DOE/EIS-0020-D(Rev)

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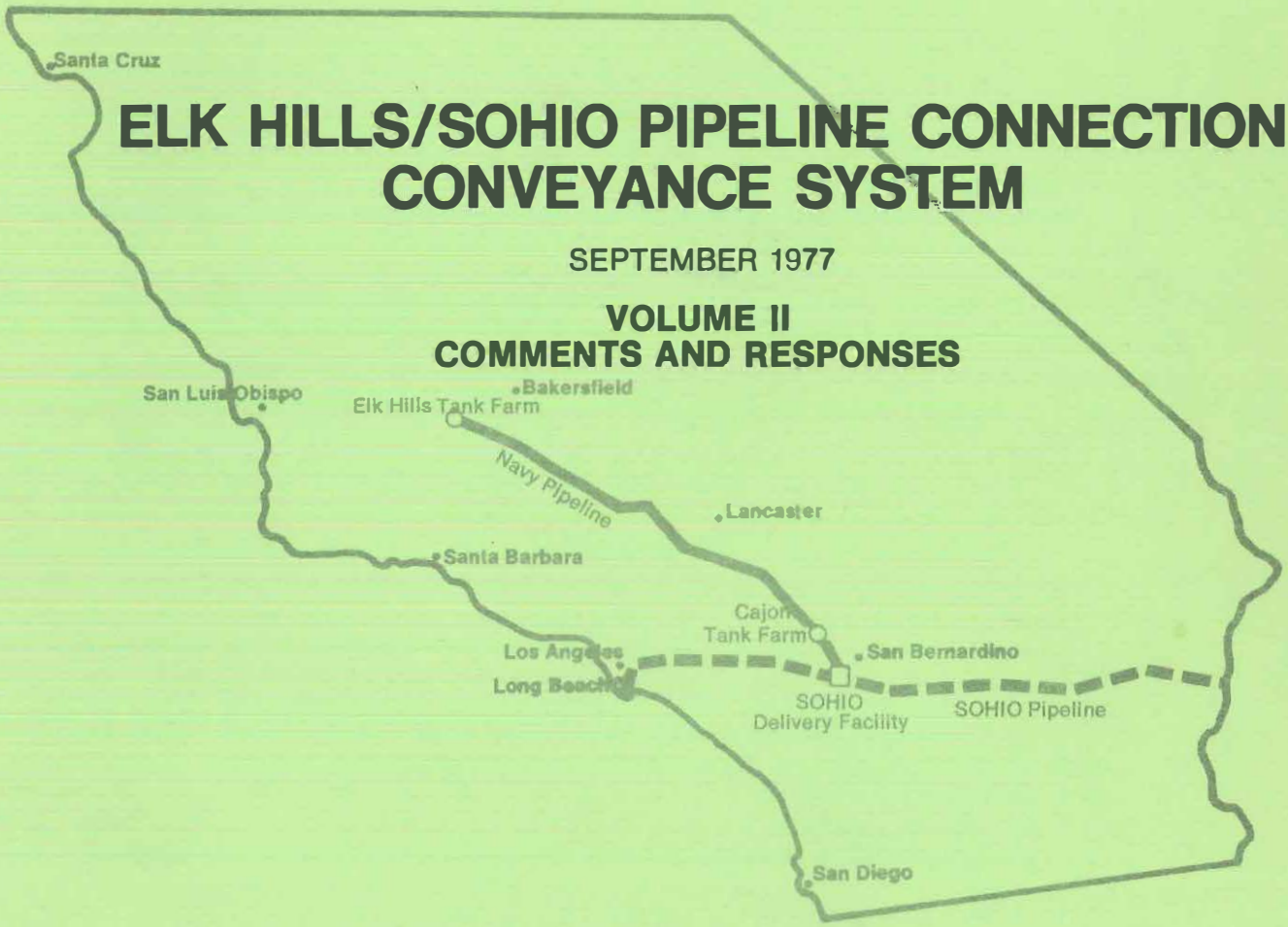
FINAL ENVIRONMENTAL IMPACT STATEMENT

CRUDE OIL TRANSPORT FROM NAVAL PETROLEUM RESERVE NO. 1 TUPMAN, CALIFORNIA



ELK HILLS/SOHIO PIPELINE CONNECTION CONVEYANCE SYSTEM

SEPTEMBER 1977

VOLUME II
COMMENTS AND RESPONSES

DEPARTMENT OF THE NAVY
NAVAL PETROLEUM AND OIL SHALE RESERVES
WASHINGTON, D.C.

PREPARED IN ACCORDANCE WITH OPNAVINST 6240.3D OF APRIL 1975 IN COMPLIANCE WITH SECTION 102(2) (C) OF THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

FINAL ENVIRONMENTAL IMPACT STATEMENT

CRUDE OIL TRANSPORT ALTERNATES
FROM NAVAL PETROLEUM RESERVE NO. 1
TUPMAN, CALIFORNIA

ELK HILLS/SOHIO PIPELINE CONNECTION
CONVEYANCE SYSTEM

VOLUME II

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16 September 1977

DEPARTMENT OF THE NAVY
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SECTION 102(2) (C) OF THE NATIONAL ENVIRONMENTAL POLICY
ACT OF 1969

Prepared for Department of the Navy by:

URS COMPANY
A URS Company

155 BOVET ROAD, SAN MATEO, CA 94402 Telephone (415) 574-5000

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X. WRITTEN COMMENTS

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A. Introduction

The Draft Environmental Impact Statement for the Elk Hills/SOHIO Pipeline Connection Conveyance System was made available to the Council on Environmental Quality on April 23, 1977, and was announced in the Federal Register on April 29, 1977. Over 120 copies of the statement were sent with requests for comments to elected officials, government agencies, libraries, and organizations.

The Navy received 63 letters which directly commented on the Elk Hills/SOHIO pipeline conveyance system or on the project in general. (Additional comments were received regarding the Elk Hills/Coalinga and Elk Hills/Port Hueneme routes. These will be addressed in future EIS's as appropriate. See paragraph 3, page 1-4 of Volume I.) These letters are numbered 1 through 63 and are included in part C of this section. The particular comments within each letter which apply to the Elk Hills/SOHIO system or to the project in general are assigned letters of the alphabet. In Section XI, these comments and their responses are organized by this numeric and alphabetical system.

B. Agencies, Organizations, and Individuals Who Responded to the Draft Environmental Impact Statement

Number

Federal

1 Advisory Council on Historic Preservation
2 Department of Agriculture, Forest Service
3 Department of Agriculture, Soil Conservation Service
4 Department of Health, Education and Welfare, Office of the Secretary

Department of Defense, Department of the Air Force
Department of Defense, Department of the Army
  Los Angeles District Corps of Engineers
  Sacramento District Corps of Engineers
Department of the Interior, Office of the Secretary
Department of the Interior, Bureau of Land Management
Environmental Protection Agency, Region IX
Federal Energy Administration, Region IX
Federal Power Commission

State

The Resources Agency of California, Office of the Secretary
The Resources Agency of California, Air Resources Board
The Resources Agency, State Water Resources Control Board

Regional

South Coast Air Quality Management District
  Metropolitan Zone
  District Headquarters
Southern California Association of Governments

Local

Los Angeles County Board of Supervisors, Supervisor, 5th District
San Bernardino County Environmental Improvement Agency

Public Organizations

Antelope Valley College
League of Women Voters of San Luis Obispo
Mission Coast Lung Association
Save Our Coast Coalition
Sierra Club, Santa Lucia Chapter
Sierra Club, Southern California Regional Conservation Committee
South Bay Conservation Group

Private Organizations

Atlantic Richfield Company, Transportation Division
Beacon Oil Company
Chevron U.S.A. Inc.
Desert Wide Real Estate, Inc.
Hunt Realty, Inc.
Ben Oman Company
Palmdale Board of Realtors, Inc.

Individuals

35 Charles W. Quinlan, Urban Planner and Architect, A.I.A.
36 E. Craig and Eileen P. Cunningham, Atascadero
37 Rodney S. Crane, Palmdale
38 Curtis J. Crawford, Quartz Hill
39 Gail M. Dyer, Huntington Beach
40 Harold Edelstein, Los Angeles
41 George H. Floyd, Cambria
42 Mr. and Mrs. Theodore Foster, San Luis Obispo
43 Lazaro and Maria B. Gorrindo
44 Jean Hellman and Nonny Scully, Pinon Hills
45 Constance and William Hendricks, San Luis Obispo
46 Mr. and Mrs. S. Jones, Palmdale
47 Russell L. Kaldenberg, Fellows
48 Chris Kennington, Morro Bay
49 Mr. and Mrs. J. J. Kubasak, Lancaster
50 Dr. and Mrs. W.C. Langworthy, Arroyo Grande
51 A. E. Letzig, Palmdale
52 Verlyn Marth, Costa Mesa
53 Verlyn Marth, Costa Mesa
54 C. L. McBroome, Highland
55 Howard E. Mettler, Arthur E. Mettler, Santa Cruz
56 Nick Nemer, Wrightwood
57 C. W. O'Brien, M.D., Arroyo Grande
58 Thomas G. Pappas, Leona Valley
59 R.D. Rice, M.D., Arroyo Grande
60 Mary Robinson, Los Angeles
61 Fred A. and Janice C. Schenk, Morro Bay
62 Nathan and Celia G. Starr
63 Mr. and Mrs. R. Stern and Family, San Luis Obispo

C. Written Comments

Following are the written comments received on the Elk Hills/SOHIO Conveyance System DEIS.

(1)

Advisory Council on
Historic Preservation
1522 K Street N.W.
Washington, D.C. 20005

May 16, 1977

Captain John I. Dick-Peddie
Officer In Charge Of Construction
Naval Facilities Engineering Command Contracts,
Elk Hills
P. O. Box 40
San Bruno, California 94066

Dear Captain Dick-Peddie:

This is in response to your request of April 21, 1977, for comments on the draft environmental statement for the construction of a pipeline to convey up to 250,000 barrels per day of crude oil from Naval Petroluem Reserve No. 1 (Elk Hills), Tupman, California, to market. Pursuant to its responsibilities under Section 102(2)(C) of the National Environmental Policy Act of 1969, the Advisory Council on Historic Preservation has determined that while you have discussed the historical, architectural and archeological aspects related to the undertaking, the Council needs additional information to adequately evaluate the effects on these cultural resources. Please furnish additional data indicating:

I. Compliance with Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f, as amended, 90 Stat. 1320). The Council must have evidence that the most recent listing of the National Register of Historic Places has been consulted (see Federal Register, February 1, 1977, and monthly supplements each first Tuesday thereafter) and that either of the following conditions is satisfied:

   A. If no property included in or eligible for inclusion in the National Register is affected by the project, a section detailing this determination must appear in the statement. a

   B. If a property included in or eligible for inclusion in the National Register is affected by the project, b

The Council is an independent unit of the Executive Branch of the Federal Government charged by the Act of October 15, 1966 to advise the President and Congress on the [illegible]

the statement must contain an account of steps taken in compliance with Section 106, as amended, and a comprehensive discussion of the contemplated effects on the property. (Procedures for compliance with Section 106 are detailed in the Federal Register of January 25, 1974.)

II. Contact with the State Historic Preservation Officer.

The procedures for compliance with Section 106, as amended, of the National Historic Preservation Act of 1966 and Executive Order 11593 require the Federal agency to demonstrate consultation with the appropriate State Historic Preservation Officer. The State Historic Preservation Officer for California is Mr. Herb Rhodes, Director, Department of Parks and Recreation, State of California, P. O. Box 2390, Sacramento, California 95841.

Should you have any questions or require additional assistance, please contact Michael H. Bureman of the Council's Denver staff at P. O. Box 25085, Denver, Colorado 80225, or (303)234-4946, an FTS number.

Sincerely yours,

Louis S. Wall
Assistant Director, Office of
Review and Compliance

(2)

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
630 Sansome Street
San Francisco, California 94111

8430

July 13, 1977

Officer in charge of Construction
Naval Facilities Engineering Command Contracts, Elk Hills
Department of the Navy, Western Division
P. O. Box 40
San Bruno, Calif. 94066

Dear Sir:

The Forest Service has reviewed your draft environmental impact statement on Alternative Crude Oil Conveyance Systems for Naval Petroleum Reserve No. 1 (Elk Hills), Tupman, California. Our comments are restricted to the major alternatives presently under consideration which would directly impact National Forest lands: the Elk Hills/SOHIO Pipeline Connection Conveyance System and the Elk Hills/Port Hueneme Conveyance System.

The information provided in the DEIS for either of these alternatives is much too generalized to permit a detailed evaluation of impacts that would occur to National Forest lands and resources. Specific "land-use incompatibilities" (reference Part Two, page 3-1) cannot be identified without a specific pipeline routing to analyze. Except as otherwise indicated, the following comments apply to both the above-mentioned alternatives.

Before either alternative is constructed, as you are aware, a Memorandum of Understanding would need to be signed between our two agencies. Such a memorandum would include mitigation measures as stipulations and specifically incorporate the following plans: Construction Plan, Erosion Control Plan, Landscape Plan, Cultural Resource Plan, Fire Plan, and Oil Spill Contingency Plan. a

To develop the information needed for the memorandum of understanding, an environmental analysis report (EAR) first must be completed, as recognized in your DEIS, Part Two, page 3-3. The preparation of such an EAR is not in either Forest's Plan of Work for FY 1978 or 1979. In order for us to meet the Navy's time constraints, it will be necessary for us to enter into a cooperative agreement with you to cover costs of necessary field reconnaissance, archeological reconnaissance, and preparation of the EAR, as well as the later costs of a Forest Service construction liaison officer. b

6200-11 (1-69)

2.

The environmental analysis report would more specifically identify, among other things, possible resource management conflicts, other existing special use permits or land uses with which there may be a conflict, and requirements to be incorporated in the necessary plans.

The increased risks or possible consequences of fires starting from pipeline construction or maintenance activities are not covered. Such projections can be made by running a fire simulation model as part of the analysis. The U. S. Forest Service fire crews referred to in both alternatives are presently trained and equipped to fight wildland fires, not oil fires. In addition to a project fire plan, needed during construction, the memorandum of understanding should provide for continuing fire prevention activities during operation and maintenance. c

Both alternatives would cross the San Andreas fault and other known earthquake faults. Trenching to locate faults is discussed, without details of how it is to be accomplished, nor associated benefits or impacts. Land needed as catchment basins for oil spills receives little mention. d

In relation to the Elk Hills/Port Hueneme alternative, it is unclear to us from the information provided in the DEIS to what extent pipeline replacement, testing, and construction of access roads would need to take place within the Los Padres National Forest. The proposal assumes the replacement of only 300 feet of pipeline within the Los Padres National Forest. No mention is made of the possibility of replacing additional sections of the pipeline should they fail to pass pressure testing, nor are the details of the pressure testing process adequately described in terms of needed access, erosion potential associated with testing for breaks, etc. Effects to water quality, visual resources, wildlife habitat, including the condor habitat, and increased fire risks are therefore difficult to assess. The long-term effects of potential oil spills on watershed uses of Los Padres National Forest lands is also not clearly spelled out, although a possible problem is acknowledged in Part Two, pages 1-59 and 1-62.

Highway 33 has been designated a Scenic Highway under the State Scenic Highways System. The pipeline replacement will be in view of the soon-to-be-installed Cuyama Badlands observation site on Highway 33. Also, the pump station to be located at Apache school should be designed to be compatible with the scenic designation.

3.

Access for operation and maintenance, if needed near critical condor habitat, could be a problem, since both road construction and helicopter operations have the potential for causing adverse effects to the condor.

The Los Padres National Forest needs these and other questions answered to adequately assess the effects on Forest resources.

Additional concerns in relation to the Elk Hills/SOHIO Pipeline connection alternative, which crosses Cajon Pass in the San Bernardino National Forest, include protection of the Pacific Crest Trail; provision for a temporary crossing for the Trail during construction; and addition of a remote control block valve in the vicinity of M.P. 131 prior to crossing the Southern Pacific Railroad tracks and entering the Cajon Creek drainage. e

The proposed 32-inch pipeline from the Cajon Tank Farm will be buried and enter National Forest land in Section 6, T.3N., R.6W. SBM, in the Baldy Mesa Area of the Cajon Ranger District. It then follows an existing dirt road southerly approximately one mile to State Highway 138. About one-fourth mile prior to meeting State Highway 138, the buried pipeline enters private land and stays in private lands adjacent to State Highway 138 for approximately five miles. It then travels through National Forest land for approximately one mile where it meets the Southern Pacific Railroad Right-of-Way. At this junction the pipeline leaves the State Highway 138 R-O-W and follows the Santa Fe Railroad R-O-W in a southeasterly direction for about two miles cutting across Santa Fe Railroad's two tracks at Sullivan's Curve and intersecting with old State Highway 66 (adjacent to the present Interstate State Highway 15). The old State Highway 66 R-O-W is maintained by the County of San Bernardino; the pipeline will be buried within one lane of the old highway for approximately the next 6.5 miles to M.P. 141, where it leaves the San Bernardino National Forest just southwest of Devore. During its 14 mile route through the Forest it alternates through National Forest and private lands. Due to the lack of accurate detail construction maps, our best estimate is that the pipeline crosses a total of 6.5 miles of San Bernardino National Forest lands, not one mile as stated in the DEIS, Part Three, page 1-21. Virtually all of this R-O-W distance is presently encumbered by State, County, or Forest Service roads and railroad tracks. f

Based on the information now available, the San Bernardino National Forest concludes that the SOHIO Pipeline alternative will not have a major effect on National Forest lands and resources if appropriate stipulations are included in a memorandum of understanding. g

4.

The statement concerning low user fees, at the top of page 2-45 (Part Two), gives an inaccurate impression. Fees for use of National Forest land for pipelines and similar uses by private companies are assessed at fair-market value; the Navy, as a Federal agency, would pay no fee for a pipeline right-of-way across National Forest lands. h

Other more specific conditions and effects can better be considered at meetings between the involved Federal land managing agencies, the Navy, and the Navy's consultants. We are looking forward to this opportunity before the Final Environmental Impact Statement is prepared, so that we can relate expected impacts and mitigation measures to specific route proposals. Only in this way will the Navy have all the environmental information which should be incorporated in the decision-making process at this stage. i

To summarize, before any authorization for a right-of-way can be given to the Navy, the Forest Service will need to analyze and assess the site-specific environmental effects of the proposed project in keeping with our responsibility for management of the National Forests and the requirements of the National Environmental Policy Act of 1969 (P.L. 91-190). Our preliminary review indicates that you will need to provide us with additional information and data on the proposed routes sufficient to enable us to give careful consideration to the environmental effects of the preferred and alternative routes, and any necessary changes or mitigation measures. Only then can we reach a conclusion as to the advisability of the proposed action as it affects National Forest System lands and resources. Timely exchange of information and development of close working relationships will facilitate our ability to be responsive to your time constraints. j

We appreciate the additional time you have made available for us to respond to the Elk Hills DEIS. We will be expecting to hear from you soon about a possible meeting with you to develop a closer working relationship.

Sincerely,

Curtis L. Smith

for DOUGLAS R. LEISZ
Regional Forester

(3)

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
2828 Chiles Road, Davis, CA 95616

June 15, 1977

Officer in Charge of Construction
Naval Facilities Engineering Command Contracts
Elk Hills, P. O. Box 40
San Bruno, California 94066

Dear Sir:

We acknowledge receipt of the draft environmental statement for the construction of a pipeline to convey up to 250,000 barrels per day of crude oil from Naval Petroleum Reserve No. 1 (Elk Hills), Tupman, California to market, that was addressed to the Soil Conservation Service on April 21, 1977, for review and comment.

We have reviewed the above draft environmental statement and have the following comments.

The erosion control and revegetation measures following construction were not adequately addressed. The statement recognizes the difficulties associated with establishing vegetation in the area. We would recommend that an erosion control and revegetation plan be developed in consultation with the Bakersfield field office of the Soil Conservation Service. The operations and maintenance following construction and initial efforts to re-establish vegetation should recognize the possibilities of failure and provide for additional planting if needed. a

We find no conflict with any Soil Conservation Service on-going or planned programs or projects.

We appreciate the opportunity to review and comment on this proposed project.

Sincerely,

Francis C. H. Lum

FRANCIS C. H. LUM
State Conservationist

cc: R. M. Davis, Administrator, USDA, SCS, P. O. Box 2890, Washington, D. C. 20013
Fowden G. Maxwell, Coordinator of Environmental Quality Activities, Office of the Secretary, USDA, P. O. Box 2890, Washington, D. C. 20013
Council on Environmental Quality, 722 Jackson Place, N. W., Washington, D. C. 20006 - Attn: General Counsel (5 copies)
Ralph Bishop, Area Conservationist, SCS, Santa Rosa, California

(4)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20201

JUN 21 1977

John I. Dick-Peddis
Captain, CEC, USN
Officer in Charge of Construction
NAVFACENGCOM Contracts
Elk Hills
P.O. Box 40
San Bruno, CA 94006

Dear Sir:

We have reviewed the draft Environmental Impact Statement for Crude Oil Transport Alternates from Naval Petroleum Reserve No. 1, Tupman, California.

The draft EIS describes three possible conveyance systems from the Elk Hills reserve.

None of the three will create particular problems related to HEW programs or concerns. Little construction-related population impacts will occur, nor will completion of any of the three alternatives result in long term or permanent population changes.

Air quality standards due to increases in hydrocarbon vapor emissions can be expected to be exceeded, particularly at Pt. Hueneme and Avila Bay. We defer to the EPA findings in this matter since they must conduct a review under the New Source Review requirements.

The possibility of accidental oil spills at Avila Bay and Pt. Hueneme was adequately discussed. The control measures to prevent such spills and the cleanup/containment procedures appear adequate. a

The proposed method of crossing the San Andreas earthquake fault is acceptable practice and meets California standards.

Thank you for the opportunity to review this document.

Sincerely,

Charles Custard
Director
Office of Environmental Affairs

(5)

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, D.C. 20330

30 JUN 1977

Captain John I. Dick-Peddie, CEC,USN
Officer in Charge of Construction
NAVFACENGCOM Contracts, Elk Hills
P.O. Box 40
San Bruno, CA 94066

Dear Capt Dick-Peddie:

The Draft Environmental Impact Statement - Crude Oil Transport Alternates from Naval Petroleum Reserve No. 1, Tupman, CA has been reviewed. The proposed action will cause no conflict with current Air Force operations.

This letter confirms our negative response by phone on 28 June 1977.

Sincerely,

LUIS F. DOMINGUEZ, Colonel, USAF
Chief, Environmental Planning Division
Directorate of Engineering & Services

(6)

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P. O. BOX 2711
LOS ANGELES, CALIFORNIA 90053

SPLED-E

23 June 1977

SUBJECT: Draft Environmental Impact Statement for the Crude Oil Transport Alternates from Naval Petroleum Reserve No. 1, Tupman, California

Officer in Charge of Construction
Naval Facilities Engineering Command Contracts, Elk Hills
P. O. Box 40
San Bruno, California 94066

1. Reference is made to a letter from your office, File No. OOH, dated 21 April 1977, which requested review and comment on the draft environmental impact statement, subject as above.

2. With respect to the draft EIS, we offer the following comments:

a. Part Two, Elk Hills/Port Hueneme Conveyance System.

(1) The EIS should present an analysis of alternative dredge spoil disposal locations; this would enable the Los Angeles Engineer District to utilize the EIS in evaluating environmental aspects of the proposed plan as required by Corps of Engineers construction permit procedures. Dredging methods and the predicted duration time of the work should also be noted. Chemical and physical analyses of the dredge sediments will be required by the Corps of Engineers and the Environmental Protection Agency (EPA) prior to issuance of construction permits.

(2) Corps of Engineers construction permits will be required for dredging, filling, and structures along the shoreline near Port Hueneme; a permit will also be required where the proposed pipeline will cross the Santa Clara River. It is also possible that construction permits will be required for filling in wetlands. We suggest that Mr. Charles M. Holt, Chief, Navigation Branch, telephone (213) 688-4933 be contacted regarding requirements for filing permit applications.

'SPLED-E 23 June 1977
SUBJECT: Draft Environmental Impact Statement for the Crude Oil Transport Alternates from Naval Petroleum Reserve No. 1, Tupman, California

b. Part Three, Elk Hills/SOHIO Pipeline Connection Conveyance System.

(1) The Los Angeles District is in the preliminary planning stages of a flood control investigation for Antelope Valley, California. One of several flood control structures under study is a dam and reservoir on Amargosa Creek in Sec. 21, R12W, T6N (South of Avenue P and west of 10th Street West on sheet C-9). Should the dam turn out to be a viable flood control alternative, its construction would probably be compatible with the pipeline as shown. However if the Navy selects the SOHIO pipeline connection alternative, close coordination should be maintained with this office to avoid unnecessary conflicts. In this regard, please feel free to contact Mr. Stanley E. Lutz, Project Manager, telephone (213) 688-5443. a

(2) On plate C-10, references to Avenue O should be Avenue Q. Avenue O runs through the proposed Palmdale International Airport. b

FOR THE DISTRICT ENGINEER:

NORMAN ARNO
Chief, Engineering Division

(7)

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
650 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814

REPLY TO
ATTENTION OF
SPKED-W

23 June 1977

John I. Dick-Peddie
Captain, CEC, USN
Officer in Charge of Construction
Naval Facilities Engineering Command
Contracts, Elk Hills
P.O. Box 40
San Bruno, California 94066

Dear Captain Dick-Peddie:

This is in response to your letter of 21 April 1977 requesting comments on your draft environmental impact statement for three alternative route proposals for the construction of a pipeline to convey up to 250,000 barrels per day of crude oil from Naval Petroleum Reserve No. 1 (Elk Hills), Tupman, California to market. Your letter sent to our Chief of Engineers in Washington, D.C. was referred to us for direct reply.

We have coordinated our review with the Corps' Los Angeles District office since two of the proposed routes, Elk Hills/Port Hueneme and Elk Hills/Sohio Pipeline Connection are located in that district. The Los Angeles District will review and provide comments on those two routes. The third route, Elk Hills/Coalinga, is located within the Sacramento District. We have no existing or proposed projects within the study area, and do not believe the proposed project will have any appreciable effect on flood control, navigation, or other programs within our jurisdiction. a

Thank you for the opportunity to review your draft EIS.

Sincerely yours,

GEORGE C. WEDDELL
Chief, Engineering Division

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

In Reply Refer To:
ER-77/413

June 30, 1977

Captain John I. Dick-Peddie, CEC, USN
Officer in Charge of Construction
Naval Facilities Engineering Command
Contracts, Elk Hills
P.O. Box 40
San Bruno, California 94066

Dear Captain Dick-Peddie:

We have reviewed the draft environmental statement for Crude Oil Alternates from Naval Petroleum Reserve No. 1, commonly known as Elk Hills, Kern County, California. We view this as a lead agency statement to serve the needs of both the Department of the Navy and the Department of the Interior in meeting their responsibilities under the National Environmental Policy Act. The statement must cover the respective actions of each agency in approval of any proposed pipeline routing for this project. In this regard we have some concerns as to suggested routings of the pipeline and the environmental coverage of the statement.

The proposed Elk Hills/Coalinga route would cross or possibly impact on public lands administered by the Bureau of Land Management. We have indicated these lands on the enclosed Xerox copies of C-2, C-3, and C-6; this information should be included in the Summary of Land Requirements. These lands are in the Temblor-Caliente Planning Unit; the Management Framework Plan and planning recommendations for that unit should be referenced as was done in Q-1 of the Elk Hills/Port Hueneme volume.

The proposed Elk Hills/Port Hueneme route will go directly through two wildlife withdrawal areas in the Temblors and Calientes. These are the Temblor National Cooperative Land and Wildlife Management Area and the Caliente National Cooperative Land and Wildlife Management Area. Wildlife developments, including guzzlers and exclosures, are located near the proposed route through these areas. Impacts on any authorized developments on the public lands should be avoided

where possible. If impacts are unavoidable, appropriate mitigation measures should be designed and included in the proposal.

Cultural Resources

The referenced archeological studies and reconnaissance surveys indicate that only portions of the proposed routes were sampled. It is evident from these preliminary investigations that the proposed project may affect cultural resources present in the area. However, adverse impacts that may occur can be significantly alleviated through comprehensive planning in the early stages of project development. Guidelines in Title 36, CFR 800, provide an effective means for dealing satisfactorily with cultural resources. a

Prior to project implementation an intensive on-the-ground survey of all areas to be disturbed should be made by a qualified archeologist. Areas where potential impacts could occur would include the unsurveyed portions of the pipeline right-of-way of the three conveyance systems, sites of tank farms and their auxiliary facilities, and access roads. Any identified cultural resources should be evaluated for significance in accordance with National Register of Historic Places criteria. b

The State Historic Preservation Officer for California is Mr. Herbert Rhodes, Director, Department of Parks and Recreation, State Resources Agency, P.O. Box 2390, Sacramento, California 95811 (phone 916-445-2358). He can be a valuable source of assistance in designing an adequate investigation of the cultural resources, evaluation of significance, and implementation of appropriate mitigation measures, where necessary. c

Copies of any additional archeological reports should be forwarded to the Western Archeological Center, National Park Service, P.O. Box 49008, Tucson, Arizona 85717, so that a more informed evaluation of the final statement will be possible. d

Wildlife

Various portions of the routes considered may involve critical habitat for one or more of the following endangered species: San Joaquin kit fox, California condor, blunt-nosed leopard lizard, brown pelican, and the California least tern. e

This is recognized in the statement and, in some instances, there has been consultation with the appropriate recovery team. Any approvals or construction by Government agencies affecting these areas must be in conformity with Section 7 of the Endangered Species Act of 1973. Continued consultation and coordination with our U.S. Fish and Wildlife Service is required. No actions can be taken which will jeopardize the continued existence of the species or result in destruction or modification of critical habitat.

Recreation

The Elk Hills/Port Hueneme and Elk Hills/SOHIO systems would have impacts on existing recreation lands with the Elk Hill/Port Hueneme system having the more severe impact of the two. Each recreation area, or park, to be impacted should be individually described, and the relative degree of impact and proposed mitigation measures identified. It should be ascertained whether or not such impacted lands have received financial assistance under the Land and Water Conservation Fund Act of 1965, as amended (P.L. 88-578). This information may be obtained through the local park-managing agency. f

If an impacted area has received such financial assistance, for either acquisition or development, then the requirements of Section 6(f) of the Act would have to be met. Section 6(f) states in part that no property acquired or developed with these funds can be converted to other than public outdoor recreation use without the approval of the Secretary of the Interior. If such funded lands are to be impacted, there should be consultation with Mr. Herbert Rhodes, Director, Department of Parks and Recreation, liaison officer for the Land and Water Conservation Fund in California. Both routes also traverse areas which have been proposed for future recreation development. We recommend that these areas be avoided, and feel that the implications of this should also be discussed with Mr. Rhodes. g

In the Elk Hills/Coalinga section mention is made of the potential recreation opportunities of the California Aqueduct and a proposed fishing access area on the Aqueduct. However, no location is given for the proposed fishing access area and there is no mention of what agency is to develop the access. An expanded description of this site is warranted. Analysis should include discussion of impacts on the recreation resource and identification of possible mitigation measures that could alleviate degradation of the sites.

Geologic

Although information on seismicity appears to have been provided for each route, the application of this information to proposed designs of pipelines and other facilities does not appear uniform for the three alternative conveyance systems. As an example, in the case of the Elk Hills/Coalinga Conveyance System, it has been concluded that "All facilities would be designed for accelerations of about 0.5 g in order to minimize adverse effects of seismic movement" (p. 4-6, par. 1, lines 8-10). In the case of the Elk Hills/Port Hueneme Conveyance System, it has been stated that "Tank farms and the marine terminal and wharf renovations would be designed to withstand the expected 25- and 50-year events that could produce 0.15 and 0.30 g acceleration" (p. 4-5, par. 3, lines 2-4). In the case of the Elk Hills/SOHIO Pipeline Connection Conveyance System, it has been stated that "Standard engineering measures would insure that surface facilities and connections between the valves and pumps and the pipeline may withstand horizontal accelerations of 0.2 g or more" (p. 4-7, par. 2, lines 1-3). In the case of the latter two systems, we have found no specific reference to proposed design of facilities to withstand accelerations as high as 0.5 g, yet both of these would cross the San Andreas fault zone as well as three to nine additional faults or fault zones. Consequently, we feel the environmental statement should clarify the seismic design criteria that would be applied to all three alternative systems.

Concerns in regard to possible impacts on and protection of surface and groundwater resources include:

- The potential for significant impact of oil spills above the underground weir of the City of Ventura on the groundwater supply of Ventura should be more adequately described and evaluated; possibilities for mitigation should be discussed in detail.

- Following pipeline and storage-tank hydrostatic testing, control of the volume of test water discharge to receiving streams should be considered in order to minimize any adverse effect of stream-bed scour or streambank erosion.

- The details of types of planned cathodic pipeline protection installations should be described more adequately. If installation of cathodic protection wells (deep anodes) is planned, the statement should

describe the design of such well-type anodes and describe plans to prevent aquifer pollution via the cathodic protection wells.

The Elk Hills/Coalinga route would result in the least impacts to resources under our management, as well as to our programs and concerns. Apparently, any route selected will cross public lands under the jurisdiction of this Department and implementation of the project will require our approvals. To ensure that the final statement covers the full range of Federal actions involved in accordance with CEQ Guidelines, our staffs at the field and Washington Office level will assist as necessary.

Sincerely,

Larry E. Meierotto
Deputy Assistant SECRETARY

Enclosures

Elk Hills/Port Hueneme

1-7 We feel that it would be appropriate to plan for the vapor recovery system as part of the project.

1-11 a. Division of Oil and Gas will not allow discharge of contaminated water in natural drainages. Evaporation ponds would be more acceptable.

b. Impacts of disposing of separated water in natural drainages have not been discussed in Chapter 4.

c. The percent of oil left in the separated water should be addressed.

1-13 The effects of ripping up five miles of oil pipeline across farmlands in the Cuyama Valley should be discussed in Chapter 4.

1-14 The seismic displacement evaluations should be performed prior to choosing the best pipeline route.

1-27, -28 The fifty-foot width (50') may not be sufficiently wide to provide access roads.

1-43 Barren lands. All disturbed lands should be both mulched and reseeded. Critical areas that may need spray or adhesives should be identified in this document, and based on soils erosibility data. In addition, where grazing of livestock occurs, reseeding has been proven to fail unless the reseeded area is fenced for at least two years.

1-58 The BLM may require additional remote controlled block valves to decrease potential spill amounts in the east end of the line where it crosses the Calientes.

1-59 The catchment ditch to keep spillages from getting into lakes, etc. is a good idea and should be incorporated into the project design.

1-64 Although only one pilot is presently on duty per day at Port Hueneme, the proposed project would probably cause an increase to two, thus making the potential for in-harbor accidents more likely.

1-6-1-69 The existing information on West Coast traffic includes present traffic, the increases from the proposed action, normal increases in traffic, plus the LNG proposed increases. This should be sufficient to make some prediction of accident increases and barrels spilled.

Elk Hills/Port Hueneme (Cont'd)

The estimated increased traffic (1-2 tankers per day) from the proposed action will significantly increase West Coast and/or Gulf Coast hazards from oil spills, as well as in the Panama Canal Zone.

2-1 Prairie falcons, fully protected by the State of California, nest in the Calientes and should be given consideration along with the federally classified endangered species.

2-9 The area with the highest potential for slope failure also has the highest potential maximum spill.

2-17 Most of the annual grass growing around the Elk Hills area is arabian grass, Schismus arabicus. It is very common and should be mentioned. Has the route been ground checked or checked by literature research for vegetation?

2-21 The maps should include the State protected prairie falcon habitat in the Caliente Mountains.

2-45 The U.S. Government gets fair market value revenues from pipelines under the Mineral Leasing Act of 1920.

3-2 Our planning system was in effect before the passage of P.L. 94-579.

4-5 The statement would be strengthened by including a discussion of measures to minimize increased soil erosion that may occur during winter or rainy-season pipeline and tank-farm construction.

4-22 The bigcone spruce is a bigcone douglas fir, Pseudotsuga macrocarpa).

4-29 Although the amount of dredging required for this project is relatively small by comparison with previous dredging at Port Hueneme, we found no description of the proposed spoil disposal plan in the draft statement. In the case of the Elk Hills/Port Hueneme Conveyance System, it is stated that California's Coastal Management Act contains such provisions as the need "to properly dispose of dredge spoils according to their toxic substance content" (p. U-3, last par.).

Elk Hills/Port Hueneme (Cont'd)

4-43 Paragraph 1. Direct costs (of spills or other accidents) might be repaid, but losses and delays to other programs would not be mitigated.

4-45 The pipeline would be visible from State Route 166 where it crosses the Calientes.

4-48 The pipeline would open up a route through the Temblors and encourage further off-road use in areas presently not open. This will cause impacts by off-road vehicles to soils, endangered plant and animal species, and vegetation.

5-4 Since the pipeline would probably cross the California aqueducts at existing road crossings, no impacts on these aqueducts are expected.

5-10 What is meant by the term "moderately sloping" - 10 percent, 20 percent, 30 percent, or 40 percent?

5-24 The BLM corridor has service roads in place for the powerlines.

5-26 Considering the existing California capability for refinery output, the California market would likely be glutted by the proposed action, driving prices down low enough to preclude exploration. Alaskan oil will further increase the glut on the market.

6-2 The rare plants should be named and it should be stated whether they are on the Federal Endangered list (Federal Register, June 16, 1976). The status also should be discussed in Chapter 2 on p. 2-19.

D-3 Paragraph 2. The results of the U.S. Department of the Interior's 1974 study on oil spills should not be ignored as mentioned in the last paragraph. Even the most recent oil pipelines have had imperfections which have resulted in spills.

D-21 Impacts to all resources from oil spills should be discussed.

K-26 Although impacts to water resources of using water for construction activities are discussed, the impacts of using 500,000 barrels of water for hydrostatic testing have not been discussed.

Elk Hills/Port Hueneme (Cont'd)

Wildlife

The pipeline will go directly through two wildlife withdrawal areas in the Temblors and Calientes. They are the Temblor National Cooperative Land and Wildlife Management Area and the Caliente National Cooperative Land and Wildlife Management Area. Wildlife developments, including guzzlers and exclosures, are located near the proposed route through these areas.

There was no mention of mitigating measures for wildlife in this volume. This seems inadequate. It is mentioned on 1-27, paragraph 2, that 50 acres within Government lands will be used along the pipeline route, not to mention new access roads to move machinery. Mitigation for these acreages should include the development of an equal number of acres for wildlife.

Visual Quality

There seems to be definite lack of descriptive modifiers in this section. The visual quality is not described. Several roads are labeled scenic but no criteria or justification is included.

Visual sensitivity seems to be correlated to closeness to urban areas, a correlation which is not necessarily true.

The visual qualities need to be described in much greater detail, as more of a description rather than an already completed judgment.

Elk Hills/SOHIO

C-2 The proposed pipeline route in T. 31 S., R. 22 E., Section 20 N 1/2 would directly impact blunt-nosed leopard lizard habitat. During the week of May 23, three blunt-nosed leopard lizards were sighted on this 320-acre parcel of public land. k

4-18 Follow through with suggestion in regard to protecting seedling oak trees that would be planted in place of destroyed oak trees along the pipeline. l

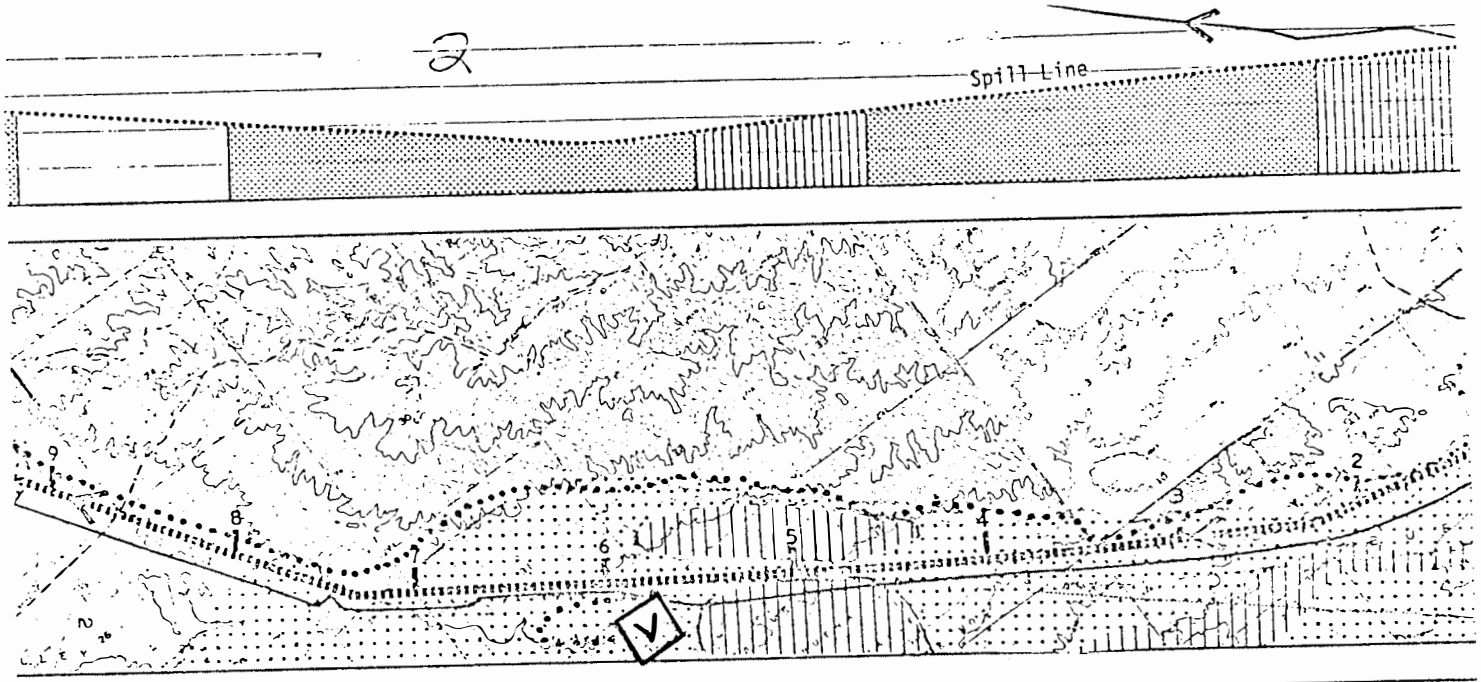
Explore the possibilities of chaparral seed mixes for pipeline construction in the chaparral zones - no recommendations. m

Elk Hills/SOHIO (Cont'd)

Water barring may be a possibility in the chaparral zone to prevent erosion (addressing the anticipated problems). n

4-19 The destruction of creosote is probably a trade-off. It should be avoided as much as reasonably possible. o

4-20 The riparian vegetation at Pastoria Creek should be protected as well as possible. A 100'-wide strip of disturbance would probably be minimal in comparison to the entire length of the creek. Stream course crossings should be examined carefully. p



Highest Control
Point: 1,140 feet

V = public land

Tertiary formation at surface or below thin cover of alluvium

Kittrick Valley | Elk Hills | Buena Vista Valley

ned creek
McKittrick Valley
ing to northeast

Buena Vista Creek

land with barrens on steep, southerly-facing slopes and shrubs along gullies and ravines. Wildlife typical of grasslands.

ve No. 1 and 2 considered as critical habitat for San Joaquin kit fox; several dens areas located near route.

ate potential
rcheological remains

High potential for
fossils

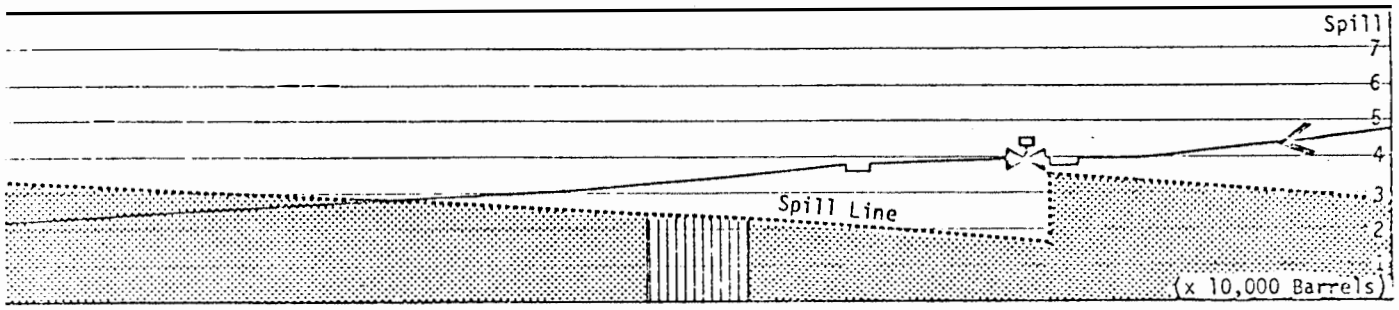
Crossing
Skyline Road

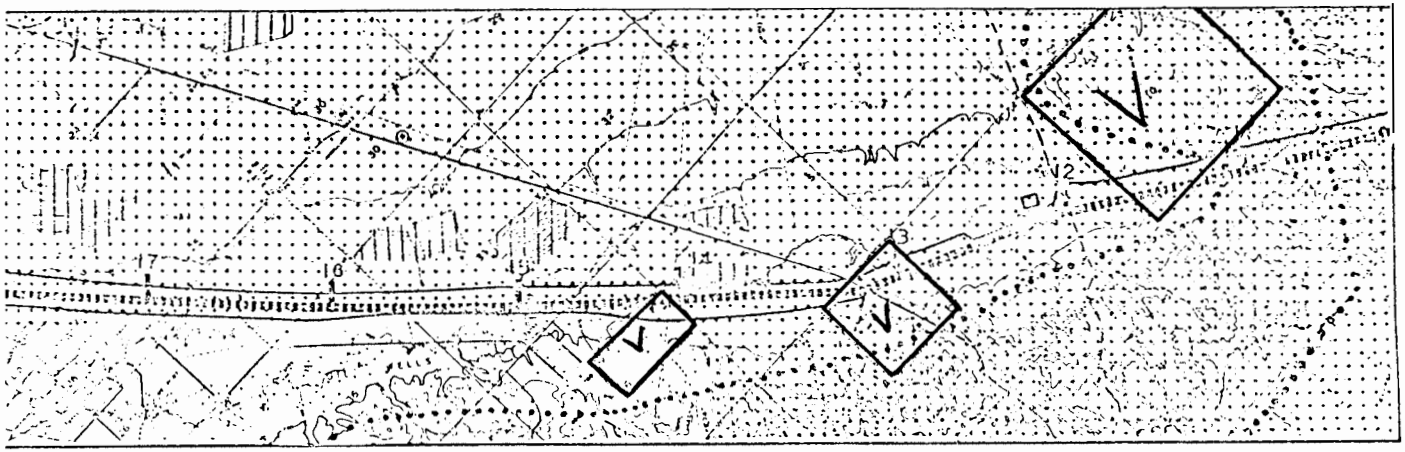
Paralleling existing pipelines

Several oil and gas pipelines
but more open rangeland

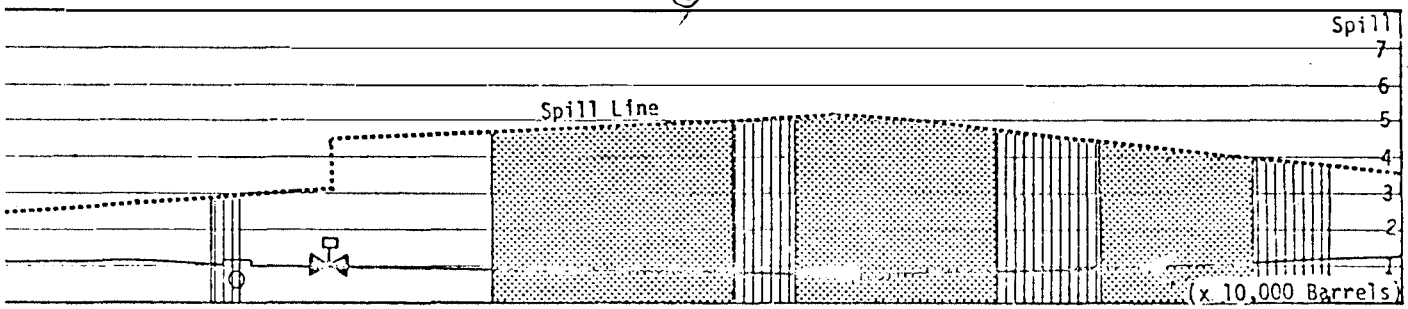
lds and pipelines in open rangeland

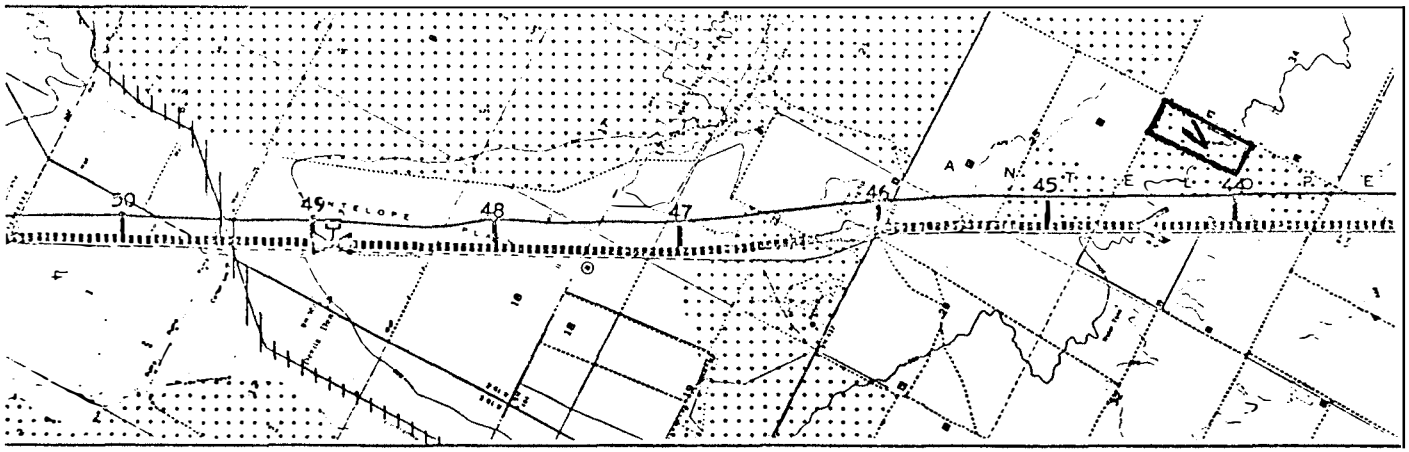
3





Valve V = public land		Remote Control Block Valve
rom Cholame-Parkfield activity area	Thin alluvium over consolidated formations	Late Tertiary formations in the unnamed hills to south
Upstream of produced water infiltration/disposal ponds	Numerous small gullies and ravines flowing northeasterly	Major unnamed creek from McKittrick Valley





Remote Control Block Valve Crossing of buried, enclosed aqueduct	Check Valve V = public land
Thin alluvial deposits Antelope Valley n Andreas fault and major epicenters	Alluvial deposits Antelope Plain
ed creek Avenal or Coastal Aqueduct	Irrigated fields
Cultivated crops with disturbance-tolerant native and introduced wildlife	Cultivated crops with disturbance-tolerant native and introduced wildlife

IN REPLY REFER TO

(2333) NPR-1
(9) (C-1615)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
800 Truxtun Avenue, Room 311
Bakersfield, California 93301
Phone: (805) 861-4191
Office hours: 7:30 a.m. to 4:00 p.m. weekdays

JUL 14 1977

Department of the Navy
Western Division
Naval Facilities Engineering Command
P. O. Box 727
San Bruno, CA 94066

Gentlemen:

We have reviewed the proposed Elk Hills/Redlands pipeline route across three tracts of public land in Kern County. Our comments are as follows:

T. 31 S., R. 24 E., M.D.M., Section 20: N½

This parcel has been identified by our wildlife biologist as critical habitat for Blunt-Nosed Leopard Lizards. While the Fish and Wildlife Service is responsible for making the final determination of Critical Habitat, we have recommended in favor of such a determination. The area of critical habitat could be avoided, however, by routing the pipeline roads which run along either the southern or easterly boundaries of our land. Our biologist tells me that the lizards do not inhabit disturbed areas so using the existing roads would cause no problems. a

T. 31 S., R. 24 E., M.D.M., Section 26: SE¼

A potential problem with this parcel is the crossing of the California Aqueduct and its appurtenant facilities. The crossing should be coordinated with Paul Hayes, Department of Water Resources, P. O. Box 388, Sacramento, CA 95814. An existing drainage channel across the aqueduct near the SE corner of Section 26 might be used for the crossing. b

T. 32 S., R. 26 E., M.D.M., Section 20: SE¼

Because this land has recently been cleared and is now being farmed in trespass, we can forsee no environmental problems in crossing this parcel.

Your exact route should be "staked" as early as possible to allow site specific archaeological reconnaissance. c

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

Once your route is finalized and an archaeological reconnaissance completed we can begin work on a cooperative agreement to authorize use of the land.

Should any questions arise concerning this matter, feel free to contact Bob Conquergood at our office.

Sincerely yours,

Gerald F. Krieg

For Louis A. Boll
District Manager

cc:
Paul Hayes
California Department
of Water Resources
P. O. Box 388
Sacramento, CA 95814

(10)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
100 CALIFORNIA STREET
SAN FRANCISCO, CALIFORNIA 94111

D-USN-K03006-CA

John I. Dick-Peddie
Captain, CED, USN
Officer in Charge of Construction
Naval Facilities Engineering Command
Contracts, Elk Hills
P.O. Box 40
San Bruno, California 94066

JUL 25 1977

Dear Captain Dick-Peddie:

The Environmental Protection Agency has received and reviewed the Draft Environmental Statement for the Elk Hills Conveyance System.

EPA's comments on the Draft Environmental Statement have been classified as Category ER-2. Definitions of the categories are provided on the enclosure. The classification and the date of EPA's comments will be published in the Federal Register in accordance with our responsibility to inform the public of our views on proposed Federal actions under Section 309 of the Clean Air Act. Our procedure is to categorize our comments on both the environmental consequences of the proposed action and the adequacy of the environmental statement.

EPA appreciates the opportunity to comment on this Draft Environmental Statement and requests two copies of the Final Environmental Statement when available.

If you have any questions regarding our comments, please contact Patricia Sanderson Port, EIS Coordinator, at (415)556-6266.

Sincerely,

Paul De Falco, Jr.
Regional Administrator

Enclosure

cc: Council on Environmental Quality

Air Quality Comments

The transport of hydrocarbons with the simultaneous production of oxidants and the impact on distant receptors is not sufficiently documented. For example, an increase in oxidants in the vicinity of Santa Maria is probable under Part I. A more detailed meteorological and air quality discussion relative to transport is appropriate. Some mitigation measures are adequately identified but in ambiguous terms as to whether or not they will be instituted (c.f. p. 42). The overall effect of 250,000 barrels/day on emissions beyond pipelines and terminals is not identified. a

In connection with Kern County AQMP and Elk Hills, the Navy had earlier indicated it would participate in this process. No mention of this is found in the DEIS. b

EPA has some major concerns regarding the air quality impacts as presented in the DEIS. EPA's primary concern is to insure that sufficient air quality mitigation measures have been provided for the adverse air quality impacts such that the project will not violate the NAAQS. c

EPA notes with concern that the DEIS indicates that substantial hydrocarbon emissions will result from the marine tanker loading operations for both the Port Hueneme and Coalinga Conveyance System Alternatives.

The DEIS concludes, with respect to the Port Hueneme pipeline alternative, that the estimated oxidant levels in Simi Valley may be increased by as much as 4.8 pphm. The DEIS also states that additional oxidant standard violations and more frequent air quality alerts are expected. The DEIS does not develop or analyze acceptable mitigation measures.

EPA is additionally concerned since the Port Hueneme pipeline alternative is located in a region which exceeds the NAAQS for oxidant by a considerable margin on a significant number of days. Therefore, EPA finds that the Port Hueneme pipeline alternative as proposed in the DEIS is environmentally unsatisfactory and is in conflict with the ongoing Air Quality Maintenance planning efforts.

EPA has some similar concerns regarding the Coalinga pipeline alternative. The DEIS again indicates that the increased tanker loading would cause additional oxidant violations. However, the DEIS concludes that this impact is not expected to produce any significant public health or welfare consequences. This conclusion is a serious understatement of the DEIS findings and additional violations may well violate the accepted criteria of the NAAQS.

EPA believes that the DEIS does not contain sufficient information to adequately assess the significance of the future air quality impacts for the Coalinga pipeline alternative and therefore EPA expresses environmental reservations with respect to this pipeline alternative.

Our review of the DEIS reveals the following air quality concerns which require further study:

The DEIS does not adequately indicate which air quality mitigation measures will be provided for the various pipeline alternatives. EPA is especially concerned about how effective mitigation measures will be provided for reducing the HC emissions from the loading of the tankers. EPA suggests that the applicant fully identify and list these mitigation measures into the following categories:

(1) Those which will be committed to as part of the proposed alternative

(2) Those which will be enforced by the responsible enforcement agencies

(3) Those which may be stipulated prior to issuance of any required permits.

In addition, the anticipated effectiveness of each mitigation measure should be cited and documented. A listing of some reasonable mitigation measures are contained in the FEIS for the SOHIO project; however, the applicant is advised to consult with all responsible agencies to develop adequate mitigation measures.

The DEIS, Part One - Elk Hills/Coalinga Conveyance System, notes that "the potential new major sources of air pollutants could affect air quality significantly". (Appendix 1-I page I-14) Although the expected total oxidant concentrations may be lower than those in other air basins, San Luis Obispo County does exceed the NAAQS a few times a year. The DEIS does not provide sufficient air quality analysis and mitigation measures to determine if the NAAQS for any pollutant will be exceeded within the next ten years. The suggetion in the DEIS that the oxidant concentrations should be reduced because of emissions controls to motor vehicles and existing stationary sources is unsupported and does not discount the expected oxidant concentration increases for this alternative. Therefore, EPA requests a more detailed air quality analysis for this alternative.

The DEIS, Part Two - Port Hueneme, has neglected to identify the Ventura County Regional Land Use Program (RLUP) under Section III - Relationship of the Proposed Action to Land-Use Plans, Policies, and Controls for the Affected Area. Since the RLUP program is presently developing the Air Quality Maintenance Plan (AQMP) for all of Ventura County, EPA advises that the FEIS identify and discuss the relationship of the Port Hueneme alternative to those plans, policies and controls being developed or considered within the RLUP program.

The DEIS, Part Two, should identify any construction mitigation measures that will be provided to reduce fugitive dust impacts. (Section IV)

The DEIS does not discuss the air quality impacts resulting from purging or tanker ballasting operations. Since these operations may have significant air quality impacts the FEIS should discuss these impacts relative to exceeding the NAAQS.

EPA has some serious concerns that the reactive hydrocarbon emissions (RHC) as estimated in the DEIS from the tank farm facilities and the tanker loading operations may be conservative and underestimated. EPA's policy regarding the photochemical reactivity of organic compounds was stated in the Federal Register, Vol. 21, No. 25, February 5, 1976. This policy statement declared that the ultimate goals of the State Implementation Plans must be to reduce emissions of all non-methane organic compounds in a region to the degree necessary to meet the NAAQS for oxidant. (emphasis added).

EPA notes in reviewing the DEIS, Part Two Section IV-page 4-11, that the reaction portion of the hydrocarbon emissions was assumed to be 20% of the total tanker loading operations at the Port Hueneme terminal.

In Appendix 2-S, Photochemical/Diffusion Modeling Results, page S-11, a 30% reactivity figure was applied to determine the RHC for tanker loading operations. In light of EPA's policy statement, the estimated oxidant concentrations as provided in Table 4-3 of the DEIS may be underestimated. Therefore, the FEIS should review the projected ozone concentrations with respect to EPA policy as noted.

EPA also has some concerns regarding the 0.7 and 1.3 lbs/10^3 gal HC emission factors suggested in the DEIS based on the partial filling of tanks and the cleaning of tanks prior to the tanker loadings. Although EPA recognizes that these are viable mitigation measures to reduce air pollution, we caution against accepting these factors as absolute for predicting future oxidant concentrations because it not

certain that such measures can and will be reasonably enforced. EPA expects the FEIS to further identify and determine the effectiveness of all mitigation measures which will be provided for the project's various alternatives.

In addition, the FEIS should update any information subject to substantial changes related to the U.S. Environmental Protection Agency publication "Compilation of Air Pollutant Emission Factors, Supplement No. 7", which will be published shortly. f

The FEIS should indicate what effect the proposed project will have on the Air Quality Maintenance Planning efforts being developed at the local levels by Ventura, Santa Barbara, Kern, San Bernardino, and Los Angeles County officials. If additional measures to attain and maintain the NAAQS as required by the Clean Air Act will result from the Elk Hills project alternatives, the feasibility of implementing such measures needs to be explicitly discussed. g

It is important to understand, for example, that recent reductions in pollutant concentrations are the result of long anticipated actions by local, State and Federal air pollution control agencies to reduce emissions. Moreover, it is necessary to realize that the public health in the critical air basins can only be protected if reductions in continued emissions of reactive hydrocarbons, NO_x, total suspended particulates and other pollutants are achieved. Thus any net increases in emissions as a result of the Elk Hills project will reduce the various options available in the AQMP planning processes now underway.

EPA notes that the DEIS addresses those emissions that are attributed to a new Elk Hills conveyance system of 250,000 B/D. However, Congress, in passing the Naval Petroleum Reserve Production Act of 1976 (PL 94-258) could allow production levels as much as 350,000 B/D. Can the proposed alternatives as suggested in the DEIS be modified to accommodate this higher production rate? What is the likelihood that this may occur? h

EPA is concerned that the DEIS fails to identify the potential markets for the Elk Hills crude oil. EPA is therefore constrained from evaluating all possible air quality impacts which may be attributed to this project. Tables 4-2 and 4-3 of the DEIS, Part Two, may underestimate the maximum primary oxidant concentration. Again, this is based upon EPA's policy regarding the reactivity of organic compounds. Also, EPA believes that some additional surface emissions near the Port Hueneme proposed tanker terminal were not considered in i

the DEIS Air Quality Analysis (Appendix 2-S). These additional emissions can be attributed to SOHIO tanker emissions, a proposed power plant at Ormond Beach and new motor vehicle emission factors. In light of some recent changes to energy development proposals in Southern California, it is unlikely that the maximum ozone concentration would occur as soon as 1979 as estimated in the DEIS, Part Two, page 4-12.

The 1973 emissions inventories provided in the DEIS have been updated. The FEIS should review these more recent inventories and revise any portion of the air quality analysis that would result in substantial differences. j

The DEIS for the Elk Hill alternatives does not identify or discuss cumulative air quality impacts from other proposed energy related developments within the project's vicinity. (i.e., Ormond Beach power plant, LNG, SOHIO, and OCS) These net incremental air quality impacts should be identifed and related to the Elk Hills project. k

Also, the Elk Hills project should be more extensively coordinated with these other energy development projects to identify opportunities in the FEIS for reducing the total air quality impact through the concepts of unitization and consolidation. The Governor's office of Planning and Research and the Joint Industry Governmental Working Group (Santa Barbara's Office of Environmental Quality) are presently investigating these possibilities and should be consulted. l

Water Comments

The Draft EIS states that the Naval Petroleum Reserve No. 1 (NPR-1) already has a production capability of 160,000 barrels per day (pg. 1-4). To provide the reviewer with a more complete environmental setting, there should be some discussion of the existing facilities. Specifically, this discussion should compare the effects of whether or not a transport/intermediate storage system/tank farm exists, and if it does not, what additional construction and renovations are planned, and what environmental impacts will result as a consequence. m

Hydrostatic testing of the integrity of the system is proposed in each of the alternatives. The final EIS should include a detailed testing program for each alternative. This program should discuss the source and availability of test waters (including availability should project completion occur in a drought year), the points of discharge of spent test waters, and the associated environmental impacts.

Port Hueneme

EPA's primary water-related concern with the proposed project is the potentially significant adverse effects of the project on water supplies and water quality in the area. The FEIS should, therefore, contain the following information:

Proposed mitigating measures for spills on surface water bodies, specifically Casitas Reservoir, Ventura River, Matilija Reservoir, Sespe Creek and the Santa Clara River. This discussion should include the status of development of an oil spill contingency plan for the area, which should recognize the relationship between swiftness of reaction and the degree of adverse environmental effects. Additionally, this discussion should expand on the concept (DEIS pg. 4-21) of a diversion system to prevent any spill from reaching the Casitas Reservoir.

Final pipeline design, or as much detail as is possible at the time of printing of the FEIS.

A discussion of measures to be taken to mitigate construction impacts associated with pipeline placement on water crossings.

Specific procedures for replanting and restoration of stream crossings disturbed during pipeline placement.

Identification of the actual source of water to be used for hydraulic testing purposes.

Page 1-5 of the DEIS states "Transportation of the crude oil in tankers out of Port Hueneme to markets is not included since full detail of these markets are not yet defined." Since tanker transport is a critical element of the Port Hueneme alternative, the FEIS should address tanker transport in as much detail as is possible at that time.

Chapter 3 of the DEIS discusses the proposed project's relationship to land use plans, policies and controls for the affected area. EPA notes however, that no discussion is given to the relationship of the proposed project to four of Ventura's County on-going planning processes, specifically the Regional Land Use Program (RLUP), Air Quality Maintenance Planning (AQMP), VCAG Sub-Regional Transportation Planning (a portion of SCAG Regional Transportation Planning), and Areawide Waste Treatment Management Planning (208 Planning). The FEIS should contain an analysis of the compatibility of the proposed project with each of these planning processes.

EIS CATEGORY CODES

Environmental Impact of the Action

LO--Lack of Objections

EPA has no objection to the proposed action as described in the draft impact statement; or suggests only minor changes in the proposed action.

ER--Environmental Reservations

EPA has reservations concerning the environmental effects of certain aspects of the proposed action. EPA believes that further study of suggested alternatives or modifications is required and has asked the originating Federal agency to reassess these aspects.

EU--Environmentally Unsatisfactory

EPA believes that the proposed action is unsatisfactory because of its potentially harmful effect on the environment. Furthermore, the Agency believes that the potential safeguards which might be utilized may not adequately protect the environment from hazards arising from this action. The Agency recommends that alternatives to the action be analyzed further (including the possibility of no action at all).

Adequacy of the Impact Statement

Category 1--Adequate

The draft impact statement adequately sets forth the environmental impact of the proposed project or action as well as alternatives reasonably available to the project or action.

Category 2--Insufficient Information

EPA believes that the draft impact statement does not contain sufficient information to assess fully the environmental impact of the proposed project or action. However, from the information submitted, the Agency is able to make a preliminary determination of the impact on the environment. EPA has requested that the originator provide the information that was not included in the draft statement.

Category 3--Inadequate

EPA believes that the draft impact statement does not adequately assess the environmental impact of the proposed project or action, or that the statement inadequately analyzes reasonably available alternatives. The Agency has requested more information and analysis concerning the potential environmental hazards and has asked that substantial revision be made to the impact statement.

If a draft impact statement is assigned a Category 3, no rating will be made of the project or action, since a basis does not generally exist on which to make such a determination.

(11)

FEDERAL ENERGY ADMINISTRATION
REGION IX
111 PINE STREET
SAN FRANCISCO, CALIFORNIA 94111

Captain John I. Dick-Peddie
Officer in Charge of Construction
NAVFACENGCOM Contracts, Elk Hills
Naval Facilities Engineering Command
P.O. Box 40
San Bruno, California 94066

JUN 2 8 1977

Dear Captain Dick-Peddie:

In response to your request of 21 April 1977, we are enclosing our in-house comments and matrix evaluations of the three alternate route Environmental Impact Statements for construction of a pipeline to convey crude oil from the Elk Hills Naval Petroleum Reserve to market. a

It was our opinion that each of the three pipeline routes has distinct advantages and disadvantages, but that when considered overall, probably the Elk Hills to Coalinga route is the most expeditious, technically and economically feasible,as well as most environmentally satisfactory method of transporting the Elk Hills crude oil to market.

The Sohio alternative would help relieve the expected glut of crude oil on the West Coast by moving the Elk Hills oil to the East and Midwest, where it is needed. However, the objections of State authorities to the Sohio tanker terminal and pipeline project may cause interminable delays which could result in the Elk Hills to Sohio connection being an impractical solution to the problem. Also, the Sohio alternative is the most capital intensive of the three routes and may face some strenuous objections from environmentalists.

The Hueneme alternative may be the quickest and most economical way of getting the Elk Hills crude oil to the domestic market, but it has a limited access and distribution potential. Further, there may be opposition from the State Air Resources Board and the California Coastal Commission because of possible increases in air pollution levels and coastal tanker traffic.

The Coalinga alternative offers two modes of transport - tanker and pipeline, and it essentially confines construction and operations to existing oil industry corridors. This route would hasten movement of Elk Hills crude oil to Bay Area refineries, which are designed to process San Joaquin petroleum. The route would probably have the least environmental impact, though increased tanker traffic and hydrocarbon vapor emissions at the

commercial tanker terminals may be the subject of State agencies and environmental organizations objections. The Coalinga route would appear to be the most realistic way to meet the Congressional mandate and aid the Nation in becoming energy independent.

We appreciate this opportunity to work with you on this most vital project.

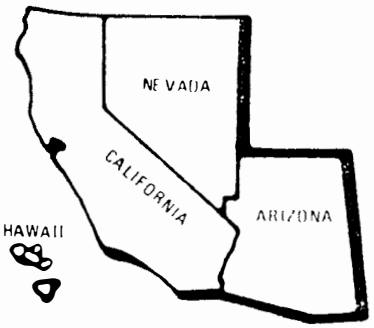
Sincerely,

Eugene W. Standley

Eugene W. Standley, Director
Energy Resources Development Division

FEDERAL ENERGY ADMINISTRATION
REGION IX
111 PINE STREET
SAN FRANCISCO, CALIFORNIA 94111

JUN 2 6 1977



FEA'S ASSESSMENT OF ELK HILLS PIPELINE ROUTE ALTERNATES

I. Summary

An FEA in-house assessment was made of the three alternative routes for transporting Elk Hills crude oil to the market place as described in Dept. of the Navy Draft Environmental Impact Statements, 18 April 1977, Crude Oil Transport Alternates from Naval Petroleum Reserve No. 1, Tupman, California.

Under Public Law 94-258 enacted 5 April 1976, the Navy must develop a pipeline capacity for transporting 350-thousand barrels per day of oil from Elk Hills to an appropriate marketing terminal. This capacity must be in place by 5 April 1979.

There is existing pipeline system capacity in the Elk Hills area of up to 150,000-barrels per day, and the Navy is developing plans to establish new pipeline capacity for 200-thousand barrels per day, expandable to 250-thousand barrels per day. This is to be coupled with a million-barrel storage capacity at Elk Hills and at the terminal end.

Three alternate routes are proposed: Elk Hills to Coalinga; Elk Hills to Port Hueneme; and, Elk Hills to SOHIO's proposed line at Colton. The Environmental Impact Statements were reviewed for each route.

The Coalinga route would provide distribution of Elk Hills crude to San Francisco Bay Area, Southern California and Pacific Northwest refineries. A pipeline intertie with commercial lines at Coalinga would take a major portion of the oil to the Bay Area, while branches off the main line connecting with commercial lines to Estero Bay and Avila Beach will allow tanker distribution to other refining centers on the West Coast.

This would appear the most attractive alternative and may have the least environmental impact. It is technically and economically feasible.

The Elk Hills to Port Hueneme route would take advantage of 50-odd miles of existing ARCO natural gas line, which would reduce new pipeline construction to less than 30 miles. It would also use the present Naval base at Hueneme as a site for storage and as a tanker terminal.

The Hueneme route is probably the least capital intensive of the three alternates and could be constructed in the shortest time. It does however have the drawback of allowing for only limited-capacity tanker distribution of the oil to West Coast refineries. There may be some moderate environmental impacts.

The Elk Hills to SOHIO's proposed pipeline route at 157 miles is the longest of the three alternates and would cross the most rugged terrain. It is also the most expensive method of providing for distribution of Elk Hills oil, though it would be entirely by pipeline and it would move most of the oil to the East through southwestern refineries and away from the area of glut.

There are some potential environmental problems with Elk Hills to SOHIO route. Further, the inability of the SOHIO company to obtain a decision from the State of California regarding construction and operation of the tanker terminal and associated pipeline leaves its future in doubt. The SOHIO pipeline may not be built, and if it is put in it may be delayed to the extent that a tie-in would be past the April 1979 deadline for completion of the Elk Hills line.

II. Vital statistics of alternate routes

	Miles/new pipe	Diameter	Cost Millions	Commercial Tie-in
A. Elk Hills/Coalinga	85	30"	$75-80	Pipelines & Tankers
B. Elk Hills/Hueneme	21	26"	$55-65	Tankers
C. Elk Hills/SOHIO	157	28"-32"	$100-120	Pipeline

III. Pertinent environmental impacts

A. Geologic/seismic

1. To Coalinga - inland route, does not cross major active faults, but is in generally unstable area; reasonably level valley lands, topography moderate; landslide potential low; existing commercial laterals to Estero Bay and Avila Beach do cross San Andreas fault; risks low to medium.

2. To Hueneme - inland to coast, crosses San Andreas and other active faults; severe topography with elevations from about sea level to 5,000 feet plus; significant landslide potential; risks medium to high.

3. To SOHIO - inland route, crosses San Andreas and three other major fault zones; topography severe in places; elevations on route to 5,100 feet; significant landslide potential; traverses subsidence areas; risks medium to high.

B. Water resources

1. To Coalinga - streams along route intermittant; encased pipeline in suspension crosses Aquaduct twice; dangers to water resources from pipeline spills low; high consumption of fresh water for tank testing in view of drought conditions; possibility of oil spills in marine environment at coastal tanker terminals.

2. To Hueneme - route crosses over both intermittant and continual flowing streams, and passes near two reservoirs; terminates at coastline near sensitive tidelands; oil spill risks to water low to medium on pipeline, medium to high at tanker terminal; high consumption of fresh water for tank testing in view of drought conditions.

3. To SOHIO - route crosses both intermittent and continual flowing streams; encased pipeline in suspension crosses Aquaduct at two places; dangers to water from pipeline spills low; high consumption of fresh water for tank testing in view of drought conditions.

C. Fish and Wildlife

1. To Coalinga - Elk Hills tank farm and pipeline route is in general habitat area of endangered kit fox and leopard lizard. Some possible displacement of both species during construction but probably not serious; possibilities of oil spills at Estero Bay and Avila Beach could cause temporary damage to fish and wildlife and marine organisms offshore and in intertidal zone; impact low to medium.

2. To Hueneme - Elk Hills tank farm and pipeline route is in habitat area of endangered kit fox, leopard lizard, condor and least tern; western terminus of pipeline and Hueneme tank farm is near Mugu wildlife refuge. Oil spills at or near Hueneme might cause some temporary marine biological damage; some possible displacement of wildlife at Elk Hills tank farm and along new portion of pipeline during construction probably not serious; impact medium.

3. To SOHIO - Construction of Elk Hills and Cajon tank farms and pipeline route may disturb habitats of endangered kit fox, condor, Mohave ground squirrel and desert tortoise. Some possible displacement of these species, but probably not serious; impact medium.

D. Vegetation

1. To Coalinga - route crosses basic valley grasslands; but much of native grasses have been eliminated by grazing and cultivation; construction would temporarily destroy vegetation along narrow pipeline path, but regrowth would soon occur; oil spills could kill vegetation contacted but in most cases vegetation would return; some revegetation after construction may be necessary; impact low.

2. To Hueneme - route crosses grass lands, cultivated areas, passes through chapparal and big cone spruce; construction could destroy some vegetation; important loss would be spruce; reasonably fast regrowth of all but conifers; oil spills could destroy or retard growth temporarily; some revegetation after construction may be necessary; impact low to medium.

3. To SOHIO - route crosses grass lands, cultivated areas, Joshua trees, creosote bushes and cottonwoods, rare and endangered chorizanthe, oak woodlands; some potential for significant damage in construction and from large oil spills; rerouting to bypass some growth may be required; impact medium to high, particularly in desert areas.

E. Archeological/Paleontological

1. To Coalinga - deeper pipeline excavations may expose and/or destroy archeological and paleontological sites. No known sites exist in pipeline corridor, but are present in general area. Impact low.

2. To Hueneme - along route archeological and paleontological resources do exist in valleys and along major streams, and near coast. No known landmarks in path. Excavation could uncover and/or destroy sites. Impact low to medium.

3. To SOHIO - route passes through archeologically rich areas. No State or Federal land marks in path. Excavation could discover artifacts, and care must be taken that they are recorded, and not destroyed if possible. Impact medium.

F. Air

1. To Coalinga - air quality in San Joaquin Valley is frequently poor. However, tank farms at Coalinga and Elk Hills and pipeline probably would not add appreciably to contamination because of vapor control equipment, but if lateral pipelines to Avila Beach and Estero Bay and tanker loadings there are considered part of project, then the hydrocarbon emissions at these two locations might cause a significant increase in air pollution, unless special precautions are taken. Impact medium to high.

2. To Hueneme - air pollution is currently a significant problem in both San Joaquin Valley, Ventura and Santa Barbara Counties. Elk Hills tank farm and pipeline may not add appreciably to emissions because of vapor control systems, but tanker loading at Hueneme might cause an increase in air pollution. Impact medium to high.

3. To SOHIO - while air pollution is frequently a problem along proposed route, effect of the pipeline and Elk Hills and Cajon tank farms would probably be minimal because of vapor control systems on tanks and closed pipeline. Impact low.

G. Visual

1. To Coalinga - minor impact involved; Elk Hills tank farm located in oil-related industry area; Coalinga tank farm and tanks at Kettleman City and Junction Station also within industry-oriented areas; pipeline underground. Greatest visual impact would be from oil spill and this probably only temporary. Impact low.

2. To Hueneme - Elk Hills and Hueneme tank farms both in industrially-oriented areas; pipeline underground through National Forest and elsewhere. Greatest visual impact from oil spill probably in Hueneme harbor area. Overall impact low to medium.

3. To SOHIO - Elk Hills tank farm would be located in an area already containing similar installations; however, Cajon tank farm would alter undisturbed scenic lands adjacent to San Bernardino National Forest; pipeline buried. Oil spills might have significant short-term visual effect particularly in desert area; Impact medium.

H. Land Use

1. To Coalinga - only temporary disruption to agricultural lands; tank-farm sites are in areas devoted to oil-related operations. Coastal Commission may object to increased industrial operations in coastal zone from additional tanker loadings. Impact low.

2. To Hueneme - tank-farm sites in areas devoted to similar industry. Pipeline passes through Bureau Land Management and Forest Service lands. Agencies have some concerns, which probably can be reconciled. Coastal Commission may object to increased industrial operations in coastal zone. Impact low.

3. To SOHIO - Cajon tank farm may be considered incompatible use by local planning agencies on basis it could damage pristine qualities of area. Other land use impacts probably insignificant. Impact medium.

I. Socioeconomics

1. To Coalinga - Employment, population, public service and utilities, recreation, land transportation, fiscal effects, growth inducement will be impacted in only minor ways; advantages small, detrimental effects small.

2. To Hueneme - same as above

3. To SOHIO - same as above.

IV. Overall Evaluation of Pipeline Routes

A. Distribution potential

1. To Coalinga - provides intertie distribution to Union, Shell, and Getty commercial pipelines at Coalinga, which terminate at San Francisco area refineries; also provides for distribution via laterals to Union tanker terminal at Avila Beach and Chevron tanker terminal at Estero Bay. Access for only small 200,000-barrel capacity tankers. Oil distribution to San Francisco, Los Angeles, and Pacific Northwest area refineries. Potential is good.

2. To Hueneme - provides for distribution via small 200,000-barrel capacity tankers (one at a time) at Navy terminal in limited access Hueneme harbor. Oil companies un-named. Distribution probably to San Francisco, Los Angeles and Pacific Northwest refineries. Potential fair to good.

3. To SOHIO - provides for distribution via pipeline tie-in with proposed SOHIO west to east pipeline at Colton. Oil would probably be destined for midwest and Texas refineries. Cooperating oil companies not named. Potential good to excellent, but only if there is some guarantee SOHIO pipeline will be constructed and within time-frame.

B. Technical Feasibility

1. To Coalinga - main route mostly covers relatively level, soft valley alluvials and presents no problem to present pipeline construction technology. Technical feasibility excellent.

2. To Hueneme - because of irregular topography and steepness of terrain over parts of route, construction could be somewhat more difficult. However, existing pipeline over most rugged area will be utilized, thus reducing problem. The project technical feasibility is good.

3. To SOHIO - route will traverse hard-rock mountainous terrain to 5100 feet, as well as desert lands and alluvial valley fill. While some degree of construction difficulties can be expected, the pipeline is within existing state-of-the-art. On a relative basis technical feasibility is fair to good.

C. Economic Feasibility

1. To Coalinga - this is the second least capital intensive of the three proposed routes, at a total estimated cost of $75-$80 million. The cost, in relation to distribution effectiveness, is very reasonable.

2. To Hueneme - the route is the least expensive of the three at $55-65 million, but the estimated costs are apparently only for new construction. Costs of acquiring the existing ARCO pipeline are not described, but it is possible these costs may bring the total for the Hueneme route to near that for the Coalinga route, about $80 million. Based on construction costs only, the Hueneme route is the most attractive, but is probably the least cost-effective with respect to distribution.

3. To SOHIO - at $100 to 120 million this represents the most costly of the alternatives, and in view of the possible delays in construction of the SOHIO tanker terminal and pipeline due to State and environmentalists objections, this could be the highest cost and highest risk project.

D. Construction Time

1. To Coalinga - as the route, two laterals and tank farms are for the most part on relatively level, soft valley alluvials, there are no serious construction problems which could delay completion of project.

2. To Hueneme - only 31 miles of the total 84 miles of pipeline will require new construction, the balance is existing pipeline. The two tank farms will be constructed in easily accessable areas. This represents the system that could probably be put into operation in the shortest period of time.

3. To SOHIO - this is the longest of the three alternates, and part of it traverses severe topography with elevations to above 5000 feet which could slow construction. One of the two tank farms would be constructed in a relatively remote area. It is estimated that of the three routes the SOHIO connection could entail the longest construction period.

E. Legal Constraints

1. To Coalinga - the pipeline, tank farms and laterals will occupy an area that is accustomed to oil-related industries. There should be little opposition from local communities, the public and civic organizations, though some grievances may occur on grounds of possible oil spills and air contamination along route and at tank farms.

   Real problems may come from increasing potential for air pollution, oil spills, and tanker traffic at Estero Bay and Avila Beach, which Coastal Commission may find unacceptable. The Air Resources Board may also object to increased hydrocarbon emissions. While not part of proposed Navy pipeline system, the route's potential depends upon the expansion of the commercial tanker facilities at these two locations.

2. To Hueneme - the route passes through Bureau of Land Management and National Forest lands and some legal problems apparently must be resolved, but they do not appear insurmountable. The passage of the pipeline through a residential area in the Hueneme area may meet some local opposition, but as the livelihood of the residents generally depends upon the Navy port facilities, and oil-related industries, there should be no imposition of constraints.

   The Air Resources Board, may find fault with increased hydrocarbon emissions in the Ventura Basin from tanker-loading operations in Hueneme harbor. The Coastal Commission may support this claim, as well as opposing through the Federal consistency section of the CZMA further industrial development in the coastal zone.

   The State Dept. of Fish and Game, the Sierra Club and other environmental and conservation groups may take some action against the proposal on the basis that it will be detrimental to the habitats of endangered wildlife and that oil spills in Hueneme harbor could adversely affect sensitive tidelands, and that pipeline spills could enter two water reservoirs nearby.

3. To SOHIO - State Dept. of Fish and Game and environmental groups, such as the Sierra Club and Friends of the Earth, may attempt to halt this alternate route on basis it impinges on habitats of endangered wildlife species, and that oil spills could cause permanent damage to fragile desert and wilderness areas. Opposition from suburban and rural residents of lands near the southern end of route may emerge. The location of the tank farm at Cajon may also be rejected by local planning agencies, environmentalists and State authorities as being out of context with the surrounding pristine desert and recreational areas.

F. Environmental Impacts

1. To Coalinga - some possible disturbance of habitat of endangered kit fox and leopard lizard during construction and possible temporary displacement of species should significant oil spill occur. Small possibility of aquaduct contamination by oil spill should severe earthquake rupture pipes at crossing. Greatest possible environmental impact could come not on pipeline or laterals, but at related commercial tanker terminals on coast, where air contamination might occur from hydrocarbon emissions and water pollution might result from accidental spills while loading tankers or from collision of two tankers in adjacent waters.

2. To Hueneme - Elk Hills tank farm and new pipeline construction might disturb general habitat of endangered kit fox and leopard lizard. Existing pipeline crosses habitat of Condor, but there should be little if any impact on endangered bird. Large oil spill from pipeline rupture might damage vegetation and displace wildlife. However, regrowth should occur in most instances and wildlife return after cleanup. Such a spill might contaminate two nearby reservoirs, however, possibilities appear slight that this would happen if appropriate precautions are taken.

   There is a greater possibility that an oil spill may occur from tanker loading, or some accident to tankers while entering or leaving constricted Hueneme harbor. A major spill might cause some damage to sea birds and bottom fauna in nearby Mugu tidelands area and to Hueneme harbor. Air contamination from hydrocarbon emissions while loading tankers is a possibility if not properly controlled.

3. To SOHIO - little chance of significant air pollution exists as system is closed. Construction could disturb habitats of endangered leopard lizard, kit fox, condor, Mohave ground squirrel and desert tortoise. Major oil spills might temporarily displace these species. Cajon tank farm might be accused of upsetting sensitive environmental balance in pristine desert wilderness area. Some irreparable damage might occur to vegetation, such as oaks, chapparal creosote bush and cottonwoods from construction, unless some route alterations are made.

IV. Conclusions - There are advantages and disadvantages to each of the three alternatives. If the prime objective of the pipeline is to move the Elk Hills crude oil to the geographic area where it is most needed (in the most expeditious and economical manner) then the SOHIO route is the most realistic approach, as it would result in transporting the oil to the midwest and East where shortages may develop, and away from the West Coast where a glut could occur with imports and Alaska crude competing with domestic production for refinery capacity.

However, this advantage is offset by the fact that the SOHIO west-to-east pipeline has not been approved as yet by California authorities. Current indications are that the State may impose so many restrictions on construction and use of the proposed pipeline and associated tanker terminal that it may never be built, or if so, it may be delayed for an extended period.

Thus, while the Environmental Impact Statements do not deal with these facts, it is pertinent to consider here the possibility that construction of a Elk Hills to SOHIO link-up could result in a pipeline to nowhere. (Unless it could then connect back to an existing local Los Angeles line).

The Elk Hills to Coalinga alternative may be the most attractive answer in view of the uncertainty over the SOHIO pipeline's future. The Bay Area refineries are designed to process San Joaquin crude and they would have no difficulty refining the Elk Hills oil. Tieing in the Elk Hills pipeline to the Getty, Union and Shell lines at Coalinga is an economical method of transporting the majority of the oil to the Bay Area, and the laterals to Estero Bay and Avila Beach provide some additional flexibility for moving part of the Elk Hills oil elsewhere. Limitations on tanker size at the two commercial facilities probably means that it would not be practical to ship the oil any further than the Pacific Northwest or Southern California.

The Elk Hills to Hueneme route allows only small tanker transport of oil to refineries on a limited access basis, because of the confined berthing at Hueneme. This alternative does not offer the diversity of distribution of the Coalinga pipeline intertie plus Avila and Estero tankerage, nor does it provide a practical means of moving oil to the East as does the SOHIO intertie.

The Elk Hills to Coalinga route is in an oil-industry related area and the pipeline and tank farms would not be out-of-place. Pipelines already exist to Estero Bay and Avila Beach, though some replacement of sections may be required because of age. The route, in terms of construction and new facilities, would probably receive the least governmental and public opposition of the three alternatives.

The SOHIO route is the least objectionable from an air pollution standpoint as it does not involve transfer of oil from pipeline and storage tanks to ships. Both the Coalinga and Hueneme alternatives may result in increased hydrocarbon emissions in basins where air pollution is a distinct problem. Measures can be taken to alleviate emissions when loading tankers through use of on-board vapor recovery systems, but it is understood they are not present as a rule on older small-capacity tankers.

Oil spills, should they occur on the SOHIO route, would be confined to the land mass with a small possibility of stream and aquaduct contamination, while the other routes have a higher potential for spills in the coastal zone.

Indications are that if the work was carried out expeditiously, the time involved to construct the SOHIO line would compare favorably with that for the other two alternatives, though based on miles of pipeline over rugged terrain alone, one would assume the SOHIO route would take longer - all things equal.

The SOHIO route is the most capital intensive. Although the Hueneme route is the least expensive from a construction cost basis, when considered with respect to expense of acquiring the existing ARCO pipeline and new construction, the total cost of the Hueneme route may not differ much from that of the Coalinga route.

ASSESSMENT-ELK HILLS PIPELINE ROUTES

ROUTE	Miles New Pipe/Total Cost	Dist. Potential	Tech. Feasibility	Economic Feasibility	Const. Time	Legal Constraints	Env. Impacts	Total
ELK HILLS/ COALINGA 1/	85 $75-80 million	6	9	6	5	4	6	36
ELK HILLS/ PORT HUENEME	31 (84 incl. old pipe) $55-65 million	5	7	6*	6	4	5	33
ELK HILLS/ SOHIO	157 $100-120 million	7	6	4	4	5	6	32

Rating:
1= Poor
4= Fair
7= Good
10=Excellent

1/ Assessment includes Estero Bay and Avila Beach commercial tanker terminals.
* Based on new construction, plus rough estimate of cost of purchasing existing ARCO pipeline.

ENVIRONMENTAL IMPACTS - ELK HILLS PIPELINE ROUTES

ROUTE	Geo./ Seismic	Water	Air	Fish/ Wildlife	Veg.	Visual	Archeo.	Land Use	Socioec.	Total
ELK HILLS/ COALINGA	6	4	3	5	8	7	7	7	7	54
ELK HILLS/ PORT HUENEME	3	4	3	4	6	6	6	6	7	45
ELK HILLS SOHIO	3	7	9	6	5	5	5	5	7	52

Rating:
1 = Poor
4 = Fair
7 = Good
10 = Excellent

Opposition from State authorities and environmental groups can be expected to all three routes, but the two routes imposing on the coastal zone may be the target of the strongest objections. Because the Navy, with its Congressional directive, may ignore State and local municipality grievances, the only method to successfully delay or halt the construction probably would be through litigation in Federal courts. However, the Estero Bay and Avila Beach laterals to the Coalinga line may be subject to State intervention as they are private industry operations in and/or affecting the coastal zone.

With an expected glut of crude oil in California in 1978 while the balance of the nation may suffer shortages, the completion of any one of the three routes, will be of significance in meeting the Nation's energy needs and developing a lasting Federal self-sufficiency program.

(12)

FEDERAL POWER COMMISSION
WASHINGTON, D.C. 20426

June 14, 1977

Office in Charge of Construction
Naval Facilities Engineering Command
Contracts
Elk Hills, P. O. Box 40
San Bruno, California 94066

Dear Sir:

I am replying to your request of April 21, 1977, to the Federal Power Commission for comments on the Draft Environmental Impact Statement for the Naval Petroleum Reserve No. 1, Elk Hills, Tupman, California. This Draft EIS has been reviewed by appropriate FPC staff components upon whose evaluation this response is based.

The staff concentrates its review of other agencies' environmental impact statements basically on those areas of the electric power and natural gas industries for which the Federal Power Commission has jurisdiction by law, or where staff has special expertise in evaluating environmental impacts involved with the proposed action.

Although there are few comments on the environmental adequacy of this statement, we suggest that consideration be made of portions of the basic proposal and alternatives for marketing the produced crude petroleum.

In the President's National Energy Plan, summary page XVIII, it is stated that:

> "production from Elk Hills Naval Petroleum Reserve would be limited to a ready reserve level at least until the west-to-east transportation systems for moving the surplus Alaskan oil are in place or until California refineries have completed a major retrofit program to enable more Alaskan oil to be used in California."

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The Draft EIS, however, being guided by Congressional directive, PL94-258, suggests the immediate development of the Reserve with conveyance alternatives and rapid expansion.

Alaskan oil, which will be available for delivery to the lower 48 states at the end of 1977, will probably be delivered through the west coast facilities. Available oil is in excess of the present west coast handling facilities and market requirements. a

The Federal Energy Administration (FEA) is presently charged with locating and developing petroleum storage facilities as part of the Strategic Petroleum Reserve Program. This program basically entails the locating of suitable underground storage for crude petroleum in depleted salt domes, limestone cavities and abandoned excavations.

The use of the Elk Hills field as a Strategic Reserve might prove to be more in accordance with the National Energy Plan and this usage should be evaluated as an alternative.

The DEIS conveyance Alternative No. 1 would employ the proposed SOHIO conveyance system. The SOHIO Pipeline project is now pending before the Federal Power Commission. Comments on the merit of this alternative would not be appropriate at this time. b

Conveyance Alternative No. 2 suggests a pipeline from Elk Hills to Port Hueneme. This would require 31 miles of new pipeline and the conversion of 53 miles of existing natural gas pipeline with terminal storage and marine export facilities.

Several applications are pending before the Commission for the construction of marine terminals at Port Hueneme/ Oxnard as well as other locations for the importation of petroleum and liquefied natural gas (LNG).

Although the proposed development of the Naval Petroleum Reserve was directed by Congress under Public Law 94-258, c

we believe that conditions and National energy goals have changed sufficiently so that the proposed action as presently envisioned may no longer be beneficial.

Thank you for the opportunity to review this statement.

Sincerely,

Jack M. Heinemann
Advisor on Environmental
Quality

(13)

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Air Resources Board
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State Water Resources Control Board
Regional Water Quality Control Boards
Energy Resources Conservation and Development Commission
California Coastal Commission
California Conservation Corps
State Coastal Conservancy

THE RESOURCES AGENCY OF CALIFORNIA

SACRAMENTO, CALIFORNIA

JUL 6 1977

John I. Dick-Peddie
Captain, CEC, USN
Officer in Charge of Construction
Naval Facilities Engineering
Command Contracts, Elk Hills
P. O. Box 40
San Bruno, California 94066

Dear Captain Dick-Peddie:

The State of California has reviewed the Draft Environmental Impact Statement (SCH 77050313) on transport alternatives from the Elk Hills Naval Petroleum Reserve which was submitted to the Office of Planning and Research (State Clearinghouse) within the Governor's Office. The review fulfills the requirements under Part II of the U. S. Office of Management and Budget Circular A-95 and the National Environmental Policy Act of 1969.

The review was coordinated with the Departments of Conservation, Navigation and Ocean Development, Fish and Game, Parks and Recreation, Water Resources, Food and Agriculture, Health and Transportation; the State Water Resources Control Board; the San Francisco Bay Conservation and Development Commission, the State Energy Resources Conservation and Development Commission; the Public Utilities Commission; the Air Resources Board; the Coastal Commission and the Division of State Lands.

Under Public Law 94-258, April 5, 1976, Congress directed the Secretary of Navy to secure pipeline capacity for 350,000 barrels per day of crude oil from Naval Petroleum Reserve No. 1 in the Elk Hills area. In addition, crude oil production at the reserve is to proceed at the "maximum efficient rate" for a period not to exceed six years after which production may be continued by the President. The subject draft EIS analyzes the impact of three alternative conveyance systems; (1) "Elk Hills to Coalinga", (2) Elk Hills to Port Hueneme , and (3) Elk Hills to SOHIO Pipeline Connection."

Depending on ultimate crude oil production levels and route selection, Elk Hills development could have serious consequences in California relative to: availability of natural gas transmission systems critical for delivery of gas to California from the Southwestern United States; in-state natural gas supply; air quality; coastal resource management; San Francisco Bay planning; planning for vessel traffic; offshore facilities and oil spill response; inland habitat values; and the state's ability to market its own heavy crude oil in a time of heavy regional surplus. a

It is critical, therefore, that the Navy's EIS fully analyze the degree to which each of these important state interests may be compromised by Elk Hills development and transportation, and identify all possible measures that might be taken in route selection and design to eliminate or minimize adverse effects to the state while still serving national goals. b

As a final general comment, the President's proposed National Energy Plan calls for bringing the Elk Hills Reserve up to a stand-by, operational condition, with an indefinite production ceiling of 80,000 barrels per day. The Navy's EIS should clearly discuss the proposal, and identify any ways such a program might affect crude oil transportation and decision-making. c

MARKETING CONSIDERATIONS

A thorough analysis of the potential market for crude oil produced in the Elk Hills Reserve should be presented in the Final Environmental Impact Statement (FEIS). The west coast will have an oil surplus by the time the proposed Elk Hills oil is scheduled to come on line. Elk Hills oil will compete with oil produced from the Alaska North Slope and from foreign and various domestic areas. d

The Navy and others should not make final decisions regarding the Elk Hills Reserve and selection of transportation facilities until the market potentials and constraints are thoroughly documented. It seems axiomatic that evaluation of alternative transportation proposals can proceed only upon a full understanding of where the crude oil will be needed. If adequate markets are not found then congressional action may be advisable to modify the directives assigned to the Navy. e

The market analysis in the Final Environmental Impact Statement should address the following:

1. The marketing relationship of Elk Hills crude to the anticipated surplus of Alaskan North Slope crude. f

2. Adequacy of existing pipelines going north, south and west from the Central California area to handle crude flows anticipated in each of these directions. g

3. Effects on existing and anticipated oil transportation activities in and around California coastal and estuarine ports.

4. The effects of Elk Hills crude availability on marketability of existing California in-state production. h

5. Clear conclusions as to which of the proposals, if any, best meet the market supply needs of the State, Navy and Nation. i

PRODUCTION

Maximum Efficient Rate

The Draft EIS points out that the Navy is in the process of preparing a separate Draft EIS on the 'production phase' of the Elk Hills Reserve Project. It is difficult to evaluate the transportation alternatives DEIS, however, without having first seen the DEIS on the production phase. For example, it is assumed in the transportation phase DEIS that the "maximum efficient rate" for Elk Hills petroleum production will be discussed in the "Production DEIS". When that rate has been determined, planning for the conveyance systems may have to be revised significantly. j

Need for Increased Natural Gas Production

The Draft EIS does not adequately consider the alternative of placing more emphasis on production and sale of natural gas instead of oil, and the associated differences in environmental impacts. As you are aware, California is facing the prospect of critical shortage of natural gas in the early 1980s. The state may become highly dependent on liquefied natural gas from both imported and domestic sources. Further, the South Coast Air Basin may become increasingly subject to temporary emergency air pollution episodes, during which there are particularly acute needs for clean-burning fuels such as natural gas. The possibility of Elk Hills natural gas being developed and offered for sale, whether on a sustained long-term basis, on a sustained basis for a definite period, or on an emergency basis, should therefore be fully evaluated in the Final Environmental Impact Statement. There should be a complete description of (1) available natural gas transmission facilities out of the Elk Hills Reserve fields; (2) the additional transmission facilities that would be necessary to connect with existing utility transmission lines; and (3) the ability of existing transmission lines to accommodate additional volumes of natural gas. k

Shallow Zone Production

The DEIS indicated that oil would be produced from both the lower (Stevens) and the upper (Shallow) zones of the Elk Hills Reserve. l

Because of the West Coast market glut of heavy oil, the similarity between the crude from this zone and the Alaskan crude, and California's interest in protecting its own in-state producers of heavy oil, the Navy should consider not producing Shallow Zone crude at this time. Conversely, there is a critical need for the light, lower-sulfur Stevens Zone crude. Since each reservoir is a separate geological entity, and since the enabling legislation is not specific as to the type of oil to be produced, such a consideration could be implemented. l

PIPELINE CAPACITIES

Increased Use of Existing Pipelines

Perhaps the most effective mitigation measure available to the Navy in this project is full use of existing pipelines. The DEIS fails to develop the information necessary to evaluate this measure.

The Final EIS should not only inventory existing vacant pipeline capacity that might be used, but should also address the possibility of increasing the throughput capability of existing lines with the addition of pumping stations and heaters. A great deal of information concerning the expansion capability of major crude trunk lines has been brought together by the Santa Barbara County-Ventura County Joint Industry/Government Working Group Study, studying the feasibility of land-pipeline transportation of offshore oil. They have estimated that through the addition of pump and heater stations to compensate for viscosity requirements and pressure limitations of the existing lines a maximum surplus capacity of 216 thousand barrels per day can be achieved within existing trunklines leaving the San Joaquin Valley. The actual feasibility of this approach, however, cannot be determined until a more thorough assessment has been made, and that should be done in the FEIS. m

Use of SOHIO Pipeline

The DEIS states that the Elk Hills-SOHIO Pipeline Connection Conveyance System would be infeasible unless Phase II of the SOHIO Project were implemented. The DEIS assumes Phase II to be in operation by 1982, but indicates that the Elk Hills Project would precipitate an early decision to convert the second El Paso Natural Gas Pipeline to SOHIO use for west-east crude oil transport. This is an issue of great concern to California. n

Although most natural gas scenarios developed by California state agencies indicate that Phase I of the SOHIO Project can be implemented without serious restriction of the state's ability to receive natural gas through the El Paso System from the Southwestern states, there are numerous strong arguments against commitment of a second of the six natural gas pipelines to oil use. In recent weeks, in particular, discussion of the possibilities of major new gas supply increments California might receive from o

Mexico has underscored the importance of the El Paso delivery network during the early 1980s. Not only is it presumptuous to assume any particular timetable for the abandonment of the first El Paso gasline for crude oil (since that issue has not yet been decided by the Federal Power Commission), but it is entirely too soon to make findings regarding probability of abandonment of a second El Paso pipeline to accommodate the proposed SOHIO Phase II. It is worth noting here that abandonment for Phase II implementation would require a separate EIS, and separate permits and approvals from all concerned agencies. The Elk Hills transportation FEIS should more directly address these points.

The DEIS on the SOHIO Pipeline Connection System states that from the 2.0 million barrels Cajon Tank Farm, crude will be able to flow by gravity into the SOHIO pipeline at Colton at a rate of up to 1.2 million barrels per day. This raises two questions. First, it is not known (and the FEIS should state) what maximum pressures the proposed converted Southern California Gas/El Paso Natural Gas Pipeline is capable of enduring. Second, in addition to the Elk Hills crude the SOHIO pipeline will be already carrying a throughput of up to 500,000 barrels per day from Long Beach to Midland, Texas. It is questionable, therefore, whether the SOHIO pipeline, which is rated at 500,000 to 600,000 barrels per day, will be able to handle the peak delivery rates anticipated. If, as a common carrier the SOHIO pipeline must allow Elk Hills crude to enter the line and pre-empt delivery of SOHIO crude from Long Beach at recurrent intervals, there may be a need for additional storage capacity in the SOHIO Project at Long Beach. p

Common Carrier Provisions

The FEIS should include additional discussion as to how the Navy intends to implement and enforce the 'common carrier' provisions of P. L. 94-258 as they pertain to the various pipeline systems. q

AIR QUALITY

Analysis of the potential Air Quality effects of the Elk Hills project remains the most difficult aspect of the environmental review. The severe air quality problem in the South Coast Air Basin, and the worsening air quality in the Ventura and Santa Barbara areas, are well known. These are health-related, not merely aesthetic, environmental issues. The Navy should be concerned to take every possible precaution to aid, rather than undermine, California air quality strategies, and the FEIS should reflect such a commitment. r

There are three major areas of concern which must be more adequately addressed in the final EIS. These are (1) Increased emissions resulting from transport and handling of oil. (2) Potential natural gas supply reduction to California resulting from proposed SOHIO inter-tie. (3) Potential for trade off strategies to reduce or eliminate net project emission, such as development of natural gas supplies at Elk Hills. s

Increased Emissions

Transportation of crude oil from Elk Hills directly to Port Hueneme or to Avila Beach and Estero Bay through the Coalinga Route would cause a substantial increase in emissions from transportation operations, storage tanks, tanker loading, tanker transits, and tanker unloading. This is particularly serious at Port Hueneme, Ventura County, where air quality standards for oxidant are frequently and widely exceeded now, and where the Draft EIS estimates that oxidant concentrations will increase by 36% if the Port Hueneme system is selected. t

Accordingly, the final EIS should include the following:

1. a specification of strong mitigating measures proposed to minimize emissions. For example: (a) storage tanks should be capable of complying with emissions adopted by the State Air Resources Board. Fixed roof tanks should not be used. Tanks should be equipped with floating roofs with primary shoe-type seals and secondary seals which extend from the roof to the shelves; and (b) tanker loading control techniques should be used similar to those required by Santa Barbara County at the ARCO Elwood marine terminal in granting conditional approval. u

2. a specific tabulation of total project emissions in each county; v

3. a listing of the emissions anticipated from storage, loading, and unloading operations at all ports potentially involved;

4. a listing of emissions anticipated from tankers in transit in shipping lanes off the South Coast; and

5. a county-by-county listing of daily, annual, mean and maximum ambient emission levels expected both pre- and post-project. w

SOHIO Inter-tie

As indicated above, Phase II of the proposed SOHIO project (which could be part of the SOHIO Route) would include abandonment of an additional pipeline presently carrying natural gas to the State of California. If this were to occur, California's natural gas supply would decrease, resulting in an increase in air pollution in the state. x

The draft EIS does not address this potential air quality problem resulting from SOHIO Inter-tie. The final EIS should present a thorough analysis of the possible effects to the state, drawing where possible on the SOHIO Project EIR and EIS documents. y

Tradeoffs Strategies

The final EIS should discuss all possible mitigating measures, including possible 'tradeoff strategies', such as allowing commercial sale of natural gas production from Elk Hills reservoirs. z

FISH AND WILDLIFE

Regardless of which route is chosen from the Elk Hills Reserve, the pipelines and associated activity will have negative effects on wildlife unless more extensive mitigation measures are identified in the FEIS and then incorporated in the project. aa

Rare or Endangered Species

In areas where kit fox dens are likely to be disrupted by pipelines or tank settings, specific mitigation measures must also be discussed and incorporated in the project. These should include provisions for pre-project trapping and transplanting of animals. The Port Hueneme alternative would have substantial impact on the San Juan kit fox population immediately east of the city of Taft. This area is heavily used for denning by the kit fox. bb

More complete surveys to establish the presence, absence or population density of the bluntnosed leopard lizard should be conducted on all areas affected by all alternatives. Any alternatives selected should include mitigation for lost leopard lizard habitat. The most significant potential mitigation strategy would be to place all project facilities on currently developed land. If leopard lizard habitat must be included within the project area, mitigation efforts should include purchase and preservation of threatened habitat occupied by leopard lizards. cc

Big Game Species

The SOHIO Pipeline Connection route crosses the Tejon Ranch properties, which are inhabited by a large population of deer and an increasing herd of Rock Mountain Elk. If this alternative is selected, there are some important mitigation or enhancement measures not considered in the DEIS. The project right-of-way could provide an excellent opportunity to improve the habitat for both of these species, as follows: (a) selective revegetation of the right-of-way with plant species that would prevent regrowth of dense brush could provide a more diverse food selection and more habitat 'edge'; (b) proper fencing of the right-of-way plantings would allow use by deer, and exclude undue competition from domestic livestock. (c) an all-weather project road adjacent to the pipeline would enhance commercial deer hunting operations on the ranch by improving hunter access to areas now relatively inaccessible, and would provide the means to better utilize the annual surplus of deer from the Tejon deer herd. dd

The FEIS should identify and evaluate such mitigation measures.

OIL SPILLS

The alternative transportation routes present variant hazards of oil spill. All three system options pose problems of onshore pipeline breaks, valve leaks, etc. The Port Hueneme option, and to some extent the Coalinga option, offer similar onshore spill risks, but these also pose substantial risk of spills at loading and unloading marine terminals and along the coast at sea. It is difficult to tell from the Draft EIS whether or not appropriate mitigation measures are incorporated into the project to reduce, prevent, and react immediately to oil spills and breakages of pipelines. ee

Onshore Pipeline Spills

The FEIS should discuss (1) the minimum response time in the event of a major pipeline break; (2) the amount of oil that will be released in the time between notification of the break and the closing of the appropriate manual block valve; (3) the amount of oil that would escape from the line even after the valve closed; and (4) the natural and wildlife resources along the path of the route that are most susceptible to damage resulting from an oil spill; and (5) clean-up techniques and capability along each route, particularly in areas near vulnerable resources. ff

An analysis by the Office of Planning and Research indicates that 90% of the equipment-related ruptures of buried lines occur on lines that are buried less than 40 inches from the surface. The draft EIS indicates the pipelines will be buried at 36 inches instead of 40. The FEIS should consider the greater depth, and evaluate the cost-effectiveness of such a measure. gg

Offshore Spills

Use of either the Port Hueneme option or the Coalinga option with a spur to the Central California coast adds the possibility of coastal oil spills during marine loading, vessel transit, or offloading in San Pedro Harbor or the San Francisco Bay system. The FEIS should discuss (a) oil spill probabilities at the various locations and along the vessel routes, (b) the natural and wildlife resources most vulnerable to spills from these operations; (c) anticipated oil spill trajectories; and (d)the adequacy of the response capability (both containment and clean-up) at critical points.

Much of the information necessary to such discussion is available in the SOHIO EIR and EIS documents just completed, and in the draft Outer Continental Shelf study nearing completion in the Governor's Office of Planning and Research.

VESSEL TRANSPORTATION

The DEIS gives consideration to the increased shipping traffic associated with any marine aspect of the various alternatives.

The report seems to assume, however, that because of strict inspection requirements for American vessels, only safe vessels will call at the coastal ports. This assumption is undercut by two factors. First, given the anticipated full use of the available fleet of small coastal tankers distributing the West Coast crude oil surplus over the next three to four years, it is not clear that an adequate number of such tankers will be available to serve Port Hueneme. California is concerned that if the Navy should determine that insufficient tankers are available to distribute the Elk Hills crude oil at currently mandated production rates, substandard World War II vintage tankers would be called back into service for use along the coast. Second, existing or anticipated U. S. Coast Guard inspection programs intended to maintain clean operations could be overwhelmed by the four-fold increase in tanker traffic now anticipated in the immediate future.

The possible use of older tankers and the difficulty anticipated in establishing adequate inspection programs thus raises many concerns regarding air pollution problems and oil spill risks that should be more fully addressed in the FEIS.

Additional consideration also should be given to interaction between existing civilian and Navy ship traffic within the inner harbor. The FEIS should provide a clear description of vessel traffic measures to be used at Port Hueneme, San Pedro Harbor, Avila Beach and Estero Bay.

SEISMICITY

It cannot be determined from the Draft EIS whether or not appropriate seismic and other geological studies have been conducted. This information is critical not only to insure design and engineering adequate to protect the integrity of the delivery system, but also to identify the risk of crude oil spills, the need for mitigation measures, and the need for specific spill response capabilities. hh

The final EIS should indicate:

1. all earthquakes that traverse the proposed pipeline routes; ii
2. their epicenters, magnitudes, accelerations and other relevant characteristics; jj
3. facilities design criteria used relative to seismic safety; kk
4. types of soil and geology and overall foundation conditions in or near any harbor where tanks and pipelines will be located; and
5. probable need for mainland lock-valves, preferably remote controlled, at the Los Gatos Creek Pipeline crossing and at other points where pipeline crosses are at suspected or known fault zones. ll

STATE AGENCY JURISDICTION

The FEIS should provide a clear, detailed description of the jurisdictions of both the California Coastal Commission and the State Lands Commission, and should identify the relationship of the Port Hueneme Project alternative and the Central California Coast Spur of the Coalinga Project alternative to these jurisdictions. The FEIS should clearly identify any conflicts with present programs and standards of these jurisdictions that the Navy considers unavoidable.

RELATIONSHIP OF ELK HILLS PLANNING TO STATE AND COUNTY OCS-RELATED PLANNING

In planning for transportation of crude oil produced offshore in the Santa Barbara Channel on state lands and on the Outer Continental Shelf, the Coastal Commission and Santa Barbara and Ventura Counties have focused heavily on use of land pipelines rather than tankers in transporting crude oil to market. This strategy is designed to eliminate both air quality emissions related to tanker loading, and oil spill risks associated with marine terminal operations and increased vessel traffic. One possible pipeline strategy under intensive examination proposes use of the same natural gas pipeline the Navy proposes to convert for use in transporting oil from Elk Hills to Port Hueneme. It would be ironic if the Navy were to select the Port Hueneme system at the same time the state and county had arrived at a strategy proposing use of the same pipeline flowing in the opposite direction. Not only would the Navy be precluding state and county efforts to clean up existing and projected OCS-related development, but it would be actually compounding coastal air and water quality problems by the same action.

The FEIS should specifically recognize the effects of the Santa Barbara-Ventura County Task Force to plan for on-shore pipeline transportation of crude oil produced off-shore, and should describe task force findings made to date. The FEIS should then discuss ways in which the Navy might coordinate its Elk Hills transportation efforts with the state and county offshore oil transportation work, and should clearly delineate areas of conflict.

ALTERNATIVES

As indicated previously the Draft EIS evaluates three major alternative conveyance systems from the Elk Hills area. The Final EIS should supplement the present analysis by presenting a cost comparison of alternatives. mm

The final document should also consider: (a) variations and combinations of the various alternatives; (b) full use of the condemnation process conferred on the Secretary by the 1976 Act to make the fullest possible use of existing pipeline, and minimize the need

for capital expansion; and (c) increased emphasis on natural gas production and sale, either in addition to or in place of emphasis on crude oil production, with resulting need for natural gas transmission facilities.

CONCLUSIONS

With respect to our areas of special concern, the state has the following specific recommendations:

1. The Final EIS should contain a thorough analysis and justification for the project based on regional and national marketing considerations, and on recent national energy policy developments. nn

2. The Final EIS should incorporate natural gas production and commercial sale as a project alternative. oo

3. The Navy and other decision makers should not approve the Port Hueneme alternative unless it is demonstrated that an improvement in air quality will occur in Ventura County and in the San Joaquin Valley Air Basin by the implementation of offsetting mitigation measures, and that natural gas supplies to the Mandalay power plant will not be jeopardized.

4. The Navy and other decision makers should not approve the Coalinga or SOHIO alternatives unless it is demonstrated that an improvement in air quality will occur in San Joaquin Valley Air Basin, at Avila Beach, Estero Bay and in San Bernardino County, as a result of offsetting mitigating measures. pp

5. The FEIS should discuss the relationships and possible conflicts between the Navy's planning for Elk Hills crude transportation and state and county planning for transportation of Santa Barbara Channel offshore oil, and should make every effort to resolve any conflicts in a manner consistent with attainment of state and county resource management goals.

The State of California respectfully requests that all concerns and issues described in these comments be given full consideration in the FEIS and in any future decisions implementing the mandate of the 1976 Act.

Thank you for the opportunity to review and comment on the Draft Environmental Impact Statement.

Sincerely,

Richard E. Hammond

Richard E. Hammond
Deputy Secretary for Resources

cc: Office of Planning and Research

(14)

STATE OF CALIFORNIA
EDMUND G. BROWN JR., Governor

AIR RESOURCES BOARD
1709 – 11th STREET
SACRAMENTO 95814

May 5, 1977

John J. Dick-Peddie
Captain, CEC, USN
Officer in Charge of Construction
NAVFACENGCOM Contracts, Elk Hills
P.O. Box 40
San Bruno, California 94066

Dear Captain Dick-Peddie:

Subject: Elk Hills DEIS; Your Reference H40: LGB: Sar, Ser H40/116

This is in response to your April 21, 1977 request for comments on your Draft Environmental Impact Statement (DEIS) "Crude Oil Transport Alternatives from Naval Petroleum Reserve No. 1."

Thus far, we have evaluated only the portions of the DEIS which deal with storage tanks. The fixed roof with internal floating covers and selected use of vapor recovery described in the DEIS are not the best alternative for your project for several reasons. A much better choice would be open-top floating roof tanks with primary metallic shoe-type seals and secondary seals extending from the roof to the tank shell which allow easy inspection and maintenance of the primary seals. This choice is: 1) safer, by reducing the chance of developing explosive mixtures in the system; 2) easier to maintain and 3) far less costly to operate.

If you have any questions concerning this matter, please contact Jim Loop at (916) 322-2739.

Sincerely,

Harmon Wong-Woo, Chief
Stationary Source Control Division

by,

Alan R. Goodley

Alan R. Goodley, Chief
Energy Projects Evaluation and
Control Strategy Development Branch 10-72

(15)

State of California THE RESOURCES AGENCY

Memorandum

To : Mr. Huey D. Johnson
Secretary for Resources
Resources Agency
1416 Ninth Street, Room 1311
Sacramento, CA 95814

Attn: Mr. L. Frank Goodson

Date : JUL 7 1977

From : STATE WATER RESOURCES CONTROL BOARD

Subject: REVIEW OF NOTICE OF INTENT: SCH 77050313
Draft Environmental Impact Statement - Crude Oil Transport Alternatives from Elk Hills

Review of the subject project has been coordinated with the California Regional Water Quality Control Boards - Central Coast, Los Angeles, Central Valley, Lahontan, and Santa Ana Regions. The attached comments have been developed.

ORIGINAL SIGNED BY
LARRY F. WALKER

Larry F. Walker
Executive Director,
Water Quality

cc: Department of the Navy
P. O. Box 40
San Bruno, CA 94066

Attachments (2)

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF PLANNING AND RESEARCH

Comments on Crude Oil Transport
Alternatives from Elk Hills

Recommendations:

1. The project sponsor should contact the individual Regional Boards responsible for the areas that the various proposed conveyance system routes pass through to determine if National Pollutant Discharge Elimination System (NPDES) permits, waste discharge requirements, and/or a certificate of conformance with federal water quality standards will be required. A map of the Regional Board boundaries is attached. Those portions of the project dealing with such things as dredging in Port Hueneme Harbor and the discharge of wastewater (including hydrostatic test water) to other than community sewers will require permits. Application for the relevant waste discharge requirements and permits must be made to the appropriate Regional Board at least 180 days before dredging or discharge is planned to begin. Early contact with the Regional Boards will aid the sponsor in obtaining the permits required, and will aid the Regional Board in obtaining any further detailed information it may require before it can accept the permit application. a

2. It is suggested that development of oil spill contingency plans be coordinated with Regional Board oil spill response plans in particular, as one of the appropriate state and federal plans. b

3. Small chronic leaks could be more damaging to groundwater aquifers than a larger, more visible spill. In porous areas the soil beneath the pipeline could be permeable enough to allow oil to penetrate downward faster than or equal to the rate at which it is leaking. This condition would be classified as severely destructive or irreparable with long-term degradation of large portions of the recharged aquifer. In these areas, an additional mitigation measure should include lining the pipeline trench with impervious material to force any potential fugitive oil to the surface as rapidly as possible and facilitate visual detection. Additional mitigation is suggested for rupture-prone areas near fault zones through the use of automatic and manual line valves. It is suggested that these mitigation measures be included as contract requirements in view of the potentially severe impact on water quality in areas heavily dependent on their groundwater resources. c

General Comments:

1. The discussion of wastewater disposal does not include a discussion of the applicability of "Effluent Limitations Guidelines for the Onshore Subcategory of the Petroleum Category" promulgated by the Environmental Protection Agency pursuant to the Federal Water Pollution Control Act Amendments of 1972. d

2. Should disposal sumps be considered due to the imposition of regulations on the disposal of wastewater pursuant to Comment No. 1, the Department of the Interior's NTL-2B regulations may have to be satisfied. e

3. The Draft EIS gives special attention to the difficulty of cleaning up oil spills in remote mountainous areas, and properly calls attention to the need for close monitoring of the pipeline to detect leaks. We concur that frequent (annual) hydrostatic testing of the pipeline may avoid oil spills from the pipeline and thereby prevent adverse impacts on water quality as a result of leaks. f

4. The Draft EIS presents interesting data on water quality conditions in Port Hueneme Harbor. However, the piling fauna survey, which was limited to 0.02^2m on each of five pilings, should not be taken as a complete description of the piling fauna, nor should the failure to catch fishes in the inner harbor be taken as indicating an actual lack of fishes there. This EIS does not represent a complete description of the marine environment that might be impacted by an oil spill. The description of the benthic fauna that would be affected by dredging is somewhat more complete than the other biological data.

5. The section dealing with Cultural Resources appears to be deficient. The Elk Hills Reserve area is recognized as an extremely important area both archeologically and paleontologically, having supported a very high prehistoric population density. Archeological and paleontological surveys for the Elk Hills Reserve area and the various conveyance routes should reflect the potential severity of these construction impacts to the resource and an adequate mitigation program must be provided to minimize or eliminate any adverse impacts identified. g

Specific Comments:

1. Volume 1, Page 1-5

   Supply a detailed description of how crude oil will be transported from Port San Luis and Estero Bay.

2. Page 1-14 & 20

   Provide details on new storage capacity at Estero Bay and Avila.

3. Page 1-60

The Standard line should have inlet/outlet monitoring equipment installed to provide faster leak detection time, especially since some of the line was installed in 1929.

4. Page 1-66

Middle paragraph states that tankers carried approximately 7 million barrels of petroleum or petroleum products at the Union terminal in Avila Beach during 1976, whereas on Page 1-18 it states that the throughput for 1976 was 8.7 million barrels. Please explain the difference.

5. Page 1-66

(Bottom paragraph.) A 25 percent increase in shipping activities for Port San Luis appears to be more than a "slight incremental increase". If another mooring was added, the increased risk for accidents would be greater than 25 percent.

6. Page 1-68

Wouldn't a loaded tanker accident be worse than a ruptured submarine pipeline? The spill could certainly exceed 1000 barrels.

7. Page 1-69

Even though the tanker traffic at Estero Bay is low compared to heavily trafficked ports, a 35 percent increase appears to be significant.

8. Volume 2, Page K-7

Groundwater storage in Cuyama Valley should be 40,000 acre-feet (out of a total storage capacity for the Santa Maria Sub-basin of 2,100,000 acre-feet) instead of 2,100 acre feet.

9. Volume 3

Little information is supplied regarding the proposed Cajon Tank Farm where 21 million gallons of oil would be stored. Measures to prevent spills and the extent of clean-up efforts in the event of spills should be provided. h

Attachment

REGIONAL BOARDS' ADDRESSES

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
P. O. Box 100, Sacramento, California 95801

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARDS

NORTH COAST REGION (1)
1000 Coddingtown Center
Santa Rosa, California 95401
(707) 545-2620

SAN FRANCISCO BAY REGION (2)
1111 Jackson Street, Room 6040
Oakland, California 94607
(415) 464-1255

CENTRAL COAST REGION (3)
1122-A Laurel Lane
San Luis Obispo, California 93401
(805) 549-3147

LOS ANGELES REGION (4)
107 South Broadway, Room 4027
Los Angeles, California 90012
(213) 620-4460

CENTRAL VALLEY REGION (5)
3201 S Street
Sacramento, California 95816
(916) 445-0270

Fresno Branch Office
3374 East Shields Avenue
Fresno, California 93726
(209) 488-5116

Redding Branch Office
1815 Sacramento Street
Redding, California 96001
(916) 442-6376

LAHONTAN REGION (6)
2092 Lake Tahoe Boulevard
P.O. Box 14367
South Lake Tahoe, California 95702
(916) 544-3481

Bishop Branch Office
633 North Main Street
Bishop, California 93514
(714) 873-7111

COLORADO RIVER BASIN REGION (7)
73-271 Highway 111, Suite 21
Palm Desert, California 92260
(714) 346-7491

SANTA ANA REGION (8)
6833 Indiana Avenue, Suite 1
Riverside, California 92506
(714) 684-9330

SAN DIEGO REGION (9)
6154 Mission Gorge Road, Suite 205
San Diego, California 92120
(714) 286-5114

(16)

South Coast
AIR QUALITY MANAGEMENT DISTRICT
METROPOLITAN ZONE
434 S. SAN PEDRO STREET, LOS ANGELES, CALIFORNIA 90013 • (213) 974-7505

May 6, 1977

Mr. Leo Bellarts
Engineering Director
O.I.C.C.
Naval Facilities Engineering
Command Contracts, Elk Hills
P.O. Box 40
San Bruno, California 94066

Dear Mr. Bellarts:

A cursory review of the Draft Environmental Impact Statement, Part 3 in reference to the Elk Hills-SOHIO conveyance system indicates a pipeline tank farm to be located in the Cajon Pass area. This facility is described as consisting of four 500,000-barrel floating roof tanks of internal floating cover design supported by a vapor recovery system designed to incinerate any vented hydrocarbon vapors.

Engineering data available to this District resulting from current technical laboratory and field tests indicate that the best available control technology (BACT) for this type of storage would be an open top floating roof tank of pontoon or double-deck design. The floating roof should be equipped with a metallic shoe (or equal sealing mechanism) and an independent secondary seal. This judgment takes into consideration operational time, changing throughput conditions, atmospheric variables, electrical requirements and conservation of hydrocarbons. a

Very truly yours,

Joseph A. Stuart
Executive Officer

Robert C. Murray
Supervising A. P. Engineer III
Engineering Division

RCM:sh

Copy to COH/09H 09HA H42

RECEIVED
MAY 9 1977
IN CODE H40

(17)

South Coast
AIR QUALITY MANAGEMENT DISTRICT
DISTRICT HEADQUARTERS
9420 TELSTAR AVENUE, EL MONTE, CALIFORNIA 91731 • (213) 443-3931

June 24, 1977

File No. B 70503

Officer in Charge of Construction
Naval Facilities Engineering
Command Contracts, Elk Hills
P. O. Box 40
San Bruno, California 94066

Dear Sir:

We have reviewed the Draft Environmental Impact Statement (DEIS) for the Elk Hills/SOHIO Pipeline Connection Conveyance System and have the following comments to offer.

Estimates in the DEIS of hydrocarbon emissions from the storage tanks and effects on oxidant air quality appear to be reasonable values. However, some of the potential emissions and air quality effects of the project apparently are not accounted for in the DEIS. a

According to Table B-2 a total of 23,600 horsepower in electric pumping capacity will be installed to service the pipeline. Although all of this capacity may not be utilized at the same time the electrical power requirements for maximum pumping will be substantial. This power will have to be generated by oil burning power plants resulting in significant increases in air pollutant emissions from those plants supplying the power. For example, 1000 kilowatt hours of energy generated by a plant burning 0.5% sulfur fuel oil results in the emission of 5.3 pounds of sulfur dioxide, 2.3 pounds of nitrogen oxides and 0.4 pounds of particulate matter. Thus, it is important that such emissions be calculated and listed for a project using large amounts of electrical power. b

Hydrocarbon emissions from pumps and valves along the pipeline are not shown in the DEIS and apparently no emissions at all are shown for the 30 miles of the pipeline lying within the South Coast Air Basin. This represents a serious omission in the DEIS because of critical air pollution problems already existing in the air basin. c

Table I-7, which contains a 1973 San Bernardino County emission inventory, does not indicate any units for the numbers listed. Finally, it would be most helpful in a DEIS for a project of this nature to include a table which summarizes all the emissions, by source and type, expected from the project. d

If you have any questions regarding this matter please call Thomas Mullins at (213) 443-3931, extension 241 or myself at extension 238.

Very truly yours,

J. A. Stuart
Executive Officer

John Danielson
Senior Air Pollution Analyst

TPM:la

(18)

SOUTHERN CALIFORNIA
ASSOCIATION OF GOVERNMENTS
600 South Commonwealth Avenue • Suite 1000 • Los Angeles • California • 90005 • 213/385-1000

June 14, 1977

John I. Dick-Peddie
Captain, CEC, USN
Officer in Charge of Construction
Naval Facilities Engineering Command Contracts, Elk Hills
P.O. Box 40
San Bruno, California 94066

RE: Elk Hills Crude Oil Transport System

Dear Captain Dick-Peddie:

The Elk Hills crude oil transport system could have considerable impact on the SCAG region and we appreciate the opportunity to review the DEIS. We wish to address aspects of the two alternative routes which will traverse the SCAG region, the Port Hueneme and Sohio Pipeline Connection systems. Prior to a decision on any of the three alternatives, SCAG would like to see some additional issues addressed during the environmental impact review process.

An important facet of the SCAG regional energy planning program is coordination of all types of energy-related activities. The Elk Hills crude oil transportation system is only one segment of the entire energy picture. We feel it is important to simultaneously focus on the natural gas resources at Elk Hills. a

Adopted SCAG policy is to encourage production of Elk Hills natural gas and make it available for intrastate sale (The Sohio Project, SCAG report adopted 4/7/77, p. 16). President Carter, in The National Energy Plan has also indicated support for Elk Hills natural gas production and proposes to seek authorization to limit oil production from Elk Hills to a ready reserve level and to study "the feasibility of producing and selling natural gas from Elk Hills to supply California markets." b

Gas transportation routes should be proposed, because these may influence and assist in determining the crude oil transport corridor. The DEIS does not mention natural gas production nor possible gas transport alternatives. Nor does it consider whether the Sohio east-west pipeline will have sufficient capacity for Elk Hills oil. This alternative may require additional abandonment of existing natural gas pipelines and thereby affect natural gas supply in California. The Elk Hills oil and natural gas transport alternatives need to be coordinated to facilitate energy planning for the SCAG region and the state. c

If the Sohio pipeline is approved, SCAG would favor an oil transport route connecting to this line. This proposal is favored over the Port Hueneme d

alternative which poses serious impacts on air quality, water quality and marine resources. While SCAG favors the Sohio route, this alternative could potentially conflict with the SCAG Conservation and Open Space Plan. The route will cross several locations defined in the plan as Areas of Regional Significance and Concern. These areas require special consideration and are planned as preservation and conservation zones. These include Big Wash Rock, Lytle, Cajon and Mescal Creeks, and the Desert Montane Transect (the transition area in Los Angeles County between the Mojave Desert and the San Gabriel Mountains).

Plans to acquire and maintain other significant zones include Antelope Buttes, Pinon Hills, and Little Rock Creek and Wash. It may be possible to cross these areas while adhering to the goals of the Conservation and Open Space Plan, but extreme care should be exercised. If a pipeline is located through these areas all mitigating measures should be explored to ensure consistency with conservation plans. It may be preferable to extend the pipeline slightly to bypass these areas where possible.

SCAG would like to see these issues considered during the EIS process. It is hoped that these comments will assist in the final decision on the Elk Hills oil transport route.

Sincerely,

Frank E. Hotchkiss
Director of Planning

FEH:EW:em

(19)

MEMBERS OF THE BOARD
PETER F. SCHABARUM
KENNETH HAHN
EDMUND D. EDELMAN
JAMES A. HAYES
BAXTER WARD

BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES
869 HALL OF ADMINISTRATION / LOS ANGELES CALIFORNIA 90012

BAXTER WARD
SUPERVISOR FIFTH DISTRICT

June 24, 1977

U.S. Department of the Navy
Director of the Real Estate Division
Post Office Box 727
San Bruno, California

Gentlemen:

I have reviewed the proposal to acquire rights of way for an oil pipeline extending from the Elk Hills Petroleum Reserve through the northern portion of Los Angeles County. As proposed, the route cuts diagonally across hundreds of privately owned parcels within the 5th Supervisorial District which I serve and I have recently received numerous complaints in this regard. a

Among the problems cited have been the damage to private property due to the diagonal alignment of the route, the impact of oil spills and the extremely limited opportunity available to affected citizens to make their views known in this important matter. b

I, therefore, request that the pipeline route through Antelope Valley be realigned to parallel existing public rights of way and property lines so as to minimize the impact of this proposed project on the citizens of Los Angeles County. I further request that every effort be made to minimize the potential occurance and impact of oil spills along the route. c

Sincerely,

BAXTER WARD

BW:wh

(20)

ENVIRONMENTAL IMPROVEMENT AGENCY

County of San Bernardino

ROBERT B. RIGNEY, Administrato
Environmental Improvement Agency

ENVIRONMENTAL ANALYSIS DIVISION
1111 East Mill Street, Bldg. 1
San Bernardino, CA 92415 (714) 383-2395

May 26, 1977

Officer in Charge of Construction
Naval Facilities Engineering Command Contracts
P.O. Box 40
San Bruno, CA 94066

RE: ENVIRONMENTAL IMPROVEMENT AGENCY'S PRELIMINARY COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS) - "CRUDE OIL TRANSPORT ALTERNATIVES FROM NPR #1" (ELK HILLS/SOHIO SYSTEM).

Dear Sir:

Thank you for the opportunity to review the Elk Hills Conveyance System Project and draft Environmental Impact Statement (EIS). The County of San Bernardino has long been concerned with the siting of energy facilities. Numerous transmission lines, pipelines, power plants, electrical substations and fuel storage facilities are presently located in our County. In addition, twelve major energy projects are now in various stages of review. These projects, individually and cumulatively, could have adverse impacts for San Bernardino County.

Realizing the potential consequences of these projects, in 1976 the Board of Supervisors of San Bernardino County prepared a comprehensive set of policies and programs relating to facility siting, contained in the Joint Utilities Management Plan (JUMP). JUMP delineates siting and design criteria for major facilities, including fuel storage facilities. Site compatibility maps, based upon 21 weighted social, cultural and economic siting variables, identify areas of constraint ranging from "least potential for adverse effects" to "prohibited by policy and law."

These Board-adopted policies and criteria have been used by the Environmental Improvement Agency's Planning Department and Environmental Analysis Division in formulating comments contained in this transmittal. The same policies and criteria are used to evaluate all energy projects. We believe that decisions on energy can be made in a judicious manner only if there is responsible local involvement. Among the range of County policies which relate to the Elk Hills Project are the following:

- The County shall consider the location of energy facilities in areas of minimal environmental and community impact as shown on the JUMP Siting Analysis maps. (Final local approval will be subject to a detailed submittal of information.)

- New pipeline corridors should be consolidated with existing pipeline or electrical transmission corridors except where there are technical or overload constraints or where there are social, aesthetic, significant economic or other overriding concerns.

- Consider social, aesthetic, economic, cultural, health and other formally expressed community concerns in reviewing and evaluating proposed facilities.

The Draft EIS is extremely well written and contains a generally complete and honest evaluation of the projected impacts. The EIA is particularly concerned about the following issues and would appreciate additional analysis where necessary:

The pipeline itself presents no conflict with adopted policies or codes of San Bernardino County. However, the proposed route for the pipeline is not in conformance with the County policy of consolidating energy corridors wherever feasible. We request your consideration of rerouting the line to consolidate it with other energy corridors, or rerouting it outside the county. **a**

The pipeline is within 10 miles of the San Andreas fault for about 120 miles along the route. We appreciate that you have designed the pipeline to resist earthquake forces. We would request however the submittal of a disaster plan to the County Emergency Preparedness Officer for review and approval. **b**

Of more concern, is the proposed Cajon Tank Farm. According to the JUMP Siting Analysis maps, it would be located partially in an area of "high potential for adverse effects" and partially in an area of "moderate potential for adverse effects." The Tank Farm is also incompatible with our standards because of its incompatibility with an eligible scenic highway and is highly visible which will attract the curious and the vandals with resulting safety hazards in a recreational area. Each of the tanks is **c**

300 feet in diameter and 40 feet high. Even though surrounded by an earthen berm, it will be difficult to screen the tanks in a manner compatible with the indigenous desert environment. The tanks will be visible from Highway 138. This is a heavily traveled road.

There are also recreational and economic considerations. Since highway 138 is designated as a priority #1 scenic highway in the Scenic Routes Element of the County General Plan this impact may be significant not only to the residents of Wrightwood and Phelan but also to visitors to our National Forest. The San Bernardino County National Forest is the most heavily used National Forest in the nation. The recreational industry which has developed to service those visitors is an integral part of the County enonomic base. Again, can this corridor be located in a less vulnerable spot? d

According to the EIR, "Although Federal agencies, including the Navy, are not required to conform to local land-use plans, policies, or controls, they commonly plan with an awareness of local issues and may go through an informal presentation of the project to local authorities." Only by coordination with the County processes can we take the necessary steps to prevent the development of incompatible uses. As stated in previous correspondence, and to insure coordination and elimination of future adjacent incompatible uses, the Cajon Tank Farm would require a General Plan Amendment and Location and Development Plan. General Plan Amendment applications are considered twice a year. The application deadline date for the next cycle is June 3, 1977. Any applications received after that date would be considered in the cycle beginning November 4, 1977, unless the Board of Supervisors initiated an emergency cycle. The process takes approximately six months. May we help you by an early filing for such considerations? e

It is our understanding that the Cajon route is one of three alternative routes being considered for the Elk Hills Conveyance System. By what criteria will the alternatives be evaluated? What is the time frame for the decision on the final route? How will the localities be involved in the decision-making process? f

The final EIS should also include an indepth assessment of the following specific issues and questions:

1) Would the Navy be granted an extension if its construction time limit beyond April 5, 1979 (established by PL 94-258) if the selected alternative required additional review or a longer construction period? g

2) In view of the present state and federal programs to reduce energy consumption to what degree will the anticipated reduced demand for refined oil on the west coast affect route selection? Will the timing of the final decision on the SOHIO project influence the possibility of the Cajon alternative? Can the SOHIO line be sized to accommodate Elk Hill oil flow without additional environmental assessment? h

3) In order to gain insight into long-term implications of transporting Elk Hills oil via pipeline (versus) tanker, the net energy consumption required for all three alternatives should be quantified. Also, the energy-related importance of determining the geographical distribution of Elk Hills oil relative to the distribution of Alaskan and mid-East oil within the United States should be assessed as concisely as possible. i

4) Are extensions of the project's six-year operational period by additional three year periods sufficiently probable enough to warrant the initial investment? j

5) Flows from potential oil spills and corresponding fire hazards should be plotted on topographical and/or other maps. k

6) The impact of oil spills on groundawater could be unacceptable and should be more thoroughly described - who or what agency makes the final decision on the degree of acceptability? l

7) The degree of increased ozone formation downwind of the Cajon tank farm induced by even the small amount of hydrocarbons leaked from either the tanks or the vapor recovery system should be quantified. m

8) Would tank farm personnel have "peace officer" status so that they can provide necessary security? n

9) The effects of small oil leaks may be more consequential than stated in the EIS and should be dealt with accordingly. o

10) The exact source of water for the Cajon tank farm's construction and operation should be determined soon and discussed in the final EIS. Would the Pearblossom-Hesperia extension of the California Aqueduct be a feasible source? p

11) The project's affect on local infrastructures and populations along the route may be more substantial than stated and therefore additional analysis should be included in the final EIS. q

In conclusion, we would like to thank you for the opportunity to review the project proposal and the draft EIS on the Elk Hills Conveyance System. As the draft EIS is further refined, we request that the County have further opportunity for review and comment.

ENVIRONMENTAL IMPROVEMENT AGENCY
Robert B. Rigney, Administrator

Lewis J. Walker

LEWIS J. WALKER, Environmental Review Officer
EIA/ENVIRONMENTAL ANALYSIS DIVISION

LJW:SH:CB:at

XC: Robert B. Rigney, Administrator, EIA
Kenneth C. Topping, Planning Director, EIA
Earl Goodwin, County Administrative Officer
Supervisor Mayfield
Supervisor Townsend

(21)

Antelope Valley College

Antelope Valley Joint Junior College District

3041 West Avenue K
Lancaster, California 93534
Telephone (805) 943-3241

June 23, 1977

Officer in Charge of Construction
Navy Facilities Engineering Command
Contracts, Elk Hills
P.O. Box 40
San Bruno, CA 94066

Dear Sir:

I am writing in regard to the Environmental Impact Statement concerning the Elk Hills/Sohio Pipeline Connection Conveyance system dated 18 April, 1977. My concerns are limited to the cultural resources element (archaeological study), and, in particular, that portion of the study concentrating on Antelope Valley: that portion of the pipeline between the Tehachapi Mountains and Cajon Pass.

I am a professional archaeologist with over sixteen years experience in California archaeology, the last ten of which have been centered in Antelope Valley. I am greatly disturbed by the statements made in the Environmental Impact Statement concerning this area. I have not seen the full report prepared by Holman and Chavez, so I will confine my comments and criticisms to the abridged comments contained in the Environmental Statement itself. I also have not seen the maps covering this phase of the report, so I must discuss generalities only. I would welcome an opportunity to see the full report including the maps.

To begin with, I would like to offer two major criticisms of the report. First, the Anthropology department at Antelope Valley College, which has amassed a considerable quantity of data concerning the archaeological resources of Antelope Valley, was not contacted in the preparation of the report. These data should be considered essential in any attempt to properly evaluate the resources of the area. a

Secondly, the entire western portion of Antelope Valley was apparently covered with snow during that part of the investigation. Any professional would agree that such a survey is practically meaningless for nearly any purpose. I am certain that Holman and Chavez must have pointed this out in their full report. b

Rec'd 6/24

In addition to the specific criticisms listed above, it may be pointed out that during the past ten years Antelope Valley College and the Antelope Valley Archaeological Society have located and recorded numerous archaeological sites in the near vicinity of the proposed pipeline. The Fairmont Buttes, mentioned in the Statement, contains 14 separate sites and may contain more which are currently unknown. An extensive discussion of this area can be found in the E.I.R. prepared for the Antelope Valley/East Kern Water Agency's D.A.W.N. project. A short paper dealing with the significance of the area was presented at the April, 1976, annual meeting of the Society for California Archaeology in San Diego. (Robinson, et. al., "Investigations at LAn-298: A Reappraisal of Cultural Traditions in Antelope Valley, California.") c

To the southwest of Fairmont Buttes, two archaeological sites (LAn-484 and LAn-488) represent a major archaeological complex consisting of major village middens, cemeteries, milling stations, and pictographs. A similar complex currently under investigation by this college is located southeast of Fairmont Buttes in the vicinity of "Sheas Castle" and Lake Elizabeth. Other major archaeological sites not mentioned in the report, such as Ker-303, LAn-485, Ker-514 to name only a few, are scattered along the foothill margins of Antelope Valley from the western Tehachapi Mountains south and east to Palmdale, California. d

The eastern portion of Antelope Valley (east of Palmdale) has been investigated primarily by the Antelope Valley Archaeological Society. I am certain that their records for this area reflect a situation as complex and diverse as do those of Antelope Valley College for the western Antelope Valley. e

The only conceivable conclusion which may be drawn from these data is that the portion of the Archaeological study including Antelope Valley is completely inadequate for any purposes involving the planning of the proposed pipeline. Both the field check in the snow and the literature and records search failed to turn up any more than a tiny fraction of the existing data. The construction of a major pipeline on the basis of these data would undoubtedly destroy a valuable portion of the archaeological resources of Antelope Valley. f

Research in recent years has proven Antelope Valley to be a very critical area in the study of California prehistory. Centrally located in southern California, the Valley represents an important zone of contact between three of the major culture areas of California: the desert, the San Joaquin Valley, and the southern California coast. The intensity of archaeological resources located within Antelope Valley combined with this position of significance creates a considerable value which must be placed on these resources. Their often fragile nature also demands very careful planning in advance of major construction efforts. The importance of thorough, intensive archaeological investigation associated with any form of environmental assessment cannot be stressed too strongly. g

I strongly urge you to consider these comments carefully in the future planning stages of this project. A complete and comprehensive archaeological assessment, including both literature/records search and field reconnaissance, will be necessary in the immediate future, not only to comply with existing laws and policies, but to insure a positive and productive approach to the preservation of a complex and valuable cultural resource. Currently, the archaeological resources of Antelope Valley represent a largely unknown factor in your Environmental Statement. It is very important that this situation be corrected. h

I am aware that much is yet to be done in the planning stages of this project, and I am, of course, aware that I am commenting without the benefit of having examined the full report prepared by Holman and Chavez. If I am jumping the gun with any of these comments, I apologize, but I am also trying to meet the June 29 deadline for comments. I sincerely thank you for your consideration of these concerns, and I would be pleased if you could find the time to respond.

Sincerely,

R. W. Robinson
Department of Anthropology

RWR/mlw

cc Mr. William Seidel, California State Historic Preservation Officer
Antelope Valley Archaeological Society
Kern County Archaeological Society
Charles Rozaire, Archaeologist, Natural History Museum

(22)

LEAGUE OF WOMEN VOTERS

OF SAN LUIS OBISPO, CALIFORNIA

June 28, 1977

Captain John I. Dick-Peddie
Officer in Charge of Construction
Naval Facilities Engineering Command Contracts, Elk Hills
P. O. Box 40
San Bruno, California 94066

RE: Comments on Draft Environmental Impact Statement for Crude Oil Transport Alternatives from Naval Petroleum Reserve No. 1, Tupman, California.

Dear Captain Dick-Peddie:

A. Publicity and Distribution of Document.

During the public hearing, May 23, 1977, in San Luis Obispo, we expressed our concern about the lack of prior publicity and the few copies of the Draft report in our County.

We thank you for the Navy's very immediate response. We received a copy of the Draft E.I.S. soon after and have made it available to others. We also received an immediate answer to our verbal comments.

B. Alternative 1, Elk Hills/Coalinga Convevance System.

1. Air Quality - We are very concerned about the increased hydro-carbon emmissions which would be generated by the proposal.

There are now no extensive studies about the air basin's characteristics such as wind and dispersion patterns and the inversion layer. The basin's pollution carrying capacity is unknown. San Luis Obispo County has only a few monitors operating and limited base line data. Projected pollution levels based on anticipated population growth have not been calculated.

No one knows how significant the pollution increment added by the proposed project will be to San Luis Obispo County. The subject document should recognize this lack of basic information and it should be taken into account when the final decision is made.

2. Growth Inducement - The increased tanker activity in San Luis Obispo County may have growth inducing effects not noted in the subject report. Since the early 1970's Estero Bay has been considered as a potential supertanker facility. Existing development with its concommitant social and economic infrastructure is often a compelling reason for siting like new activities. Will this 109 additional tankers annually be reason for more port development in the future ?

3. California Coastal Commission Plan - This alternative is in conflict with the CCC's main policies to preserve Avila Beach for recreational use and to give preference to overland oil transport routes.

4. Markets - The Draft E.I.S. states "There is now no firm indication that California demand for Elk Hills crude will approach its availability at full production." (p. Q-21, all volumes). Given this statement plus the projected West Coast Alaskan crude surplus, we question the need for immediate production of Elk Hills oil. a

Based on the subject document, we feel the impacts on San Luis Obispo County are unacceptable.

Sincerely,

Lauretta Rice

Lauretta Rice
President, League of
Women Voters of San Luis
Obispo

League of Women Voters
of San Luis Obispo
1638 Carla Court
San Luis Obispo, CA 93401

(23)

Serving Monterey, Santa Cruz & San Luis Obispo Counties

MISSION COAST LUNG ASSOCIATION

A Member of the Clean Air Coalition

June 22, 1977

1101 NORTH MAIN STREET
SALINAS, CALIFORNIA 93901
PHONE (408) 424-1220

7000 SOQUEL DRIVE
APTOS, CALIF. 95003

1216 MORRO STREET
SAN LUIS OBISPO, CALIF. 93401

Officer in Charge of Construction
NAVFACENGCOM Contracts, Elk Hills
P.O. Box 40
San Bruno, Ca. 94066

Dear Sir:

The Clean Air Coalition of San Luis Obispo is concerned about the proposal to sell Elk Hills oil and the subsequent alternative marketing routes under consideration. We recommend legislation to retain Elk Hills oil for emergency use only, designating it as a strategic ready reserve. With increased supplies from Alaska and the uncertainty of foreign supplies, we oppose the use of Elk Hills oil for current domestic consumption and support measures designed to make Elk Hills oil available in times of emergency. a

We do favor the development of a capability to transport such oil in times of emergency. In considering the three alternative routes described in your Draft Environmental Impact Statement (EIS), we support Alternative 3, the all-pipeline hookup with the SOHIO Long Beach pipeline to Texas because:

1. With the increased oil supplies on the California market due to Alaskan oil, it makes sense to move the oil to the East and Midwest as expediently as possible where oil is most needed.

2. All-pipeline routes, while more expensive initially, are less expensive in the longrun and less environmentally damaging in terms of future pollution loads and costs.

We oppose the Coalinga Conveyence system (Alternative 1) for the following reasons:

1. Increased hydrocarbon emissions would raise oxident levels in the county degregating air quality. While it is true the Federal Ambient Air Quality Standards for oxidents are presently exceeded in this county fewer times than in some areas of the state, the county is vunerable to air pollution for the following reasons: San Luis Obispo County has a small air pollution control office which is understaffed, a rapid rate of growth, and limited air quality data

at this time. There are few air pollution tradeoffs available and most importantly we have one of the lowest persistant inversion layers in the state.

Since the "Elk Hills/Coalinga Alternative would afford the least marketing flexibility of the three proposed transportation alternatives"(p. Q-18 EIS) and since full details of the markets serviced by this route "are not yet defined" (p 1-5), it does not make long range sense to unnecessarily degradate clean air to ship oil out to sea to "unknown" markets when the oil is needed in the Eastern states.

2. Increased tanker traffic, especially at Estero Bay, has associated with it an increased risk of tanker accidents and oil spills. Although the record for Estero and Avila is good, such a record is based on "the low traffic density" (p 1-69). The coast south of Estero Bay where oil spills would flow is environmentally sensitive because of recreational facilities, wildlife habitates and fishing grounds.

3. The pipelines from Kettlemen City and Junction Station to Avila and Estero Bay have been in existence for some time and do not reflect best available technology (ie., lack of inlet/outlet monitoring system on Standard Oil's line).

Furthermore, the Clean Air Coalition sees the following points in the Draft Environmental Impact Statement need more detailed analysis and further substantiation:

1. On page 1-5 the EIS states "transportation of the crude oil out of the Coalinga area, Avila Beach, and Estero Bay to markets is not included since full details of these markets are not yet defined." Before pipelines are considered and increased tanker traffic contemplated, it is important that specific plans for marketing this oil should be formulated.

2. On pages 1-18 and 1-20 the report speaks of additional storage facilities which may be needed at Avila and Estero Bay. However, there is no information concerning the technology which will be required to insure minimum hydrocarbon emission.

3. On page 1-64 there is an admission of the limited data available concerning oil spills "associated with small offshore terminal operations." The discussion needs to further pursue the relationship of increased tanker traffic at Avila and Estero Bay on the risk statistics.

4. On page G-7 it is stated that emissions from Estero Bay would be dispersed "owing to the complex winds in the area" and that "emissions from Estero Bay and Avila Beach most likely affect different areas." To our knowledge no extensive study of wind patterns and dispersal patterns have been done for this county.

(24)

June 27, 1977

To: Officer in Charge of Construction
NAVFACENGCOM Contracts, Elk Hills
P.O. Box 40
San Bruno, CA 94066

Subject: Draft EIS on Elk Hills Oil Pipeline Project, Comments.

It is requested that you consider the following as public comment on subject Environmental Impact Study.

The Save our Coast Coalition of the California Central Coast strongly opposes, in light of our understanding of today's need and the future projection of need for additional West Coast oil development, the construction of any oil pipeline from Elk Hills to a transportation terminal. We feel that the Elk Hills Reserve should not be brought into production in the forseeable future. But rather it should remain as a reserve, with the oil still in the ground, until a demonstrable West Coast need arises. Legislation must be enacted to reverse the decision made in 1976 to bring the reserve into production. a

If a choice were to be made between the three alternative routes delineated in the draft EIS, we feel that the tie-in directly with SOHIO's Long Beach-to-Texas pipeline makes the best sense from an environmental and air quality point of view. We have considerable concern over expanded use of oil tankers, particularly the larger ones, because increased tanker traffic means increased potential for oil spillage and greater attendant air pollution due to hydrocarbon emmissions. In other words, an oil transportation system that does not use tankers is preferable. b

Sincerely,

John P. Forrest

John P. Forrest
Chairman

cc: President Carter
Senator Alan Cranston
Senator S. I. Hayakawa
Representative Robert Lagomarsino
Representative Leon Panetta
James R. Schlesinger

10-96

(25)

FOUNDED IN 1892

SIERRA CLUB ~ SANTA LUCIA CHAPTER

June 8,1977

Officer in Charge of Construction
N.A.V.S.A.C.E.N.G.C.O.M.
Contracts Elk Hills
P.O. Box 40
San Bruno, Ca. 94066

Dear Sir;

The Executive Committee of the Santa Lucia Chapter of the Sierra Club strongly urges the restoration of the Elk Hills Navy oil resource to its original reserve status. The 1976 law which permitted use of Elk Hills oil was passed hastily during a period of crisis. The Environmental Impact Statement for the Elk Hills Reserve indicates that the potential market and use for this oil is uncertain especially with the project of North Shore oil and additional off-shore oil at Santa Barbara coming on line later this year. a

The proposed Elk Hills oil pipeline to storage facilities at Avila and Estero Bay and the additional tanker traffic are not only unnecessary but could be seriously detrimental to the environment. It would seem more logical to reserve the oil underground in its present location than to disrupt and possibly contaminate the environment of an ecologically valuable shoreline.

Preserving the Elk Hills oil for future defense needs makes far more sense than making it available to the whims of the current market. b

Respectfully yours,

Jan Clucas

Jan Clucas, Secretary
San Luis Obispo, Ca.

10-97

(26)

Sierra Club

Southern California Regional Conservation Committee

Please respond to :

1333 B. Brenner St.
San Diego, Ca.92110

June 27, 1977

Officer In Charge of Construction
Naval Facilities Engineering Command Contracts
Elk Hills, P.O. Box 10
San Bruno, Ca 94066

Dear Sir,

Herewith are the comments on the DEIS Elk Hills Oil Transport. The comments were compiled by Hamilton Parhydte, and Freeman Allen on behalf of the Sierra Club. If you have questions regarding their input we would be glad to respond.

Yours sincerely,

Susan Steigerwalt - Chair.
Southern California Regional
Conservation Committee

Sierra Club Regional Vice President

Review of Vol. 1. of DEIS Elk Hills Oil Transport, SOHIO Pipeline Conveyance System.

These DEIS do not make any statements relative to cost, or how the oil will be routed once it arrives at the pipeline terminals, or anything else which would contribute to a "big picture" understanding on how this project meshes with a total oil flow pattern to supply this country's oil needs in the future. a

Assuming that public law 94-258 will prevail and thus that the pipeline will be built and operated at capacity for a period of not less than 6 years, it becomes a matter of selecting the "best " route and determining that the pipeline is built with a minimum deleterious environmental impact. If SOHIO puts a pipeline into operation from Long Beach to the east, and if this pipeline has the capacity to absorb the Elk Hills output in addition to the oil throughput from Long Beach, then the pipeline from Elk Hills to Colton may be preferable. If this is not the case, then the pipeline from Elk Hills to Coalinga would be preferable. b

The pipeline to Colton is preferable since it eliminates marine pollution by providing a complete pipeline route east and eliminating transfers to and from tanker vessels. The entire length of the pipeline passes through or close to areas that are already heavily man altered. One concern for Colton pipeline route is that the transfer to Sohio terminal occurs in an area heavily impacted by air pollution, and all possible precaution should be taken to minimize air pollution. c

The entire length of the pipeline to Coalinga passes through or close to areas that are already heavily man altered. The capacity of the existing facilities at Avila Beach and Estero Bay would not have to be enlarged to handle the additional volume of oil. The DEIS makes a big point that maximum rate of air pollution would not be increased. However, it is obvious that the total volume of air pollution would be increased. (We estimate by approximately 170% using tanker loading rates given in DEIS.) The combined emission rates at Estero Bay and Avila Beach presently account for 54% of the county total emission rate of 3.133 pounds per hour.

We assume that the route of the proposed pipeline to Port Hueneme would generally follow Highway 33 from Taft to Ojai through the Los Padres National Forest. This route crosses the San Andreas Fault and passes close to two condor sanctuaries, and condor foraging areas. However, the area immediately adjacent to Highway 33 is mildly man altered over much of the route including roughly one-half the distance through Los Padres National Forest by the presence of farms and ranches. There are no existing major alterations in the category of high speed highways, railroads, aquaducts, high capacity electric transmission lines etc. The tanker facilities at Port Hueneme would have to be substantially enlarged to accommodate the throughput from the new pipeline.

Once a route is selected the remaining concern is that the pipeline be constructed to minimize environmental impact. Perusal of the DEIS suggested that the usual steps such as X-raying of welds; replanting, fertilizing, and watering of disturbed areas; re-establishment and stabilization of stream banks; etc. will be considered. d

The automated leak detection and shutoff system appears satisfactory, but once a leak is detected, the pumps stopped, and the shutoff valves activated, still the entire length of the pipeline must be visually checked to find the location of the leak. Adding more sensors along the pipeline could significantly shorten the time and effort required to locate a leak. e

The pipeline authorities plan to depend on local firefighting authorities to control any fire or explosion hazard. There is no mention of any plan to determine if these authorities have appropriate equipment and to reimburse the local communities the expenses of providing standby services and actual hazard combat. f

The proposed new storage tank construction involves fixed roof tanks with internal double sealed floating covers. For such seals to be fully effective the tanks must be constructed with flush welds to provide a smooth and continuous surface. g

The DEIS cannot be considered complete until the entire transport route to ultimate storage location and its environmental impact is examined, and until a no development impact is discussed. A sound route selection cannot be made without this information. h

The Navy may wish to consider a fourth alternative that fulfills the ultimate interest of Public Law 94-258., namely the creation of a military strategic oil reserve east of the Rocky Mountains, in a somewhat different manner. Specifically, recover the gas in the Elk Hills field, rather than the oil, supply the gas to local California public users, who would in turn provide an equivalent amount of oil to the Navy from other sources for the eastern oil reserve. The Elk Hills oil can be recovered at a later date by steam injection. Meanwhile the Navy has in effect increased the size of their strategic oil reserve and California has reduced its near term need for imported natural gas. i

Review of Part 3 of DEIS Elk Hills Oil Transport, SOHIO Pipeline Conveyance System.

There is doubtful justification for this project. If the SOHIO pipeline can handle the oil, this alternative could be acceptable, if modified by movement to the South, as mentioned on page 5-23 and 5-24. This relocation increases the danger of earthquake damage, but avoids the Condor range (apparently) and would have generally less environmental impact. There may be less hydrocarbon emissions in the South Coast Air Basin under this alternative since there would be less new construction at the SOHIO juncture. The alternatives which involves transfers to tankers are unacceptable because of the potential for air and water pollution in the tanker operations which seem so difficult to control.

This is one of three pipeline alternatives listed (a alternative for rail transport has apparently already been dismissed). The two other alternatives are shorter and produce less environmental insult to endangered species and vegetation, but have much greater potential for air pollution because they involve transfer to tankers and the construction and/or use of existing port facilities. Thus none of the choices to construct are very attractive.

The SOHIO alternative has the following major objections

1. It is several times longer than the other routes so that there will be more net use of land for the project.

2. The route includes ten miles in the critical California Condor habitat.

3. There is some intrusion on the Kit Fox habitat (an endangered species).

4. There will be long-term damage to oaks (in the Tejon Ranch area), to Chaparral in the Tehachapi Mountains, and to ancient creosote communities and Joshua trees.

5. The possibilities of ruptures of the pipeline in the Lytle Creek Santa Ana River areas could contaminate local water resources.

6. It is not clear that the SOHIO line will be in place and able to handle this added capacity without addition of 2nd phase which would require abandonment of 2nd natural gas pipeline which might adversely affect supply of natural gas to California.

These means of conveyance for increased production from Elk Hills field should not be provided because 1) the estimates of peak production from Elk Hills would not be sufficient to utilize all of its increased capacity and 2) there may be economic and other benefits in reserving this source of crude oil for a later date when shortages may be even more critical.

On page 9-1, Vol.3, the point is made that peak Elk Hills production will be only 97-99% of the total pipeline capacity, depending on whose estimate is used. The existing Elk Hills pipeline facilities can handle 150,000 B/D. Legislation mandated the additional 200,000 B/D, even though the total of 350,000 B/D exceeds production prospects, and an act of congress would therefore be necessary to stop the project. It is less than reasonable to develop our oil reserves now

at maximum rate when they are likely to be even more valuable to us in the future. The proven Prudhoe field reserves and Elk Hills both have a project life of another 20 years at full production capacity and the North Slope oil alone is more than we can handle on the West Coast at this time. t

There is one possible advantage of the Elk Hills Crude: some of it is low sulfur like the Indonesian crude we import, and will continue to import, because there is less pollution by sulfur dioxide when it is burned. (This applies only to the Stevens Zone crude). u

To comment on the contents of the DEIS itself:

The tank farm at Elk Hills will emit hydrocarbon (non-methane) at an estimated rate of 43.9 lb/hr. This amounts to 0.3% of the total hydrocarbon emission in Kern County, and will impact areas in the county which already fail to meet National Ambient Air Quality Standards many days each year. There is no modeling to predict what the impact will be on the more heavily impacted areas (for oxidant) such as Visalia. Therefore, we recommend that a vapor recovery system be included in this tank farm as is apparently already in use on other tanks at Elk Hills. v

There is a small tank (10,000 B) planned for the junction facility at the SOHIO pipeline. There is no mention of the emission from this tank which is in Colton. In fact, there is no mention of the air quality impact on the South Coast Air Basin. The major emissions in the SCAB would probably be from this tank, and it would probably not be large, but it is also in a very heavily impacted air basin, and deserves analysis. w

There is no analysis of the air pollution from secondary sources producing the energy to power the electric pumps. The magnitude and location of such emissions should be mentioned, together with the energy consumption for the pumping operation. x

LOS OSOS, CALIFORNIA 93401

Officer-in-Charge of Construction
NAVFACENGCOM Contracts, Elk Hills
P.O. Box 40
San Bruno, California 94066

Dear Sir:

In the consideration of the Elk Hills Oil Fields, we strongly urge it be returned to a reserve status to counter possible crisis in our energy supply. a

We also urge extending present pipeline systems to provideeastward overland transport of future supplies; more specifically, Alaskan oil. b

Respectfully,

George Taylor

GEORGE TAYLOR
Chairman
South Bay Conservation Group
Los Osos, California 93402

AtlanticRichfieldCompany

Transportation Division
515 South Flower Street
Mailing Address: Box 2679 - T.A.
Los Angeles, California 90051
Telephone 213 486 2533

Lodwrick M. Cook
Vice President

(28)

June 17, 1977

Officer-In-Charge of Construction
Naval Facilities Engineering
Command Contracts
Elk Hills P.O. Box 40
San Bruno, California 94066

Re: Alternative Pipeline Routes
from Naval Petroleum Reserve
No. 1 (Elk Hills)

Dear Sir:

In response to your notice of hearings and testimony on the captioned subject contained in the Federal Register, Volume 42, No. 82, the Atlantic Richfield Company submits the enclosed comment on the Draft Environmental Impact Statement for your consideration.

The Atlantic Richfield Pipe Line Company, already involved in transporting Elk Hills crude, has plans and programs for pipeline projects which would increase the capacity to handle additional volumes and open new markets for Elk Hills crude. A brief description of these systems is contained in the enclosure.

Atlantic Richfield Company thanks the Department of the Navy for this opportunity to offer commentary. If there is a desire for a more detailed discussion on any point, it can be arranged at your convenience.

Sincerely,

L. M. Cook by dcr.

Enclosure

10-104

WRITTEN COMMENT ON

DRAFT ENVIRONMENTAL IMPACT STATEMENT

CRUDE OIL TRANSPORT ALTERNATES

FROM NAVAL PETROLEUM RESERVE NO.1

ATLANTIC RICHFIELD COMPANY

TRANSPORTATION DIVISION

JUNE 1977

/1/

Atlantic Richfield appreciates the opportunity to comment on the Navy's plans for transporting Elk Hills crude. Our comments are aimed primarily at the potential for expansion of existing systems because their potential was not discussed in the Draft Environmental Impact Statement (DEIS).

Atlantic Richfield already plays an important part in transporting Elk Hills crude. Since the opening of the reserve last July, Atlantic Richfield has transported crude purchased by some of the successful bidders from Elk Hills to Bakersfield and Los Angeles. We offer a current capacity of about 45 thousand barrels per day (MBD) to Los Angeles area buyers in our 14-inch system. This system can be expanded to handle about 75 MBD of Elk Hills crude to Los Angeles. Should the Navy be willing to enter into a throughput agreement to support such an expansion, the 30 MBD additional capacity could be installed in 12 to 18 months at an expenditure of about $5 million. The estimated initial cost of this expansion increment is only 65% of the lowest cost (Port Hueneme) alternate in the DEIS. Although this expansion when added to expansion potential of other existing systems would not yield a capacity adequate to transport the additional 250 MBD, it does provide an opportunity to maintain production at higher levels until major west to east pipelines are in service.

In his proposed energy plan, President Carter has suggested that Elk Hills production be reduced to 80 MBD or to an amount needed for local consumption, during the projected West Coast surplus or until west to east pipelines are in service. We suggest that with a production rate restriction, consideration should be given to the availability of the 30 MBD expansion capacity of our 14-inch system.

Atlantic Richfield has several projects in various stages of development that can impact Elk Hills crude transportation.

*

FOUR CORNERS

The Four Corners Pipe Line Company, a wholly owned subsidiary, is pursuing plans to reverse its 16-inch trunk line which runs from Los Angeles to Aneth, Utah. The reversal, with initial capacity of 30 MBD, is expected to be completed early in 1978. Four Corners is connected to Atlantic Richfield's 14-inch system mentioned earlier. This connection will allow New Mexico refiners to bid on Elk Hills crude if they so desire. Moreover, the reversal will allow Elk Hills crude to move to strategic reserve storage on the Gulf Coast and to mid-continent refiners by connecting pipelines. The ultimate capacity of the reversed Four Corners system, planned for late 1979, is 140 MBD. Provisions will be made for maintaining the Stevens Zone crude separate from other high sulfur content crude.

/3/

*

TRANS MOUNTAIN

Atlantic Richfield is actively involved in plans to reverse Trans Mountain Pipeline. This system can supply crude to Northern Tier states which are losing traditional Canadian supplies. It is connected to Puget Sound refineries which have also lost their Canadian supply. By keeping the Stevens Zone crude segregated, the Navy could play an important role in the supply picture of Washington State and Northern Tier states. If the Stevens Zone crude can be delivered by ship to the Cherry Point dock of the Trans Mountain Project, it could partially displace sweet foreign crude currently being used by nearby refineries. Vancouver refiners, also connected to the Trans Mountain System, use sweet Albert crude which if displaced by Stevens Zone crude, could be available to Northern Tier states on an exchange basis. In order to take advantage of the Trans Mountain potential, the Port Hueneme alternate would be desirable. Port Hueneme also offers better flexibility than other alternates to reach other crude marketing areas, and is the lowest cost of the three. The environmental question of hydrocarbon emissions during tanker loading is recognized as a handicap of the Port Hueneme alternative.

*

TRANSPORTATION COSTS

A comparison of alternative project transportation costs was not noted in the DEIS. Overall economics and maximum revenue to a

the Navy will be enchanced by maintaining flexible transportation alternatives and by being in a position to offset some of the high cost sweet foreign crude imports needed by many refineries on the West Coast.

*

NORTH SLOPE

A correction on page 21, Appendix P, Coalinga alternative is noted. Atlantic Richfield's latest estimate is that Valdez Terminal receipts will be at 600 MB/D by August 1977, and will reach 1.2 MMB/D in January 1978. Thus, the effects of a West Coast crude surplus would be manifested before recognized in the DEIS. b

*

AIR EMISSIONS - STORAGE TANKS

Recent studies conducted by Chicago Bridge and Iron, and ongoing studies sponsored by the Western Oil and Gas Association (WOGA) indicate that API methods for calculating hydrocarbon emissions from floating roof tanks overstate the actual emissions. Use of secondary seals and other special features reduce hydrocarbon emissions to 10 or 20% of that calculated by using API Publication 2517.

REFINERS · MARKETERS · PETROLEUM PRODUCTS

(29)

BEACON OIL COMPANY

525 WEST THIRD STREET, HANFORD, CALIFORNIA 93230

AREA CODE (209) PHONE 582-0241

June 15, 1977

Officer in Charge of Construction
Naval Facilities Engineering Command Contracts Elk Hills
P. O. Box 40
San Bruno, Ca 94066

Dear Sir:

This has reference to your Draft Environmental Impact Statement (DEIS) for the construction of a pipeline to convey up to 250,000 barrels per day of crude oil from Naval Petroleum Reserve No. 1 (Elk Hills), Tupman, California, to market.

In your DEIS, our company is referred to as being located at Bakersfield, California.

Our refinery and main office is situated at Hanford, California, which is 90 miles north of Bakersfield.

Appreciate your adjusting your records to reflect our correct location.

Thank you.

Very truly yours,

BEACON OIL COMPANY

K. W. Bridwell
Manager of Supply

KWB:dk

(30)

Chevron U.S.A. Inc.
575 Market Street, San Francisco, CA 94105

D. L. Bower
President

June 29, 1977

Crude Oil Transport Alternates
From Naval Petroleum Reserve No. 1

Office in Charge of Construction
Naval Facilities Engineering Command Contracts, Elk Hills
Post Office Box 40
San Bruno, California 94066

Dear Sir:

Chevron U.S.A. is pleased to be given this opportunity to comment on the subject of pipeline systems being considered for transporting crude oil from Naval Petroleum Reserve No. 1 (Elk Hills).

The Naval Petroleum Reserves Production Act of 1976 requires that the Navy provide a crude oil transportation system capable of handling 350 MBD of Elk Hills crude by April 1979. This is incongruous with the requirement to produce at MER.

The Current Maximum Efficient Rate (MER) of production from the Elk Hills Field is expected to be substantially less than 350 MBD. Production experience since open-up has demonstrated a lower productive capacity than previously envisioned. The MER will probably decrease by 1980 because of ongoing production. It is our conviction that Elk Hills production cannot be substantially increased without detriment to ultimate economic recovery and that additional pipeline capacity may be uneconomic and unnecessary.

We strongly recommend that the Department of the Navy seek an amendment to the Naval Petroleum Reserves Production Act of 1976 modifying Congress' mandate to provide 350 MBD of pipeline capacity and request that the wording be changed to provide that pipeline capacity be that which is required for producing Elk Hills at MER. It should be brought to the attention of Congress that a sound MER of production has not yet been established through reservoir engineering studies and that continued production history will be necessary for expert consultants to derive an MER which will meet the mandate of the law.

Very truly yours,

D L Bower

DESERT WIDE REAL ESTATE, INC.

EVERY OFFICE IS INDEPENDENTLY OWNED

"The Experts"

OFFICER IN CHARGE
OF CONSTRUCTION,
NAVAL FACILITIES
ENGINEERING COMMAND
CONTRACTS,
ELK HILLS
P.O. BOX 40
SAN BRUNO, CALIF. 94066

Dear Sir,

After reviewing the Environmental Impact report on the oil pipe line between Elk Hills + Colton + receiving calls from irate property owners, I feel the pipeline can bypass improved property in Palmdale + be run through many flat areas we have here in the Antelope Valley, such as Ave. M, Ave. D, E, F, G, H. or follow Ave. P or existing road or utility easements.

Sincerly,
Kathy Harrison

Copy to
Congressman Ketchum

949 E. Palmdale Blvd., P.O. Box 459, Palmdale, Ca. 93550 • (805) 273-0949 (From Lancaster: 948-8300)

(32)

HUNT REALTY, INC.

EVERY OFFICE IS INDEPENDENTLY OWNED

"The Experts"

June 15, 1977

Mr. John I. Dick-Peddie
Officer in Charge of Construction
Naval Facilities Engineering Command Contracts
Elk Hills,
P.O. Box #40
San Bruno, California 94066

RE: Elk Hills Pipeline

Dear Sir:

As a Real Estate Agent, land and land owners are my business, and anything that affects them, affects me.

The manner in which your people have drawn the course of the proposed pipeline, seems to be one in which no consideration was given to the people the property affected. It is very possible that in some instances, the pipeline easements may destroy the value of property crossed, preventing its' further developement and/or developement of adjoining properties. In addition, small parcels that are severed from the main parcels will undoubtedly become weed-grown eye-sores further affecting future developement and land values.

It would appear that the pipeline crossed 75+ miles of property in the Antelope Valley, yet a Public Hearing was not held here, and I am told that one has been refused. Only the few who found out about this situation early enough to attend Hearings in Bakersfield and San Bernardino have had a chance to respond or ask questions like:

1) How deep will the pipeline be buried?
2) What restrictions will the Government put on use of land above the pipeline?
3) Can it be farmed?
4) Can roads or driveways cross it?
5) Can buildings be erected over it?
6) To whom can we appeal your discussion? Do we have a right to damages?
7) Are we to understand that the Department in Charge of placing the pipeline will also decide our Rights as Property Owners?
8) Cannot alternate routes using existing County, State or Government easements be considered or used?
9) Has consideration been given to consulting with local State or County Planning Commissions or Local Realty Boards regarding more feasible routes?

38801 No. 10th Street West, Palmdale, California 93550 • (805) 273-2131 (From Lancaster: 942-7733)

HUNT REALTY, INC.

REALESTATE NETWORK

EVERY OFFICE IS INDEPENDENTLY OWNED

"The Experts"

June 13, 1977

Letter to Mr. John I. Dick-Peddie

CONTINUED

PAGE 2 of 2

I certainly feel that the people most affected by this proposed pipeline should have a better opportunity to express their feelings regarding this matter. In other words, the least you could do is conduct a well publicized Hearing here in the Antelope Valley.

Hoping to receive proper consideration, I remain,

Respectfully yours,

Arthur Helsinger
Realtor/Associate

AH/ksd
cc: Congressman William M. Ketchum

38801 No. 10th Street West, Palmdale, California 93550 • (805) 273-2131 (From Lancaster: 942-7733)

(33)

BEN OMAN

[redacted]

PUBLIC RELATIONS
ADVERTISING
PROMOTION

June 8, 1977

OIC Construction
Naval Facilities Engineering Command, Contracts
Elk Hills
P. O. Box 40
San Bruno, California, 94066

Dear Sir:

I am writing in relation to the Elk Hills-to-Colton proposed oil pipeline thmough the Antelope Valley.

First, I am very much concerned at this pipeline cutting "catt-cornner" acro s thebeutiful high desert area without regard for private property! a

Second, I am concerned that it will come close to my home and I will be located within a potential spill area. b

Third, I am concerned that, according to Wm. James Dunt, who attended your hearing in Bakersfield, the Antelope Valley route seems to be the one you are most interested in spending our tax dollars on! c

Now, what do I suggest? I suggest exactly what Jim Dunt suggested--that the pipeline follo the existing road patterns or existing easements and go in an east-west direction or/and a north-south direction rath r than in a northwest-to-south-east direction. d

This would disrupt the least private properties in the Antelope Valley! There certainly must be pleaty of room along the roadside and along present easements for your fifty-feet-wide pipeline route!

And, don't tell me it would cost more money--as I am much aware of the complete disregard the government and its bureaucrats have for my and other citizen's tax money!

It'll cost us all a great deal more if the plan you have so poorly publicized is used.

I am the Real Estate Editor of the Antelope Valley Press, published in Palmdale(the only city in the Antelope Vally through which you plan to put the pipeline) and we are going to publicize your arbitrary decision to the hilt, so that you'll hear from a lot of persons in this area. I do hope you'll see fit to make the necessary changes! e

Very sincerely,

Ben Oman

BEN OMAN COMPANY
39182 NORTH 11TH STREET WEST
PALMDALE, CALIFORNIA 93550

H40
349

10-115

(34)

REALTOR®

Palmdale Board of Realtors, Inc.

38131 Sixth Street East, Palmdale, Calif. 93550
Telephone (805) 947-8000

June 27, 1977

Officer in charge of Construction
Naval Facilities Engineering Command Contracts
Elk Hills P. O. Box 40
San Bruno, California 94066

Attn: Captain John I. Dick-Peddie

Dear Capt. Dick-Peddie,

The Palmdale Board of Realtors would like to go on record in support of your concept of building a pipeline through the Antelope Valley. Certainly, the Environmental Impact would be minimal in comparison to the other proposed routes.

The route you have selected, however, should be altered in order to use existing easements held by county agencies, public utilities, or the state. This method may seem somewhat impractical now, but the far-ranging effect of drawing a straight line through the valley will result in many parcels of land being rendered useless. Perhaps if the Navy intended to purchase all the land so categorized and use it for storage, etc. We doubt that this would be feasible and therefore suggest you adopt a route utilizing county and state roadways along Avenue D, highway 138, all the way from the entry into the Antelope Valley and eastward to 200th Street East and then southerly toward Wrightwood. This route would take you partially through Edwards Air Force Base and certainly involve some savings in costs. a

Perhaps you can devise a better route along existing easements and rights of way. We would ask you to bear in mind the straight line route would probably cause innumerable problems for property owners along your proposed route. b

Certainly, our area needs the employment and would welcome the selection of a route through our Valley, but we would urge you to use care in selecting a route that would be least harmful to our residents and property owners. c

Sincerely,

PALMDALE BOARD OF REALTORS, INC.

Pete Dattilo, Jr.

Pete Dattilo, Jr. by ar
President

10-116

PD:ar

CHARLES W. QUINLAN
URBAN PLANNER • ARCHITECT A.I.A.

Officer in Charge of Construction
NAVFACENGCOM Contracts, Elk Hills
San Bruno, CA. 94066

Dear Sir:

This is a letter in opposition to the use of Elk Hills oil for current domestic consumption. As proposed in President Carter's energy plan, the oil should be used for emergency only. When the oil must be used, it should be transported by an all-pipeline hookup to the SOHIO Long Beach pipeline which connects to the Midwest and East. This method will be least environmentally damaging and, since Alaskan oil will more than meet west coast needs, it only makes sense to transport the oil by the safest method to other U.S. domestic markets.

Thank you for your interest.

Sincerely,

Charles W. Quinlan

Charles W. Quinlan
174 Del Norte Way
San Luis Obisoo, CA. 93401

(36)

June 14,1977

Officer in Charge of Construction

NAVFACENGCOM Contracts, Elk Hills

P.O.Box 40

San Bruno, Ca.,94066

Dear Sir:

It has come to our attention that oil from Elk Hills is to be moved out for domestic market use. We are also hearing that oil from the Alaska Pipeline will be flowing this month. Recent reliable reports say that world oil will run out sooner than we think, 5 years has been quoted.

Would it not be wise to continue the Elk Hills oil in its original status as a Naval Petroleum Reserve. If this oil must be moved for some reason not publicly known please direct it away from our beautiful central coast, we are supposed to have plenty of oil in California from the reports we read.

We hope we will read favorable reports on Elk Hills oil in the near future.

Best wishes with your work

sincerely,

E.Craig and Eileen P.Cunningham
8707 Casitas Rd.,
Atascadero,Ca.,93422

E. Craig Cunningham

Eileen P. Cunningham

cc Pres. Carter
James R.Schlesinger
Senator Alan Cranston
Senator S.I.Hayakawa
Congressman L.Panetta

June 12, 1977

Officer in Charge of Construction
Naval Facilities Engineering Command
Contracts, Elk Hills
P.O. Box 40
San Bruno, Calif. 94066

Dear Sir:

We are writing in regard to the Naval Pipeline, which is being brought through the Antelope Valley. We are very concerned Homeowners and our home is approximately 1/2 mile from the pipeline.

Our son will be attending a public school within 1/4 mile from the pipeline. We feel this will present a dangerous situation!

We feel it is unfair that Homeowners property will be cut through, and the Homeowners who are in the "Spill" area were not

even notified! This is not fair, this Valley has a lot of good people living here who care very much about their family and Homes. We were not even given the opportunity to Voice Our Opposition! If we have to live with this, we should have something to say about the route.

We think it is only fair that the pipeline follows existing easements, NOT cut across parcels of propesty!!

b

Respectfully,
Mr. Rodney S. Crase
Mrs. Edwina Kay Crase
38915 Dorholm Dr.
Palmdale, Calif 93550

(38)

June 23, 1977

Officer in Charge of Construction
Naval Facilities Engineering Command Contracts,
Elk Hills
P.O. Box 40
San Bruno, CA 94066

Dear Sir;

I believe that more consideration should be given to the location of your oil pipeline project from Elk Hills, to Colton. As to cost, now and in the future, we study what the project will do to our environment, the animals, birds, etc., because the environmentalists have gotten to us and had it mandated. The real problem is what the project does to the future of the area ten, twenty, fifty, seventy-five years from now, not just what the cost is today. a

To give you a little background of my concern, it is in the land development. I have been in the Escrow, Loan and Title Industry since 1943. In the Title Industry, I worked with Title Insurance & Trust Co. from 1950 to 1968 as a Title Searcher, Claims Adjuster and Title Officer. I am currently employed as the Loan Manager for the Antelope Valley with American Savings & Loan Association. Having been involved in the tremendous growth period of Southern California as a title man, I have seen the problems created by condemations and unknowledgeable easement takings by Federal, State and Municipal bodies. The greatest being indescriminate cutting of parcels of land. Many people feel because the land is vacant who can be hurt. As our population grows we need more space. Look back at areas like Orange County twenty-five years ago - would you have believed the growth there.

I have searched and examined easements, subdivisions and observed the tremendous costs involved in land development. Pipe line easements of the type you are working with have, without a doubt, been one of the greatest impediments to our society in that they create irregular unmarketable parcels of land, which eventually end up as state owned through forclosure of tax sales. This puts additional tax burdens on us, the tax payers as well as an unsightly piece of land that is unmarketable and a public menace. b

Please reconsider the route of the pipeline and place it as close to existing street and road easements as practical. It may mean an increase of costs now, but nothing like the costs will be many years from now which will be thousand fold. c

You, as a public servant, have been given a charge of being fully knowledgeable in what you should be doing. Your children and mine will have the cross to bear by our indiscretions. Please, consider me in your hearing in Palmdale; I would like to give my testimony.

Very truly yours,

Curtis J. Crawford
41606 N. 47th Street West
Quartz Hill, CA 93534
805/943-3130

cc: Congressman William M. Ketchum

Officer In Charge of Construction
NAVFAC, Contracts, Elbs Hill
P.O. Box 40, San Bruno, Calif 94066

I have learned that construction of an oil transport pipe line between Elbs Hill and Colton is in planning. Prints of proposed route indicate routing of the line approximately N60° westerly from the vicinity of Palmdale diagonally across the valley. Such routing, cutting willy-nilly across multiple property lines without regard to existing easements are roads seems a gross invasion + imposition on the private rights of all owners impacted. a

I have two parcels of land in Sec 17 R12W T6N SBM that I consider would be adversely affected and in which I have 12 years of hard earned investment. I know there are hundreds in the same position as I am. Most school boys know that the shortest distance between two points is a straight line, but I'm sure that imaginative engineering would give consideration to existing easements, routes and land division boundry conventions.

I strongly urge that these concepts be given proper consideration in routing the line

Yours Truly
Earl M Dyer
8501 Glasgow Circle
Huntington Beach Ca. 92647

cc Senator Alan Cranston
Congressman William M Ketchum

11728 Wilshire Blvd., Suite 607,
Los Angeles, Ca., 90025
June 23, 1977

(40)

Officer in Charge of Construction Elk Hills,
Navy Facilities Engineering Command,
Contracts,
P.O. Box 40,
San Bruno, Ca., 94066

ANTELOPE VALLEY PIPELINE
ELK HILLS TO COLTON

Gentlemen,

I represent the owners of the four parcels of acreage within the N½ of SW¼ NW¼ section 24, T 5 N, R 9 W., SBM in Los Angeles County.

It appears that your proposed line is close to our properties. It will be appreciated if you can indicate on a standard section plat your line in relation to our acreage. a

At this time I would like to express the view that your diagonal alignment across rectangular grid ownerships is very poor planning, would not be approved by a county planning commission nor be accepted within an environmental report. It shows an unconcern for the people who support the government. b

Very truly yours,

Harold Edelstein

Harold Edelstein

(41)

George H. Floyd
295 Weymouth Street
Cambria, California 93428

June 16, 1977

Officer in Charge of Construction
NAFACENGCOM Contracts, Elk Hills
P.O.Box 40
San Bruno, CA 94066

Dear Sir:

I strongly oppose alternatives one and two of the four alternatives suggested in the Navy's Draft Environmental Impact Statement on transport of Elk Hills oil.

Use of tankers to transport a strategic material such as oil, throws an additional and unnecessary defense burden on the already overburrdened Navy, to protect the tankers on the sea.

Alternative three would not impose this unnecessary additional burden on the Navy, but would still make the oil available for Navy and domestic use.

Sincerely,

George H. Floyd

Copies to: President Carter, James R. Schlesinger, Alan Cranston, S.I.Hayakawa, Leon Panetta

(42)

Mr. and Mrs. Theodore Foster
748 Meinecke St.
San Luis Obispo, CA 93401
June 26, 1977

Officer in Charge of Construction
NAVFACENGCOM Contracts, Elk Hills
P.O. Box 40
San Bruno, CA 94066

Dear Sir;

We are opposed to the use of Elk Hills oil for domestic purposes. a
We feel that it should remain in the ground as a reserve for emergency use. We understand from the EIS that there are no defined markets for this oil and with Alaskan oil coming in to the west coast it seems b
unneccesary to use the Elk Hills reserve. We are very strongly opposed to any increase of the use of the tanker ports a Avila and Estero Bay in San Luis Obispo County. Heavier use would result in greater air pollution and increase the possibilities of oil spills and development of these ports.

It does seem that the easiest and least damaging way of moving c
the oil in case of emergency would be a hookup with the SOHIO Long Beach east-west pipeline.

Sincerely;

Theodore Foster

Roberta Foster

(43)

Secretary of the Navy
W. Graham Clayton
Room 4E 710
Pentagon
Washington, D.C. 20350

Officer in Charge of Construction
Naval Facilities Enginoering Command Contracts,
Elk Hills
P. O. Box 40
San Bruno, California 94066

Congressman William B. Ketchum
P.O. Box 711
Lancaster, California 93534

Re: Proposed U. S. Navy Pipeline through Antelope Valley, California

Gentlemen:

Please accept this letter as evidence of our general objection to the manner in which your Department has proposed constructing its petroleum pipeline across the Antelope Valley in a generally diagonal direction from the north-west to the south-east. Such a proposal and its required easements can only result in an inordinate number of triangularly-shaped parcels which are of little practical economic worth for use by the present owners and would certainly be of less than favorable value should the present owners wish to dispose of what were once regularly-shaped parcels. a

We believe that it is to the best present and future interests of all concerned, whether the users of such land be private, governmental, or both, that this pipeline be rerouted in such a manner that it would follow presently existing east-west and north-south roads within the Antelope Valley, or to follow existing easements in the same areas, or to follow section lines if necessary. b

We specifically object to the manner in which your Department proposes to cut our land while crossing diagonally the south half of our Section 1, Township 8 North, Range 16 West. Your Department's proposal, which does not assure us of the absence of roads, pathways, or other obstructions to the continued unimpaired use of our land for efficient and economical agricultural purposes should such proposed easement be successful, has not been executed. We can also anticipate the same curtailment of use on adjacent parcels which we have previously farmed. Therefore the submitted "Right of Entry", identified as Navy Parcel No. LAC-245, in the County of Los Angeles, State of California, is not being returned at this time. c

Very truly yours,

Lazaro Gorrindo
Lazaro Gorrindo

Maria B. Gorrindo
Maria B. Gorrindo

June 20, 1977

Post Office Box 669, Minden, Nevada 89423.

July 8, 1977

Department of the Navy

Officer in Charge of Construction
POB 40
San Bruno, California 94066
Attn: Cmdr Philip Parisius

Dear Cmdr Parisius:

These are photocopies of signatures gathered on the Phelan-Pinon Hills petition opposed to the desert route of the Elk Hills-Colton oil pipeline.

The signers all signed locally, I understand; and, because Nonny Scully and David Hellman were both busy with year-end school duties, the petition was not "pushed" - it just lay around waiting to be looked at.

There are about 500 registered voters in the school district here, but the petition never got to the school district boundaries.

Yours truly,

Jean Hellman
for Nonny Scully

P.O.B. 144
Pinon Hills
CA 92372

PETITION

STOP THE NAVY OIL PIPELINE

We, the undersigned, object to the proposed route of the Navy's Elk Hills-Colton oil pipeline through Pinon Hills, Phelan and Cajon Valley to connect with Standard Oil's Long Beach-Texas pipeline, and to the proposed site of the pipeline tank farm at Phelan because of:

* air pollution from the tank farm - 30 pounds of hydrocarbons per hour
* damage to the fragile desert and to the animals and plants which live on or by the proposed ~~100~~ 40-50-foot right of way a
* danger of oil leaks, and nearness to the San Andreas Fault
* appropriation of homes and private land and National Forest along the route b
* loss of probable archeological and fossil sites in an unexplored area c
* scarring of a county-designated scenic highway d
* the short notice - 7 days - given local residents by the Navy of the public hearing and the project. e

IT'S UGLY

(18) STOP NAVY OIL PIPELINE

	Name	Address
1.	Jamie W. Massie	14208 Hwy View Lane, Apple Valley
2.	Dan L. Pitchell	P.O. Box 204, Phelan, Ca 92371
3.	Earl H. Rasmussen	15608 - 6th St. Victorville, Ca.
4.	Sherry Langston	4491 Sunset Rd. P.O. Box 63 Phelan
5.	Wanda Jaycull	P.O. Box 274 Phelan / 22225 E. Cajon Rd 5500 Old West Rd. West Cajon Valley
6.	[illegible]	P.O. Box [illegible] Phelan, [illegible]
7.	[illegible]	P.O. Box [illegible]
8.	Donald Kaufman	P.O. Box 161 Phelan
9.	Jean Delgado	15910 Mideliet Rd. Apple Valley Ca. 92
10.	Dorothy F. King	635 E. Tamarack Pinon Hills, Cal.
11.	Jeanne Berg	11181 Monte Vista Rd. Phelan
12.	Jan Hitchcock	14124 Sunland Rd Apple Valley
13.	[illegible]	760 Cicola [illegible]
14.	Janet L. Adams	787 Mt View [illegible]
15.	Jim G. Adams	P.O. Box 22 Wrightwood, Ca. 9239
16.	Virginia Kistler	P.O. Box 22 Wrightwood, Ca 9239
17.	William A. Baker	P.O. Box 237 Phelan (And) 92371
18.	Louis D. Dixon	[illegible] 337 Adelanto 92 301

Petition to
Stop the Navy Oil Pipeline

(11) signatures

1. ERIC LANDSTROM 1025 TAMARCK RD. PALM SPRINGS, CA. 92262
2. Alice Scully 2100 Calle Felicia Palm Springs Ca 92262
3. Claire Miller 2114 Calle Felicia Palm Springs, Ca 92262
4. L. B. Miller 2114 Calle Felicia P. S. Ca 92262
5. Beverly Miller 2114 Calle Felicia P.S. Ca 92262
6. Robert A. Webster 380 N. Sunrise #9 P.S. Ca. 92262
7. Leslie Ann Webster 380 N. Sunrise #9 P.S. CA 92262
8. Mrs John C Maniaci 3694 Camino Rojos PS Ca 92262
9. Patricia Ann Maniaci 3694 CAMINO ROJOS P.S. CALIF 92262

---

1. William R Lee
135 E Artesia, Apt B, Pomona, Ca. 91766

2. Frank Blaston
21115 South Rd. Apple Valley, Ca. 92307

3.

(25)

Petition to
Stop the Navy Oil Pipeline

	Name	Address
1.	[illegible] Cox	6622 [illegible]
2.	Joe C[illegible]	St. Rt. 92334 Box 305 CA
3.	Joyce P Vasquez	St-R-92334 Box 305 Ca 924
4.	Donald K Wadsworth	St. R. 92334 Box 215 - San Bdno 924
5.	[illegible]	" " " " " "
6.	Kathryn Cocran	SR 92334 Box 291 - San Bdno 924
7.	Evelyn R. Luaschnick	ST RT 92334 Box 250 San Bn. 924
8.	Saint Cervantes	STAR RT 92334 - Box 250 - San Bdno 924
9.	Ernest L. Olivera	Star Rt 92334 Box 249 San Bernardino 92403
10.	Norma J. Olivera	" " " " " "
11.	Bill Spinks	St. Rt. 92334 Box 275 [illegible]
12.	Helen Spinks	" " " " "
13.	Dawn Nicholson	" " " " "
14.	Brenda K Keel	St Rt 92334 Box 296 San Bernardino, Ca
15.	Thomas R. Mason	St 92334 Box 298 San Bernardino CA 92403
16.	James A Mason	St. 92334 Box 298 San Bernardino Ca. 92403
17.	Donald R Bryant	Sterling Rd Box 303 Wrightwood, Ca
18.	[illegible]	[illegible]
19.	[illegible]	Box 177 Phelan, CA 92371
20.	Bud Rook	Box 297 west Cajon Ca [illegible]
21.	Alice Sinclair	Box 207 West Cajon "
22.	Williams III, Harper	" "
23.	George	Lot 56
24.	Kathryn Gray	P.O. Box 177 Phelan Hesperia Rd
25.	[illegible]	St. 92334 Box 297 San Bernardino Calif. 9240

Petition to Stop the Navy Oil Pipeline

(23)

Name	Address
1. Charles Engman	P.O. BOX 34 PINON HILLS Ca
2. Rachel Engman	P.O. Box 34 Piñon Hills Calif.
3. Dean K Reeves	(Spring Road) P.O. Box 65, Piñon Hills, Calif.
4. Alexandra Reeves	Po Box 65 Pinon Hills Calif.
5. Deborah York	P.O. BOX 152 Wrightwood, Calif.
6. Dorothy M Wilkinson	P.O Box 136 Pinon Hill. Ca.
7. Wilkinson	P.O. Box 136 - PINON HILLS
8. Drew E. Park	P.O. Box 59, Pinon Hills, Ca. 923;
9. Rose Mary Parks	P.O. Box 59 Piñon Hills, Calif. 92372
10. Fred Marino	{Juniper Rd. Pinon Hills, Cal. 92372 1693 Carmel Cir. W, Upland, Cal. 91786
11. Marion P. Bernard	P O Box 172, Pinon Hills, Ca. 92372
12. Lester L Bernard	P O Box 172, Pinon Hills Ca 923; Juniper Rd Pinon Hills, Cal 92372
13. Joyce Marino	1693 Carmel Cir W. Upland Calif 91786
Carrie Shinn	P.O. Box 179 Phelan Ca. 92371
15. Mary B. Marks	P.O. Box 45 Phelan, Ca. 92371
16. Judith M. Bernardi	P.O. Box 42 Phelan, Ca 92371
17. Adrian G. Willard	P.O. Box 646 Wrightwood, —
18. [redacted]	2872 Stoddard Ave., San Bernardino
	PO Box 902 Phelan Ca.
20. Janie McMain	BOX 186 Phelan Ca 92371
21. Kenneth S. Pope	2391 Highway 18 Apple Valley CA
22. Lorene M. LeFevre	Box 682 Wrightwood Ca. 92397
23. Richard B. Jung	4456 Electric Ave. San Bernardino, Ca.

(23)

Star Rt. 92334 Box 247
San Bernardino, Calif.

27	John Reed	Box 296 S. B. CA 92403
28		Fontana, Ca. 24 [illegible]
29	Ernest F Upshaw	P.O Box 83 Phelan, Ca.
30	Jack Murphy	Po. Box 61 Phelan Ca
31	James R. Trueblood	P.O. Box 483 RIALTO, Ca. 92376
32	Ronald J Fox	P.O. Box 312 S.B. 92334 - S.B. 92403
33	Wesley J. Fox	Box 313 Star Rt. 92334
34	Gregory A Mahin Box 90	[illegible] Ca. 92403
35	Lowell C. Eichman	Star Route 92334 Box 55 S.B 92403
36	Wilma D. Wimmer	Star Route 92334 Box 80 S.B 92403
37	Billy B. Beardsley	Star RT 92334 Box 70 S B 92403
38	Janet Lenarz	Star Rt 92334 Box 70, S. B. 92403
39	Richard Dyer	Star Rt. 92334 Box [illegible] S.B. 92403
	Edna Dyer	Star Rt. 92334 Box 115 S.B. 92403
	Georgia L. Bruce	Star Rt 92334 Box 130 S.B. 92403
42	Raymond R. Moore	Star Rt. 92334 Box 130 S.B. 92403
43	Phyllis Eagle	Star Rt 92334 - Box 140 SB. 92403
44	François B Roi	Star Rt 92334 Box 231 S.B 92403
45	R. Peter Carroll	ST. RT 92334 Box 212 S.B. 92403
46	Agnes J. Carroll	ST RT 92334 Box 212 S.B. 92403
47	Tom Keith	St. Rt. 92334 Box 227 " "
48	Michael A. Dyer	Box 100
49		
50		

(23)

	Address
1. Wilson H. Jones	P.O. Box 491 PHELAN, CA. 92371
2. Linda Jones	10151 Via Verde Pinon Hills
3. Ed Stark	10131 Via Verde " "
4. Lucille V. Ward	9653 SHEEP CREEK RD PHELAN
5. George E. Young	P.O. Box #116 - Phelan Ca (-92371
6. Hershel L. Bradford,	H RT Bx 394 Phelan
7. Otis W. Toomb	P.O.B. 182 Pinon Hills, CA 92371
8 C.A. Simpson	P O Box 328 Phelan 92371
9 P L Campbell	P.O Box 399 Phelan, 92371
10 Catherine G. Tracy	Phelan Cal. Box 399 923
11. Don L. Cody	H Rt Box 310 Wrightwood (92397
12 Edith McDevitt	Star Rt. Box 270 Wrightwood 92397
13 Nick Nemer	Star Rt. Box 270 Wrightwood
14 Nick Nemer	Box 9 Wrightwood Ca.
15 Aletta Nemer	P.O. Box 192 Phelan
16 Patricia L. Jolley	PO BOX 181 PINON HILLS
17 Erick J. Zachoff	Star Route Box 158, Phelan
18 William W. Hamel Jr.	Star Route Box 58, Phelan
19. Carol J. Hamel	P.O. Box 417, Phelan
~~20 Elaine Zachoff~~	~~P.O. Box 117 Phelan~~
22 Dorothy McCarron	P.O Box 117 Phelan
23 Mary K. Holcomb	
24 Louis B. Holcomb	

STOP NAVY Oil Pipeline

(16) Name — Address

1. Norman S. Hellman — PO Box 144 - Pinon Hills, Ca.
2. David J. Hellman — P.O. Box 144 - Pinon Hills
3. William Warden — P.O. Box 154 Pinon Hills
4. Jacquelyn Ogrow — Po Bx 391 Phelan
5. Jane Foster — P.O. Box 355 Phelan
6. Harold Linda Jeno — Box 339 Phelan
7. Sharon Harvey — P.O. Box 192 Pinon Hills
8. Gayle Epperly — Box 432 Phelan
9. Mattie Boyd — Box 62 Phelan
10. Patricia A. Lawlor — 22150 Roundup Way Apple Valley, Ca

Petition to Stop the Navy Oil Pipeline

	Name	Address
11.	Charles K Park	POB 59 Pinon Hills Calif 92372
12.	Kristen M. Park	POB 59 Pinon Hills Calif 92372
13.	Kathryn H Jones	Juniper Rd Pinon Hills
14.	Sam E. Taylor	Oasis Pinon Hills
15.	Frederick L. Ault	Juniper Rd Pinon Hills
16.	Priscilla L. Rodgers	11533 No. 5th Ave. Hesperia, CA 92345

(21) names

Stop the Navy Oil Pipeline

Petition

	Name	Address
1.	Donald Roland	St. Rt. 92334 Box 405 Phelan Ca 92371
2.	Charlene Hoskins	St. Rt. 92334, Box 405 Phelan, Ca. 92371
3.	J. Faulkner	PO Box 153 Phelan Ca 92371
4.	Susan B Metts	St Rt 92334 box 402 Phelan Ca 92371
5.	Thomas Stamer	914 Edna (Box 152) Wrightwood

1-	Richard M Adams	9550 Green Rd. Pinon Hills CALIF
2-	Daniel M. Adams	9600 Green Rd Pinon Hills Calif.
3-	Maureen Adams	" " " "
4-	Reginald M Adams	" " " "
	Dorothy V. Adams	9550 Green Rd. Pinon Hills, Calif.
5-	Edward [illegible]	1525 Tamarack Pinon Hill Calif.
6-	Ed [illegible]	Tamarack Pinon Hills Calif
7-	Yong Sin Rowe	" " " "
8-	Janice Adams	9550 Green Rd. Pinon Hills Ca
9-	[illegible]	9550 Green Rd. Pinon Hills, Ca
10-	[illegible]	Box 195 Pinon Hills Ca
11-	Ray J Bailey	554 So Joyce
12-	Rick Flores	9398 Frankfort
1.	Joe Saviano	Bx 201 Pinon Hills Ca 9237
2.	John Dickinson	Box 223 Pinon Hills Ca 9237
3.	Jean Hellman	POB 161 Pinon Hills Ca 9237
4.		

Petition to Stop the Navy Oil Pipeline

(17) Signatures	Mailing Address	Home location
1. Kathy A. Elliott		Wright Wood Baldy Mesa Area
2. Jennie L. Adamson	P.O. Box 661 Victorville	
3. Stella R. Adamson	Baldy Mesa Area P.O. Box 661 Victorville	
4. Irene Allison	"	Off Baldy Mesa
5. J.R. Allison	"	"
6. Dorothy M. Gellard	PO Box 202 V.V. Ca	(11850 Center, Baldy Mesa)
7. Charles A. Gillard	PO Box 202 V.V. Ca	(11850 Center, Baldy Mesa Ca
8. Ronald F. Gellard	Star Route Box 482	Phelan Ca
9. Jessie A. Davis	P.O. Box 722	Victorville
10. Jane M. Hannaman	Po Box 130 Victorville	(10057 6th St Baldy Mesa
11. Millie Hannaman	Po. Box 130	Victorville
12. Fran Davis	P.O. Box 722	Victorville
13. [illegible]	P.O. Box 193	"
14. [illegible]	Po Box 193	" Baldy Mesa
15. Ida Hickerson	P.O. BOX 860	" Baldy Mesa
16. Sherry Gellard	Po Box 202	Victorville (7th+Center Baldy Mesa)
17. Cindy Krueger	Hwy [illegible] + 395	Baldy Mesa

(45)

Officer in Charge of Construction
NAVFACENGCON Contracts, Elk Hills
P.O. Box 40
San Bruno, Ca. 94066

June 26, 1977

Gentlemen:

We are unalterably opposed to opening up the Elk Hills oil reserves. This supply should be kept for emergencies as originally planned.

There is no definite need for the oil at this time since the Alaskan oil will soon be reaching markets. a

Why should air pollution be increased along with the possibility of increased oil spills! b

Sincerely,

Constance Hendricks

Constance Hendricks

William Hendricks

William Hendricks
549 Jeffrey Drive
San Luis Obispo, Ca.
93401

cc: President Carter
Alan Cranston
Leon Panetta
James Schlesinger
S.I. Hayakawa

June 14, 1977
Palmdale, Calif

Naval Facilities Engineering
Elk Hills, P.O. Box 46
San Bruno, California

Dear Sir:

This letter in regard to pipeline in Antelope Valley, California.

We urge the pipeline to be rerouted to follow existing roads or follow existing easements. a

Please do not cut across parcels of property.

Thank you.

Sincerely,
Mr. + Mrs. S. Jones
2011 E. Ave Q
Palmdale, Calif.
93550

137 "C" St.
P.O. Box 15
Fellows, CA 93234

(47)

Officer in Charge of Construction
Naval Facility
Engineer in Command of Contracts
Elk Hills
P.O. Box 40
San Bruno, CA 94066

Reference: Crude Oil Transport Alternatives from Naval Petroleum Reserve No. 1, Tupman, CA. EIS

Sirs:

As a native of the westside and a member of a family which settled in Fellows, CA in December 1909, and whose family has worked the oilfields since that time, I would like to comment on the above EIS. There are many descrepancies in terminology, prehistory, wildlife, history, illustrations, and paleontology which should be corrected prior to implementation of the proposed project. Basically, the EIS seemed to have been done hurriedly and the result certainly shows. a

Let me illustrate a few examples. Figure 2-1 refers to Carrizo Plain as Carrizo Plains, never is it Plains (plural) since it is a singular geological and geographic entity. Check your topo map or Twisselman (1956 and 1967). This type of error frequently occurs when local persons are bypassed during initial data collecting.

Figures are extremely poorly represented, often being so poorly copied or reduced to such a nonsensical scale as to be non-legible. Examples are figures 1-35, and 1-36. What US BLM document (1976) is being referenced? I attempted to track this document down but was unable to locate even the source. Such poor referencing is unprofessional and academically in poor taste. b

Question? What and who is an URS company? It is quite obvious that they utilized no local experts and consulted no individual interested in Westside resources. Bakersfield Community College has various experts in the fields of archaeology and biology who are interested in the Westside yet they were not even consulted. Why? I find the statement (2-1) that "Wildlife is scant" to be ridiculous/scant wildlife? Compared to what, Kenya? or the San Diego Zoo? c

It is the habitat of the kangaroo rat. Even Elk Hills is a game preserve where the kit fox and kangaroo rat are protected animals. During hunting seasons the oil fields are alive with hunters after chukar, quail, dove, pheasants, rabbits, and even deer in the Temblor Mountains. The Westside is the flyway for the California Condor (eastern extent). As a youth I witnessed the Condor flying over the Temblor Mountains on many occasions. The statement is even more ridiculous when one realizes that this document is being prepared for the US government which is legislatively mandated to objectively evaluate the impacts on all resources. Scant wildlife is anything but objective. It is ludicrous.

No mitigating measures are specificly proposed for the impacts to vegetation. Construction practices can be modified to reduce or eliminate these impacts. Topsoil can be removed and stockpiled for redistribution over disturbed areas after construction. This statement is fine on its face value, but where will the topsoil originate? How long before the scars are eradicated? How are the disturbed areas to be mitigated? Reseeding is one way but it is not proposed by the consultant. d

The proposed wildlife mitigating measures are wholely inadequate. With a total of only 7 paragraphs, it is impossible to adequately mitigate impacts to wildlife. e

Who worked on the EIS? A list of individuals along with their qualifications and academic background should be provided so these people could be examined more thoroughly by the reader. It seems as if minimal original data was collected, but that URS simply relied upon tertiary data, much of which was out of date. f

Who performed the paleontological survey? According to EO 11593, the 1966 Archaeology and Historic Sites Preservation Act, and the latest Solicitor General's ruling, paleontological resources are protected by the 1906 American Antiquities Act and since the Westside contains numerous fossiliferous deposits and strata, some of which are identified in the EIS, any destruction of fossil sites may be aviolation of the 1906 act and punishable by law. How do you propose to onsure that no paleontological sites are destroyed? g

Why under climate is only sumer climatic data given? Have any of the consultants ever spent a winter on the Westside in the damp fog? Air pollutants and the damp winter climate are also conducive to further air quality degradation. With increased industrialization in the Bakersfield area the air quality of the Westside is increasingly being impacted and the addition of further pumping stations and their resultant byproducts do nothing to slow the air quality degradation. How do you propose to mitigate winter air quality degradation? h

Archaeology-This portion of the EIS is extremely poorly summarized. It may be that the "qualified archaeologists" submitted a professional report but the summarization in the EIS is so poor that the reader cannot make that assumptive statement. What portion of the route was surveyed by Holman and Chavez? How could they decide to survey only stream crossings? This makes no professional sense as there are no stream crossings on the Westside, only areas which carry runoff from the Temblors and series of small hills during rainstorms. The pattern of aboriginal occupancy centered around lakes and sloughs, sites are also common where Monterey Chert is exposed in the Temblors or at spring locations but no where else. A better manner would have been to conduct a systematic random sample of the project area then to construct a predictive model based upon those results for the remainder of the unsurveyed route. Undoubtedly there are unrecorded sites along the survey route, many are historic oil exploratory sites, oil leases, and isolated homesites, graves, etc. None of these items were mentioned in the archaeological section. A statement on page 2-26 indicates that "no historic sites lie within the project vicinity." What is the project vicinity? I find this hard to believe even if vicinity is defined as 500 feet each side of the pipeline's center line. How is historic site defined by the consultants? Generally, archaeologists in California define a historic site as anyplace having a date of greater than 50 years or a place where a significant local event occurred no matter what age the site is. I have always been under the impression that project vicinity was external to the project side by 5 to 10 times the size of the project. Fellows, Derby Acres, McKittrick, Reward, and numerous leases are historic sites in the project vicinity and should be addressed as such.

Much as was the case with Carrizo Plain, Yokuts is always Yokuts (see Latta, Krober, Hester, etc.) it is never Yokut. Unfamiliarity with the professional literature by Holman and Chavez or sloppy editing by URS staff is responsible for this type of error. These errors would not have been in a legal document had URS taken more time to prepare the document and double check this type of entry.

What type of mitigating measures is proposed for archaeological resources? Monitoring is not a mitigating measure mitigation should be full and total survey of the pipeline course and pipeline plants, as well as areas the construction workers will park construction-related vehicles and will themselves camp during construction. Mitigation of specific sites should then be proposed.

Were the extension of the existing railroad system from Taft to Elk Hills surveyed or the 10 miles of new power poles necessary for the pumping station surveyed for cultural resources? If the old railroad route from Taft to Elk Hills is going to be used it certainly has some historic

value and should be assessed as such.

What is the title of Holman and Chavez's archaeological report? Why was it not cited in the Bibliography for Volume 1? Where is this report available for public review? It is not at Bakersfield City College. m

Volume II summarized the archaeology somewhat better than volume 1, however the same research methods were used which makes me doubt the validity of the archaeological report. Although in the Cuyama River Valley there are legitimate "stream crossings" where sites were located. This is due to the nature of the aboriginal settlement pattern and not due to the cursory archaeological data recovery methods which were used in the Cuyama Valley. Again, this entire area warrants a 100% archaeological and historical sites survey to comply with NEPA, section 106 of the 1966 Historic Sites Preservation Act, and EO 11593. This should be done immediately and not during pipeline construction.

In sum, the opportunity was afforded URS and their consultants to present data gathered from an area sorely needing environmental research, yet URS seemed to dwell on tertiary sources, only did a partial job, then poorly summarized the reports of professional people whom they had hired. I would think that this EIS would not live up to the legal or moral responsibilities of NEPA and certainly is not objective nor does it propose adequate mitigating measures for any resource. Please send me a copy of the revised EIS when it becomes available for further comment. n

Respectfully,

Russell L. Kaldenberg

Russell L. Kaldenberg
137 "C" St.
Fellows, CA 93534

June 16, 1977

Dear Sir:

I am opposed to the transport of Elk Hill oil through San Luis Obispo County and espically if that means tanker facilities at Avila and Estero. I have lived in this county for seven years and in that short time, I have witnessed a drastic ~~change~~ increase in the amount of oil on the beaches. It's digusting and sad. a

If you must transport this oil (that is, if you find that there is indeed a market) then at least have the insight to see that the all-pipeline hook up to SOHIO Long Beach pipeline connecting to Midwest and Eastern U.S. is the safest and beyond a doubt, the only choice you have.

Chris Kennington
Morro Bay

(49)

June 10, 1977

COMMANDER, CONSTRUCTION
NAVY FACILITIES COMMAND
ELK HILLS P.O. Box 40
SAN BRUNO, CALIF, 94066

DEAR SIR,

We wish to protest the proposed U. S. Navy oil pipeline (Elkhills to Colton) which is planned to cut across Antelope Valley in the Southern California area.

The proposed route divides many parcels of property in an unusual manner which effectively destroys the value of those parcels. We urgently request that the proposed routing be changed to parallel existing streets or easements. a

We are shocked at such callous disregard for private property rights, particularly since the proposed route is so close to many single family residential homes.

Very truly yours,

J. J. Kubasak

Mr. & Mrs. J. J. Kubasak
1713 W. Ave. L-8
Lancaster, CA 93534

(50)

Route 2 Box 73 K
Arroyo Grande, Ca. 93420
June 27,1977

Officer in Charge of Construction
MAPACLMSCOM Contracts, Elk Hills
P.O. Box 40
San Bruno, Ca. 94066

Dear Sir;

This letter is to be enclosed in your public comments regarding the transportation and disposition of the oil from the Elk Hill Naval Reserve in the compilation of the final EIS on same.

As a pair of locally active citizens, we oppose the transportation of Elk Hills oil via the Central California coast ports. Our area is subject to an extremely low inversion layer and any increase in emissions will bother the multitude of asthmatic retirees who have fled the cities for their health. Due to the physical conformation of the San Luis Bay, and noting the growth-oriented community of Santa Maria at it's southerly margin, we feel that any added tanker traffic will only serve to bring more as the importation of oil by water continues on the West Coast.

Our area has for years been an important agricultural one, many crops being extremely sensitive to photochemical smog. Neither the city and town governments nore the various regional agencies are adequately staffed to cope with industrially-oriented expansion: there is, for instance, no evacuation plan nor waste disposal facilities for the reality of an operating nuclear power plant- although we have Diablo Canyon constructed and in the licensing phase- and it's built 21/2 miles from a known earthquake fault.

The unfortunate fact seems to be that oil transportation facilities do not provide jobs for local already settled workers. Diablo Canyon's construction brought in a great many outside workers creating housing problems, and adding a serious burden to already poor local school districts. We feel certain that some of the same problem will be repeated with an Elk Hills oil pipeline construction to the central coast area.

Finally, with a projected glut of oil from Alaska due within a month or two at West Coast refineries, the only sane disposition of the Elk Hills oil is to leave it 'in situ' as a National Reserve. a

Thank you for your inclusion of our letter in your compilation.

Yours very truly,

Dr. and Mrs. W.C. Langworthy

(51)

June 20th,77

Officer in charge of contruction

Dear Sir:

Subject: Elk Hills pipe line.

This line should only be laid on present public property right aways - no property owner should be forced to take a devaluation on his property because of this line.

If this route is not followed then we have taken one more step toward central government control.

Yours truly

A.E. Letzig

40436 W. 16th Street
Palmdale, CA 93550

(52)

RE-TYPED FOR CLARITY

27 APRIL 1977

LT. COMMANDER BENROTH
NAVAL FACILITY ENG COMMAND
SAN BRUNO, CALIF.

DEAR COMMANDER BENROTH

ENCLOSED IS A COPY OF THE MAP FOR THE CALIFORNIA STATE WILDFLOWER PRESERVE. I BELIEVE, BUT I'M NOT SURE THAT ONE OF THE ROUTES CROSS THIS AREA. IF NOT IT MAY GO ABOUT A MILE EAST OF THE AREA SHOWN.

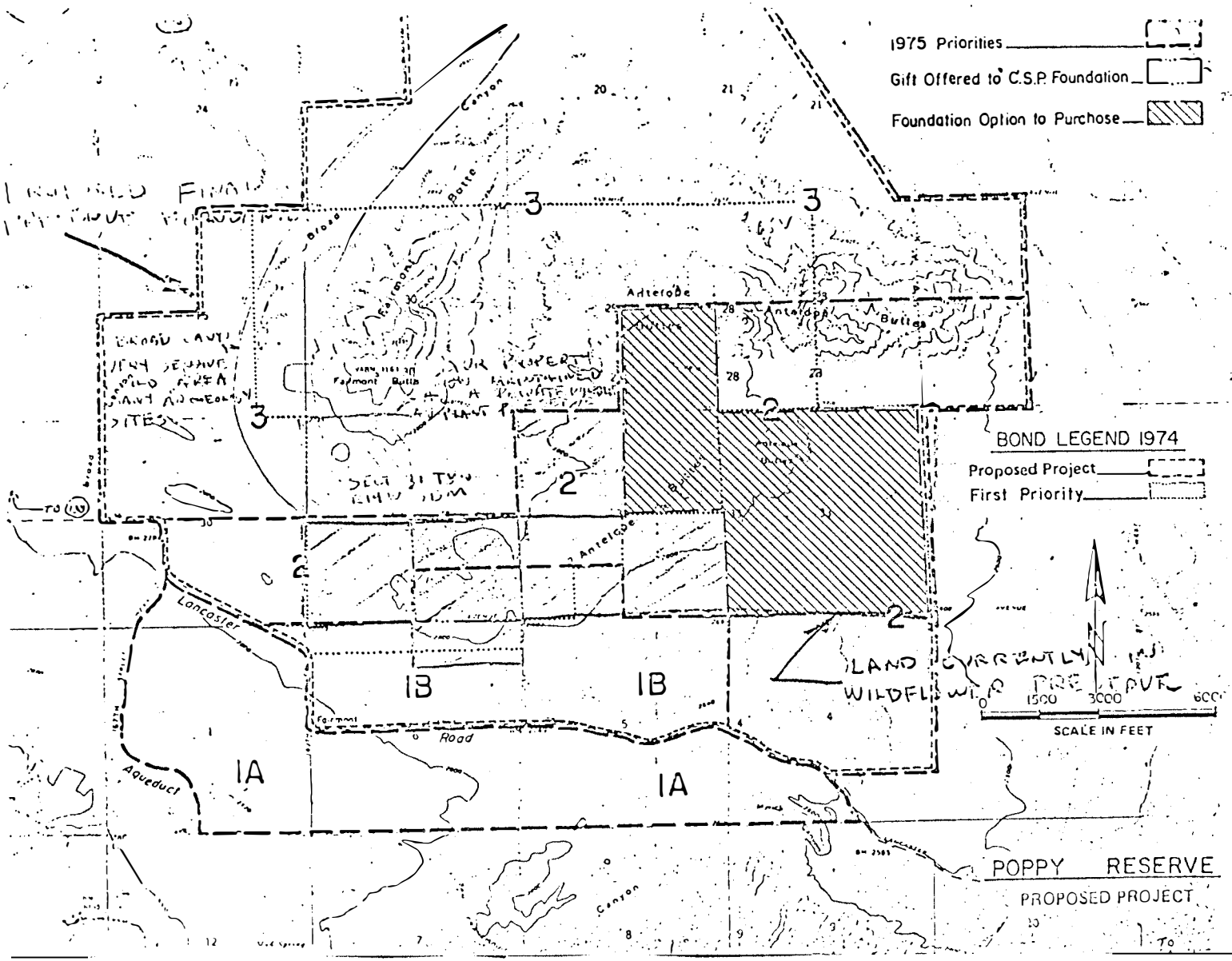
THE AREA IS AN EXTREMELY SENSITIVE WILD AREA, CONSTITUING THE FINEST POPPY DISPLAY STILL EXISTENT IN CALIF. IT IS ALSO THE WINTERING GROUNDS OF THE ENDANGERED PEREGRINE FALCON AND THE RARE PRAIRIE FALCON AND GOLDEN EAGLE. EVERY EFFORT SHOULD BE MADE TO AVOID THE AREA FOR CONSTRUCTION DISTURBANCES, TRAFFIC INDUCED BY A PIPELINE ROAD, AND REDUCTION OF WILD LAND ACREAGE. a

I APPRECIATE YOUR SENDING THE EXACT ROUTE AND E.I.S. DETAILS IN ACCORDANCE WITH OUR PHONE CONVERSATION.

SINCERELY

SIGNED BY
VERLYN MARTH

VERLYN MARTH
3197 CAPE VERDE
Costa Mesa, Calif.
92626


1975 Priorities
Gift Offered to C.S.P. Foundation
Foundation Option to Purchase
BOND LEGEND 1974
Proposed Project
First Priority
Lancaster
Aqueduct
Road
Antelope
Butte
Canyon
1A
1B
2
3
SCALE IN FEET
POPPY RESERVE
PROPOSED PROJECT

(53)

20 June 1977

Officer in Charge of Const.
Naval Facilities Eng Command Contracts
Elk Hills
San Bruno Calif

Dear Sirs:

Enclosed are comments on the E.I.S. to be included in the final E.I.S. and reviewed in route selection. Please acknowledge receipt.

It would be appreciated if a copy could be made for Commander Benroth, or if not possible, that he be notified of comments arrival and be permitted to review their content.

Sincerely
Verlyn Marth

VERLYN MARTH
3197 CAPE VERDE
COSTA MESA CALIF
92626

ELK HILLS PIPELINE E.I.S. ADDITIONS

BY VERLYN MARTH - 19 JUNE 1977

This report is formal review response to the Draft Environmental Impact Statement "alternative Crude Oil Conveyance Systems from Naval Pet. Res. No. 1 (Elk Hills) Tupman, Calif". Please include this statement in total in the final impact statement and give it full consideration in selection or modification of any final pipeline route. a

The principle comments are directed to the Elk Hills to SOHIO Crude Oil Pipeline Conveyance System. This route is unsatisfactory and undesirable as proposed, and it constitutes an intolerable assault upon one of the most valued natural areas in Calif. — the State Fairmont - Antelope Buttes Wildflower Preserve. That area is about 15 miles west of Lancaster, in the Antelope Valley, Los Angeles County. It is shown on C-8, segment 67 to 73. It is generally described as the area near Section 31, T8N, R14W SBM. It is one of the last areas of remnant desert grasslands with a spectacular display of spring wildflowers, generally containing a genetic warehouse of wild plants that are priceless. The sections on biology, archeology, land use of C-8 is totally inadequate for the Buttes area.

The Buttes Wildflower Preserve is in the early stage of acquisition. Several sections of land have been procured by the Calif Parks assn

and the preserve has gone through formal Park dedication. The presently acquired land is to be augmented by expansion to include all of both Fairmont and Antelope Buttes, a total area of several thousand acres. The pipeline as proposed crosses directly over the S.E. 1/4 of Sect 31, through the best wild plant section of the existing preserve, literally destroying its integrity. It crosses the Goode valley parcel with its superior poppy and lupine stands, and goes on or near a proposed display building for the preserve. The enclosed C-8 is marked to show both the present and the proposed Poppy Preserve boundaries. Experience with a much smaller and more harmless water pipeline in the area has shown an intolerable disruption during line construction. Natural flora is disturbed for a path over 100' wide. It takes scores of years for this area to even begin to be marked. The disturbance is invaded by alien weeds in the first stage of a succession that probably approaches 50 to 100 years for complete healing. The land is compacted to an impenetrable pavement. Wildlife leaves the area. The route is taken over by 4-wheel off-road vehicle and motorcycles which disperse from right-of-way to destroy adjacent areas. Pumping stations, risers, air valves and other equipment are an ugly addition to a wild area. After construction, regular patrols and other vehicle

operations are totally non-compatibl with ca preserve concept. Erosion in the Hill areas crosses are an unstable problem, unsolvable without unnatural constructions.

The Northwest 1/4 of Sect. 31, adjacent to the State Preserve, and directly crossed by the pipeline is maintained by Evelyn and Myra Marth as a private preserve for plants and animals. Ten years have been expended introducing wild plants to this 160 acre parcel, allowing the needlegrass - native bluegrass cover to re-establish itself, and to augment the return and build-up of animal and bird life. It is one of the major horned lark breeding grounds in Calif due to its undisturbed grassland nature. It is a major wintering ground of the endangered Peregrine Falcon and the rare prairie falcon. There are 5 archeological sites in that parcel that have been long-protected from public abuse. The land has been posted against motor vehicle use and grazing for years, and it is just now accelerating its decovery.

The entire antelope-Fairmont Buttes area is one of the richest archeological areas in Calif. I have personally charted about 40 sites or structures, which taken together make the Buttes as an integral site so important that no construction such as the pipeline should be considered in the

area. The proposed pipeline crosses significant sites of rock structures on the low hills a mile west of Fairmont Buttes. One of the most impacts on human activities generally assigned to be several thousand years old, is creation of a motor vehicle pathway into and across the area; and from this access, destruction of these invaluable relic areas would be assured.

The Antelope-Fairmont Buttes are a treasure house of botanical species. I have a logged description of about 150 world plants growing in this area, many of which are part of the annual display which warranted implementation of the Poppy Preserve. This list may be reviewed by the final E.I.S. preparers if desired. Typical plants are coreopsis, many lupine species, California poppy, owls clover, beavertail cactus, astus, wild buckwheat species, goldfields, asters etc. Perhaps more important are the native grassland areas in the Buttes area with its dry perennial species stands that have become almost non-existent elsewhere under grazing pressure and invasion by foreign species such as wheat. Real recovery of these elements is just now beginning following establishment of the preserve — only now to be threatened again by the pipeline.

corridor. It must not be built as proposed.

The real merit of the antelope-Fairmont Buttes area is the existence of a complete interrelated wild system with little disturbance by man. There is little better example of this critical and intimate support between natural elements than the habitat's support of plants; plants related closely to associated insects, microorganisms, birds, and animals: And of special associations of certain species, one with another. The bird population is one of a grassland biome, and of predators living on grassland animal, plant and insect foods. The nesting horned lark swarm of an extremely large number of individuals on this land is a sample. Meadowlarks also nest in the fields, on the ground. A pair of endangered peregrine falcons have wintered on the area described for three years. Prairie falcons are common (if rare in Calif). Both utilize the Calif ground squirrel and the horned lark for food. The Buttes area is a major hunting and resting area for the Golden Eagle, particularly in its local movement from alfalfa hunting areas to the mountain foothills. A most unusual bird population are flocks of great curlews who ground-graze the plant area crossed by the pipeline. Ravens nest in Fairmont Buttes, and are year-round occupants. Many

other bird species live in the area year-round, and it is a major stopping ground for many unusual birds during spring and fall migration. Because it is one of the few areas left without people and in an undisturbed state. There is an extensive Calif ground squirrel population, many species of small, Kangaroo Rats and reptiles. I believe I have seen the Mojave ground squirrel, ~~and~~ endangered species a half mile from the pipeline route, a mile south-east of the Antelope Butte park area. Skunks, badgers and the wind song coyote are here where they belong, and it is not appropriate to destroy their wildness with a pipeline.

It seems ridiculous to build an oil pipeline for miles paralleling the major earthquake fault in the U.S.A — the San Andreas. The pipeline also crosses other minor faults in the Antelope Valley, including one in the Buttes valley, and Willow springs canyon near Muntz ranch. All of the Antelope Valley is sloped north where the line is routed and spill line of C-8 are simply wrong — oil on a quake-induced spill would be a disaster for the sensitive desert or farmland areas, and effluent will run much further than shown, in natural flow channels— the Buttes Valley for example.

Directly crossed by the proposed pipeline in the Fairmont - Antelope Buttes area is the b

proposed Buttes Reservoir. It would be a Calif water project storage area for most of the A.V.E.K. water system. Construction is projected for the 1980s. Its rough extent is shown on the map. Again the pipeline as proposed crosses <u>under</u> the reservoir!! How ignorant can a proposal be. One even hesitates to discuss the effects of a spill or a sabotage under the prime water reservoir for the A.V. water system.

It is believed a spill anywhere in the Antelope Valley will have a disastrous result on the underground water supplies of the Antelope Valley. The entire valley is undulain with a single massive reservoir replenished from runoff from surrounding desert and foothills; filtering through alluvial sands. A spill will filter similarily down into this major water table with a massive adverse effect. This element alone combined with exposure to active faults could seriously preclude consideration of the Antelope Valley as a pipeline route.

C-8 enclosed is compiled for major omissions covered above. Also missing are the above-ground impact of pumping stations, valves, etc in a sensitive desert-farming-living area.

I urge that if the line were routed in the Antelope Valley, it not go within 2 miles of the Antelope-Fairmont Buttes area, and that rather than being built on a

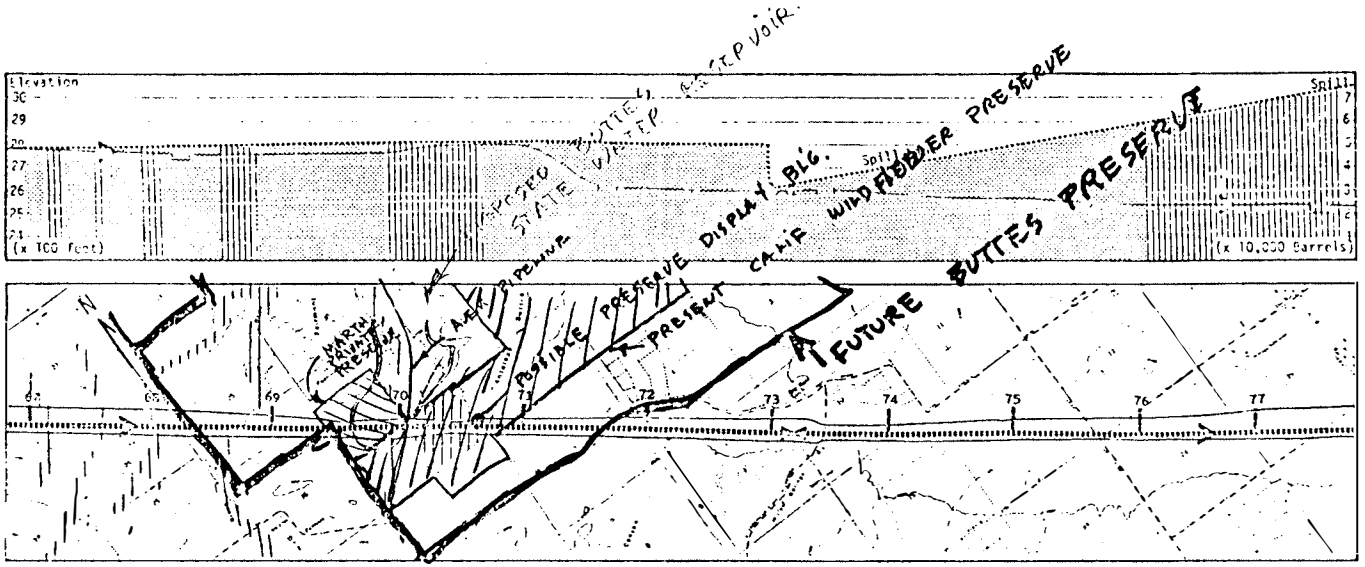
slant, it be placed in roadside areas, along roads and highways, on section lines. Why must we dig out pristine agricultural and wild lands right across their centers when we already have destroyed highway corridors? Is it because cars and motorists are too good for an oil spill — while wild land, its flora and fauna, and farmers and farmland are, in comparision, unimportant? It is discouraging to see such a sample of land ethic on this project. Similarly the critiria of lowest cost pursues destruction of land is a foolish argument indeed. Any land ethic decries we must respect the integrity and right of wild land and its disappearing inhabitants to exist: and would advocate that farmland should be avoided, for food and farmers are more important than oil and oil companies. The question is not oil or no oil — it is one of can we do things right. In other words can we leave Antelope-Fairmont Buttes alone, and can we keep such construction out of farms.

Finally on a broader scale — if there is so much oil on the West Coast that we have to send it to Japan, why do we have to consume Elk Hills Oil at all? Why not keep it in the ground as a naval preserve? C

10-158

8.

END



PROJECT FEATURES	Possible realignments to avoid archeological sites NOT POSSIBLE	Blasting in hard rock	Cased boring under major, paved roads BORING UNDER AVEK	Manual block valve Cased boring under Elizabeth Lake Road and Willow Springs Rasn	PUT ON SECTION LINES Cased boring beneath major secondary roads SPECIAL CONSTRUCTION OVER AVEK
GEOLOGY & SEISMICITY	Quaternary alluvium surrounding tertiary formation and older intrusive Antelope Valley	Fairmont Butte FAULT – WILLOW SPRINGS CANYON FAULT San Andreas fault; less than 5 miles southwest — A LOT LESS THAN 5 MILES.		Coalesced alluvial fans between older Quaternary alluvial terraces	A SPILL WILL THREATEN ENTIRE A.V. UNDERGROUND WATER SUPPLY
HYDROLOGY	Broad Canyon and wash THESE ARE MAJOR SPILL CHANNELS		Myrick Canyon and wash	Willow Springs Canyon and Wash	Numerous gullys and washes
SOILS	— NOT IMPORTANT IN ARID WATER	Cultivated croplands, fallow grasslands, and isolated desert scrub			
ECOLOGY AND OTHERS	ANTELOPE FAIRMONT BUTTES GRASSLAND - WILDFLOWER AREAS NORTH BUTTES PRIVATE PRESERVES STATE OF CALIF WILDFLOWER PRESERVE CROSSED DIRECTLY Recorded Archeological site - L&M 57	Recorded Archeological site - L&M 695	High potential for archeological remains	MAJOR HORNED LARK NESTING AREA Possible habitat of Mojave ground squirrel	11 FINEST POPPY DISPLAYS LEFT IN CALIF 150 SPECIES WILD PLANTS ADVERSE IMPACT TO RARE OR ENDANGERED 40-50 SITES OF ANCIENT MAN THREATENED
	Many known and high potential for archeological sites				
LAND USE & TRANSPORT	Grazing and cultivated lands, scattered residences, and desert home subdivisions. CALIF WILDFLOWER PRESERVE		NOW WATER UNDER PROPOSED BUTTES WATER RESERVOIR Lancaster Road	Hi-voltage powerlines Elizabeth Lake Road	ALL FARMLAND AVEK IRRIGATION POTENTIAL Grazing, some cultivation, and isolated farm residences PRIVATE PRESERVE
	Los Angeles County				
SOCIOECONOMIC	General agricultural and open recreation		DESTRUCTION OF ONE OF CALIF FINEST AND RAREST PRESERVES		DESTRUCTION OF MAJOR IRRIGATION POTENTIAL

DESTRUCTION OF ONE OF THE NEAREST WILD AREAS TO L.A.'S POPULATION CENTER OF OUTDOOR STUDIES OF NATURAL HISTORY

29 may 77

Richard T. Russell
P. O. Box 40
Naval Fac Eng Cmd
San Bruno, 94066

Dear Sir:

I read in the Sun-Telegram a article about environmental effect of a pipeline you are considering building.

Since I have some land on both sides of highway 138 — sounds like I may get involved.

Since I knew nothing about briefing — and did not attend, Please send me a map of proposed route near 138.

My property lies in Section 28, TOWNSHIP 3 NORTH, Range 6 W.

Can you give me an idea about any building restriction you will impose in relation to distance from pipe line, e.g., wells drilled, buildings erected or roads constructed.

mcb

Yours truly
C L McBroom
[Over]

C. L. McBROOM
6379 CIENEGA
HIGHLAND CA 92346
TEL (714) 862-6868

10-160

a

b

54

[illegible] Naval Facilities
Sir: Since we have been notified of possible designated route of pipeline and being one in path of such planned destruction for valley we would ask that the potential property holdings be reconsidered and changed to other course although have other means to use these strong armed methods

Though there has been no [illegible] of outright purchase of property in this path as yet this is classified but it would still be detrimental to money and valley.

Anything less than this would burden the property holder who had purchased for future potential and land payment & interest struggle plus continued high taxes for decade or more. Yet under such circumstances yet doubtful any buyer could be found as builders would avoid same and repercussions even if sold would be unlimited. Who would want to pay taxes lifetime for something everyone could avoid?

Today we have letters from many over years who expressed interest in buying land undoubtedly for homes apartments get rec. district leads to Country Club real homes and 2 mile from planned approved city.

It was purchased for future potential

Also there has not been one realtor etc who has not confided outrightly

Loss the Company that proceeds result thereby.

At first we were very slow and loath in possible consideration, as we would wish to be, but because of consequences involved for all we must join forces opposed to such a plan.

Signed.

Edward E. Mettler
Arthur E Mettler
2027 E Cliff Drive
Santa Cruz Calif
(95062)

(56)

Nick Nemer
Star Rt. Box 270
Wrightwood, Ca. 92397

Richard T. Russell, P.E.
Environment Engineering Section
San Bruno, Ca. 94066

Dear Mr. Russell,

I have looked at a map which shows that the U.S. Navy's Elk Hills Conveyance System Project may go through my property and house. a

Can you verify this? Can the route be changed? I don't want to loose my home and property.

The legal description of my property is as follows: SW 1/4 OF SW 1/4 OF NW 1/4 OF NE 1/4 OF SECTION 26, TOWNSHIP 4N, RANGE 7W, S.B.B.M.

I don't want the pipline or tanks around here, but if you must, will you please leave my home alone?

Sincerly yours,
Nick Nemer

R. D. RICE, M.D.
DIPLOMATE
AMERICAN BOARD
OF FAMILY PRACTICE

E. N. PLATT, M.D.
FAMILY PRACTICE

HALCYON MEDICAL GROUP, INC.
336 SOUTH HALCYON ROAD
ARROYO GRANDE, CALIFORNIA 93420
TELEPHONE 805-489-9000

(57)

C. W. O'BRIEN, M.D.
GENERAL SURGERY

M. A. CRANE, M.D.
ORTHOPEDIC SURGERY

June 20, 1977

Officer in Charge of Construction
NAVFACENGCOM Contracts, Elk Hills
P.O. Box 40
San Bruno, California 94066

Dear Sir:

My concern in writing this letter is twofold. First, I oppose having the Elk Hills oil reserve tapped for domestic use at this time. Second, I oppose the possible increased tanker traffic that would result if either of the first two alternatives suggested by the Naval Department's Environmental Impact Statement were instituted. a

The Elk Hill reserve was established with a specific purpose in mind and it is to our good to maintain this purpose for as long as is possible. President Carter has suggested that we keep Elk Hills as an emergency reserve to draw from only when all other alternatives are no longer available. If and when that time comes, I propose that Alternative 3 of the Naval Department's EIS be utilized as the best choice for transporting the oil. This particular mode of transporting the oil would eliminate much concern over possible oil spills, unwanted increased tanker traffic along the California coast, and further pollution of our already over polluted environment. b

It is essential, during these critical economic periods, that we do not make hasty decisions from which we may not recover, and finding after the fact that we should have taken more time and given more consideration to finding the best workable solution.

Thank you for your consideration.

Sincerely,

C. W. O'Brien, M.D.

10-164

/lk
cc: President Carter
James R. Schlesinger

(51)

40217 97th Street West
Leona Valley, California 93550
June 9, 1977

Officer in Charge of Construction
Navy Facilities Engineering Command
Contracts, Elk Hills
Post Office Box 40
San Bruno, California 94066

Dear Sir:

This is in regard to the Elk Hills to Colton oil pipeline proposed route through Antelope Valley.

We are opposed to the current proposed route through Antelope Valley, because it cuts diagnally across the valley, cutting up too much of the land. There must be other routes that could be considered that would not leave such a scar on a very attractive area. The use of current easements, along water ways, or along road ways would seem to be a much more agreeable and attractive solution.

We hope that you consider this opposition very strongly. Thank you.

Sincerely,

Thomas G. Pappas

R. D. RICE, M.D.
DIPLOMATE
AMERICAN BOARD
OF FAMILY PRACTICE

E. N. PLATT, M.D.
FAMILY PRACTICE

HALCYON MEDICAL GROUP, INC.
336 SOUTH HALCYON ROAD
ARROYO GRANDE, CALIFORNIA 93420
TELEPHONE 805-489-9000

59

C. W. O'BRIEN, M.D.
GENERAL SURGERY

M. A. CRANE, M.D.
ORTHOPEDIC SURGERY

June 16, 1977

Officer in Charge of Construction
NAVFACENGCOM Contracts, Elk Hills
P. O. Box 40
San Bruno, California 94066

Dear Sir:

As a resident of central California, this letter is submitted to you in order to make known my feelings regarding the use of Elk Hills oil and tanker traffic off the coast of California.

I am strongly opposed to using the Elk Hill oil at this time for anything other than a reserve. Consumption by the domestic market should be examined more closely and those needs re-evaluated. The domestic market has become the "unruly, self-indulged child" who needs to be disciplined for its own welfare. Hindsight, in this instance, will not suffice. The President has proposed to keep this available as a ready reserve to be used for emergency situations and it is extremely important to all of us to know we have a reserve if and when the time comes for us to use it. a

In 1912, when, by Executive Order, Elk Hills was made into a reserve, it was done with accurate projection of logic and understanding and it would be our own undoing to ignore the reasoning which created this reserve. If, indeed, we find that it is necessary to transport the oil, then we must choose the method which would accomplish this in the best possible way. If we are able to project the same logic and understanding as was done in 1912, then the only choice would be to use an all-pipeline hookup such as the linkup with the SOHIO in Long Beach. Preserving the environment is of no less importance and it accomplishes nothing to destroy one irreplaceable item in order to obtain another. b

Since we are still able to make choices, let's make the right ones!

Sincerely,

R. D. Rice, M.D.

/lk
c c: President Carter
James R. Schlesinger
Alan Cranston
S. I. Hayakawa
Leon Panetta

10-166

(60)

June 17, 1977

Construction, Naval Facilities Engineering

Dear Sir:

I am writing you about the pipeline in Antelope Valley for you to cut across parcels of property cattercorner will ruin the land as to value and leave valueless parcels. Please follow existing roads or easements.

Sincerely,
(Mrs) Mary Robinson
3624 Shannon Rd
L.A. Ca 90027

a

(61)

FRED A. SCHENK, JR.
Attorney at Law
745 HARBOR STREET
MORRO BAY, CALIFORNIA 93442
(805) 772-8360

June 15, 1977

Officer in Charge of Construction
NAVFACENGCOM Contracts, Elk Hills
PO Box 40
San Bruno, CA. 94066

Re: Use of Elk Hills oil

Dear Sir:

My wife and I hereby register our protest against the use of Elk Hills oil for current domestic consumption, and we support President Carter's energy plan to make Elk Hills a strategic ready reserve to be used for EMERGENCY ONLY.

We abhor the idea of madly pumping out as fast as possible all oil reserves in this country, thereby encouraging further waste of our resources by domestic consumers. If we pursue this policy, which can only benefit oil companies in their pursuit of further excessive profits (and which companies, I am sure, have quite a lobby organization in Washington, D.C.), we will find some day in the not-too-distant future that we have no oil reserve in event of a military threat to this nation. a

If civilian vehicular and military nonessential traffic must be curtailed, even by rationing if necessary, this is preferable to draining out our last remaining military reserves. Perhaps a law should be considered to prohibit exportation and sale of oil produced domestically, including Alaskan oil, to ensure that oil companies do not drain out this country's oil, which belongs to all Americans, to sell on a foreign market for gain. b

We unequivocally oppose the use of terminals (Avila and Estero Bay) in this county to transport oil, since this would increase air pollution and possibilities of oil spills. This county has one of the lowest air ceilings (much less than the Los Angeles area) and thus can tolerate much less pollution. We have a unique wildlife breeding ground in the sandspits and shallows of this area which would be endangered by such spills, and which cannot be duplicated in any other area of this country.

Sincerely,

Fred A. Schenk, Jr.

Janice C. Schenk

Janice C. Schenk

(62)

NATHAN & CELIA G. STARR
40759 N. 19th St. West
Palmdale, CA. 93550 PH: 805/ 947 3062

June 15, 1977

Officer in Charge of Construction
Navy Facilities Engineering Command,
Contracts, Elk Hills,
P.O. Box 40
San Bruno, Ca. 94066

Re: Los Angeles Co. Assessor's Parcel No. 3035-15
Navy Parcel No. LAC - 632

Dear Sir:

Since March of 1957, we have owned property on 165th Street East, in the Llano, California, area. We have recently been advised, by the Department of the Navy, that the Government may require a right of way for a crude oil pipeline across a portion of our land.

On June 1, 1977, we were contacted in person by a Mr. Robert E. Wilkinson, on behalf of Leon Conner, Head, Operations Branch, Real Estate Division, and asked to sign a Right of Entry on this property. He informed us that if we were not agreeable to the decision of this Department, that we had no choice - because the acquisition could be imposed through the right of eminent domain. We explained to Mr. Wilkinson that we were not opposed to the pipeline, as long as it would follow the existing right of way granted for utilities, which would run parallel to the property.

It has been our understanding that property is regulated by local and state government, within the framework of the Federal government. However, the pipeline, as proposed, would be contrary to all regulations, and would amount to confiscation of our property by crossing it diagonally - thereby rendering the property unusuable or unsalable. Mr. Wilkinson advised that the Navy Department was not planning to take the entire parcel. This would leave us with land on which we would have to pay taxes, and the property would be of little or no value. If the Navy Department wants to acquire the land in the manner in which it proposes, we would be willing to convey the property to them, in its entirety, at its fair market value.

We are writing to you to urge that the pipeline be rerouted to follow existing roads in the Antelope Valley, or to follow existing easements. A copy of this letter is being sent to Congressman William Ketchum, Hon. Samuel Hyakawa, and Hon. Alan Cranston, United States Senate, Washington, D.C.

Yours truly,

Nathan Starr

Celia G Starr

TO OFFICER IN CHARGE OF CONSTRUCTION
NAVFACENGCOM CONTRACTS
ELK HILLS, P.O. Box 40
SAN BRUNO, CALIF. 94066

DATE JUNE 16, 1977

SUBJECT Pumping oil from Elk Hills Reserve.

Dear Sir;

To say it simply.... The best place to keep the oil from the Elk Hills Naval Oil Reserve, is in the ground in Elk Hills.

That saves the trouble of transporting this not needed oil, and keeps it intact for when it will be needed.

We would appreciate all you could do to implement this important step as part of a National Energy program.

Sincerely,

Mr. + Mrs. R. Stern + Family
Rt. 3 Box 274..San Luis Obispo..
Calif. 93401

cc: James Schlesinger
Leon Panetta
Alan Cranston

Form ML 3 NP2 The Dittoing Board Inc. Box 305 Dallas Texas

XI. RESPONSES TO WRITTEN COMMENTS

XI. RESPONSES TO WRITTEN COMMENTS

A. Organization

Written comments on the Elk Hills/SOHIO Conveyance System are answered in the following pages. (Comments which pertain only to the Elk Hills/Coalinga or Elk Hills/Port Hueneme routes are not addressed here. They will be responded to in future EIS's, as appropriate.) The numbers at the beginning of each set of comments refer to the numbers assigned to each of the letters received, which are reproduced in Section X. The comments within each letter are answered in the order in which they appeared in the letter.

After many of these comments were received, the Navy decided to reconsider the proposed routing of the pipeline through the Antelope Valley. After studying six alternatives, a route was chosen following the Southern Edison Company powerline, street rights-of-way, township lines, and a railroad right-of-way. This new routing through Los Angeles County was incorporated into the text of Volume I of this FEIS. Because of the change in route, many of the comments received are no longer directly applicable; they are answered by referring to the new route and explaining the change in impact.

B. Responses

Following are responses to written comments received on the Elk Hills/SOHIO Conveyance System DEIS.

1. Advisory Council on Historic Preservation

a. C The Council must have evidence that compliance with Section 106
b. of the National Historic Preservation Act of 1966 has been followed.

R During the time of preparation of this EIS, no one transportation system for Elk Hills petroleum was chosen. For this reason, it was decided to perform a preliminary survey of cultural resources for each of the three routes being considered. Once a route is selected, surveyed, and staked, the archeologists will perform a survey of the route, search the National Register, and work with the State Historic Preservation Officer to determine if there are any resources along the route eligible for inclusion in the National Register. The Navy will fulfill all of the requirements for the National Historic Preservation Act at that time, but it is too early in the decision and design process to accomplish these objectives at the time of publication of this FEIS.

c. C Contact with the State Historic Preservation officer must be established by the Navy.

R Throughout the cursory archeological survey conducted, the State Historic Preservation office was consulted and use made of their maps for record site locations prior to field observations. Mr. Herb Rhodes himself was not contacted, but will be at the time of the comprehensive Archeological Impact Evaluation.

2. U.S. Dept. of Agriculture, Forest Service

a. C. A Memorandum of Understanding must be signed between the Navy and the Forest Service. It would include mitigation measures as stipulations and specifically incorporate the following plans: Construction Plan, Erosion Control Plan, Landscape Plan, Cultural Resource Plan, Fire Plan, Oil Spill Contingency Plan.

R This is reflected in Chapter III of the text of the FEIS.

b. C To develop information for the Memorandum of Understanding, an Environmental Analysis Report (EAR) must first be prepared. The preparation of such a report is not in the Forest's Plan of Work for either FY 1978 or 1979; consequently, it will be necessary for the Navy to enter into a cooperative agreement with the Forest Service to cover costs necessary for field reconnaissance, archeological survey, and preparation of the EAR as well as costs for a Forest Service liaison officer.

R The Navy plans to enter into a cooperative agreement to coordinate preparation of the EAR. The agreement will incorporate the costs involved for field reconnaissance, archeological survey, and also include preparation of the EAR and having a Forest Service construction liaison officer present at the time of project construction.

c. C The EIS failed to discuss possible consequences of fires starting from pipeline construction or maintenance activities.

R Fires resulting from construction activity would occur only when work crews are present; at such times portable fire extinguishers, earthmoving equipment, and numerous personnel would be available to contain any such incidents as required in the construction contract. Normal operations of the pipeline provide no ignition points for starting fire; conversely pipelines are virtually unaffected by any surface fires because they are buried. In the event of a major spill, the outbreak of fire is unlikely because of the lack of ignition sources. However, if fires should start, the major concern would not be in pooled oil or in oil absorbed by the cover materials, but with the spread to wildlands where conventional control methods could not be used.

Fire prevention and control are included as a part of the safety program of the construction effort. Following construction, the pipeline right-of-way will be replanted with low growing native plants which would serve as a partial fire break. Further, the route will be overflown once a week, providing additional surveillance for identification of potential fire-related problems or of fire breakout.

d. C There is an impact of trenching for locating faults on the San Andreas crossing.

R Geological surveys across the fault areas (which are crossed at right angles) are exploratory techniques which are not considered to create any permanent scarring. Furthermore, most trenching required would be within the permanent right-of-way.

C There is a need for catchment basins for oil spills.

R Because of their severe impact on the terrain, catchment basins would never be constructed unless a very sensitive facility or area has to be protected. If a large spill occurs and the line drain continues for some time (as discussed in Appendix D, pages D-9 and D-10), catchment basins would be constructed as required to prevent further spread of oil. The probable maximum land which might be affected by a large spill is outlined for the entire route in the Environmental Atlas (Appendix C).

e. C Is there provision for temporary crossing for the Pacific Crest Trail during construction and operation?

R Disruption of the trail crossing would be for only a few days and might require temporary rerouting or, alternatively, bridging of the open trench. Inconvenience would be the major factor. Protection of the trail by the addition of a remote control block valve is not warranted because of the proximity of protective valves at MP 127.0 and MP 137.0. Further, if a remotely controlled block valve were placed there, protection would not be absolute since any rupture involves some spillage during the shutdown period.

f. C Our best estimate is that the pipeline crosses a total of 6.5 miles of San Bernardino National Forest lands, not one mile as stated on p. 1-21.

R The text has been changed (see page 1-21).

g. C Based upon available information now, the San Bernardino National Forest Service concludes that the SOHIO pipeline will not have a major effect on National Forest lands and resources if appropriate stipulations are included in the Memorandum of Understanding.

R Chapter III in Volume I includes a discussion of the contents of the Memorandum of Understanding. The Navy plans to enter into the cooperative agreement with the Forest Service regarding all facets of the memorandum.

h. C Fees for use of National Forest land for pipelines and similar uses by private companies are assessed at fair market value; the Navy, as a Federal agency, would pay no fee for a pipeline right-of-way across National Forest lands.

R The text has been changed (see page 2-42).

i. C A meeting prior to the preparation of the Final Environmental Impact Statement to resolve other conditions and effects of the project is requested.

R A coordination meeting was held on August 16, 1977.

j. C The Forest Service must be provided with all information and data pertinent to the SOHIO Pipeline alternative in order to give due consideration to all environmental effects as required by NEPA. Timely exchange of information and a close working relationship will facilitate the task and allow the Forest Service to be responsive to the Navy's time constraints.

R The Navy has met with the Forest Service and has initiated compliance with the Forest Service requirements.

3. United States Department of Agriculture, Soil Conservation Service

a. C Recommendations that an erosion control and revegetation plan be developed in consultation with the Bakersfield office of the SCS.

R The Navy agrees to coordinate with the district conservationist of the Bakersfield office regarding an erosion control and revegetation plan for the pipeline route. This plan will recognize the possibility of failure and provide for additional planting, if needed.

4. Department of Health, Education, and Welfare

a. C The document is adequate.

R No response is necessary.

5. Department of the Air Force

a. C There will be no conflict with Air Force operations.

R No response is necessary.

6. Department of the Army, Corps of Engineers (Los Angeles District)

a. C The U.S. Army Corps of Engineers is currently considering construction of a flood control reservoir along Amargosa Creek in the Antelope Valley. While the proposed SOHIO pipeline is compatible with this structure, some alternative alignments are not.

R Revisions have been made in these alignments that make them compatible with the proposed flood control facility.

b. C On plate C-10, the road referred to as Avenue O is Avenue Q.

R The plate has been changed.

7. Department of the Army, Corps of Engineers

a. C This office has no existing projects along the Coalinga route. The Port Hueneme and SOHIO alternative will be handled by the Los Angeles District Office.

R No response is necessary.

8. U.S. Department of the Interior, Office of the Secretary.

a. C Guidelines for dealing with cultural resources in Title 36, CFR 800 should be followed.

R As pointed out in this comment, the function of the preliminary investigations was to delineate areas of high archeological potential.

It is agreed that adverse impacts that may occur can be significantly alleviated through comprehensive planning in the early stages of project development. Realistically, however, such comprehensive planning can only take place when the project route has been determined by the Navy, as well as surveyed and staked by engineering survey crews. Site Specific Archeological Evaluations would certainly be prepared with a full awareness of the Guidelines of Title 36, Code of Federal Regulations 800 (revised July 1, 1976).

b. C An intensive survey of all areas of cultural resources should occur prior to project implementation.

R It is fully agreed that prior to any project implementation and as soon as a decision is made as to which pipeline route is to be utilized, the locations of all portions of pipeline right-of-way corridors, sites of tank farms, pumping stations, access roads and auxiliary facilities should be surveyed by qualified archeologists. Evaluation of impacts and recommendations of mitigations can be made at that time and such evaluations can then be made in regard to significance in accordance with National Register of Historic Places criteria.

c. C The State Historic Preservation Officer for California should be contacted.

R The State Historic Preservation Office in Sacramento will be fully informed as to the nature and extent of follow-up archeological evaluations of the designated pipeline routes and facility locations. Assistance in the evaluation of significance, and implementation of appropriate mitigative measures will be sought of this agency, as well as other appropriate agencies and individuals, as may seem necessary at that time.

d. C The Western Archeological Center should be informed of additional archeological work.

R The Western Archeological Center, National Park Service, Tuscon, Arizona (as well as all other appropriate review agencies) will be furnished with copies of the final field investigation report, when such an investigation and accompanying documents have been prepared.

e. C Any construction by a government agency should be in conformance with Section 7 of the Endangered Species Act of 1973.

R Following submittal of this Final Environmental Impact Statement, the Navy will initiate consultation with the Fish and Wildlife Service, as recommended in the "Proposed Provisions for Interagency Cooperation," Federal Register v. 42(17), January 26, 1977. In accordance with these quidelines, the Navy will conduct assessments of the impacts of the proposed project upon the critical habitats (as defined by the Recovery Teams) of the California condor, San Joaquin kit fox, and blunt-nosed leopard lizard. These assessments will be submitted to the Fish and Wildlife Service.

f. C The Elk Hills/SOHIO system would have impacts on existing recreation lands. Each recreation area, or park, to be impacted should be individually described, and the relative degree of impact and proposed mitigation measures identified. It should be ascertained whether or not such impacted lands have received financial assistance under the Land and Water Conservation Fund Act of 1965, as amended (P.L. 88-578). This information may be obtained through the local park-managing agency.

R The only recreation area to be directly impacted by this project is the San Bernardino National Forest. The route remains on existing rights-of-way through the forest. Since this part of the route is extensive, impacts and mitigation measures for it are included throughout the EIS under the appropriate sections. As discussed in the EIS, a Memorandum of Understanding which includes additional mitigation measures will be signed by the Navy and the Forest Service prior to construction of the pipeline.

g. C If an impacted area has received such financial assistance, for either acquisition or development, then the requirements of Section 6(f) of the Act would have to be met. If such funded lands are to be impacted, there should be consultation with Mr. Herbert Rhodes, Director, Department of Parks and Recreation, liaison officer for the Land and Water Conservation Fund in California. The route also traverses areas which have been proposed for future recreation development. We recommend that these areas be avoided, and feel that the implications of this should also be discussed with Mr. Rhodes.

R There are no impacted parklands which have received financial assistance under the Land and Water Conservation Fund Act of 1965 as amended. In response to the second part of this comment, the route traverses an area once indicated for future acquisition as part of the California Poppy Preserve. The State Department of Parks and Recreation was contacted on this issue. Acquisition of the poppy preserve is now complete. The pipeline route is 1/2 mile north of the completed preserve. Mr. Ray Wild of that department felt there was only a minimum probability that the park would ever be expanded to include the pipeline route corridor.

h. C The EIS should clarify the seismic design criteria that would be applied to all three pipeline alternatives.

R The text in Section IV was a summary of the seismic hazards evaluation contained in Appendix F, but some oversimplifications were made and inaccurate conclusions resulted from the summarizing process in the DEIS. As discussed in Appendix F, the evaluation of ground shaking along the pipeline route was based on calculations made for the Elk Hills Tank Farm site. The following comments have been added to the text in the mitigation section of Geological Resources.

There are no prescribed criteria for selection of design peak ground acceleration based upon probability of occurrence. However, a frequently used practice in earthquake resistive design is to select a 0.16 probability of exceedance, and for the pipeline, a 25-year period of use may be estimated. The design peak ground acceleration for areas not close to fault zones would then be 0.5 g (from Table F-3, Appendix F).

At points along the route within a few miles of active faults, recurrence rates might be 50 to 100 percent greater than those given for the Elk Hills Tank Farm site (Table F-3). Consequently, a higher level of design peak ground acceleration would be required near faults. Elsewhere along the route the ground motion expectancies would be about the same as those calculated for Elk Hills. Where crossing major active fault traces, the pipeline would be subjected to possible ground surface rupture in an earthquake as well as to strong vibratory ground motion.

When final earthquake resistive design criteria are prepared they will take into account the approximate differing response to earthquake ground motions of crystalline rock, alluvium, or other geologic formations.

i. C The release of hydrostatic test water to receiving streams should be controlled in order that streambed scour and streambank erosion may be kept to a minimum.

R None of the water originating from the hydrostatic testing will be released until all applicable discharge regulations (i.e., water quality regulations) are first met. The method of release will be such that stream scouring and erosion will be kept to a minimum (e.g., the releases will be done gradually and will not be excessively large or beyond the channel capacity of the receiving stream involved).

j. C Cathodic pipeline protection should be described more adequately.

R The cathodic protection system will meet all standards outlined under Department of Transportation Title 49, Part 195 - Transportation of Liquids by Pipeline, A & S1 - B 31.4 - 1974. These standards should suffice to insure that aquifer pollution will not occur. Further, the pipeline runs almost entirely through terrain which has a very deep water table and where rainfall is minimal.

k. C Three blunt-nosed leopard lizards were sighted in T. 31.S., R. 22.E, Section 20.

R The sightings and impact on habitat for the blunt-nosed leopard lizard have been incorporated into the main body of the FEIS in the Environmental Atlas and under Section IV, E.2.a., construction impacts on wildlife. See response to comment e. of letter 8 for additional action by the Navy.

l. C Follow through on the protection of seedling oak trees.

R Please see response to letter 13, comment dd.

m. C Are chaparral seed mixes possible?

R Section IV, E.1.c., mitigation for impacts on vegetation, has been modified to indicate the possible value of using chaparral seed mixes for mitigation of losses in the chaparral zones.

n. C Water barring may be a potential erosion prevention method.

R Section IV, E.1.c., mitigation for impacts on vegetation, has been modified to indicate the possible value of water barring as a means of preventing erosion in the chaparral zone.

o. C The destruction of creosote is a trade-off.

R Section IV, E.1.c., mitigation for impacts on vegetation, does indicate that disturbance of creosote should be minimized.

p. C The riparian vegetation at Pastoria Creek should be protected.

R Section IV, E.1.c., mitigation for impacts on vegetation, has been modified to call for careful examination of stream course crossings and special care to be exercised at Pastoria Creek.

9. U.S. Department of the Interior, Bureau of Land Management

a. C A parcel is crossed which includes critical habitat of the blunt-nosed leopard lizard.

R Refer to responses to comments 8 e. and 8 k.

b. C The crossing of the California Aqueduct by the pipeline should be coordinated with appropriate staff members of the California Department of Water Resources.

R The Navy fully intends to work closely with the Department of Water Resources in its crossings of the California Aqueduct to insure that the aqueduct is adequately protected from impact.

c. C The exact route should be staked as early as possible to allow site specific archeological reconnaissance.

R Refer to responses 1 a. and b.

10. U.S. Environmental Protection Agency, Region IX

a. C The impact beyond interim destinations is not identified.

R Under the SOHIO alternative, the bulk of Elk Hills oil would be transported to the east out of California to the highest bidder. At this time, it is impossible to tell where the ultimate destinations would be.

b. C Will the Navy participate in AQMP process?

R Upon receipt of a request from the Environmental Protection Agency or Kern County indicating the type of assistance required, the Officer in Charge, Naval Petroleum Reserve No. 1 (Elk Hills) will provide appropriate assistance in the formulation of the Kern County Air Quality Maintenance Plan.

c. C Are there sufficient mitigating measures such that the project will not violate the NAAQS?

R Mitigating measures that will be implemented were listed in Section IV of the DEIS. In addition, potential measures are listed which could further mitigate emissions. The potential measures that will be necessary to prevent violation of the NAAQS will be

defined in the New Source Review (NSR) Procedure. The Navy will comply with all applicable Federal, state, or local NSR procedures.

d. C List the mitigation measures in terms of following categories: committed, enforced by responsible agencies, stipulated prior to permit issuance. Also state the effectiveness of various measures.

R The mitigation measures on the petroleum storage tanks can be categorized as follows:

(1) committed - painting the Elk Hills tanks white, double seal floating-roof tanks with primary metallic shoe-type seals and secondary seal extending from the roof to the tank shell.
(2) enforced by responsible agencies - double seal floating-roof tanks.
(3) stipulated prior to permit issuance - potential measures include vapor recovery and emissions offsets within the same air basin. Although vapor recovery was originally considered as a mitigating measure, it was dropped as recommended by the California Air Resources Board and the South Coast Air Quality Management District.

Best available control technology for crude oil storage has been determined to be floating-roof tanks with a metallic shoe seal and an independent secondary seal. The design proposed for this project is in accordance with this determination.

The effectiveness of possible mitigating measures were listed and documented in the Air Quality Mitigating Measures section, Chapter IV, of the SOHIO conveyance system DEIS.

e. C The EPA is concerned that reactive hydrocarbon emissions are
f. underestimated and should be updated according to Supplement No. 7.

R Hydrocarbon loss calculations have been revised slightly in the FEIS to conform with the procedures outlined in EPA Publication AP-42, Supplement No. 7. The loss estimate is in terms of total hydrocarbons; reactive hydrocarbons were determined to be 95 percent of total based on the three class reactivity scheme adopted by the EPA and ARB. The revised calculation can be found in Appendix P of Volume I.

g. C A description of the effects of the project on the Air Quality Maintenance Planning Process (AQMP) should be provided.

R Discussions with officials involved in the AQMP process in Kern County, the South Coast Air Quality Maintenance Area (AQMA), and the Southeast Desert AQMA, revealed that the AQMP's are now in their initial stages of development. The AQMP's will concentrate

on transportation and land-use planning as well as major new developments that could affect air quality. The general concensus was that any new source that falls under the current provisions of the New Source Performance Standards and the New Source Review would not have any significant effect on the AQMP process.

Both the Elk Hills and Cajon tank farms will be subject to the New Source Performance Standards and applicable New Source Review Processes, therefore they are not expected to affect the AQMP process significantly.

h. C The DEIS treats a conveyance system of 250,000 bbl/day, but production could be 350,000 bbl/day. Can the alternatives be modified to accommodate higher production?

R There is currently capacity in existing pipelines in the Elk Hills area to transport about 150,000 bbl/day to California refineries. The Navy currently has commitments with refineries in California to deliver 142,000 bbl/day. Therefore the proposed project covers the additional capacity needed to meet the Congressional mandate.

i. C The DEIS fails to identify potential markets for Elk Hills oil.

R Navy currently has commitments with refineries in California to deliver 142,000 barrels of Elk Hills crude per day through existing pipelines. The direction of Congress for the Navy to provide for transportation of up to 350,000 barrels per day of Elk Hills crude by 1979, and the expected surplus of crude on the West Coast dictates that the Navy must provide for shipment of some of this crude outside California. The major market for this crude will be east of the Sierra Nevada which can be reached by either pipelines or tanker shipping. (See comment 10.a.)

j. C More recent emission inventories than 1973 are now available.

R The Air Resources Board has prepared 1975 reactive hydrocarbon emission inventories for the air basins of concern as well as future projections. The 1975 inventory is less than the 1973 inventory in Kern County by about 1 percent. The Southeast Desert portion of San Bernardino County 1975 inventory is about 4 percent higher than the 1973 inventory used in the DEIS. Therefore, since the differences are small, there would be no change in the conclusions drawn in the DEIS.

k. C The DEIS doesn't consider cumulative air quality impacts due to other energy-related projects.

R The Draft and Final EIS mention in Appendix I that tertiary oil recovery operations in the San Joaquin Valley could create an increased SO_2 problem, exacerbating the impact of the Elk Hills

project. The proposed SOHIO marine terminal and pipeline project, which is necessary in order to implement the Navy's SOHIO alternative, could have substantial effects on the air quality of the South Coast Air Basin. It would have little effect on the Southeast Desert Air Basin, however, where the Cajon Tank Farm's primary impact would occur.

l. C The Elk Hills project should be better coordinated with other energy development projects.

R The SOHIO conveyance system alternative offers what is probably the greatest degree of coordination possible with other energy projects. It makes maximum use of another proposed energy facility, the SOHIO pipeline, and moves Elk Hills oil to markets where it is potentially more needed than in California. In addition, the Joint Industry Governmental Working Group of Santa Barbara has identified the SOHIO conveyance system as a possible link in a system to move OCS oil to eastern markets. The link between the Santa Barbara Channel and Elk Hills would be accomplished primarily through conversion of the existing Casitas Pipeline Company natural gas line to oil use.

m. C The Draft EIS does not address the effects of the production and/or intermediate storage of the oil prior to its pickup at the Elk Hills Tank Farm. The hydrostatic testing program should also be described in more detail.

R As noted on page 1-5 of the EIS, this report does not include the production of oil at Elk Hills or the transport and intermediate storage of this oil prior to its arrival at the Elk Hills Tank Farm. These items and their environmental assessment will be covered in a separate document, which will be published at a later date. For this reason, these items are not addressed in this EIS.

With regard to the source and discharge of the hydrostatic test waters, the final decision on this matter will be made by the U.S. Navy at some later date. However, it should be noted that it is our intention to abide by all relevant regulations that pertain to the acquisition and disposal of this water, including any applicable permits. While the possibility for impacts cannot be completely dismissed until after the testing program has been presented in detail, the probability of impact will be substantially reduced by this process.

11. Federal Energy Administration, Region IX

a. C The FEA has conducted an in-house evaluation of the project.

R No response is necessary.

12. Federal Power Commission

a. C Elk Hills Petroleum Reserve should not be developed, but be retained as a strategic Reserve under the Federal Energy Administration's program.

R Please refer to Section II of the Naval Petroleum Reserves Production Act (Appendix A of the FEIS) in which Congress directed the Secretary of the Navy to develop and produce Elk Hills petroleum at maximum efficient rates. Any revision to this operating concept would require an Act of Congress.

b. C Standard Oil of Ohio's (SOHIO) pipeline proposal has not yet been approved.

R The Navy is awaiting the resolution of the SOHIO midcontinent pipeline issue.

c. C We believe that conditions and National energy goals have changed sufficiently so that the proposed action may no longer be beneficial.

R Please see the response to comment a. above.

13. The Resources Agency of California

a. C Elk Hills development could have serious consequences relative to a number of issues.

R Specific response will be made on these issues in the following comments.

b. C It is critical that the Navy's EIS fully analyze the consequences of Elk Hills development on a number of issues. All possible measures to mitigate adverse effects while still serving national goals should be taken.

R Specific responses will be made on these issues in the following comments.

c. C The proposal for a production ceiling of 80,000 barrels per day from Elk Hills should be discussed.

R Until the proposals are implemented by Congress into new laws, the Navy must proceed under the present law. Regardless, the President's proposed energy plan does not indicate any decrease in the requirement for the Navy to be able to move up to 350,000 barrels a day as required by Public Law 94-258. Nor does it propose a change in the time frame for accomplishment of that goal. It

provides only that some ceiling be placed on production until facilities are available to handle the expected West Coast surplus and the Navy's crude.

d. C Market analysis should be presented in the FEIS. Final de-
e. cisions should not be made until market potentials and con-
f. straints are thoroughly documented. Specifically, what is the market relationship of Elk Hills crude to the anticipated surplus of Alaskan crude?

R The Navy has undertaken a new market analysis at the request of Congressional committees. This study is being conducted concurrently with the FEIS preparation and will be completed in September, 1977. Preliminary reviews of the study show that conclusions will be similar to those of earlier Navy studies, i.e., as long as there is a surplus of Alaskan North Slope crude on the West Coast, the national interest will be best served by marketing Elk Hills oil east of PADD V. In any event, Public Law 94-258 requires that transportation capability for 350,000 BPD be developed by April 5, 1979; so the project described in this FEIS must proceed based on the market analyses now available.

g. C Are existing pipelines going north, south, and west adequate to handle crude flows?

R Existing oil lines near Elk Hills, including those currently carrying Elk Hills crude, are near capacity in all directions. Small additional capacity could be developed. However, it does not appear feasible to pursue the necessary addition of pumps and heaters at total Navy expense in order to marginally increase the capacity of these industry-owned pipelines.

h. C The market analysis should address the effects of Elk Hills crude availability on marketability of existing California in-state production.

R Continued availability of Elk Hills Crude would exert price pressures on some crude production in California.

i. C Clear conclusions should be drawn regarding which proposal, if any, would best meet the market supply needs of the state, Navy, and nation.

R Such conclusions have been made in Section V, Alternatives, wherever it was indicated that both of the other alternatives (Elk Hills/Coalinga and Elk Hills/Port Hueneme) would make Elk Hills crude oil available on the West Coast. However, more likely markets for Elk Hills crude oil would be in the eastern and central U.S., which the SOHIO alternative would serve more directly.

j. C The production DEIS is necessary to provide information to assess the pipeline DEIS.

R The production maximum efficient rate (MER) is anticipated to be 300,000 BPD by the end of 1980. The breakdown is 240,000 BPD Stevens Zone and 60,000 BPD Shallow Oil Zone. The MER is then expected to decline by approximately 15 percent per year to depletion. Although the production MER could vary from the rate programmed by the Navy, the intent of Congress and PL 94-258 is extremely clear with regard to the amount of transportation capacity to be secured from Elk Hills. This was an item that was fully considered by the Congress during debate on this law, and it would seem inappropriate at this time for the Navy to take any other action.

k. C The production, sale, and transport of Elk Hills gas needs to be addressed in the DEIS.

R The natural gas produced in association with the crude oil and non-associated gas is planned to be used for reinjection to secure maximum ultimate recovery as mandated by law. When this gas has accomplished its purpose, it may then be made available for sale. Nonetheless, any sale or transport of natural gas from Elk Hills would require additional environmental analysis which is not within the scope of this crude oil pipeline EIS.

l. C Oil should be produced from the Stevens Zone vs. the Shallow Oil Zone in view of the better quality and likely better ability to market Stevens crude.

R As noted earlier, it is not the purpose of this statement to cover production from Elk Hills which will be the subject of the separate Environmental Impact Statement on the production aspects of Elk Hills. The design of the pipeline takes into consideration that the oil would be batched by zones and the proposed pipelines can handle both the Stevens Zone and Shallow Zone crudes.

m. C The most effective mitigating measure available to the Navy in this project is full use of existing pipelines. The DEIS fails to develop information necessary to evaluate this measure. The Final EIS should not only inventory existing vacant pipeline capacity that might be used but also address the possibility of increasing the throughput capability of existing lines with the addition of pump stations and heaters. A great deal of information concerning the expansion capability of major crude tank lines has been brought together by the Santa Barbara County, Ventura County Joint Industry/Government Working Group.

R The Navy has previously investigated the pipeline capacity out of the San Joaquin Valley and has determined that it is not feasible to add heaters and additional pump stations within the time frame required. It should be pointed out that additional connections, heaters, and pump stations required for increase would be a total Navy expense. In view of the uncertainty as to the time or rate of production, an alternative is probably not economically justified. Expanding the capacity of existing pipelines would still not permit marketing Elk Hills oil east of PADD V, as the SOHIO connection would.

n. C The DEIS assumes that Phase II of the SOHIO Project would be in operation by 1982 and also indicates an early decision on conversion of the second El Paso Natural Gas Pipeline for east-west transport.

R The revised project description now provides for delivery of up to 500,000 barrels per day into the SOHIO pipeline. If and when Phase II of the SOHIO project is implemented, an expansion of the Elk Hills/SOHIO connection would be considered. Any such expansion would be covered by an additional environmental assessment.

o. C If SOHIO can accept Elk Hills crude at peak delivery rate (questionp. able), SOHIO would have to store preempted crude at Long Beach (more pollution).

R If the Elk Hills to SOHIO option is selected, a portion of Elk Hills crude will initially displace a portion of SOHIO's North Slope crude moving to the midcontinent via the SOHIO line. This sharing of the line and the ratio of SOHIO to Elk Hills crudes will be according to established, common carrier provisions. The displaced North Slope crudes will most likely be moved by tanker to the Gulf Coast.

q. C Implementation of the common carrier provision of Public Law 94-258 should be discussed.

R Any pipeline constructed or purchased by the Navy would be a common carrier for Elk Hills crude. Private lines transporting Elk Hills crude would be common carrier lines as far as Elk Hills production is concerned.

r. C The FEIS should reflect the Navy's commitment to aid air quality strategies.

R The design of storage tanks for the SOHIO conveyance system alternative will meet all applicable Federal, state, or local regulations. In addition, requirements of the Federal, state, or local New Source Review process will require that the Navy not interfere with the attainment or maintenance of air quality

standards. Potential mitigation measures that could be used to meet NSR requirements are listed in Section IV of the FEIS.

s. C There are three major areas of concern: (1) increased emissions from transport of oil; (2) natural gas supply reduction to California; and (3) potential for tradeoff strategies through natural gas production at Elk Hills.

R These comments are answered in detail in the responses to comments t. through bb.

t. C Transportation of crude oil to ports for tanker loading would have the most serious air quality consequences.

R This is correct. The SOHIO conveyance system has the least air quality impact of the proposed routes.

u. C The FEIS should specify strong mitigation measures for storage tanks such as double-seal floating roofs with primary shoe-type seals and secondary seals whch extend from the roof to the tank shell.

R The tank design has been changed to reflect the above design requirements.

v. C The FEIS should provide a specific tabulation of emissions in each county.

R For the SOHIO conveyance system alternative, the major air pollution sources are the Elk Hills Tank Farm in Kern County and the Cajon Tank Farm in San Bernardino County. Therefore, specific emissions by county can be found in Tables P-1 and P-3 of the FEIS.

w. C The FEIS should include a county by county listing of daily, annual, mean and maximum emission levels pre- and post-project.

R County emissions listings were addressed in the response to comment v. Storage tank emissions are calculated based on a correlation developed by the American Petroleum Institute. The method correlated annual hydrocarbon losses with average annual oil temperature and wind speed. Therefore, annual average losses are the only losses that can be reliably estimated using the correlation. The lbs/hour estimates presented in the FEIS are unit conversions from barrels/year estimates made by the correlation.

There are no existing facilities to calculate pre-project emissions at the Cajon site. At Elk Hills, there are a number of present emission sources, however, and these will be addressed in the forthcoming DEIS on production of Elk Hills oil.

x. C Phase II of SOHIO project would require abandonment of additional gas pipeline capacity and adversely affect California air quality.

R The DEIS, in Section VII, did address the potential problems of a Phase II natural gas pipeline abandonment. This, however, is a subject which is appropriate for discussions in any future EIS for Phase II of the SOHIO project.

y. C The EIS does not address potential air quality problems of a SOHIO inter-tie. The FEIS should present a thorough analysis of the SOHIO project.

R It is beyond the scope of this FEIS to present a thorough analysis of the SOHIO project. As the Resources Agency of California states on page 5 of its comment letter, the Phase II implementation would require a separate EIS and separate permits and approvals from all concerned agencies.

z. C The FEIS should discuss tradeoff strategies, such as production of natural gas at Elk Hills.

R The natural gas produced in association with the crude oil and non-associated gas is planned to be reinjected to secure maximum ultimate recovery as mandated by law. When this gas has accomplished its purpose, it will then be made available for sale if directed to do so by the Secretary. Nonetheless, any sale or transport of natural gas from Elk Hills would require additional environmental analysis which is not within the scope of this crude oil pipeline FEIS.

aa. C There will be negative effects of the pipeline on wildlife unless
bb. more extensive mitigation is proposed and identified in the FEIS.
cc.

R Regarding the negative effects on wildlife, in particular endangered species, the Navy will conform to the stipulation of the Endangered Species Act of 1973. See response to letter 8 e. for more extensive response.

dd. C We are concerned about Rocky Mountain Elk and deer and possible improvement of their habitat.

R The Navy will coordinate revegetation plans with the California Department of Fish and Game to maximize the value of the habitat to wildlife and minimize competition by livestock. The Navy will provide an all-weather access road in the Tejon Ranch.

ee. C Indicate what appropriate mitigation measures are incorporated into the project to reduce, prevent, and react immediately to oil spills or breakage of pipeline.

R The design of the pipeline will be such as to reduce, and in some cases prevent, oil spills. Thus, block valves will be placed at intervals to insure that the maximum design spill (that is a worst case condition) is not out of keeping with the terrain in which the spill might occur. The input-output monitoring system will insure that pipeline operation will cease within a few minutes after any detected leak -- large or small (and detection can be accomplished in 2 minutes or less). A contingency plan will be prepared for the entire length of the pipeline and an SPCC plan will be developed for the tank farms prior to initiation of operations. This contingency plan will include a detailed definition of each mile of the pipeline indicating direction of flow of oil in the event of a break or leak, and sensitive environments which could be affected. (The Environmental Atlas of Appendix C outlines in more general terms the "spill corridor," based upon the design spill, and indicates the sensitivity of the environment along the route.) The contingency plan will also indicate appropriate cleanup methods along the entire route, local contractors who may be retained in the event of a spill and the procedures in reporting the spill to pipeline personnel and appropriate regulatory agencies both within the State and in the Federal government.

ff. C Information is requested on: (1) the minimum response time in the event of a major pipeline break; (2) the amount of oil that would be released in the time between notification of a break and closing the appropriate manual block valve(s); (3) the amount of oil that would escape from the line even after the valve was closed; (4) the natural and wildlife resources along the path of the route that are most susceptible to damage resulting from an oil spill and (5) clean-up techniques and capabilities along the route, particularly along areas of vulnerable resources.

R Regarding the first three parts, in the event of a major oil spill the input-output system would alert the supervisory control center at Elk Hills and the pipeline would be promptly shut down. All remote valves would be closed immediately and crews would be dispatched to determine the exact location of the rupture if this were not known. At the same time these crews would close any manual block valves to lessen drainage. In most cases, block valves could be closed within an hour but for purposes of calculating the design spill, shown in Figure D-1 of Appendix D, a two-hour closure was assumed. Line drainage during this two-hour period is estimated to be less than 9,000 barrels over most of the route and would be appreciably less when block valves were located close to the site of the break. In very rugged terrain, drainage would proceed much

faster (see Table D-4 in Appendix D for the relative drain times on the route), but because of the low design spills typical of rugged terrain, the total spill would be of the same order as above.

Oil would continue to flow from the pipeline even after valves were closed. However, heavy equipment could be brought into play within a matter of an hour or so in most locations to provide berms to contain this oil or prevent further spread. Stopples can also be inserted into the broken line, shutting off all flow. Pooled oil would be salvaged by vacuum trucks.

Parts 4 and 5 of this comment have been answered in response to part ee. above.

gg. C Ninety percent of the equipment-related ruptures occur on lines less than 40 inches below the surface. The DEIS indicates the pipeline will be buried at 36 inches.

R Equipment-related ruptures (third party accidents) do predominate in lines with less than 40 inches of cover (see Appendix D, page D-6). However, third party accidents involving heavy equipment occur most frequently in the State of California where deep plowing (sub-soiling), is practiced in agricultural activities. In areas of agricultural activities through which the pipeline passes, it would be buried at least 48 inches. In other areas, such deep burial would result in more disturbance of the terrain and should be avoided.

hh. C It cannot be determined from DEIS whether or not appropriate seismic and other geological studies have been conducted.

R Full-scale geological and seismological studies have not been conducted. This will be done, where necessary, when the final pipeline route is chosen and approved. Design criteria of the pipeline relative to seismic safety is responded to in comment 8.h.

ii. C List all earthquakes that traverse the proposed pipeline route.

R See Figures F-1 and F-2 in the FEIS, Volume I.

jj. C Describe epicenters, magnitudes, accelerations and other relevant characteristics.

R See Figures F-1 and F-2 and Tables F-1 through F-3.

kk. C List facilities design criteria.

R See response to comment 8.h.

ll. C List main line block valves at points where the pipeline crosses suspected or known fault zones, including Los Gatos Creek.

R The SOHIO alternative does not cross Los Gatos Creek. However, the SOHIO pipeline does cross the San Andreas fault zone between MP 145 and 146. A remote controlled block valve would be located at MP 145 and a manual block valve at MP 146 to stop oil flow in the event of movement along this fault. Block valves are located at greater distances from the smaller Garlock, White Wolf, and San Jacinto faults. However, in the event of pipeline breakage along these faults, the system can be shut down quickly or with minimal oil spill. For further information regarding pipeline fault crossing and spills, see Appendix D, and Figure 1-9 in the project description.

mm. C Compare costs of alternatives, with consideration given to (1) variations and combinations; (2) full use of the condemnation process; and (3) increased emphasis on natural gas production.

R The total construction dollar amounts involved for each alternative are: Elk Hills/Coalinga, about $80 million; for Elk Hills/ Port Hueneme about $60 million; and for Elk Hills/SOHIO about $110 million.

(1) Variations of each alternative have been considered. Combinations of alternatives, however, have not been considered under the scope of this proposed project. In general, use of two or more alternative pipelines would yield greater, overall adverse environmental effects, while not providing any essential additional benefits.

(2) Navy discussions with the owners of various pipelines available to carry oil from Elk Hills have indicated the feasibility of moving up to 150,000 barrels a day of oil and still meet the Congressionally-mandated directive to obtain a total capacity of 350,000 BPD by 1979. However, it does not appear feasible to pursue the addition of pumps and heaters on industry property at Navy expense to marginally increase the capacity of various pipelines.

(3) The transportation alternatives in the EIS are not intended to cover impacts of gas production from Elk Hills. Regarding pipeline construction, the EIS discusses only the requirements to transport oil, not gas.

nn. C Thorough analysis of justification for the project based on regional and national marketing considerations and national energy policy developments should be completed.

R Thorough analysis of justification of the project is found in Public Law 94-258 which establishes the scope and time for completion of this project. See also response 13.d.e.f.

oo. C Final EIS should incorporate natural gas production and commercial sale as project alternatives.

R See response to mm above, part (3).

pp. C Navy and other decision-makers should not approve SOHIO alternative unless it is demonstrated that a net improvement in air quality will occur.

R The Navy concurs and this EIS and all subsequent actions work toward that end, within the framework of current Federal, state, and local regulations.

14. Air Resources Board

a. C A recommendation is made to change the tank design to open-top floating-roof tanks with primary metallic shoe-type seals and secondary seals extending from the roof to the tank shell.

R The design of the storage tanks at Elk Hills and Cajon has been changed to the recommended design.

15. California State Water Resources Control Board

a. C The project sponsor should contact the individual Regional Boards responsible for areas traversed by the pipeline to determine what discharge permits are required.

R The Navy will coordinate its acquisition of discharge permits through the Environmental Protection Agency and will meet state standards. No discharges will be made until all appropriate permits have been obtained.

b. C The development of oil spill contingency plans for the pipeline should be coordinated with the Regional Board oil spill response plans.

R A complete oil spill contingency plan will be prepared before the pipeline becomes operational. It will be coordinated with the Regional Board oil spill response plans and with any other appropriate state and Federal response plans.

c. C Small chronic leaks from the pipeline could be more damaging to groundwater aquifers than a larger, more visible spill. In porous areas, consideration should be given to the construction of an impervious trench lining. Such a lining would effectively force any potential fugitive oil to the ground surface where it could be more easily detected. Also, automatic and manual line valves should be installed in rupture-prone areas.

R In general, the movement of oil through the soil column is governed by the soil's permeability and the oil's viscosity. While a particular soil's permeability is a relatively fixed parameter, the viscosity of an oil, once it is spilled, is subject to change. In particular, spilled oil tends to become more viscous through the loss of its lighter fractions via evaporation and microbial action. Thus, even in cases where highly porous soils favor oil penetration, this degradation will tend to limit the extent of an oil's downward movement. For this reason, it is not expected that small chronic leaks, even in porous soils, will achieve sufficient soil penetration to cause groundwater contamination.

Only in cases where the groundwater table is close to the surface and it is heavily used would the above penetration be sufficient to result in major adverse effects. For the SOHIO alternative, only one area (Cajon Creek near Keenbrook) fits such a classification. This area is used by the City of San Bernardino as a municipal water supply and is closely paralleled by the pipeline. Because of the closeness of the pipeline to this groundwater system, a chronic leak could result in major contamination. Thus, the use of an impervious trench lining in this area (MP 138-142) would be advisable and will be included in the project design.

With regard to line valves in rupture-prone areas, such as the San Andreas Fault area, such devices have already been included in the project's design.

d. C The discussion of wastewater disposal does not include any discussion of the applicability of EPA Effluent Guidelines for the Onshore Subcategory of the Petroleum Category.

R These particular EPA guidelines were not discussed in the report because they are applicable only to water pollution associated with oil/gas production, field exploration, drilling, well completion, and well treatment.

e. C If EPA Effluent Guidelines apply and a disposal sump is required, the Department of the Interior's NTL-2B regulations may have to be satisfied.

R Since the above guidelines are not applicable to the project addressed in the DEIS, the NTL-2B regulations of the Department of the Interior do not need to be satisfied.

f. C Annual hydrostatic testing of the pipeline could prevent adverse impacts from an oil spill in remote mountainous areas.

R The shortage of water and lack of treatment facilities along the route of the pipeline preclude annual hydrostatic testing which is not required under present regulations.

g. C There is a deficiency in the Cultural Resources section.

R See response to letter 1, parts a. and b.

h. C Additional information on measures to prevent spills, and description of cleanup efforts in the event of spills, is requested on the proposed Cajon Tank Farm where 21 million gallons of oil would be stored.

R The storage capacity at the Cajon Tank Farm would be approximately one million barrels of oil, equivalent to 42 million gallons. However, the average amount of storage would be close to the 21 million gallons indicated. Each of the proposed tanks would be individually diked with drainage to a holding pond of one million barrel capacity. Provisions would be made to allow removal of surface waters through the dike by manual means only. In the event of a spill, oil would be retained within the holding pond and would promptly be pumped out for return to the system. The facility will have both a Spill Prevention Control and Containment plan, as required by the Environmental Protection Agency, and a contingency plan which will include detailed instructions on spill prevention and cleanup.

16. South Coast Air Quality Management District

a. C The best available control technology for storage tanks is open-top floating roof with pontoon or double-deck design, metallic shoe seal, and independent secondary seal.

R See response to 14 a.

17. South Coast Air Quality Management District

a. C Some potential emissions are apparently not accounted for.

R See responses to comments b. and c. below.

b. C Electrical power requirements for pumps will produce air pollution at power plants. A total of 23,600 horsepower in pumping capacity will be installed, therefore the consequent power plant emissions should be quantified.

R A total of 16,550 horsepower would be used at any one time, since a spare pump would be included at each pump station as indicated in Table B-2 of the FEIS. Assuming that the necessary power would be produced by burning fuel oil, the following emission factors are suggested for use by the Air Resources Board:

SO_x - 5.3 lbs/megawatt-hour
NO_x - 3.0 lbs/megawatt-hour
Part. - 0.5 lbs/megawatt-hour
HC - 0.2 lbs/megawatt-hour

The 16,500 horsepower pump requirement is the equivalent of 12.3 megawatts. Therefore, power plant emissions would be as follows:

SO_x - 65 lbs/hour
NO_x - 37 lbs/hour
Part. - 6 lbs/hour
HC - 2 lbs/hour

Due to the complex power grid system, all of the emissions would probably not be produced at one power plant or even in one air basin. If all emissions were produced at the same power plant, small ($\sim$.01 ppm) ground level SO_2 concentrations would result, assuming worst case meteorological conditions and an elevated stack.

c. C Hydrocarbon emissions from pumps and valves along the pipeline are not quantified -- no emissions are listed in the South Coast Air Basin.

R There will be no pumping stations along the pipeline in the South Coast Air Basin. There will be several valves. However, hydrocarbon emissions from the valves were considered too small to warrant consideration. For example, the Air Pollution Engineering Manual, compiled by John Danielson of the LAAPCD, lists average oil refinery valves as losing about 0.1 lbs/day of hydrocarbons. Such losses would not have any measurable effect on air quality.

d. C Table I-7, containing the 1973 San Bernardino Emission Inventory, does not contain any units. Also, an emission summary would be helpful.

R Table I-7 has been corrected in the FEIS to reflect the units of tons/day. Since the major sources of emissions in the SOHIO project are the tank farms at Elk Hills and Cajon, a summary of emissions can be found in Tables P-1 and P-3 of the FEIS.

18. Southern California Association of Governments

a. C SCAG policy is to encourage production of Elk Hills natural gas.
b. Is anything being done about the natural gas at Elk Hills? Will
c. it be available for intrastate sale? Will SOHIO's pipeline have the capacity for Elk Hills oil, or will additional gas lines have

to be converted? Gas transportation routes may influence choice of crude oil transport corridor, and should be proposed now.

R The natural gas produced in association with the crude oil and non-associated gas is planned to be used for reinjection to secure maximum ultimate recovery as mandated by law. When this gas has accomplished its purpose, it will then be made available for sale if the Navy is directed to sell it by the President and Congress. Nonetheless, any sale or transport of Elk Hills natural gas would required additional environmental analysis which is not within the scope of this crude oil pipeline FEIS.

If the Elk Hills to SOHIO option is selected, a portion of Elk Hills crude will initially displace a portion of SOHIO's North Slope crude moving to the midwest via the SOHIO line. This sharing of the line and the ratio of SOHIO to Elk Hills crudes will be according to established, common carrier provisions. The displaced crude will most likely be moved by tanker to the Gulf Coast.

There is a possibility that SOHIO will add a second phase to their project, which would convert a second natural gas pipeline, not presently in use, to carry crude oil. This would bring SOHIO's capacity up to 1.2 million barrels/day, allowing more Elk Hills oil to be added to the system. Should SOHIO wish to develop Phase II, further environmental studies would be required for their expansion program and for expansion of the Navy's system.

d. C The SOHIO route could potentially conflict with the SCAG Conservation and Open Space Plan. The route crosses several locations defined in the plan as Areas of Regional Significance and Concern. These are planned as preservation and conservation zones. They include Big Rock Wash, Lytle, Cajon, and Mescal creeks, and the Desert Montane Transect (between the Mojave and the San Gabriel Mountains). Plans to acquire and maintain other significant zones include Antelope Buttes, Pinon Hills, and Little Rock Creek and Wash. Mitigation measures should be explored to ensure consistency with conservation plans.

e.

R The new route through Antelope Valley, as described in the FEIS, avoids all of the "Areas of Regional Significance and Concern" listed in the SCAG's Conservation and Open Space Plan. The route does pass just one-half mile northeast of the California Poppy Preserve near Fairmont Butte. The route will follow the Southern Edison powerline through this area, thus following a route which is already disturbed. Mitigation measures along the pipeline route include restoring the surface and reseeding.

19. Los Angeles County Supervisor, 5th District

a. C The route cuts diagonally across hundreds of privately owned parcels within the 5th Supervisorial District.

R The route has been realigned through the Antelope Valley to eliminate the problem of severed property. The realignment occurs between MP 60 and 121.

b. C Problems of this route include damage to private property due to the diagonal alignment of the route, the impact of oil spills, and the limited opportunity available to affected citizens to make their views known in this important matter.

R The route has been changed to follow existing rights-of-way or township lines through the Antelope Valley. A discussion of avoiding oil spills is included in part 9B of Chapter I and in Appendix D of the EIS. The affected citizens have had (and taken) the opportunity to make their views known. A public hearing was held in the City of Palmdale on June 29, 1977. Forty-three letters from organizations and individuals and a petition have been sent to the Navy, and all are responded to in this Final EIS. (This is in addition to the 23 letters from government agencies or officials like yourself.) In response to all of this citizen input, the proposed route through the Antelope Valley was changed to minimize the impact on private property value and future land development. The realignment was presented to the City of Palmdale in August and received a favorable endorsement.

c. C The route should be realigned to follow public rights-of-way and property lines.

R This has been done through the Antelope Valley. See the responses to letter 32, comment a, and letter 49, comment a.

20. San Bernardino County Environmental Improvement Agency

a. C The proposed route for the pipeline is not in conformance with the County policy of consolidating energy corridors wherever feasible.

R In this case, location in an energy corridor did not appear feasible. However, the route is located in a major transportation corridor.

b. C A disaster plan for earthquakes should be submitted to the San Bernardino County Emergency Preparedness Officer for review and approval.

R A comprehensive contingency plan will be prepared for the pipeline prior to operation. The preparation will be coordinated with appropriate Federal, state, and local agencies including the San Bernardino County Emergency Preparedness Officer.

c. C According to the JUMP siting analysis maps, the Cajon Tank Farm would be located in areas of high and moderate potential for adverse effects. The tank farm is incompatible with an eligible scenic highway, and its visibility will attract the curious and vandals with resulting safety hazards in a recreational area.

R. The relationship of the Cajon Tank Farm with the JUMP plan has been discussed in the EIS beginning on page 3-4. Our analysis has indicated that the tank farm would not be visible from Highway 138, thus minimizing to some degree the impact on recreationists and the potential for vandalism. The tank farm will be fenced and locked as well. Access will be by an unmarked, unimproved road which also will discourage entry.

d. D There are other recreational and economic considerations. The San Bernardino National Forest is the most heavily used National Forest in the country. The recreational industry which was developed to service those visitors is an integral part of the county's economic base. Can this corridor be located in a less vulnerable spot?

R The routing of the pipeline along Highway 138 was an effort to minimize impact on the National Forest. Impacts on the National Forest due to the construction and normal operation of the project will be limited to the vicinity of Highway 138 and will occur during the period of construction and restoration. An analysis of the spill potential, or risk of abnormal operation, can be found in Section 9a of the Introduction and in Appendix D of the FEIS. This information and your letter are available to the Navy in their decision process.

e. C To ensure coordination and elimination of future adjacent incompatible uses, the Cajon Tank Farm would require a General Plan amendment and Location and Development Plan.

R The Navy has initiated discussion with San Bernardino County about these issues.

f. C By what criteria will alternatives be evaluated? What is the time frame for the decision? How will localities be involved in decision-making process?

R The alternatives will be evaluated according to their respective environmental impacts, economics, engineering feasibility,

markets for the crude, and the outcome of the SOHIO Long Beach - Midland pipeline. A decision is expected to be made in the fall of 1977. The EIS process involves the county in the decision-making process in that it spells out the degree of conformance with local plans and responds to county concerns as expressed in the county comments on the DEIS. As indicated in the response to comment 19 e, the Navy has initiated discussions with the county on various issues raised in the comments on the DEIS.

g. C Would the Navy be granted an extension for construction if additional review time were required?

R Such an extension would be decided by Congress. The present law (PL 94-258) does not provide for any time extensions for any reason.

h. C What effect will reduced demand on the West Coast for crude oil have on route selection? Will the timing of the final decision on the SOHIO Long Beach - Midland pipeline influence the possibility of the Navy's SOHIO conveyance system alternative? Can the SOHIO line be sized to accommodate Elk Hills oil flow without additional environmental assessment?

R Marketing considerations are an important aspect of the route decision. In view of an anticipated crude oil surplus on the West Coast, the SOHIO conveyance system is the most viable alternative from a marketing standpoint. The timing of the final decision on SOHIO's Long Beach - Midland pipeline will influence the Navy's decision-making process, given the time constraints imposed by Congress. The revised project description in the FEIS presents a SOHIO conveyance system sized to be compatible with Phase I of SOHIO's Long Beach - Midland pipeline. The ultimate capacity of 1.2 million bbl/day would require additional tankage at Cajon and Phase II of SOHIO's Long Beach - Midland pipeline; such a project would require additional environmental assessment.

i. C Energy consumption of all three alternatives should be quantified. Energy-related importance of Elk Hills oil distribution vs. Alaskan and mid-east oil should be assessed.

R Over the long term, pipeline oil transport is generally considered to be the least energy consumptive means of transport, compared to other forms. The energy-related importance of Elk Hills oil distribution is directly related to potential markets for crude oil. Since it is generally recognized that the greatest potential market for Elk Hills and Alaskan crude will be in the central and eastern U.S., the SOHIO conveyance system alternative appears to be the most energy-efficient alternative, since it would move

Elk Hills oil to those markets. The Cajon Tank Farm location was chosen to minimize energy consumption. The hydraulic head from the 4,600-foot elevation of the Cajon Tank Farm is sufficient to permit the oil to flow by gravity to the Indio pump station of the SOHIO line. If the tank farm were at Colton, SOHIO would have to utilize their Redlands pump station to move the oil, with the consumption of an additional 40,767,000 KWHR per year based on a flow rate of 250,000 barrels per day.

j. C Are extensions of the project's six-year operational period by additional three year periods sufficiently probable enough to warrant the initial investment?

R The Navy is required by Public Law 94-258 to acquire the pipeline capacity. Considerations of economic justification were made by Congress when promulgating the law. Even if the initial investment is not economically justifiable under normal economic considerations, other parameters enter into a decision to acquire the pipeline capacity, such as national security.

k. C Flow from potential oil spills and corresponding fire hazards should be plotted on topographical and/or other maps.

R These flows are indicated on topographical maps in Appendix C of the EIS.

l. C The impacts of oil spills on groundwaters are not adequately described. If impacts are found, what agency is responsible for making the final decision on their degree of acceptability?

R The impact of oil spill on local groundwaters depends on several factors including oil viscosity, soil permeability, water table height and, most importantly, the use to which the particular groundwater is put. Because of the heavy use of groundwaters in portions of San Bernardino County crossed by the proposed project, the Navy made a special effort to analyze the impact that an oil spill might have on these waters. Based on this analysis, the groundwaters underlying Cajon Creek are the most susceptible to impact due to their proximity to the project and their heavy use. As stated in the FEIS, a major spill in or near these waters will have significant adverse effects on their use in the San Bernardino municipal water system. In light of the detail involved in this analysis, it is believed that the effects of oil spills on county groundwaters have been adequately discussed. As to the degree of acceptability of these impacts, the Santa Ana Regional Water Quality Control Board and the State Water Quality Control Board should make a determination.

m. C Increased ozone formation due to Cajon Tank Farm hydrocarbon emissions should be quantified.

R Such quantification has been done, to the extent possible, in the FEIS. See Appendix P of Volume I.

n. C Would tank farm personnel have "peace officer" status to provide necessary security?

R Operating personnel who would monitor the tank farm operation daily are likely to be working alone. They may be provided with "peace officer" status but would better rely upon the use of 2-way radios, with which their cars would be equipped, to contact the proper authorities in case trouble is encountered.

o. C Small oil leaks may be more consequential than described in the DEIS.

R Small or undetected oil leaks could, in a few unique situations, result in more than contamination of the soil around the pipeline. A slow leak into surface underground waters might be detected only as an off-odor or off-taste by some consumer; for surface waters such detection would occur rapidly. Ingress into groundwaters along the pipeline routing is most unlikely. In populated areas, a slow leak might enter sewer or drainage systems, conceivably leading to an explosive mixture. Detection would be by odor or thorugh the use of gas "sniffers." Ignition in such underground systems is unlikely; although very infrequently sewer collector systems, which can generate combustible gas mixtures, explode.

p. C The exact source of water for the Cajon Tank Farm's construction and operation should be noted and potential for use of California Aqueduct water addressed.

R Final determination of the exact source of water for the Cajon Tank Farm will be developed during the project's final engineering design. Current project plans call for the use of local groundwaters and site runoff waters, if sufficient supplies exist. Waters from the California Aqueduct may also be considered subject to the approval of the State Department of Water Resources, which operates the aqueduct.

q. C The project's effects on local infrastructures and populations along the route may be more substantial than stated and therefore additional analysis should be included in the final EIS.

R For the Final EIS, further analysis of water supply problems of the Cajon Tank Farm site and the responsibilities of local fire agencies was done. It was determined that the original

discussion of the impact on local fire agencies was accurate. Water supply considerations are discussed in the response to comment 19 p.

21. Antelope Valley College

a. C The anthropology Department of Antelope Valley College was not contacted during preparation of the DEIS.

R The data and information available to Antelope Valley College concerning the archeological resources of the Antelope Valley must certainly be taken into consideration in the preparation of any final, comprehensive Archeological Impact Evaluation of the Elk Hills/SOHIO Pipeline Route Alternative. Should the Navy decide upon this alternative, then a comprehensive archeological evaluation of this area will include a complete review of the information available at this institution, as well as other archeologically oriented organizations, and consultation with authoritative individuals in the Antelope Valley area.

The limited scope (time and funding) of the preliminary investigation of the three alternatives allowed only primary sources to be checked, not a final comprehensive archeological investigation. The initial literature and records source for these studies was the Archeological Resources Section, Department of Parks and Recreation, Sacramento (these files have since been placed under the administration of the State Historic Preservation Office, Sacramento). The Sacramento records indicated that the site maps and site survey records for Los Angeles County were up-to-date when examined in Sacramento. The Kern County maps were at the Official District Office (Bakersfield College) and they were examined in Bakersfield. The oversight of references on maps or site survey records of resources having been recorded by Antelope Valley College Archeologists may well be due to the cursory nature of the preliminary research. Any follow-up, comprehensive investigation of this conveyance system alternative will include a visit to all such institutions and agencies, such as Antelope Valley College, prior to a final field survey of specifically located facilities and pipeline routes.

b. C The entire western portion of Antelope Valley was apparently covered with snow during that part of the investigation.

R Those portions of Antelope Valley which were covered with snow at the time the sample survey was conducted were not surveyed as such; time was spent attempting to locate recorded sites only, and only in those areas in the vicinity of Fairmont Buttes and Antelope Buttes which were snowfree.

c. C There are archeological sites contained in the Fairmont Buttes area.

R The information available in this paragraph, as well as the specific references cited, will be invaluable in conducting a final Archeological Resources Evaluation of this area.

d. C There are archeological sites located to the southwest and
e. southeast of Fairmont Buttes and other sites not mentioned in the DEIS. Investigations by the Antelope Valley Archeological Society have occurred in the eastern portion of Antelope Valley.

R The archeological resources cited by Mr. Robinson in these two paragraphs which were not mentioned in the DEIS apparently were not recorded on the maps (which were supposedly up-to-date) at the Sacramento Archeological Resources Section at the time of the initial investigation (refer to comment 21 a. above).

f. C The archeological study in the Antelope Valley is completely inadequate and construction of a pipeline would undoubtedly destroy a valuable portion of the archeological resources in the Antelope Valley.

R The report was intended to be an indication of the archeological sensitivity of considered pipeline route alternatives and not a comprehensive evaluation based on a Site Specific Archeological Survey. It is believed, that despite not having discussed all the known archeological resources in the Antelope Valley area, the EIS did discuss the highly sensitive nature of the area.

It is difficult, if not impossible, to determine what adverse impacts (direct and/or indirect) the conveyance system alternative would ultimately have on any portion of the known or unknown archeological resources of Antelope Valley. At best it can be stated that the Antelope Valley constitutes an area of high sensitivity regarding the distrubance of archeological remains. When the Navy specifically designates the location of facilities and pipeline corridors, a complete archeological investigation will be conducted, specific impacts identified, and mitigative measures designed. An assessment of this nature will be executed within the context of all relevant state and Federal laws and guidelines.

g. C Antelope Valley is a very critical area in the study of California
h. prehistory. A recommendation of a complete and comprehensive archeological assessment is made.

R See response to 21 f.

22. League of Women Voters of San Luis Obispo, California

a. C There is no indication that California demand for Elk Hills crude will approach its availability at full production. The need for this additional oil is questioned in light of a proposed West Coast Alaskan surplus.

R Please refer to Section II of the Naval Petroleum Reserves Production Act (Appendix A of the FEIS) in which Congress directed the Secretary of the Navy to develop and produce Elk Hills at maximum efficient rates. Any revision to this operating concept would require an Act of Congress.

23. Mission Coast Lung Association

a. C The Association recommends legislation to retain Elk Hills oil for emergency use only, designating it as a strategic ready reserve.

R Please see response to letter 22.

24. Save Our Coast Coalition

a. C The Elk Hills Reserve should remain as a reserve and not be brought into production.

R Please see response to letter 22.

b. C Recommend the SOHIO Long Beach to Texas pipeline alternative because no oil tankers will be involved.

R This is the Navy's prefered route, but depends upon SOHIO's obtaining approvals for their project.

25. Sierra Club, Santa Lucia Chapter

a. C The 1976 law was passed hastily in a period of crisis. The potential market for Elk Hills crude is uncertain, especially with North Slope oil and additional oil at Santa Barbara later this year.

R The Navy currently has commitments with refineries in California to deliver 142,000 barrels of Elk Hills crude per day through existing pipelines. However, discussions to date with various refineries in California have been sufficient to indicate that a market for all available Elk Hills crude does not exist in the State. The direction of Congress for the Navy to provide for

transportation of up to 350,000 barrels per day of Elk Hills crude by 1979, and the expected abundance of crude on the West Coast dictates that the Navy must provide for shipment of some of this crude outside California. The major market for this crude will be east of the Sierra Nevada which can be reached by either pipelines or tanker shipping. It does not seem that these conditions will change in the near future, nor would they be greatly affected one way or the other by a detailed market study.

b. C Make Elk Hills oil available for future defense needs rather than current market whims.

R Please see response to letter 22.

26. Sierra Club, Southern California Regional Conservation Committee

a. C The EIS does not make any statements relative to cost or provide a "big picture" understanding of how this project meshes with a total oil flow pattern to supply future oil needs.

R Comparative construction costs for the three pipeline alternatives are given in response to letter 13, part mm. As indicated in Section I, Introduction of the FEIS, this document does not include an environmental assessment of transportation of crude oil beyond the interim destination of the project.

Regarding the relationship of the proposed project to the total energy picture, please see the Project Description and response to letter 13, parts d., e., and f.

b. C A determination of the best route is made.

R No response is necessary.

c. C The pipeline to Colton is preferred because it causes less air pollution than marine terminal alternatives. All possible precautions should be taken to minimize air pollution at the transfer point to the SOHIO line.

R There will be no significant sources of air pollution associated with the project in the South Coast Air Basin. See response to letter 24, part b.

d. C Concern was expressed with suggested mitigation measures only being considered.

R The best mitigation measures to minimize adverse effects during construction will be developed prior to and during construction

in conjunction with the BLM, Soil Conservation Service, U.S. Forest Service, and U.S. Fish and Wildlife Service.

e. C Quicker detection of leak location by use of additional sensors in the input/output monitoring system would be desirable.

R The proposed automatic leak detection system would, in almost all cases, be capable of locating a leak within a 20-mile segment of the pipeline. Additional sensors would not increase this sensitivity greatly. A most probable source of a major spill is a third-party accident and, in almost all such incidents, the point of the incident is reported by the perpetrator, who usually also takes corrective action if possible. Locations of spills by aerial or surface surveillance can usually be accomplished within 1 to 1-1/2 hours maximum which, except in very hilly terrain, allows corrective action to be taken before appreciable line drain has occurred (see Table D-4, Appendix D).

f. C The pipeline authorities plan to depend on local fire fighting authorities to control any fire or explosion hazard. There is no mention of any plan to determine if these authorities have appropriate equipment and to reimburse the local communities the expenses of providing these services.

R Local fire fighting authorities will not have the primary responsibility for controling fires or explosions. Their assistance may be needed, and the FEIS on p. 4-39 states that the Navy and local fire agencies would investigate arrangements for compensation of the local agencies for their part in any fire fighting. In addition, fire agencies in all counties were contacted to determine where oil fire fighting equipment is available, and this information is contained in the DEIS on pp. 2-38, 4-38, and in Table O-1, Appendix O.

g. C Flush welds must be used on the tanks to provide an effective seal with the internal floating roofs.

R Such welds will be used in tank construction.

h. C The EIS cannot be considered complete until the entire transport route and impact is examined and also until a no development impact is discussed.

R The FEIS only covers the project from the Elk Hills Reserve to the SOHIO pipeline connection at Colton. Beyond this interim destination, the impacts are not discussed because of the undefined markets for the oil. A no development alternative is discussed in Section V of the FEIS.

i. C The Sierra Club suggests that the Navy consider a fourth alternative to recover the gas at the Elk Hills reserve rather than the oil.

R The natural gas produced in association with the crude oil and non-associated gas is planned to be used for reinjection to secure maximum ultimate recovery as mandated by law. When this gas has accomplished its purpose, it will then be made available for sale if directed to do so by the President and Congress. Nonetheless, any sale or transport of natural gas from Elk Hills would require additional environmental analysis which is not within the scope of this crude oil pipeline EIS.

j. C There is doubtful justification for this project.

R Please see response to letter 12, comment a.

k. C None of the three choices are very attractive.

R It is true that none of the alternatives can be implemented without some adverse effects.

l. C The SOHIO alternative would use more land than other alternatives.

R This impact is recognized in the FEIS.

m. C A condor habitat is included in the route.

R Please see the response to letter 8, part e.

n. C The route intrudes on the kit fox habitat.

R Please see the response to letter 8, part e.

o. C There will be long-term damage to oaks, chaparral, and ancient creosote bush communities and Joshua trees.

R The statement is true to the extent that the mitigation measures given in the FEIS will not eliminate the adverse impacts.

p. C The possibilities of ruptures of the pipeline in the Lytle Creek-Santa Ana River areas could contaminate local water resources.

R Ruptures in the pipeline in the Lytle Creek-Santa Ana River area could contaminate local water resources. The DEIS analysis stated that and noted that groundwater contamination is of greatest concern because of the heavy use of groundwater in this area. In particular, the groundwaters underlying Cajon Creek (a tributary of Lytle Creek) are the most susceptible to contamination due to their proximity to the pipeline and their generally high water

tables. However, it should also be noted that the pipeline monitoring program and oil spill contingency plan included in the project's design will help to markedly reduce the probability of such contamination.

q. C There will be an adverse effect on natural gas supply to California if Phase II were implemented.

R The revised project description states that the initial phase of the Navy's project (SOHIO conveyance system) will be compatible with Phase I of the SOHIO project (Long Beach to Midland). The implementation of Phase II of the Navy's SOHIO conveyance system (1.2 million BPD into the SOHIO pipeline) would require implementation of Phase II of the SOHIO project and abandonment of a second natural gas pipeline. Such action would require a second environmental assessment.

r. C A means of conveyance for increased production from Elk Hills
s. field should not be provided.
t.

R Please see response to letter 13, part c. regarding production ceiling. Also see the response to letter 12, part a. regarding the Navy's Congressional mandate.

u. C The advantage of Elk Hills crude is that it has a relatively low sulfur content thereby causing relatively less sulfur dioxide to be formed during combustion.

R In sulfur content most Elk Hills crude has an advantage over some oils, such as Alaskan North Slope crude, but not over others, such as Indonesian Minas.

v. C A vapor recovery system should be installed on the Elk Hills Tank Farm.

R Vapor recovery was considered on the Elk Hills Tank Farm, but was rejected on the recommendation of the California Air Resources Board. Vapor recovery systems on storage tanks of the size required present significant safety and maintenance problems.

w. C There is no consideration of the emissions from the 10,000 barrel tank planned for Colton, and no mention of air quality impact in the South Coast Air Basin.

R The storage tank at Colton would be a surge tank, therefore its use would only be during times of abnormal pipeline operation. Emissions from the tank would occur infrequently and then only temporarily. The only other potential emission sources in the South Coast Air Basin are pipeline valves; these are considered to be minimal (see response to comment 17 c.).

x. C There is no analysis of the emissions from power plants producing the energy necessary to drive the pumps.

R See response to comment 17 b.

27. South Bay Conservation Group

a. C The South Bay Conservation Group urges that Elk Hills oil fields be returned to a reserve status.

R Please see response to letter 12, part a.

b. C The Group recommends extension of present pipeline systems.

R Existing pipelines do not have sufficient capacity to meet the requirements of P.L. 94-258. Addition of heaters and pumps to existing pipelines would provide only a marginal increase in capacity.

28. Atlantic Richfield Company

a. C ARCO has several on-going pipeline projects, not discussed in the DEIS, which can substantially increase Elk Hills crude transport potential and reduce the need for new pipelines.

R The expansion of ARCO's line to the Los Angeles area would involve Government investment in a private pipeline and would not assure the Navy the required throughput to comply with Public Law 94-258. As noted by ARCO, the Four Corners line will allow movement of Elk Hills crude in small quantities to the Mid-Continent area if sales are consummated. One of the Navy's pipeline options addresses a line from Elk Hills to Colton, California to tie into the proposed "SOHIO" pipeline from Long Beach, California to Midland, Texas. If this option is selected, an additional tie-in could be made to ARCO's Four Corners pipeline to move additional crude to the Mid-Continent. Plans for this tie-in are being developed. The environmental impact will be addressed separately.

b. C Atlantic Richfield's latest estimate is that Valdez Terminal receipts will be 600 MB/D by August, 1977 and 1.2 MMB/D by January, 1978.

R Atlantic Richfield's latest estimate that Valdez Terminal receipts will reach 1.2 MMB/D by January 1978 is supported by FEA, which states that throughput is planned to be increased from 600 MB/D to 1.2 MMB/D in "November 1977 - early 1978."* A correction has been made to the text on page Q-21.

*U.S. Federal Energy Commission
North Slope Crude/Where To? - How?, 1976.

29. Beacon Oil Company

a. C The DEIS incorrectly stated the location of oil company main offices in Bakersfield.

R The FEIS has been changed to indicate that the refinery and main office are located at Hanford, California.

30. Chevron U.S.A., Inc.

a. C Elk Hills production cannot be substantially increased without detriment to ultimate economic recovery and the additional pipeline capacity may be uneconomic and unnecessary.

R As noted by Chevron, the Navy is mandated to have 350,000 B/D pipeline capacity by 5 April 1979. The Navy is also mandated to obtain maximum ultimate recovery, not the maximum economic recovery mentioned by Chevron U.S.A., Inc.

31. Kathy Harrison

a. C The pipeline should bypass Palmdale and be run along Avenue P or other existing road or utility easements.

R The pipeline route was realigned through the Antelope Valley. It now follows a powerline corridor, township lines, and road and railroad easements through Los Angeles County.

32. Hunt Realty

a. C Pieces of land severed by the pipeline route from main parcels will become eyesores and thereby affect future land development and value.

R The pipeline route has been changed, and now follows existing rights-of-way or township lines in Los Angeles County. These changes are reflected in the Final EIS. The new pipeline route travels in a diagonal line for 16 miles as it parallels and lies adjacent to the Southern California Edison Company powerline right-of-way. This route will not create any new disturbance of parcels, but will widen an existing 300-foot to 450-foot corridor by 25 to 50 feet. The right-of-way will continue to be used for agriculture. Should this area by subdivided in the future, the shape of the subdivision is already determined by the powerline corridor, and will not be further influenced by the pipeline. The realignment appears in the Atlas (Appendix C, Volume I) between MP 60 and 121.

b. C How deep will the pipeline be buried?

R A minimum of 36 inches. Please also see the response to letter 13, part gg.

c, d, e, f. C What can be done on the land above the pipeline?

R Buildings and trees will not be allowed in the right-of-way. However, paved parking lots, driveways, other landscaping, and agricultural uses other than orchards will be permitted.

g. C To whom can we appeal your discussion? Do we have a right to damages?

R The EIS process is meant to (1) explain the Navy's plans to the public, and (2) receive public comments on the Navy's proposed project. If a decision is reached by the Navy that is objectionable, the decision can be appealed to the Secretary of the Navy. All property owners whose land is crossed by the pipeline have been notified by the Navy and will receive fair compensation if the SOHIO alternative is chosen. See response to 32 k.

h. C Does the Department in charge of placing pipeline also decide ownership rights?

R The easement through private property will necessitate adequate compensation to property owners by the Navy.

i. C Cannot alternate routes using existing county, state or government easements be considered or used?

R Realignment through the Antelope Valley has been examined. Several alternate routes were evaluated. The pipeline alignment has been changed to parallel existing utility corridors and transportation rights-of-way where possible. This realignment appears in the Atlas (Appendix C) between MP 60 and MP 121.

j. C Has consideration been given to consulting local, state or county Planning Commissions or local Realty Boards regarding more feasible routes?

R The EIS addresses county master plans and zoning in those counties affected by the proposed route. The Board of Realtors of Palmdale was also given opportunity to comment on the realignment of the pipeline route through the Antelope Valley.

k. C Concern was expressed about a local public hearing.

R The citizens affected by the pipeline in the Antelope Valley were given an opportunity to comment on the proposed project at the public hearing held in Palmdale on June 29, 1977. Those concerns are addressed in the comments and responses on Public Hearings included elsewhere in this report. A subsequent meeting with local representatives regarding the proposed realignment apparently produced a plan satisfactory to those present.

33. Ben Oman

a. C I am concerned about the pipeline cutting diagonally across the beautiful high desert without regard to private property.

R See the response to letter 32, comment a.

b. C I am concerned that the pipeline will come close to my home, and I will be located in a potential spill area.

R Because we do not have your home address, we cannot tell whether or not the new pipeline route alignment through the Antelope Valley is near your home. The Navy is individually contacting parties directly afffected by the route. Please see the mapped route in Appendix C of the FEIS, the Environmental Atlas.

c. C I am concerned that the Antelope Valley route is top priority of the three.

R No final decision has been made on the conveyance system to be constructed by the Navy, but the SOHIO tie-in is preferred by the Navy. See response 24 b. This decision is due in October.

d. C The pipeline should follow existing roads or easements and go in a west-east or north-south direction.

R Please see the response to letter 32, comment a.

e. C I hope you make the necessary changes.

R Please see the response to letter 32, comment a.

34. Palmdale Board of Realtors, Inc.

a. C The pipeline route should use easements held by county agencies, public utilities, or the state. We suggest Avenue D or Highway 138 to 200th Street east, then south toward Wrightwood.

R The new alignment of the pipeline through Los Angeles County follows street, road, and railroad easements, a powerline corridor, and township lines. The Navy investigated an alternative route similar to the one you've suggested, but the newly chosen alignment had fewer environmental and social economic problems.

b. C The straight line diagonal route would cause innumberable problems to property owners.

R Please see the responses to letter 32, comment a, and letter 49, comment a.

c. C Our area needs the employment, but use care in selecting a route through the Antelope Valley.

R The result of a second look at these problems is the new alignment through the Valley, between MP 60 and 121 on the Environmental Atlas.

35. Charles W. Quinlan

a. C Opposition is expressed to use of Elk Hills oil for domestic consumption.

R Please see response to letter 12, part a.

36. E. Craig and Eileen Cunningham

a. C Leave Elk Hills oil in its present status as a Naval Petroleum Reserve.

R Please see response to letter 12, part a.

37. Rodney S. and Edwina Kay Crane

a. C Our home is 1/2 mile from the pipeline route, and our son's school is 1/4 mile from it. We feel this will present a dangerous situation. Also, we feel the pipeline should follow existing easements, not cut across parcels of property.

R The proposed pipeline alignment near your home has been changed to follow street rights-of-way. Please see the Environmental Atlas, MPs 90 to 94. This new alignment is still within a mile of the school and your street. Both the school and your property are uphill of the route, and thus are well outside of the potential spill area indicated on the Environmental Atlas, p. C-10.

b. C I was not given notice of pipeline plans.

R Only those residents directly affected by the pipeline were notified of the Navy's intent. Public hearings, at which those indirectly affected could be notified, were well publicized in the local media.

38. Curtis J. Crawford

a. C The greatest impact of the proposed pipeline is on future land development. Cutting parcels in two with a diagonal route will leave parcels undevelopable. Future growth needs that space.

R The Navy has changed the route through Los Angeles County. Please see the response to letter 32, comment a.

b. C Pipeline easements create irregular, unmarketable parcels of land, which the state eventually own through the foreclosure of tax sales.

R Please see the response to letter 32, comment a.

c. C Please realign the route along street and road easements.

R The route has been changed, and now follows street and road easements, township lines, or utility easements through Los Angeles County. Please see the response to letter 32, comment a.

39. Gail M. Dyer

a. C The diagonal routing of the pipeline is an imposition on private rights and owners.

R Please see the response to letter 32, comment a.

40. Harold Edelstein

a. C It appears that your proposed route is close to our properties within the north half of Section 24, T5N, R9W, in Los Angeles County. Could you send us a map of the route near our property?

R The route was realigned through the Antelope Valley and now lies one-half mile north of Section 24, T5N, R9W. It follows the railroad tracks through Section 13, T5N, R9W. The Navy is individually contacting parties directly affected by the route.

b. C Diagonal alignment across rectangular grid ownerships is poor planning.

R Please see the response to letter 32, comment a.

41. George H. Floyd

a. C Only the Elk Hills/SOHIO route would not impose the additional burden on the Navy of protecting tankers on the sea.

R See response to letter 24, comment b.

42. Mr. and Mrs. Theodore Laster

a. C The oil should remain in the ground.

R Please see response to letter 12, part a.

b. C There are no markets for oil.

R Please see response to letter 13, parts e. and f.

c. C The easiest and least damaging way of moving oil in an emergency would be a hookup with the SOHIO Long Beach east-west pipeline.

R The Navy concurs with this assessment.

43. Lazaro and Maria B. Gorrindo

a. C We object to the diagonal alignment of the pipeline across the Antelope Valley.

R Please see the response to letter 32, comment a.

b. C The pipeline route should follow existing easements and roads.

R Realignment through the Antelope Valley has been examined. Several alternate routes were evaluated. The pipeline alignment has been changed to parallel existing utility corridors and transportation rights-of-way where possible. This realignment appears in the Atlas (Appendix C) between MP 60 and MP 121.

c. C The pipeline route crosses our property diagonally. We have not been assured of the absence of roads or other obstructions to the continued use of our land for agricultural purposes. We also anticipate curtailment of use on adjacent parcels which we have previously farmed.

R The pipeline route alignment near your property has been changed. It now follows the east-west township line which is the border between Kern and Los Angeles counties. Where the pipeline would cross agricultural activities, however, these activities could resume completely, without obstruction, once the pipeline construction was completed. No curtailment of use on adjacent parcels would occur.

44. Jean Hellman and Nonny Scully

a. C The fragile desert plants and wildlife would be damaged in the 40-80 ft. right-of-way.

R The right-of-way will be kept to 50 feet to avoid as much impact on desert life as possible. Please refer to Chapter 4, Section E, of the FEIS "Biological Resources" beginning on page 4-18 for a complete discussion of this topic.

b. C The Navy will appropriate homes and private land and National Forest lands along the route.

R No homes or other buildings will be disturbed or appropriated for this project. The pipeline route does cross some private lands, and an easement will be purchased from the owners. The pipeline will be buried and farming, roads, or other non-structural uses of the land can continue. The pipeline follows road rights-of-way through the San Bernardino Forest. The Forest Service and Navy will sign a Memorandum of Understanding which includes mitigation measures to minimize impacts on National Forest Lands.

c. C Concern was expressed over the loss of probable archeological and fossil sites in an unexplored area.

R Please see response to letters 1 and 21.

d. C The project will scar a county designated scenic highway.

R Access roads and other surface traces of the pipeline would be visible from Highway 138, an eligible county scenic highway. The Cajon Tank Farm would not be visible from the highway.

e. C Navy gave short notice -- 7 days -- to local residents of the public hearing and the project.

R The purpose of the public hearings is twofold; first, to inform the public of the project, and second to receive comments on the Draft EIS. The Navy originally sent out press releases on May 4 to the news media in Bakersfield, Taft, Coalinga, San Luis Obispo,

Oxnard, and San Bernardino. In response to concern by citizens in the Antelope Valley area, the Navy held another public hearing in Palmdale on June 29. Press releases for this public hearing were released on June 20.

45. Constance Hendricks and William J. Hendricks

a. C There is no need for Elk Hills oil and why should air pollution
b. and the potential for oil spills be increased.

R Please see response to letter 12, part a.

46. Mr. and Mrs. S. Jones

a. C We urge the pipeline be rerouted to follow existing roads or easements. Please do not cut across parcels of property.

R Please see the response to letter 32, comment a.

47. Russell L. Kaldenberg

a. C Basic displeasure with DEIS was expressed.

R The appropriate corrections will be made in the responses to follow.

b. C What BLM document (1976) is being referenced?

R The figures were incorrectly referenced. They were from the DEIR, "SOHIO West Coast to Mid-Continent Pipeline Project," Volume 2, Part 1, prepared by the Port of Long Beach and the California Public Utilities Commission, September 1976, pp I-10 and I-11. Corrections have been made to the text.

c. C Concern was expressed about the use of the phrase "wildlife is scant." Also, the archeology study is inadequate.

R This statement was used in the introduction to Section II of the Coalinga alternative only. A discussion of wildlife is provided in Section II.E. Regarding archeology, please see the response to letters 1 and 21.

d. C There are no mitigating measures for vegetation.

R Mitigating measures for vegetation are discussed in Sections IV.E.1.C and IV.E.2.C. Measures to be employed include minor realignment of the corridor to avoid large trees or significant stands of

small plants wherever possible, transplanting seedlings to disturbed sites, and reseeding. Measures will be selected according to local conditions. Similarly, the time required for recovery of disturbed areas will vary according to the type of community present and the restoration measures applied. Grasslands could be restored in 2 to 3 years while woodlands would require from 10 years for riparian cottonwoods, to 100+ years for Joshua trees.

e. C Wildlife mitigating measures are inadequate.

R The discussion of mitigating measures for wildlife given in Section IV.E.2.C. is intended to provide a general discussion of the potential for mitigation and the range of restoration techniques. Due to the length of the pipeline, and the variety of local conditions which will be encountered, it is not possible to discuss the details of mitigation in the text. The Navy will provide mitigation according to specifications provided by California Fish and Game, other resource management agencies, and land owners. Also see the response to letter 8, part g regarding mitigating measures for rare and endangered species.

f. C Who worked on the EIS?

R URS Company assisted the Navy in the preparation of the EIS.

g. C Who performed the paleontological survey? How do you propose to ensure that no paleontological sites are destroyed?

R URS Company assisted the Navy in preparation of the DEIS. A qualified archeologist/paleontologist would be on the construction site to make a determination of the proper methods to protect any archeological or paleontological remains uncovered by construction activities. Please see response to letter 21.

h. C Why is only summer climatic data given? How is winter air quality proposed to be mitigated?

R Summer climatic data is emphasized because summer is the season with the greatest potential for photochemical pollution, which is caused by hydrocarbon emissions. The HC emissions from the tank farm at Elk Hills would cause no air quality problems during the winter months. Therefore there are no impacts to mitigate during the winter due to the project.

i. C Why were only stream crossings surveyed? What is the project vicinity? How is an historic site defined by the consultant?

R The random sampling technique was used in the initial archeological survey because of time and budgetary constraints; stream or creek crossings were chosen because it was believed they held

the most potential for sites. Any sites found would help in better identifying areas and types of sites to be found in other parts of the route. As recommended in the consulting archeologists original report, a more detailed survey -- using random sampling techniques and more intensive coverage -- of areas that contain environmental settings conducive to prehistoric cultural activities will be made after the pipeline route has been surveyed and staked. Strictly speaking, the project vicinity is that area that could be affected by the pipeline construction, generally within several hundreds of feet on either side of the proposed route. A historic site, for purposes of legal definition, is defined as any site listed on the National Register of Historic Places. Once the proposed route has been staked, a final determination will be made as to the location of any historic sites within the pipeline corridor.

j. C The reference to Yokuts should be Yokut.

R Holman and Chavez prefer to spell the word "YOKUTS." This is based on the usage by a Chukchansi Yokuts Indian from Madera named Archie Burnett who used to visit the Buchanan project when Mr. Holman was working there in 1967-1968.

k. C What type of mitigation measures are proposed for archeological resources? A full survey should be conducted.

R See response to letter 21, comment f.

l. C Was a survey conducted of the existing railroad system from Taft to Elk Hills or for the 10 miles of new power poles?

R No, these routes were not surveyed.

m. C What is the title of Holman and Chavez's archeological report.

R It is entitled "An archeological reconnaissance of the proposed pipeline route from the Elk Hills naval petroleum reserves, to Coalinga and Port Hueneme, California Phase I," and "An archeological reconnaissance of the proposed pipeline route from the Elk Hills Naval petroleum reserves to the Redlands facilities, California Phase II." Copies of these reports were sent to Robert Schiffman at Bakersfield College.

n. C Concern was expressed over the use of tertiary sources and the poorly summarized report of the consultants.

R A complete archeological survey will be prepared when the final pipeline route is chosen. Please see responses to letters 1 and 21. Every attempt was made during the preparation of the EIS to contact all parties with information pertinent to the project.

Because of the immense size of the task, it is conceivable that various sources of primary information were overlooked.

48. Chris Kennington

a. C If Elk Hills oil must be transported, then hookup to SOHIO Long Beach pipeline is the safest choice.

R See response to letter 24, comment b.

49. Mr. and Mrs. J. J. Kubasak

a. C The proposed route divides many parcels in an unusual (diagonal) manner, effectively destroying the value of those parcels. The route should parallel existing streets and easements.

R After attending the public hearings and receiving the written comments to the Draft EIS, the Navy considered several alternate pipeline routes through the Antelope Valley. A new route, which exclusively follows township lines or existing rights-of-way through Los Angeles County (MP 60 to 121), was chosen after consultation with local representatives. The Final EIS has been revised to reflect the changed routing of the pipeline.

50. Dr. and Mrs. W. C. Langworthy

a. C Leave Elk Hills oil "in situ."

R Please see response to letter 12, part a.

51. A. E. Letzig

a. C The pipeline route should be placed on present public property only. No landowner should be forced to take a devaluation on his property.

R There is no practical pipeline route that follows public property only. The revised route, discussed in detail in this FEIS, does follow township lines, road and railroad right-of-ways, and a powerline corridor through Los Angeles County, minimizing the impact on private owners. All easements will be paid for by the Navy. The government is always required to compensate for the acquisition of property or interests in property.

52. Verlyn Marth

a. C I believe the route crosses the California State Poppy Preserve.

R The Navy has contacted Mr. Ray Wild of the State Department of Parks and Recreation about the California Poppy Preserve. The acquisition of the park is complete at this time; funds for the park have been exhausted. The original scope of the project was reduced due to a funding shortage.

The present extent of the park in the vicinity of the pipeline route is shown in the Environmental Atlas. The Southern Edison Company powerline, along which the Elk Hills pipeline would be routed, is located approximately one-half mile northeast of the park. Although it is possible future funds may become available for expansion of the park, Mr. Wild felt there was only a minimum possibility that the park lands would ever be expanded to include any part of the powerline corridor.

53. Verlyn Marth

a. C Please include this whole letter about the California Poppy Preserve in the Final EIS.

R It has been done. For a discussion of the Poppy Preserve, please see the response to letter 52, comment a.

b. C The pipeline corridor as proposed passes directly under the site of the proposed Buttes Reservoir.

R As presented in the DEIS, the pipeline corridor did pass directly underneath the proposed site of the Buttes Reservoir. This reservoir, which is only in the preliminary planning stages, is scheduled to be located in Sections 29-32, T8N R14W SBMM. The pipeline corridor is shown to pass through the middle of Section 31. This alignment has, however, been changed. The new alignment, which is shown in the FEIS, is slightly more than a mile to the northeast of the proposed reservoir site and would, therefore, no longer be in conflict with it.

c. C Keep Elk Hills oil in the ground.

R Please see response to letter 12, part a.

54. C. L. McBroome

a. C Send a map of proposed route near 138.

R A map has been sent.

b. C What are building restrictions over the pipeline?

R Please see response to letter 32, part c.

55. Howard E. Mettler and Arthur E. Mettler

a. C Displeasure was expressed over the proposed pipeline route.

R Please see response to letter 32, part a.

56. Nick Nemer

a. C I have looked at a map which shows the Elk Hills Conveyance System pipeline goes through my property and house.

R The Navy has contacted Mr. Nemer with regard to the pipeline route and has assured him that the route will not go through his residence.

57. C. W. O'Brien, M.D.

a. C President Carter has said we should keep Elk Hills as an
b. emergency reserve.

R Please see the respone to letter 12, part a.

58. Thomas G. Pappas

a. C We are opposed to the route through the Antelope Valley because it cuts diagonally across the valley, cutting up too much land. Couldn't you follow current easements, waterways, or roadways?

R Please see response to letter 32, part a.

59. D. D. Rice, M.D.

a. C Opposition is expressed to using Elk Hills oil at this time for anything other than a reserve.

R Please see response to letter 12, part a.

b. C Our preference is for use of the SOHIO pipeline in Long Beach.

R See response to letter 24, part b.

60. Mary Robinson

a. C Dividing parcels diagonally will affect land value.

R Please see the responses to letter 49, part a, and letter 32, part a.

61. Fred A. and Janice C. Schenk

a. C Opposition is expressed to pumping Elk Hills oil.

R Please see response to letter 12, part a.

b. C Elk Hills oil should be saved, even if the shortage of oil required that all auto traffic must be curtailed. We should not sell domestic oil to a foreign market for a gain!

R The Navy has been directed by Congress to expand the production of Elk Hills crude oil, and only a further action by Congress could reverse this direction. Public law 94-258 prohibits the sale of this oil to foreign countries. Please refer to Section II of the Naval Petroleum Reserves Production Act (Appendix A of the FEIS).

62. Nathan and Celia G. Starr

a. C Isn't property regulated by local and state governments within the framework of the Federal government? The SOHIO route would be contrary to all regulations, and would amount to confiscation of property by crossing it diagonally, rendering the property unusable or unsaleable. We would like to see them purchase whole parcels instead.

R The Federal government has the authority to acquire property or interests in property and this authority is not subject to local regulations. However, the SOHIO route is not contrary to "all regulations." There is some conflict between the Cajon Pass tank farm site and San Bernardino County's Joint Utilities Management Program, but the rest of the system is in accordance with land-use regulations. The Navy will be working together with San Bernardino County on the tank farm issue. Regarding the diagonal routing of the pipeline across property, please see the responses to letter 49, part a, and letter 32, part a.

63. Mr. and Mrs. R. Stern and Family

a. C Keep Elk Hills oil in the ground.

R Please see response to letter 12, part a.

XII. PUBLIC HEARINGS

XII. PUBLIC HEARINGS

A. Introduction

1. Purpose of Hearings

Public hearings were held in seven locations for the Draft Environmental Impact Statement on the Navy's three alternative petroleum conveyance systems. The purpose of these hearings was twofold. First, the hearings provided an opportunity to inform the public about the details of Navy alternatives for transporting Elk Hills crude oil. Second, they gave the public an opportunity to provide input into both the decision-making process and the Environmental Impact Statement. As an example of public input, suggestions for alternate routes through the Antelope Valley from these public hearings and from written correspondence provided a basis for a series of six alternative routes considered by the Navy for the Antelope Valley leg of the pipeline. A new route was selected and incorporated into Volume I of this FEIS.

2. Dates and Locations

The following table gives the dates and locations of each hearing held by the Navy for the Draft EIS's.

May 18, 1977 1:00 p.m. and 7:00 p.m.	City Council Chambers Coalinga, California
May 20, 1977 9:00 a.m. and 2:00 p.m.	City Council Chambers Bakersfield, California
May 21, 1977 9:00 a.m.	Auditorium of "The Fort" Taft, California

May 23, 1977 2:00 p.m. and 7:00 p.m.	City Council Chambers San Luis Obispo, California
May 24, 1977 9:00 a.m., 2:00 p.m., 7:00 p.m.	Hilton Inn Oxnard, California
May 26, 1977 9:00 a.m., 2:00 p.m., 7:00 p.m.	Convention Center San Bernardino, California
June 29, 1977 2:00 p.m. and 7:30 a.m.	City Hall Palmdale, California

3. Availability of Public Record

The hearings were transcribed by a court reporter who accompanied the Navy and URS Company personnel to each of the hearing locations. The hearing transcripts are available for perusal by the public at the following locations:

Department of the Navy
Officer in Charge of Construction, Elk Hills
P. O. Box 40
San Bruno, California 94066
(415) 871-6600, extension 2507

Department of the Navy
Officer of Naval Petroleum and Oil Shale Reserves
Crystal Plaza #6
Washington, D.C. 20360
(202) 692-0600

4. Participants

The hearing panel at each of the hearings included Commander Philip J. Parisius, Environmental Program Officer, Western Division, Naval Facilities Engineering Command, Chairman; Mr. Milton Staackmann, Vice-President, URS Company of San Mateo, California; and Mr. Leo Bellarts, Director of Engineering, Naval Facilities Engineering Command, Contracts, Elk Hills. The hearings were recorded verbatim by Dee Segalia, Official Reporter, Wm. E. Henderscheid and Associates. Other URS Company staff present included William Van Horn and Jack Jenkins.

The following persons spoke or read statements at the hearings.

Coalinga 1:00 p.m.

C.H. Corwin

Coalinga 7:00 p.m.

Ms. Bunker
Mr. Allen

Bakersfield 9:00 a.m.

James Woo, Lancaster

Bakersfield 2:00 p.m.

James Hunt, Palmdale
Dev Vrat, Santa Barbara Office of Environmental Quality
Pat Pourchat, Bureau of Land Management, SOHIO project

Taft 9:00 a.m.

Ed Johnson, U.S. Navy
Jack Lardy, Kern County

San Luis Obispo 2:00 p.m.

H. W. Meyer, Morro Coast Audubon Society
Donald Smith, Environmental Center of San Luis Obispo County
Don Parham, Los Osos
Harold Weber, Mariposa
Bob Carr, San Luis Obispo County Air Pollution Control District
Janet Kovrakis, San Luis Obispo League of Women Voters
Ian McMillan, San Luis Obispo County
John McNeil, Atascadero

San Luis Obispo 7:00 p.m.

Donald Smith, Environmental Center of San Luis Obispo County
Ms. Reichenberg, Clean Air Coalition
Jim Rogers

Oxnard 9:00 a.m.

Rae Richerson, Santa Barbara
Richard Floch, City of Oxnard
Robert Yamasaki, BLM Pacific OCS Office
Michael Kuhn, City of Simi Valley

John English, Air Pollution Control District, Santa Barbara County
George Hottle, Oxnard Shores Community Association

Oxnard 2:00 p.m.

Ray Flether, Oxnard Harbor Commission
Phil White, Ventura County Concerned Citizens Committee
Albert Reynolds, Environmental Quality Coordinator, Santa Barbara County

Oxnard 7:00 p.m.

Harry Lyon, USA Petroleum Corporation

San Bernardino 9:00 a.m.

Emmett Beman, San Bernardino County
Okla Armstrong, San Bernardino County
Mrs. Okla Armstrong, San Bernardino County
Sam E. Taylor, Pinion Hills
Jack Chaney, Littlerock

San Bernardino 2:00 p.m.

Bill Greenberg, Sun Telegram
John Freeman, San Bernardino County
Sara Hoffman, San Bernardino County

San Bernardino 7:00 p.m.

Lewis J. Walker, Environmental Improvement Agency, San Bernardino County
Richard Troyer, Phelan Chamber of Commerce
Cindy Crandall, Fontana

Palmdale 2:00 p.m.

Assemblyman Larry Chimbole, Lancaster
James Hunt, Palmdale
Carol Barber, Palmdale Board of Realtors
Warren Harwood, South Coast Air Quality Management District
Sylvia Robinson, Antelope Valley Archeological Society, Inc.
Dennis Cannon, Sunnyside Property Owners Association
Nick Nemer, Wrightwood
Curtis J. Crawford, Quartz Hill
Leo A. Seltzer, Encino
T. C. Gibson, Encino
Denver F. Cook, Palmdale
Nathan Starr, Palmdale

Palmdale 7:30 p.m.

Gary Howell, Palmdale
David Hellman, Pinion Hills/Phelan area
Jean Hellman, Pinion Hills
John Kubasak, Lancaster
Forrest Hull, San Bernardino County
Arthur Helsinger, Palmdale
Clint McBroome, Highland
Art Wallace, Palmdale
Zella Gwinn, West Side Property Owners Association
Ben Oman, Palmdale
Cal Bostwick, Palmdale
Joe Mastro, Littlerock
Mike Nesel, Palmdale

5. Summary of Main Issues

Commander Parisius opened each public hearing by explaining the history of the Naval Petroleum Reserve No. 1 at Elk Hills. He then explained the requirements of Public Law 94-258, enacted by Congress in April, 1976, and the Navy's program to meet those requirements. He spoke of the role of the National Environmental Policy Act of 1969 in the Navy's program, and described the public hearing process.

Mr. Staackmann of URS Company then briefly described each of the three transportation alternatives the Navy is considering. He summarized the positive benefits from these alternative transportation systems, and then described the adverse effects of each of the three alternatives.

Speakers at the hearings spoke to a variety of issues, ranging from "Leave the oil in the ground as a military reserve" to suggestions for alternate routes and appropriate markets. The major issues, those expressed frequently during the hearing, are summarized below, for the Elk Hills/SOHIO route only (comments on the other two route alternatives will be addressed in future EIS's, as appropriate).

There was much concern over the diagonal routing of the pipeline through the Antelope Valley. Owners of small lots were concerned that their property, severed by the pipeline, would result in an unattractive vacant corridor and unusable parcel segments. Developers of large, planned subdivisions objected because the diagonal route would require a diagonal alignment of streets in their proposed developments.

Because of this concern, many suggestions were made for more appropriate locations for the pipeline route. These included the California Aqueduct, railroad tracks or street rights-of-way, township lines, and property lines.

Property owners were concerned about the depth of the pipeline, the width of the right-of-way, and restrictions on land use in the right-of-way.

There were questions on the detection, cleanup, and impact of oil spills.

Many persons questioned the marketability of the oil or suggested local markets for it. They also questioned the ability of the SOHIO line to accommodate Elk Hills crude oil. Others suggested the oil be left where it is now.

The Cajon Tank Farm site was questioned. Speakers mentioned the recreational nature of the area, the visibility of the site, and the lack of water in the vicinity.

The following section responds to these concerns and to other pertinent issues brought out at the hearings.

B. Response to Public Hearing Comments

1. Organization

The following responses are organized according to the public hearing location and the page number of the hearing transcripts. Comments specifically about the Coalinga and Port Hueneme alternatives are not answered in this FEIS (see paragraph 3, page 1-4, Volume I).

2. Responses

Bakersfield, May 20, 1977

James Woo

Comment: (p. 23) The route, crossing at an angle, comes quite close to the San Andreas fault. The route could follow Highway 138 to 110th Street East, avoiding all of the town and diagonal crossings.

Response: The Navy investigated several alternative routes through the Antelope Valley, including the one you have suggested. A new route was chosen which is described in detail in the Final Environmental Impact Statement (FEIS). This route minimizes impacts on property owners and on the environment by following existing rights-of-way and township lines.

James Hunt

Comment: (p. 46) The diagonal crossing of the flat terrain through the Antelope Valley would result in damage to property values and long-range economic loss to owners.

Response: The Navy has reconsidered the pipeline route through this area and a new route, which follows existing rights-of-way or township lines, has been chosen. Diagonal severing of properties will not occur. The FEIS discusses this new routing in detail.

The new route does follow the diagonal, 600-foot wide Southern Edison Company power corridor for 16 miles. In this case, the impact will be the widening of an existing corridor by 25 to 50 feet. The route will not create any new disturbance of parcels. Should the area change from agriculture to residential development in the future, the shape of any subdivision has already been determined by the powerline corridor, and will not be further influenced by the pipeline.

Dev Vrat, Santa Barbara Office of Environmental Quality

Comment: (pp. 51-52) The Port Hueneme alternative is inconsistent with the probable West Coast oil glut. The oil should be transported to refineries in greatest need; for example, the midwest.

Response: That is the intent of the SOHIO alternative.

Comment: (pp. 53-54) Only the SOHIO alternative is consistent with Santa Barbara pipeline plans and comprehensive national energy development planning. Santa Barbara channel oil could be shipped through the Navy's pipeline to SOHIO too. The EIS should address the implications of the routing decision for comprehensive national energy development planning.

Response: The Navy's pipeline would be a common carrier, and the scenarios you describe, which foresee the Elk Hills pipeline being used for channel oil, are quite possible. The relationship of route selection to national energy policy is outside the scope of this EIS.

Pat Pourchot, Bureau of Land Management, SOHIO Project

Comment: (pp. 60-61) How could 250,000 to 350,000 barrels per day of Navy oil be accommodated in the SOHIO pipeline which has a maximum capacity of 500,000 barrels per day? Alaskan oil alone would be filling the pipeline to maximum capacity. If there's to be a second phase to the SOHIO pipeline, whose project would it be?

Response: If the Elk Hills to SOHIO option is selected and approved by the President, a portion of Elk Hills crude will initially displace a portion of SOHIO's North Slope crude moving to the mid-continent via the SOHIO line. This sharing of the line and the ratio of SOHIO to Elk Hills crudes will be according to established, common carrier provisions. The displaced North Slope crudes will most likely be moved by tanker to the Gulf Coast. SOHIO is considering a second phase to their project, which would involve the conversion of a second, now-empty natural gas pipeline, and would increase the capacity of their system to 1.2 million barrels per day. Should this occur, the Navy could expand their own system to utilize part of the additional capacity. Both the second phase of SOHIO's project and the consequential Navy expansion would require new environmental studies.

Taft, May 21, 1977

Mr. Johnson

Comment: (p. 19) Is there an estimate for the kit fox population in the Elk Hills area?

Response: Yes, there is an estimate of the kit fox population. The Department of Fish and Game conducts frequent censuses.

Jack Lardy

Comment: (p. 19) The kit fox is not a wild animal.

Response: Inasmuch as the kit fox is not a domestic animal, it is treated in this report as a wild animal, even though it may be seen in or around buildings, roads, etc.

Comment: (p. 20) Can't the gases emanating from the tanks be collected and used for energy at the tank farm?

Response: The best availabe control technology for the storage tanks has been determined to be floating-roof tanks. Such design does not permit recovery of hydrocarbon emissions, but does considerably reduce the actual vapor loss.

San Luis Obispo, May 23, 1977

H. W. Meyer, Morro Coast Audubon Society

Comment: (p. 26) The Navy will have to initiate a selling campaign and beat the bushes to peddle an important military asset of Elk Hills crude.

Response: The Navy is already selling approximately 120,000 barrels per day to local markets. The alternative transportation routes were chosen to substantially improve marketability of this crude.

Donald Smith, Environmental Center of San Luis Obispo County

Comment: (p. 28) The overall oil picture in California must be considered. California has more crude oil than its refineries can handle. We don't need more oil.

Response: The intent of the Elk Hills/SOHIO conveyance system is to transport the oil out of California to the midwest.

Harold Weber

Comment: (p. 33) It doesn't seem wise to give up the Naval reserve storage "to increase the nation's security."

Response Congress has instructed the Navy to develop the reserve. Please refer to Section II of the Naval Petroleum Reserves Production Act (Appendix A of the FEIS). Any revision to this operating concept would require an Act of Congress.

Ian McMillan

Comment: (p. 46) Is it wise to take oil out of the reserve at this time?

Response: Please see the response to Harold Weber's comment above.

John McNeil

Comment: (p. 48) Does the public law spell out that the oil will be drilled and sent out on these pipelines in any particular quantity and any particular time?

Response: The specific words in the law, which is included in Appendix A of Volume I, are "Pipelines and associated facilities constructed at or procured for Naval Petroleum Reserve No. 1 pursuant to this subsection shall have adequate capacity to accommodate not less than 350,000 barrels of oil per day and shall be fully operable as soon as possible, but not later than three years after the date of Naval Petroleum Reserves at the maximum efficient rate consistent with sound engineering practice for six years. From the information available, the Navy has determined "maximum efficient rate" to be between 280,000 and 350,000 barrels per day.

Comment: (p. 51) The purchasers of the oil should determine the route, not vice versa.

Response: The Navy conducted a marketing analysis for the crude oil. They surveyed refineries to see where in the U.S. crude oil of the Elk Hills type could be refined. All three of the proposed routes will satisfy existing markets and get the oil to a refinery.

Donald Smith

Comment: (p. 53) Are you selling the 250,000 barrels per day, which the proposed pipeline would handle, now?

Response: No. It won't be sold until the pipeline is constructed.

Don Parham

Comment: (pp. 56-57) Could you produce 35 barrels per day and comply with the law? Must you produce 350,000 barrels per day?

Response: The law says the petroleum must be produced at maximum efficient rate. At this time, maximum efficient rate is estimated to be between 280,000 and 350,000. There will be a reservoir study to better define the reservoirs, and this should establish more firmly what the maximum efficient rate is.

Donald Smith

Comment: (p. 75) The California coast is expected to have a glut of oil from Alaska for several years. Elk Hills oil should be kept as an emergency reserve for military and domestic purposes.

Response: Please refer to Section II of the Naval Petroleum Reserves Production Act (Appendix A of the FEIS) in which Congress directed the Secretary of the Navy to develop and produce Elk Hills petroleum at the maximum efficient rate. Any revision to this operating concept would require an Act of Congress.

Oxnard, May 24, 1977

Phil White

Comment: (p. 73) Is there any interest in the purchase of this oil?

Response: The Elk Hills Reserve is presently producing 142,000 barrels of oil a day, which is being sold to local refineries. Any of the alternative pipelines, once constructed, would substantially improve the marketability of Elk Hills oil.

Harry Lyon, USA Petroleum Company

Comment: (p. 135) We're currently purchasing oil from the Elk Hills Reserve. Can there be taps put on the pipeline once it is constructed?

Response: The Director of Naval Petroleum Reserves will continue to consider any feasible alternatives or modification to the pipeline as presently planned for the purpose of enhancing marketing potential.

San Bernardino, May 26, 1977

Emmett Beman

Comment: (p. 21) Anything that will contaminate the water is not good.

Response: The routine operation of the pipeline would not have any significant effects on water quality anywhere along the route. Abnormal operations, such as oil spills due to pipeline failure, could have adverse effects depending on the location of the mishap. Such accidents are mitigated against through a variety of means as described by Volume I.

Comment: (p. 22) Are there any mitigating measures to reduce tank fumes?

Response: Yes. Double seal, floating-roof tanks will be used at the recommendation of the California Air Resources Board and the South Coast Air Quality Management District.

Comment: (p. 23) How wide is the construction right-of-way?

Response: Fifty feet.

Okla Armstrong

Comment: (p. 24) You can't build anything over the 50-foot right-of-way. You destroy the whole parcel.

Response: No structures could be built over the right-of-way, but they could be built immediately adjacent to it.

Emmett Beman

Comment: (p. 26) How deep will the pipeline be buried?

Response: The pipeline will be buried a minimum of 3 feet below grade with the following exceptions: (a) the pipeline will be buried at least 4 feet below grade in farmland; (b) the pipeline will be buried at least 18 inches below grade in rocky, mountainous areas; (c) when crossing floodable areas in Los Angeles County, the pipeline will be buried deep enough to avoid any scouring effect of flooding or mud flows; (d) the pipeline will be buried somewhat deeper than 3 feet through the City of Colton to avoid underground utilities.

Comment: (p. 26) In case of a spill does the oil soak into the sand? What happens to the sand?

Response: Yes, the oil does soak into the sand although if the spill is very large it will also form pools on the surface. After the pipeline has been shut down and any pools of oil removed in vacuum trucks, all oil-soaked sand would be removed and replaced with clean fill. The contaminated sand would be disposed of in a segregated site in accordance with government regulations.

Comment: (p. 27) The minimum spill detectable would be about one barrel a minute?

Response: The leak detection system to be used on the pipeline would identify a leak of as little as a barrel a minute. Smaller leaks, that is pin hole leaks, could occur and would probably be detected only when oil reached the surface. Under the worst conditions, the total leakage might be as much as 1,200 barrels.

Comment: (p. 28) How do you determine there is a leak?

Response: The leak detection system uses both pressure and flow sensors and the data processing capability of a high-speed computer to measure the quantity of oil entering the pipeline vs. that leaving the pipeline. Variations of greater than one barrel per minute will be detected and reported, leading to the shutdown of the pipeline until corrective action has been taken. Very small leaks will probably be detected by visual means and similar corrective action taken. Aerial and ground inspection would detect surfaced oil.

Comment: (p. 29) Are maintenance stations close enough so that someone can fly over to determine damage and take corrective action?

Response: Pipeline operating personnel would be dispatched from the Elk Hills Supervisory Center to fly the section of the pipeline where the leak is known or suspected to have occurred. Large leaks are easily identified from the air and oftentimes are also reported by ground observers. Small leaks (around a barrel per minute) that have not yet surfaced are difficult to find and may require pressurization of each segment of the pipeline. In any type of identified leak, the pipeline will remain inoperational until the leak is fixed. Local contractors, identified in the contingency plan for the pipeline, will be used for repair and restoration efforts.

Okla Armstrong

Comment: (p. 30) How much water will the tank farm use?

Response: The minimum on-site storage is projected to be 1,000 barrels of water. There will be little demand for this water except in the case of a fire.

Emmett Beman

Comment: (p. 31) We may be shipping oil in from the Far East and shipping our oil to Japan. Does this make sense?

Response: There is no proposal to ship Elk Hills oil to Japan. The purpose of each of the Navy's three alternatives is to get the oil to domestic markets.

Comment: (p. 33) Why can't Los Angeles Water and Power and Edison Company get oil from here [Elk Hills] instead of getting it from the other places, paying about $14 a barrel?

Response: By law, the way the Navy markets the oil is to offer lots or amounts of oil to the highest bidder. What they do with the oil is determined by the buyer. Anywhere they transport it for refinement are determinations based upon the current market situation.

Comment: (p. 34) What's the Navy going to do when we need oil and don't have it?

Response: Please refer to Section II of the Naval Petroleum Reserves Production Act (Appendix A of the FEIS) in which Congress directed the Secretary of the Navy to develop and produce Elk Hills petroleum at maximum efficient rates.

Sam E. Taylor

Comment: (pp. 35-37) How close to an easement can we build? This will affect the value of the property. If you can't build within 50 feet of the right-of-way, it's effectively a 100-foot right-of-way.

Response: Structures may be built right up to the edge of the easement, but not on top of it.

Mr. Greenberg

Comment: (p. 60) What provisions have been made where the pipeline crosses fault zones?

Response: Historically liquid pipelines have been found to survive extremely well in earthquake zones, including fault crossings. The proposed pipeline will be buried underground with sufficient slack to account for anticipated movement. Further, the wall thickness will be designed to take anticipated stresses.

John Freeman

Comment: (p. 62) How deep will the pipes be buried?

Response: Please see the response to Emmett Beman's third question, p. 26 of the San Bernardino Public Hearing.

Comment: (p. 63) Once a route is selected, will detailed county maps be available with the route plotted carefully?

Response: The detailed routes can be found in the Final Environmental Impact Statement, which will be available in local libraries. More detailed information will be available to property owners affected by the proposed project.

Comment: (p. 65) Will odors be detectable downwind from tank farm?

Response: There will be odors from the three tanks due to evaporation of the crude oil. However, the quantity stored is only about a million barrels and best available control technology will be employed (double seal floating-roof tanks). In comparison to the Long Beach area referred to, this particular tank farm will have

substantially less hydrocarbon emissions because in Long Beach there is oil processing in addition to significantly greater oil storage.

Lewis, J. Walker, Environmental Review Officer, Environmental Improvement Agency, San Bernardino County.

Comment: (p. 103) Because the project requires a General Plan amendment, an environmental review must be conducted and an EIR written or certified. All of this will take time.

Response: There is no requirement in the California Environmental Quality Act (CEQA) for state EIRs to be written for projects of the Federal government. Because the Federal government is not required to follow local regulations other than applicable air and water quality standards, and other environmental standards, they need not obtain a General Plan amendment. There is, then, no supplementary local or state agency action that would require a state document. (In a joint Federal-state or Federal-local action, an EIR would be required. In these cases, the EIS could be modified to meet the requirements of CEQA and serve as both an EIS and EIR.)

Richard Troyer, Chamber of Commerce, Phelan

Comment: (p. 107) What would the source of water be for the Cajon Tank Farm? How much water will be required?

Response: Please see the response to Mr. Armstrong's comment. The exact source of water for the tank farm site is to be determined by the Navy. Water will probably be trucked in and stored at the site. The draft EIS recommended the possibility of using site runoff waters, if sufficient supplies exist. Waters from the California Aqueduct could also potentially be used, if the Navy received approval from the State Department of Water Resources.

Comment: (p. 110) Would the road into the Cajon Tank Farm area be paved and dedicated to the county?

Response: No, the road would be for access only. It may be unimproved to discourage entry into the area by unauthorized personnel.

Comment: (p. 111) Was the tank farm placed at Cajon to keep it out of the Colton area?

Response: There are three important benefits to be derived from placing the tank farm at Cajon Pass: (1) it saves considerable money in operating costs, since the crude oil is moved via gravity through the first section of the SOHIO line and to the SOHIO interchange; (2) it removes the tank farm from the residential and built-up community of Colton; (3) it impinges less on the air quality in the San Bernardino basin.

Lewis Walker

Comment: (p. 111) Isn't there also an air quality benefit in locating the Cajon Tank Farm out of Colton?

Response: The prevailing winds would blow the emissions from the tank farm into the Southeast Desert Air Basin rather than the South Coast Air Basin. The advantage realized is that air quality in the South Coast Air Basin, which is currently quite poor, will not be significantly affected by the presence of the tank farm.

Comment: (p. 113) What input does the public or the Navy itself have on making final decisions?

Response: The public has provided formal comments, either written or in a public statement, which have been considered in the preparation of the final impact statement. The Director of the Naval Petroleum and Oil Shale Reserves is the individual making a recommendation to the Secretary of the Navy based upon the environmental impact statement process and the comments received. A number of recommendations and comments will be adopted while others won't. All comments, however, have been answered by the Navy in the FEIS.

Basic policy decisions on the rate and timing of oil production from Elk Hills are included in Public Law 94-258 and, therefore, are not a matter of Navy discretion.

Richard Troyer

Comment: (p. 116) Have the easements and rights-of-way already been purchased for the SOHIO route?

Response: No. Owners along two of the routes have been advised of the prospect of the pipeline being built across their property. Some entry rights have been obtained. There has been no purchase or negotiation of rights-of-way.

Palmdale, June 29, 1977

Warren Harwood, South Coast Air Quality Management District and Los Angeles County Housing Authority

Comment: (p. 28) The route crosses some foothill areas near proposed senior citizens public housing facilities. These facilities could be impacted by oil spills. In addition, the route cuts right through the property and will require a diagonal alignment of streets.

Response: The new route stays along the Avenue M right-of-way through the lands planned for the senior citizens development, and will thus have no impact on land-use patterns. Such placement in

public rights-of-way is recommended practice with a very good safety record. No differentiation between senior citizens residences and other residences can be made. However, the presence of a slope in this area would, should a spill occur, result in a somewhat larger area of contamination downhill of the pipeline.

Ms. Robinson

Comment: (pp. 28-31) Antelope Valley College was not contacted during the archeological study. The pipeline would destroy a valuable portion of the archeological resources of the Antelope Valley.

Response: Please see response to letter 21 in this document.

Dennis Cannon, Sunnyside Property Owners Association

Comment: (pp. 31, 33) The pipeline route cuts diagonally through lots which are a part of the planned Rancho Vista subdivision. Can't the route follow road easements?

Response: The pipeline has been realigned to follow street rights-of-way through this subdivision.

Comment: (p. 32) The way the property (Rancho Vista subdivision) is situated any oil spill would tend to drain across the property owners lands in much the same way that rainwater does.

Response: A large spill would follow a course similar to that taken by water in the same area. Some of the oil would soak in but much of it would gather in natural pools where it could be collected. The pipeline is designed to shut down immediately after a large break occurs limiting the initial spill prior to shutdown to probably no more than 500 barrels. However, the line will continue draining in this area for a matter of many hours. This time lag allows dikes to be constructed to contain the oil to prevent further spread and to limit line drain. Since large breaks are often caused by heavy construction activity (for example, a bulldozer hits the line while excavating), the perpetrator often is able to take immediate actions to limit the extent of the spread.

Comment: (p. 32) How far would spilled oil permeate into the ground and could it enter into the water table and contaminate further what is already poor quality water?

Response: A leak which is rapidly detected will normally not permeate more than a few feet into even sandy soil before corrective action is taken. A very slow leak which went undetected for some time could permeate considerably further; however, because the water table in this area is low (estimated 200 to 300 feet) it is quite improbable that even a very small, prolonged leak would reach the water basin.

If this did occur, oil would be detected in the drinking water supply and extensive cleanup might be required to correct the situation.

Comment: (p. 33) Groundwater withdrawals in the Lancaster area have resulted in an overdraft situation and current pumpage consists primarily of poor quality water. What would be the effects of an oil spill on these waters?

Response: The sustained pumpage in the Lancaster area has resulted in the depression of local water table levels of up to 360 feet below the ground surface. Because of the relative immiscibility of oil in water and the filtering capacity of the overlying soils, it is not expected that detectable quantities of oil could reach this lowered water table in the event of an oil spill. Thus, spill would not have any noticeable impact on local groundwaters.

Denver Cook

Comment: (p. 34) Is it wise to situate a tank farm where there has been considerable seismic activity in the past?

Response: Historically tank farms have been found to survive earthquakes well. Sloshing from full tanks would be minimized by the floating roofs in the tanks. Tank breakage is very unlikely. However, if tanks were to rupture, individual dikes, with sufficient capacity to contain the contents of the tank involved, would prevent further oil spread.

Nick Nemer

Comment: (pp. 33, 34) There is a discrepancy in hydrocarbon emissions from two different tables. Concern is expressed over hydrocarbon emissions affecting two schools just downwind of the tank farm site.

Response: Revised calculations in the FEIS estimate reactive hydrocarbon emissions from the Cajon Tank Farm as 22 pounds per hour using the American Petroleum Institute (API) method. The Environmental Protection Agency (EPA) feels that 50 percent of this figure is more accurate.

The schools that are only two or three miles away from the tank farm will likely experience little or no adverse impact due to the presence of the tank farm. This is because it takes hours for the hydrocarbons to react with sunlight and other air constituents to form ozone. By this time, the air parcel will have been blown past the school and the more likely impact area would be Victorville. On calm days, the effects from the tank farm may be more noticeable at the school, but offsetting this transport from San Bernardino will be minimal in comparison to more windy days.

Comment: (p. 35) The pipeline should be built on the downhill side of the California Aqueduct.

Response: Where the pipeline crosses the aqueduct, there will be another pipe encasing the pipe carrying the oil so that the oil would be spilled on either side of the aqueduct in the event of a leak. If a leak occurs uphill of the aqueduct, the berms alongside are designed to prevent contamination of the water. The oil would spread laterally along the aqueduct and no contamination would occur unless an obstruction prevented lateral flow.

Comment: (p. 38) Is there a market for Elk Hills oil in Midland, Texas?

Response: The SOHIO Long Beach-Midland pipeline would connect with existing pipelines at Midland, Texas, to open up markets throughout the central and eastern United States for Elk Hills oil.

Comment: (p. 39) The best alternative is to market the oil locally.

Response: The basic drawback is limited refinery capacity and the oil with which the Elk Hills oil would be competing with. The Navy doesn't control this situation. The Navy can only offer the oil to a successful bidder, who, in turn, decides where that oil will be refined and sold.

Comment: (p. 40) Could melting snow soften the ground on which the tanks are located and create possible problems?

Response: Soil boring and testing in the area of the proposed tank farm site are being made to insure that foundations for the individual tanks will be adequate under all conditions. The accumulation of snow on floating-roof tanks, such as those proposed at Cajon, can cause some problems where the snow fall is very high. However, the indicated snow fall of 26 inches would cause no concern and would be accounted for in the design of the floating roof.

Comment: (p. 43) The pipeline route should be changed to avoid Phelan and the aqueduct in the event of a spill.

Response: The community of Phelan is not in a potentially dangerous area in the event of a spill from the proposed pipeline. The spill line (p. C-13) for this portion of the pipeline shows that a spill would not reach the community. The tank farm would be surrounded by a dike to prevent oil from escaping toward the community. The dike would lead to a sump, downhill at some distance, which would have a containment volume equivalent to the volume of all the tanks.

For a response regarding the aqueduct, please see the comment on page 35.

Comment: (p. 44) What if the pipeline spills uphill of the (California) aqueduct, say near MP 115?

Response: In this, and in similar instances, the oil would flow downslope to the edge of the aqueduct where it would be diverted by the berm which is an integral feature of the aqueduct. The oil would then continue to run along side and pool beside the aqueduct but would be most unlikely to overflow into the aqueduct. Underground seepage is most unlikely through the concrete liner of the aqueduct. Under some freak circumstances, damaged pipeline, while under pump pressure, might create a plume of oil which could conceivably drift across the aqueduct. While the ingress of oil from pipelines into aqueduct systems has not been a problem in the San Joaquin Valley, some consideration has been given by pipeline cooperatives in the area as to how to counteract any such event. No good solutions have been identified aside from shutting down the flow of water in the aqueduct to permit containment and collection of oil on the water surface.

Comment: (p. 45) Charts (alluding to Appendix D), indicate that a spill up to 20,000 barrels could go undetected; this spill could continue from six hours to several days.

Response: The comment is a misinterpretation of the data. A design spill, as shown in Figure D-1 of Appendix D, a worst case condition, of up to 20,000 barrels in the Palmdale area is potentially possible. However, this assumes a total rupture of the line with total drain of the pipeline over a period of six days. The leak detection system would immediately sense such a break and shut down the pipeline. Thereafter, within a matter or an hour or two, crews would be on the site to build containment dikes around the site of the spill, and, at the same time, place stopples at the site of the break to prevent further line drainage. The leak detection system would be ineffective only for leaks of less than one barrel per minute, which, again under a worst case condition, might accumulate up to 1,200 barrels before surface detection was possible.

Leo A. Seltzer

Comment: (p. 53) The pipeline route cuts across an area planned for a senior citizens development. This area is located between 60th and 80th streets W, from Avenue L up into the foothills. Couldn't you follow the aqueduct?

Response: Please see the response to Warren Harwood's comment, earlier in this section on the Palmdale Public Hearing. The aqueduct was considered as a possible new alignment but was not viewed as the best alternative.

T. C. Gibson

Comment: (pp. 55-56) My property has been cut across by the Edison Company twice. It was cut across by the California aqueduct as well. Put the pipeline along the aqueduct and leave us alone.

Response: The pipeline route has been realigned, and is now adjacent to the Southern Edison Company powerline. It would require a separate easement, but its location next to the existing easement should limit the impact on the use of your property.

Denver F. Cook

Comment: (p. 57) Any catty-cornered cutting of land leaves unusable parcels which can be unsightly and harms the owner of the land.

Response: The route through the Antelope Valley has been realigned. It now follows a diagonal direction only once, and this is along an existing easement. The rest of the route follows road, railroad easements, or township lines. Thus no new parcels will be severed and left in the condition you describe.

T.C. Gibson

Comment: (p. 61) Can the pipeline be built to Midland, Texas in two years?

Response: Once the permits are granted, SOHIO believes the pipeline can be built in less than two years. The Navy can build its pipeline on time if a final decision is made before October 1, 1977. After that, the Navy does not believe the pipeline can be completed to meet Congressional mandate.

Nick Nemer

Comment: (p. 62) I would like to speak in favor of using the aqueduct easement for the Navy's pipeline route.

Response: This route was considered during the reexamination of the Antelope Valley portion of the pipeline route, but another realignment, described in the text, was chosen.

Gary Howell

Comment: (p. 96) The route will be going through our house and our neighbors houses. What will we do if we have to give up our house?

Response: The pipeline route has been realigned to follow street rights-of-way in the vicinity of your neighborhood. Please see the alignment in the Environmental Atlas, MP 91 to 93. No one would be displaced as a result of construction of the proposed pipeline route.

David Hellman, Pinion Hills/Phelan area, West Cajon Valley

Comment: (p. 98) A new junior/senior high school is being built 1-1/2 miles to the north of the Cajon Tank Farm.

Response: The location you describe is not within the potential oil spill area as delineated in the Environmental Atlas, nor is it in an area where air pollution will be a problem. Please see the response to Mr. Nemer's second comment, earlier in this section on the Palmdale hearings.

Comment: (p. 98) Less than a mile to the east of the Cajon Tank Farm site is a hill called "Old Granddad" which is heavily used by motorcyclists.

Response: It is not foreseen that this use would be impacted by the Cajon Tank Farm, either from a potential spill or from an air quality reduction. There could be an impact on visual quality on views from Old Granddad toward the tank farm site.

Ms. Hellman

Comment: (p. 99) Checklist of plants and animals in the report is incorrect.

Response: The checklist is the result of compilation of data from standard references on geographical and habitat distribution, supplemented by interviews with individuals and field observations. Within the limitations of the scope of work, it was impossible to talk with every knowledgeable person or conduct lengthy wildlife observations within the project area. However, some of these suggested omissions (mountain lions, quail, and deer) were included in the list on pages M-4 and M-11.

Comment: (p. 100) Motorcyclists would ride over the pipeline, especially around the tank farm. Couldn't you consolidate it with an existing corridor?

Response: With the exception of 3-1/2 miles near the tank farm, the route follows existing rights-of-way or township lines (in Los Angeles County) throughout San Bernardino and Los Angeles counties. The tank farm site is located off of existing transportation corridors to reduce the potential for visual impact on travelers and the potential for vandalism. The route, then, necessarily leaves the highway corridor for a short distance to reach the tank farm.

Comment: (p. 101) The fire fighting supply of 260,000 gallons is going to require a very good well in the Cajon Tank Farm site.

Response: Recognizing the shortage of water at the Cajon Tank Farm site the Navy has revised the layout of the tank farm to reduce water requirements. This reduction was made possible by increasing the distance between the individual storage tanks such that radiation effects from fire on one tank, which require water to cool the exterior of adjacent tanks, are unnecessary. Water will still be required for the foam generation systems for the individual tanks and for general facility protection but the amount required will be less than 100,000 gallons total and will be provided by water trucked in and stored at the site.

Comment: (p. 101) Pollutants would not affect just Victorville but be blown all around.

Response: Victorville was chosen as an example of an urban location that could potentially be the most adversely affected by oxidants formed as a result of hydrocarbon emissions. It is true, that depending upon the wind direction, receptors in all directions in relation to the tank farm would be affected.

John Kubasak

Comment: (p. 102) I object to the odd angle that the pipeline route cuts across the southeast corner of the Antelope Valley. This will hurt property value. The Navy should use an existing corridor.

Response: The route through the Antelope Valley has been changed to follow existing rights-of-way and township lines.

Forrest Hull

Comment: (p. 103) What restrictions will there be on the use of the land in the pipeline right-of-way?

Response: The land may be used for farming, grazing, parking areas, driveways, or roads. No structures may be built over it.

Comment: (p. 104) With a 50-foot swath cut through my property, it would be worthless!

Response: The route has been changed. It now follows existing rights-of-way or township lines and no longer severs any lots in the Antelope Valley.

Ms. Hellman

Comment: (p. 109) The pipeline would cross archeological sites for several miles. Perhaps digging the pipeline would allow archeologists to look more closely beneath the surface.

Response: Please see responses to letters 1 and 21 regarding extent of the archeological survey. An archeologist will also be present during pipeline construction in order to record any artifacts.

John Kubasak

Comment: (p. 109) What happens after the Navy selects a piece of land and notifies the owner that his land will be crossed?

Response: There would be an attempt to negotiate a fair and equitable price for the right-of-way which should ultimately result in a construction permit to proceed. The permit would also stipulate how the pipeline would be built in that area. For example, in farming areas, the pipeline would be buried deep enough so that no obstruction to normal operations would occur. The only restriction to activities over the pipeline would be within the 50 foot right-of-way and would prohibit buildings and trees. Parking lots, driveways, landscaping and agricultural activities (except orchards) would be permitted.

Arthur Helsinger

Comment: (p. 111) How much footage will be required for construction equipment?

Response: The construction equipment will stay within the 50-foot right-of-way.

John Kubasak

Comment: (p. 116) What criteria will be used to decide which route to use?

Response: One major criterion is whether or not the SOHIO pipeline is approved and built. Other criteria include the overall environmental impacts of each route, the interests of the people affected, the overall cost, the potential markets for the sale of the oil and its production, and engineering feasibility.

Arthur Wallace

Comment: (p. 116) If the pipeline could follow divisions, regular township lines, and highways through the Antelope Valley, it would be better.

Response: The new route through the valley follows the lines you mentioned as well as road and railroad easements and a powerline corridor.

Zella Gwinn, West Side Park Property Owners Association

Comment: (p. 117) We're concerned how you will be crossing our neighborhood, which is located between Avenue O and Avenue O-12, and between 10th and 20th Streets, West. You should stay within existing easements.

Response: The route no longer crosses your neighborhood, but lies one block south, along an existing road right-of-way.

Ben Oman

Comment: (p. 120) The pipeline could follow the Southern Pacific Railroad tracks from Palmdale to Colton.

Response: After the public hearings and the Draft EIS, this route was investigated along with several others. The new route does follow these railroad tracks from north of Pearblossum to a junction with Highway 138.

Clint McBroome

Comment: (p. 120) Is Alternative 3 (the Elk Hills/SOHIO pipeline) the preferred route?

Response: Yes. Although there has been no decision made at this time. In order to meet the Congressionally-mandated timetable, it appears that a decision will have to be made by October 1, 1977, in the opinion of the Navy. After a route is selected, the Navy has to complete pipeline design and negotiations with landowners and, finally, commence and complete construction before April 5, 1979. Currently, however, the Navy is publishing the FEIS for the Elk Hills/SOHIO alternative only.

David Hellman

Comment: (p. 121) Crude oil transmitted through a pipeline carries a certain amount of water with it. Will this water build up in the tanks at the Cajon Tank Farm and will it eventually be discharged at the site?

Response: Water in the crude oil is normally emulsified and transferred with the crude, eventually arriving at the refinery where separation is accomplished. However, some water build-up in the tanks at the Cajon Tank Farm may occur even though mixers in the tank will be used to minimize this possibility. If this build-up becomes significant the water will be discharged to a sump, held to allow the oil/water emulsions to break, and the resultant mixture put through an oil/water separator. The recovered oil will be returned to the system and the water will be discharged to the surface or recycled

to the water system if it meets appropriate standards. If for some reason traces of oil remain in the water, it will be removed by truck for disposal at appropriate sites.

Mr. Bostwick

Comment: (p. 123) Assuming that 350,000 barrels a day are pumped out of the reserve, how long would it take to deplete the field?

Response: The pumping rate would not be sustained at the 350 MBD rate. As the field becomes depleted, the rate would decrease. In order to recover the maximum amount of oil, you have to reduce the maximum pumping rate as the field becomes depleted. And the Congressional mandate states that "Best engineering practices [should be used] in removing the oil." If 350,000 bbl per day were pumped until depletion, the reserve would be depleted in about 8 years.

Joe Mastro

Comment: (p. 124) Couldn't the pipeline follow property lines, which run north to south and east to west?

Response: Where the new route does not follow existing easements, it stays in the alignments you've suggested, along township and division lines.

Gary Howell

Comment: (p. 125) When were the pipeline routes designed?

Response: A tentative route selection for each of the three alternatives has been made. However, the pipeline itself and the associated facilities have not been designed. The study report from which the routing selections were made was completed on March 28, 1977.

Mr. Nesel

Comment: (p. 126) Is there currently a preference for any of the routes?

Response: The Navy is currently publishing only the FEIS for the SOHIO Conveyance System Alternative. The FEIS's for the Port Hueneme and Coalinga Conveyance System alternatives will be published when and if environmental and other constraints are overcome. Although the SOHIO route is presently preferred by the Navy, it depends on SOHIO obtaining the necessary permits for its pipeline.

Nick Nemer

Comment: (p. 127) Will the Elk Hills oil be delivered to the SOHIO refinery in Midland, Texas?

Response: No. The SOHIO pipeline is a common carrier which anyone can use. Therefore, any refiner could purchase the oil and use the SOHIO pipeline to get the oil to its refinery.

Comment: (p. 128) Doesn't SOHIO have an economic advantage to compete for Elk Hills crude oil?

Response: No. they do not. There is a tariff that is applied for shipment of oil through the SOHIO line. The refiners pay a certain price for the oil, including the tariff. The Federal Energy Administration establishes entitlements such that one would not obtain an advantage in obtaining, in this case, Elk Hills crude oil. All bidders would be competing on an equal basis. Congress has established that no one firm can obtain more than 20 percent of produced oil from Elk Hills. The only economic advantage would be realized by those refineries in relatively close proximity to Elk Hills which would have smaller transportation costs.

Comment: (p. 129) Since the Navy's pipeline is to be a "common carrier," will the Navy be paid for the use of their line?

Response: If another firm connected to the Navy's pipeline, there would be a tariff for the oil involved. This subject area will be covered in the EIS on Elk Hills oil production.

Mr. Nesel

Comment: (p. 131) Are there revegetation plans?

Response: Yes, there are revegetation plans. Please see Section IV. E.1.c. in Volume I of this FEIS for a listing of mitigating measures. The Navy will also coordinate with the Soil Conservation Service, Forest Service, BLM, and the Fish and Wildlife Service to determine the most appropriate revegetation plans.

Clint McBroome

Comment: (p. 138) Will you parallel Highway 138 exactly or could you back off 100 or 150 feet so I can build along the highway?

Response: The purpose of paralleling the highway is to use the highway right-of-way, and to minimize the impact on private property. It shouldn't pose a problem to highway frontage development.