasonal period.

The potential for water erosion is greatest from November through April. Although disturbed areas of the route will have little potential for erosion from late Spring to mid-fall, adequate measures for control of runoff should be in place before the Winter rains begin and prior to beginning revegetation. In many areas,

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successful revegetation will be contingent upon the adequacy of the erosion control measures implemented and these will be continued until success is assured.

The SCS has developed standards and specifications for temporary and permanent erosion/sedimentation control, specifically for those regions of California crossed by the pipeline. Temporary soil erosion control structures are designed to temporarily control runoff until disturbed areas have become stabilized. Various temporary structures, such as diversion dikes, interceptor dikes, perimeter dikes, straw bail dikes, interceptor swales, stone outlet structures, sediment basins, and sediment traps, are proven effective measures when correctly implemented and maintained. They will be implemented where and when necessary as indicated in the soil conservation plan.

Seeding of rangeland areas can only be successful in late fall to early Winter; October and November are the optimal months.

- o Effectiveness: Revegetation success is enhanced by seeding during October and November, and by implementing soil erosion controls (temporary or permanent) in advance of Winter rains and prior to revegetation.

[15] The soil conservation plan will identify how and when monitoring of disturbed areas will be conducted and will identify monitoring criteria.

- o Effectiveness: The measure will ensure effective monitoring of areas where revegetation will be difficult.

[40] All cleared areas of the pipeline right-of-way and building or microwave tower areas will be revegetated immediately after completion of construction according to a soil conservation plan (see mitigation measure [9]). Grasses that are similar to the adjacent vegetation cover will be used where possible to ensure that the created visual pathway will blend as much as possible into the surrounding landscape.

- o Effectiveness: The residual impact of the visual intrusion will be insignificant for the right-of-way.

[41] Oaks, cottonwoods, and other large trees will not be removed if this can be avoided by minor realignment.

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If trees must be removed, similar tree types will be planted in place, except on the 30-foot right-of-way, which will remain clear of woody growth for the life of the project. Minor deviations of the right-of-way will avoid large visually important trees, such as oaks, and tree clusters. The soil within the root zone of these trees will not be disturbed.

- o Effectiveness: Replanting with native oaks has not been very effective in the past in California. Thus, avoidance of oak trees is the most effective means of mitigation.

Implementation of these measures will help to minimize the length of time the visual impacts persist. The success of such efforts are evident where existing pipeline rights-of-way are well-revegetated and fully integrated visually into the surrounding landscape. The applicant, in a letter to the State Lands Commission dated February 9, 1987, amended their application to incorporate these measures. Therefore, the project as amended, will avoid or substantially lessen the adverse visual impacts of pipeline construction as identified in the FEIR/EIS. The FEIR/EIS concludes that there will be no significant residual impacts after such mitigation.

VISUAL

IMPACT: Visual contrast of ancillary facilities such as booster stations and microwave towers.

- FINDING:
- 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
  - 2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency. (Counties of: Fresno, Merced, Stanislaus and San Joaquin).
  - 3) Specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the final EIR.

FACTS SUPPORTING THE FINDING:

The construction of new towers, new booster stations, access roads, and power lines will result in visual contrasts. These ancillary facilities will have long-term impacts on the visual landscape. The impact depends on the type of feature and the nature of the surrounding visual landscape. These impacts are identified in Table 4-22 of the FEIR/EIS. Measure 39 is recommended as a supplement to the mitigations initially proposed by the applicant. This measure requires: 1) consideration of minor relocations of booster stations SJV-2b and SJV-3b; 2) use of the three station (SJV 2, 3 and 4) alternative since it would have somewhat less of a visual impact; or, 3) if those are infeasible, preparation of landscaping plans to screen SJV-2b and 3b. Specifically, the FEIR/EIS states:

[39] Siting requirements and visual impacts for booster station SJV-2b and microwave tower No. 8, and for booster station SJV-3b and microwave tower No. 11, will be carefully reviewed in relation to SJV-4, which has a better location in regard to visual resources. SJV-2b would be better sited near Little Panoche Road to place the station and microwave tower No. 8 in the background. SJV-3b and microwave tower No. 11 are located near the

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Westley Rest Stop Park, which is the most widely used rest stop in the region; consideration will be given to relocating SJU-3b and its microwave tower. SJU-4 has only a moderately significant impact. If relocation is not feasible, a site-specific landscaping plan will be prepared for SJU-2b and SJU-3b to provide screening and/or blend the stations with their surrounding.

- o Effectiveness: The residual impact will be reduced but will remain significant.

The applicant, in letter to the State Lands Commission dated February 9, 1987, amended their application to incorporate measure 39. Therefore, the project, as amended, will substantially lessen the visual impacts of the ancillary facilities as identified in the FEIR/EIS.

The FEIR/EIS concludes that, "construction and operation of booster stations SJU-2, SJU-3 and SJU-4 and associated microwave towers will have less impact on visual resources than booster station SJU-3b, which is part of the proposed action..." As noted above, consideration of the 3 station alternative is built into mitigation 39. The three station alternative is outside of the jurisdiction of the State Lands Commission. Thus, although the three station alternative is judged to be better than the proposed action it still results in significant impacts and either action (proposed or alternative) would result in significant residual impacts after mitigation. Responsible agencies: Fresno County (SJU-2b) and Stanislaus County (SJU-3b); and Fresno County (SJU-2), Merced County (SJU-3) and San Joaquin County (SJU-4) should take these factors into consideration during their permitting processes (see finding No. 2 above).

In any event, since significant residual impacts will result from any combination of alternatives (see discussion of Alternatives at the end of this exhibit) and mitigations except the no project alternative, the Commission also adopts the finding of overriding considerations in Exhibit E.

PALEONTOLOGY

IMPACT: Loss or disturbance of significant paleontological resources.

FINDING: 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

FACTS SUPPORTING THE FINDING:

In areas of known paleontological resources within the right-of-way and on sites designated for ancillary facilities, trenching or grading during construction may result in direct destruction of most fossils within the excavated portion and may result in the loss of geologic context, which is used to determine the age and significance of the resource. Vehicle traffic may have similar effects on near-surface resources. Construction of buildings, paving, and backfilling may prevent future access and scientific investigation. Indirect impacts of unauthorized collecting of vertebrate fossils could occur or be increased by drawing attention to the presence and location of vertebrate fossils.

The proposed route crosses or comes very close to approximately 10 recorded fossil-producing localities. Nearly 100 vertebrate localities are recorded within 1 mile of the proposed route. Project impacts on known localities vary from significant to inconsequential. In most cases, impacts are expected to be insignificant. For the remaining cases, the FEIR/EIS recommended measures 44 and 45 to supplement those proposed by the applicant in the initial application. These measures would mitigate impacts by requiring: monitoring of sensitive locations during trenching; and, requiring resource locations be kept confidential to prevent unauthorized collection. Specifically, the FEIR/EIS states:

[44] Direct construction impacts to paleontological resources will be mitigated by the following procedures:

- a) Monitoring of ditching within areas assessed to have high or very high paleontologic impact significance as shown on Table 4-23 will be done by an approved vertebrate paleontologist.
- b) Any vertebrate fossils discovered during project construction, by personnel involved in construction

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or other project activities, within unmonitored areas, will be reported immediately to the approved paleontologist for assessment of value and recommended mitigation.

- c) The approved paleontologist will be empowered to halt temporarily or redirect project construction in the event that (1) unforeseen concentrations of vertebrate fossils assessed to have unusually high importance (as judged by the criteria in Appendix F) are revealed; and (2) such interruption will avoid further damage to the specimens. Sufficient time will be allowed for consultation with the authorizing agencies regarding mitigation.
- o Effectiveness: These measures will minimize loss of the scientific value of paleontological resources and improve knowledge of their distribution.

[45] Indirect impacts due to unauthorized collection will be minimized by imposing confidentiality regarding the existence or location of fossil localities.

- o Effectiveness: This measure will reduce the potential for irretrievable losses in case significant paleontological resources are identified.

The applicant, in a letter to the State Lands Commission dated February 9, 1987, amended their application to incorporate these measures. Therefore, the project, as amended, will avoid or substantially lessen the impacts to paleontological resources identified in the FEIR/EIS. The FEIR/EIS concludes that there will be no significant residual impacts after such mitigation.

CULTURAL RESOURCES

IMPACT: Loss or disturbance of sites eligible for the National Register of Historic Places (NRHP).

FINDING: 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

FACTS SUPPORTING THE FINDING:

Cultural resources that could be impacted by the proposed project include archaeological and historic sites that are located in areas which would be directly (pipeline right-of-way) or indirectly affected by project construction and facilities operation.

A field survey was conducted to identify any potential cultural resource sites. Initial results indicate little potential for disturbance of significant cultural resources (maximum of 3 sites). However, the results of this effort have not been fully evaluated by appropriate agencies. Pending the conclusions of that review and possible unexpected discovery of resources the FEIR/EIS recommended mitigation measures 48 and 49. These measures will assure that construction activities proceed in full consideration of potential impacts to cultural resources by assuring compliance with the National Historic Preservation Act and making provisions for unexpected discoveries. Specifically, the FEIR/EIS states:

[48] Sufficient information was obtained at the time of survey to determine whether sites are potentially eligible for inclusion on the NRHP. Criteria for determining NRHP eligibility are found in 36 CFR 60.4. Limited testing of subsurface deposits may be needed for the single site identified during the field identification program. The report documenting results of the field identification program and evaluating significance has not been reviewed and accepted by the appropriate agencies. For this reason, it is premature to identify specific mitigation measures that will be applied to the identified cultural resources. However, the Memorandum of Agreement requires adequate treatment of sites evaluated to be significant (i.e., eligible for listing on the NRHP), and provides a process to accomplish this.

- o Effectiveness: These actions, under Section 106 of the National Historic Preservation Act, will ensure that the effects of pipeline construction and operation on cultural resources are fully considered, as required by law.

[49] If previously undiscovered cultural resources are uncovered during construction, work will stop and a competent archaeologist will be called in to evaluate the site.

- o Effectiveness: This measure will reduce impacts in areas of low sensitivity (such as agricultural fields) which will not be surveyed in detail.

The applicant, in a letter to the State Lands Commission dated February 9, 1987, amended their application to incorporate these measures. Therefore, the project, as amended will avoid or substantially lessen impacts to cultural resources as identified in the FEIR/EIS. The FEIR/EIS concludes that there will be no significant residual impacts after such mitigation.

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TERRESTRIAL AND AQUATIC BIOLOGY

IMPACT: Loss or disturbance of biological communities of concern due to construction.

FINDING: 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

FACTS SUPPORTING THE FINDING:

Clearing and grading of the right-of-way will cause short-term and long-term loss and disturbance to existing natural communities. The FEIR/EIS found construction could result in significant adverse impacts to four biological communities of concern: vernal pools; riparian corridors; wetlands; and, oak savannah. In addition, significant impacts were also found in areas of alkali sink and saltbush scrub due to the slow process of revegetation by woody species caused by climatic and soil conditions. In general, direct impacts to wildlife were found to be insignificant because many animal species would be expected to quickly repopulate the construction corridor following restoration. To facilitate the recovery process the FEIR/EIS recommends measures 56, 57 and 58 to supplement those initially proposed by the applicant. These measures would mitigate impacts related to: vehicular use of the right-of-way; unauthorized collection of plants and animals; avoiding raptor nests; and special revegetation/construction techniques for areas of native vegetation. Specifically, the FEIR/EIS states:

[56] Unauthorized vehicle operation on the right-of-way will be prohibited by appropriate signs and gates. Authorized use will be subject to a low speed limit (15 mph). Illegal plant and animal collections will not be permitted as enforced by current laws and appropriate signs.

o Effectiveness: These measures will reduce the chance of significant impacts (incidental mortality) on rare or relatively rare species.

[57] No construction will occur within one-half mile of an active raptor nest during nesting seasons and no nests will be disturbed. Construction may proceed near inactive nests (see [52 f] above).

- o Effectiveness: This measure will ensure that nesting birds of prey and/or their nesting sites are not disturbed. The residual impact on raptors is not significant.

[58] The site-specific soil conservation plan (see mitigation measure [9]) will specify special revegetation measures for areas covered by native vegetation (see Table 3-30), such as alkali sink and saltbush scrub, using such techniques as preserving root stock and propagation with native plant materials. Rangelands will be revegetated with approved grass mixtures. The plan will identify the depth of topsoil to be segregated and replaced during trenching in order to enhance revegetation success in these areas, particularly in the area over the pipeline.

During construction in alkali scrub areas, right-of-way clearing will be limited to trimming and crushing whenever possible. The right-of-way will be located adjacent to existing disturbed areas (e.g., roads) where possible. These measures will reduce the amount of vegetation removed as well as reduce erosion potential, and will enhance recovery by not disturbing root systems.

- o Effectiveness: This measure will reduce impacts associated with the temporary loss of habitat to an insignificant level in grassland areas. Alkali scrub will resprout after construction and expedite habitat recovery on the right-of-way, thus reducing temporary loss of habitat to an insignificant level. Where oak trees are removed, revegetation will not fully restore habitat to preconstruction conditions. This represents a significant impact. Cattle would need to be excluded from grazing the seedlings. Avoidance of the trees is the most appropriate mitigation measure.

The applicant, in a letter to the State Lands Commission dated February 9, 1987, amended their application to incorporate these measures. Therefore, the project, as amended will avoid or substantially lessen the impacts on general communities and wildlife as identified in the FEIR/EIS. The FEIR/EIS concludes that there would be no significant residual impacts to biological communities of concern after such mitigation.

TERRESTRIAL AND AQUATIC BIOLOGY

IMPACT: Disturbance of special status plant and animal species caused by construction.

FINDING: 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

FACTS SUPPORTING THE FINDING:

Construction activities could cause direct or indirect mortality or a loss of habitat for a variety of plant and animal species considered to be rare, threatened, endangered or otherwise requiring extremely careful treatment due to their sensitivity and/or critically small populations. The pipeline and the ancillary facility sites were extensively surveyed to determine the presence or potential presence of such special status plants or animals. (Note: the field survey for plants will be supplemented with a spring survey to comprehensively ascertain impacts to some plants.) Pipeline construction could result in significant impacts or potentially significant impacts to special status species including the: giant fiddleneck, Crampton's tuctoria, the delta coyote thistle, furcate fiddleneck; California jewel flower; Congdon's eatonella; Kern mallow; Hoover's wooly star; bearded allocarya; caper-fruited tropiocarpum; San Joaquin kit fox; blunt-nosed leopard lizard; San Joaquin antelope squirrel; salt marsh harvest mouse; Tipton's kangaroo rat; and, the Giant kangaroo rat.

The FEIR/EIS recommended measures 55, 56, 57, 58, 59, 60, 61 and 62 to supplement those initially proposed by the applicant (see prior impact discussion for a detailed description of 56, 57 and 58). These measures, in combination with those identified in the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) Biological Opinions would: mitigate for long-term loss of habitat; restrict vehicular use in the right-of-way; prohibit unauthorized plant or animal collection; require special revegetation measures; avoid kit fox den sites; provide special restoration measures at Pacheco Creek; and, avoid wetlands and vernal pools. Specifically, the FEIR/EIS states:

[55] Mitigation for the long-term loss of habitat (due to facility siting and right-of-way maintenance) will consist either of the improvement of marginal habitat on

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areas adjacent to the pipeline or the purchase of conservation easements along the corridor in areas that may be under the threat of agricultural conversion and which are currently occupied by listed or candidate species. Exact areas and acreages will be determined in consultation with USFWS, CDFG, SLC and the applicant.

- o Effectiveness: This measure compensates effectively for any long-term habitat impacts on special status species. It does not mitigate the impact of the loss of trees, if any, unless special provisions were to include this element in the agreements.

[59] Because the Tipton kangaroo rat inhabits alkali sink habitat, it will be revegetated with characteristic native plants. Specific details, including a schedule for monitoring to assure revegetation success, will be developed in the soil conservation plan.

- o Effectiveness: This measure will reduce impacts on this sensitive species. (See effectiveness of measures 57 and 58 above.)

[60] The pipeline alignment will be fine-tuned to avoid potential San Joaquin kit fox dens in the following locations:

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Milepost	Proposed Realignment
18.2	70 feet to east
58.3	20 feet to west
67.9	60 feet to east
84.9	50 feet to east
87.8	70 feet to west
89.6	50 feet to west
120.0	70 feet to west
135.8-136.0	70 feet to west
142.2	20 feet to west
178.3	130 feet to west

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The construction right-of-way will be reduced to 50 feet in these areas. If these potential den sites cannot be avoided, identified den sites will be monitored immediately prior to construction to determine if they are active. If they are, construction will be delayed in that location until foxes relocate.

- o Effectiveness: This measure will reduce direct mortality impacts on this special status species to insignificant.

[61] The soil conservation plan will provide for restoring the prevailing hydrology and topography at the Pacheco Creek crossing and for revegetation with pickleweed and other salt-tolerant plants characteristic of this habitat.

- o Effectiveness: This material will reduce impacts on brackish marsh and specifically on the salt marsh harvest mouse, a special status species.

[62] Realignment of the pipeline at mileposts 40.5 to 40.9 about 300 feet to the west to avoid a high quality wetland, and at milepost 227 to avoid a vernal pool.

- o Effectiveness: This measure will eliminate significant impacts on this important habitat.

Also, through lease condition No. 1, State Lands Commission assures that the necessary botanical surveys will be completed to the satisfaction of USFWS and CDFG.

The applicant, in a letter to the State Lands Commission dated February 9, 1987, amended their application to incorporate these measures. Therefore, this project, as amended will avoid or substantially lessen the impacts to special status species identified in the FEIR/EIS. The FEIR/EIS concludes that there would be no significant residual impacts to special status species after mitigations contained in this document and the bio-opinions (USFWS and CDFG) were implemented.



TERRESTRIAL AND AQUATIC BIOLOGY

IMPACT: Oil spill impact on habitat of special status species.

- FINDING:
- 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
  
  - 3) Specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the final EIR.

FACTS SUPPORTING THE FINDING:

Although the probability of a major oil spill is very small, if it were to occur, it would significantly affect terrestrial and aquatic resources on a short-term basis and could also cause significant impacts in the long-term. Vegetation will be destroyed. Animal mortality will occur, and animal life will be displaced or lost at least in the short-term. Any loss of special status plants and animals or their critical habitat would be significant. The extent and magnitude of the impact is dependent on the volume and location of the spill and the response time and cleanup techniques employed.

Special status vegetation and the vegetation of special areas are stationary and cannot avoid the impact of a spill. The special status wildlife species include various burrowing animals. Oil will fill the burrows and trap these animals and their young, allowing no room for escape (San Joaquin kit fox, San Joaquin antelope squirrel, and candidate species like the Tipton's kangaroo rat and San Joaquin pocket mouse). The impact would be significant, especially where a spill is sufficiently large to impact several special status species and/or special habitats, such as brackish marsh and riparian communities. A major spill at or near stream crossings could cause significant impacts whether or not a stream were flowing at the time.

In order to reduce the risk of spills various mitigations were incorporated into the initial application and are discussed in the sections of the FEIR/EIS dealing with System Safety and Reliability and Oil Spills. In addition, to deal with the specific consequences of a spill affecting the special

status species and their habitat, the FEIR/EIS recommended measures 78 and 79. These entail: notification of, and consultation with USFWS and CDFG in the event of a spill; and, updating the Oil Spill Contingency Plan to assure quick response to spills in areas of critical habitat. Specifically, the FEIR/EIS states:

[78] In the event of extensive maintenance or repair work or a spill in or near special status species habitat shown on Table 4-26, the USFWS and CDFG will be notified so that they can identify any special requirements.

- o Effectiveness: This measure will assist in the development of appropriate mitigation to reduce possible spill impacts to special status species but does not eliminate the potential for incidental mortality in advance of extensive pipeline right-of-way maintenance.

[79] The Oil Spill Contingency Plan will be updated to include specific measures to provide for quick response to spills in or near special status species habitat. The goal will be response and initial containment within 4 hours of identification of a spill by the Anaheim spill center. The Oil Spill Contingency Plan will require that the USFWS and CDFG be notified immediately of spills in or near endangered species habitats to afford the opportunity for consultation.

- o Effectiveness: Although this measure will minimize significant impacts on sensitive habitats, the impact of an oil spill will remain significant.

The applicant, in a letter to the State Lands Commission dated February 9 1987, amended their application to incorporate these measures. Therefore, the project as amended, will substantially lessen the impacts of a spill on special status species as identified in the FEIR/EIS.

The combination of mitigation measures outlined above constitute prudent and reasonable efforts to reduce the impacts of a spill on special status species. These measures will not, however, guarantee that such a spill will never happen. If a spill does occur and does affect special status species, the impacts would be significant. There are no alternatives available which would eliminate these effects except the no project alternative (see discussion of Alternatives at the end of this exhibit). Therefore, the Commission also adopts the finding of overriding considerations in Exhibit E.

SYSTEM SAFETY AND RELIABILITY

IMPACT: Fires at booster stations.

- FINDING:
- 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
  
  - 3) Specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the final EIR.

FACTS SUPPORTING THE FINDING:

The FEIR/EIS concluded that with the exception of fire control, the project, as proposed, has incorporated adequate system safety measures. Fire presents the only hazard for which new mitigation measures were proposed. The FEIR/EIS recommends measures 85, 86 and 87 to deal with this hazard. These measures would: require fire breaks at station sites; provide fire specific fighting equipment at station sites; and, require natural gas leak detection devices in all turbine enclosures. Specifically, the FEIR/EIS states:

[85] A fire break of at least 25 feet will be kept free of vegetation on the periphery of the station.

- o Effectiveness: The risk of a weed fire setting fire to the station will be reduced.

[86] In order to provide effective fire protection at the booster/injection stations in the event of a brush or weed fire, firefighting equipment will be stored at each station, including portable fire extinguishers for outdoor use, and shovels. Water will be available at each of the sites, and a 4-inch gravel bed will be installed in and around turbines and pumps for additional fire protection.

- o Effectiveness: The additional equipment will provide effective fire protection against brush or weed fires near the booster stations, thereby minimizing potential damage to the station or pumps. No significant residual effect.

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[87] Natural gas leak detection devices will be installed at all pump stations in the turbine enclosures.

- o Effectiveness: This measure will reduce the potential for explosion due to natural gas leaks to an insignificant level.

The applicant, in a letter to the State Lands Commission dated February 9, 1987, amended their application to incorporate these measures. Therefore, as amended, the project will substantially lessen the impacts due to system safety and reliability identified in the FEIR/EIS.

The combination of mitigation measures outlined above constitute prudent and reasonable efforts to reduce the risk and consequences of fires at the booster station sites. They will not, however, guarantee that fires will never happen. If a fire does occur its effects may be significant. There are no alternative actions available which would eliminate these effects, except the no project alternative (see discussion of Alternatives at the end of this exhibit). Therefore, the Commission also adopts the finding of overriding considerations in Exhibit E.

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OIL SPILL POTENTIAL

IMPACT: Oil spills during operation.

NOTE: The FEIR/EIS contains a separate section on Oil Spill Potential. Significant adverse impacts were identified in this section. Various mitigations were incorporated into the initial application to deal with these impacts. In addition, the FEIR/EIS recommended supplementary measures. These have been discussed in the respective sections which described the specific hazard or resource involved. See: Geologic Hazards; Surface Waters; and, Terrestrial and Aquatic Biology.

ALTERNATIVES

IMPACT: The various alternatives would eliminate some impacts identified in the FEIR/EIS but create others.

- FINDING:
- 1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
  - 2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
  - 3) Specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the final EIR.

FACTS SUPPORTING THE FINDING:

The FEIR/EIS compared the various alternatives in terms of significant adverse impacts. It concluded that the differences between the proposed system and the alternatives "...are generally minor." In summary, with the exception of the oil fired heaters and their impacts on air quality, there is no clear choice between the alternatives. Specifically, the FEIR/EIS found:

Combination Route

The Combination Route has the same impact as the proposed route since it traverses similar features. A minor point is that the alternative route follows I-5 more closely than the proposed route for almost 7 miles, and this is preferred from a land use viewpoint.

The proposed route would be fully restored and revegetated in this flat area and would be farmed, as the Combination Route would probably be, also. Along I-5, there is less likelihood that the pipeline would be impacted by agricultural activities or other equipment. No strong case can be made for the selection of either route over the other, since the distance involved is small. No residual significant adverse impact is associated with one but not the other.

### Contra Loma Route

The Contra Loma Route crosses lower topography and fewer steep slopes than the proposed route and is preferred in terms of soils stability. However, the Contra Loma Route avoids only a small number of the steep slopes crossed by the proposed route, since it is so short. The Contra Loma Route would cross an estimated five slopes steeper than 18% and 11 steeper than 12%, whereas the proposed route would traverse 10 slopes steeper than 18% and 12 steeper than 12%. The difference is small, considering that the proposed route traverses more than 50 slopes steeper than 18%, regardless of which route is selected. However, some of the steepest slopes (i.e., in excess of 35%) are avoided along the Contra Loma alternative.

Both routes cross the Concord Fault at Pacheco Creek; therefore, the risk of seismic hazards is the same.

The advantage that the Contra Loma Route has in avoiding the Black Diamond Mines Regional Park (1.4 acres) is offset by several land use conflicts unique to this route, including:

- o Proximity to subdivisions in the City of Antioch;
- o Traversing Contra Loma Regional Park; and,
- o Proximity (500 feet) to the Contra Loma Reservoir.

The Contra Loma Route would, like the proposed route, affect competing land uses for residential, landfill, and Highway 4 improvements. Neither route is free of significant impacts.

### Three New Booster Station Alternative

The booster station alternative, which would integrate three new booster stations (SJU-2, 3 and 4) instead of the two proposed stations (SJU-2b and 3b), does not have significantly different environmental impacts from the proposed project. This assumes landscaping at SJU-3b (mitigation measure [39]) to avoid an impact on the Westley Rest Stop Park. The most substantial difference between the alternative and the proposed project is the requirement for additional land (less than 25 acres).

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### Alternative Power Source Configurations

The alternative which proposes to use electricity to power the pumps and crude oil for the heaters has a significantly higher impact on air quality than either the proposed system (natural gas and cogeneration of heat) or the other alternative, which would rely on electricity and natural gas. The oil-burning alternative would result in SO<sub>2</sub> exceeding ambient standards by a factor of seven at SJU-3b.

### Overhead Aqueduct Crossings

The environmental impacts of this alternative, which proposes to use suspension bridges to cross the canals and aqueducts, differ from those of the proposed action in regard to visual resources and potential spill impacts.

Visual resources (VRM Class 2 and 3) would be impacted in Kern, Kings, and Fresno counties. Any spill due to a break at the points of suspension into a canal or aqueduct, although unlikely, would directly impact substantial volumes of water until the system could be closed down. Because these aqueduct crossings would leave the pipeline exposed in six areas that would not be exposed in the proposed action, this alternative would create the possibility of above-ground damage causing spills into the aqueducts.

### No Action Alternative

The no-action alternative is not without environmental impacts, if it would mean the use of other modes of oil transportation than a pipeline to convey the crude to Martinez. If it would not mean the use of other modes of transportation, no-action would have none of the environmental impacts described in this report.

The FEIR/EIS also analyzed an alternative set of pipeline diameters. In this analysis, the 20" diameter pipeline was found to have smaller "worst-case" oil spills. Such spills, if they occurred would still be significant. With the implementation of mitigation measures 7 and 70, the impacts from spills would be reduced. These measures would cause the maximum spills in critical areas to be much more comparable whether the 20" or 24" line is used. Also, mitigation measure 102 would improve the response to such a spill and therefore reduce its impact.



Many of the impacts caused by the alternatives would be avoided or substantially lessened (Finding No. 1) by the measures the applicant amended into their application (see letter to the State Lands Commission dated February 9, 1987). All of these alternatives, however, are outside of the jurisdiction of the State Lands Commission. Therefore, the decision about which should or should not be implemented is the responsibility of other agencies (Finding No. 2). (In the letters of comment on the DEIR/EIS, several agencies expressed concerns with or opinions about one or more of the alternatives. These included: Contra Loma Route - City of Antioch opposed, Contra Costa County concerned; Overhead Aqueduct Crossings - Department of Water Resources favored over the proposed action; and, Booster Station 2 and Microwave 8 - County of Fresno appears to favor. Please see letters 4, 21, 17 and 20, respectively in the Finalizing Addendum.) They can and should consider the relative impacts of these alternatives. Finally, because there will be significant residual impacts caused by either the proposed action or any of the alternatives, with the possible exception of the no project alternative, the State Lands Commission adopts the finding of overriding consideration in Exhibit E.

EXHIBIT E

STATEMENT OF OVERRIDING CONSIDERATION

The San Joaquin Valley Pipeline project has potentially significant construction and operation impacts on the environment. Construction impacts would result primarily from the clearing, trenching, and backfilling along the right-of-way. Operation impacts would result primarily from potential oil spills and leaks. Potential impacts in each of these areas have been analyzed in detail in the EIR/EIS.

Many mitigation measures, can and will (by virtue of the applicant amending most of these into the project) be implemented to reduce the significant adverse effects of the project. (See CEQA findings, Exhibit D) These measures, when implemented, would substantially lessen the environmental impacts which may result from the project. However, for some significant impacts identified in the EIR/EIS there are no feasible mitigation measures which would totally reduce the impacts to a level of insignificance.

The FEIR/EIS provided the following information about the purpose and needs for this project:

The San Joaquin Valley Pipeline project is proposed as a means of assuring a reliable supply of crude oil for delivery at a competitive price from Kern County oil fields to Shell's refinery in Martinez. Under an exchange agreement with Texaco, Shell currently transports 120 MBD of oil through Texaco's heated pipeline, which extends from the Caliola tank farm in Fresno County to refineries in Contra Costa County. This exchange agreement expires in 1988 after which the Texaco pipeline will be available to Texaco and independent producers and refiners having protected rights to use the pipeline under the Texaco/Federal Trade Commission Consent Decree (related to Texaco's acquisition of the Getty Oil Company). Once this decree becomes effective, it could reduce the transmission capacity available to Shell in the Texaco pipeline. In addition, Texaco's own transportation requirements could reduce or preempt the pipeline capacity available to Shell.

Economic factors also support a proposal to build a pipeline to the Martinez refinery. The Texaco pipeline, with a 20-inch diameter, is currently transporting over 200 MBD, including Shell's component of about 120 MBD. This 200-MBD total volume is at or near the pipeline's

capacity, and because this flow rate exceeds optimum operating costs on a per-barrel basis, it is not cost-effective for Shell to continue to transport oil through the Texaco pipeline, even if Shell could obtain a long-term guarantee for its 120-MBD share of the total capacity. Additionally, because the Texaco line is privately owned and operated, Shell must pay for the right to use this pipeline, a cost it would avoid if San Joaquin Valley Pipe Line Company implemented the project. The costs of building the San Joaquin Valley Pipeline are currently estimated at \$110 million, and it is uncertain if cost savings alone are sufficient to justify the project. However, the project's main objectives are reliable and cost-competitive oil transportation, and these would be achieved by building a new pipeline.

This project will provide a transportation link between areas long established in oil production and refining. Shell Oil first became involved in oil production in the San Joaquin Valley in the 1900's. Prior to 1920, the first pipeline between Coalinga and the Martinez Refinery was established. This connection was expanded (looped) in the '30's. With the advent of steam injection, Getty laid the line currently owned and operated by Texaco in the late 1960's. Shell substantially increased its holdings in the San Joaquin Valley with the purchase of the Belridge Field in 1980. Their refinery in Martinez was being upgraded at about this same time.

Transportation of oil by pipeline will result in land disturbance and impacts on terrestrial biology. By comparison, however, other forms of transportation would have greater potential for significant adverse impacts. In the discussion of alternatives considered but eliminated from detailed analysis, the FEIR/EIS states:

Other means of transporting oil from Weir to Martinez were considered, but rejected because of greater environmental impacts, logistical difficulties, and higher cost compared to pipeline transport. Alternative transportation means initially considered included trucks, railroad, and tankers. About 600 trucks would be required to travel between Weir and Martinez each day, or, alternatively, three sets of trains containing 72 cars each would be required, in order to deliver 120 MBD to Martinez. Compared to pipeline transport, either of these transportation methods would cost more, would increase highway or rail traffic, and would greatly increase the risk of oil spills resulting from accidents

or oil transfers. Marine transport was rejected because of its impracticality; the oil-production areas associated with the project are landlocked, and this alternative would therefore require that oil be transported to the coast, either by truck, rail, or pipeline, before it could be loaded onto tankers. Any route to the coast would have to cross the rugged Coastal Ranges.

Only the "no project" alternative would completely eliminate all significant impacts (assuming of course that the other modes of transport described above were not employed). However, the Commission has examined this alternative and finds it unacceptable. The State has, for many years, endorsed the use of pipelines over other forms of transportation. This policy has been supported by various studies which endorse pipeline transportation over other forms.

The proposed project is consistent with the national economic and energy policy goals of assuring national security and reducing dependence on foreign sources of foreign crude.

The State Lands Commission has considered the benefits and the nature and extent of the impacts of the project as described in the EIR/EIS for the Proposed San Joaquin Valley Pipeline Project and as discussed in Appendix D of the Calendar Item. From this review, the Commission finds that, in balancing the project's benefits against its unavoidable environmental risks, the benefits outweigh the level of environmental risks which would remain after the application of mitigation measures discussed in the EIR/EIS and in Exhibit D.