CITY OF OXNARD
CALIFORNIA

PLANNING DEPARTMENT
GENE L. HOSFORD, DIRECTOR
305 WEST THIRD STREET
OXNARD, CALIFORNIA 93030
PHONE 486-4311, EXT. 230

October 10, 1980

To All Interested Parties:

Union Oil Company of California proposes to develop Outer Continental Shelf (OCS) oil and gas leases P-0202, P-0203 and P-0216 in the eastern Santa Barbara Channel, offshore of Ventura County, California. To develop these leases, Union proposes to install two offshore platforms and construct an onshore treating facility within the Mandalay Beach area of the City of Oxnard. One of the platforms (Gina) would be located approximately 4.5 miles southwest of Port Hueneme, and the other platform (Gilda) would be located 10 miles west of Oxnard.

Shortly after the project was formally announced, the City of Oxnard was asked to assume the role of "lead agency" by the State Office of Planning and Research (OPR) and take the principal responsibility for preparing the environmental documents required under the provisions of the California Environmental Quality Act of 1970 (CEQA), as amended. Assistance in carrying out this role was provided by a Steering Committee, established under a Memorandum of Understanding developed by OPR. Agencies represented on the Committee are: the State Lands Commission, State and Regional Coastal Commissions, County of Ventura, U.S. Army Corps of Engineers, and the United States Geological Survey (USGS). USGS is the federal agency responsible for preparing an Environmental Assessment to determine whether or not the project will have a significant effect on the environment, under the provisions of the National Environmental Policy Act of 1969 (NEPA). The enclosed document has been designed to fulfill this latter requirement.

As a means of serving the public interest, the Steering Committee agreed to prepare a joint environmental study to avoid duplication in staff efforts, share expertise, and promote intergovernmental coordination at the local, State and federal levels. The document, entitled "Draft Environmental Impact Report/Environmental Assessment, Union Oil Company Platform Gina and Platform Gilda Project" (Volumes I and II - May, 1980) was circulated for review under the applicable provisions of State and

federal law. Comments were received on the draft document through July 14th, and responses are contained in the attached finalizing addendum (Volume III - October, 1980). This finalizing addendum has been prepared in accordance with Section 15146 of the California Environmental Quality Act, EIR Guidelines, as amended through April 8, 1980. The information in this volume, combined with Volumes I and II, forms the Final EIR/EA for the proposed Platform Gina and Platform Gilda Project.

A public hearing has been scheduled before the City of Oxnard Planning Commission to certify that the Final EIR/EA has been completed in compliance with CEQA, State EIR Guidelines, and adopted City procedures set forth under Resolution No. 7470. This hearing has been scheduled for October 30, 1980, at 7:30 p.m. at the Oxnard City Council Chambers, located at 305 West Third Street, Oxnard, California, and any interested person is welcome to attend.

If you have any questions pertaining to the hearing, please contact Mr. Ralph Steele of this department at (805) 486-4311, Extension 530.

Gene L. Hosford

Gene L. Hosford, AICP
Planning Director

RJS:afm

Attachment

ENVIRONMENTAL IMPACT REPORT / ENVIRONMENTAL ASSESSMENT

UNION OIL COMPANY

PLATFORM GILDA AND PLATFORM GINA PROJECT

LEASES OCS P-0202 AND P-0216

OFFSHORE VENTURA COUNTY, CALIFORNIA

VOLUME III

Prepared by:

City of Oxnard
305 West Third Street
Oxnard, California
93030
EIR 78-19
SCH 80052812

United States Geological Survey
Pacific OCS Region
Department of the Interior
1340 West Sixth Street
Los Angeles, California
90017

With Technical Assistance Provided Under the Direction of:

Dames & Moore
125 East Victoria
Santa Barbara, California
93101

October, 1980

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1.0

INTRODUCTION

This finalizing addendum has been prepared in accordance with Section 15146 of the California Environmental Quality Act, EIR Guidelines, as amended through 8 April 1980. The information in this volume combined with Volumes I and II form the Final EIR/EA for the proposed Platform Gina and Platform Gilda Project.

Copies of the Draft EIR/EA (Volumes I and II) were distributed to persons, organizations, and public agencies. Comments were received from those listed in Table 1-1. All comments received are on file and available for public inspection at the Planning Department, City of Oxnard, 305 West Third Street, Oxnard, California 93030.

Responses to comments on the Draft EIR/EA are provided in Sections 2.0 through 28.0. The organization of each section is as follows:

(1) A copy of the commenting letter is provided. Each specific comment in the letter is designated by a number (e.g., 27.1, 27.2, 27.3, etc.).

(2) The letter is then followed by responses to each comment in the letter. The number of the response is keyed to the number of the comment in the letter. Each response also includes a topical identification of the subject of the comment.

Section 29.0 provides contract information, as required by Section 7800 of the State of California Government Code.

TABLE 1-1

PERSONS, ORGANIZATIONS, AND PUBLIC AGENCIES
COMMENTING ON THE DRAFT EIR/EA

U.S. Coast Guard
U.S. Department of Commerce - National Oceanic and Atmospheric Administration
U.S. Department of the Interior - Heritage Conservation and Recreation Service
U.S. Department of the Interior - National Park Service
U.S. Department of Transportation - Federal Aviation Administration
U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service
U.S. Navy - PMTC
U.S. Navy - Construction Battalion Center
California Air Resources Board
California Coastal Commission
California Department of Conservation - Division of Oil and Gas
California Department of Transportation - Division of Aeronautics
State Lands Commission
Ventura County Air Pollution Control District
Ventura County Resource Management Agency
Ventura County Flood Control District
City of Oxnard - Planning Commission (Duff)
City of Oxnard - Planning Commission (O'Connell)
City of Oxnard - Planning Commission (Dressler)
City of Oxnard - Public Works
City of San Buenaventura
League of Women Voters
Ian Dyer
Jean Harris
Carroll Lorbeer
Alice Wennerholm
James Wolf
Union Oil Company

June 12, 1980

Oxnard City Council
305 West Third Street
Oxnard, Ca. 93030

Honorable Councilmembers:

At its June 9, 1980 general meeting, the Oxnard Advisory Committee (OAC) approved five recommendations for your consideration.

2.1 Recommendation 6-9-80-1: The OAC recommends to the City Council that the Environmental Impact Report (EIR) for the proposed "Union Oil Company Platform Gina and Platform Gilda Project" should fully consider alternate pipeline routes and a consolidated separation facility. (ayes - 13; noes - 6; abst. - 5)
Discussion:
This Recommendation resulted from a discussion paper prepared by the Environmental Quality Subcommittee (please see Attachments A and B).

Recommendation 6-9-80-2: The OAC recommends that the Oxnard City Council submit its concerns regarding Outer Continental Shelf Lease Sale # 68 to the U.S. Department of the Interior.
(ayes - 13; noes - 7; abst. 4)
Discussion:
The recommendation also resulted from a discussion paper by the Environmental Quality Subcommittee (see Attachment C).

Recommendation 6-9-80-3: The OAC recommends that the City Council relay a list of nine concerns to the State Lands Commission for inclusion in the Shell Oil Company EIR (PRC3314.1).
(ayes - 12; noes - 11; abst. - 1)
Discussion:
This recommendation also resulted from a discussion paper by the Environmental Quality Subcommittee (see Attachment D).

Recommendation 6-9-80-4: The OAC recommends that the City of Oxnard establish a policy governing artesian wells, requiring that all wells be capped within a reasonable period of time, and that the City of Oxnard commit itself to a definite date that road expansion will take place on Victoria Avenue and the subsequent capping of the well. If this expansion will not take place within six months, the OAC requests that the McGrath well be capped immediately.

Discussion:
This recommendation also resulted from a discussion paper by the Environmental Quality Subcommittee (see Attachment E).

Recommendation 6-9-80-5: The OAC requests that the City Council make funding available for the purpose of chartering a school bus for 1/2 day for the OAC's annual tour of the City.
Discussion:
During the summer months, attendance of regular OAC meetings is poor due to vacations. Therefore, the Committee feels that the tour would be preferrable to a regular meeting in July. The date selected for the tour is July 26, from 8:00 a.m. until noon. The cost for the bus would be approximately $100.00. The OAC feels that this tour is very important to its understanding of the long-range needs of the community.

The OAC appreciates this opportunity to present its recommendations to the City Council. Thank you.

Sincerely,

Donald G. Pierson by DLR

Donald G. Pierson
President

DGP:en

ATTACHMENT A

OXNARD ADVISORY COMMITTEE

ENVIRONMENTAL QUALITY SUBCOMMITTEE

April, 1980

UNION OIL PIPELINE ROUTES

PURPOSE:

Present OAC Environmental Quality Subcommittee evaluation and recommendation.

BACKGROUND:

Federal Department of Interior promoting extensive Outer Continental shelf development in Santa Barbara Channel. Federal Coastal Zone Management Act requires federal action to be consistent with state and local coastal plans. California Coastal Act dictates consolidation of generay facilities.

Chevron now constructing oil/water separation facility at platform Grace in Outer Continental Shelf Offshore of Ventura; oil is shipped to Carpenteria which also has separation capability.

Union Oil proposes two new platforms with related pipelines and a new separation facility at Mandalay Beach Park.

DISCUSSION:

Union's favored proposal: build platform Gilda, 10 miles offshore (90-wells) and Gina, 4.5 miles offshore (9 wells); pipe oil/water from each to Mandalay Beach Park for separation at new facility.

Alternate proposal: connect Gina and Gilda to Grace; use Chevron's pipelines to bring oil ashore at Carpenteria for separation.

PROBLEMS:

Union's first choice does not favor alternate proposal, consolidating facilities with Chevron.

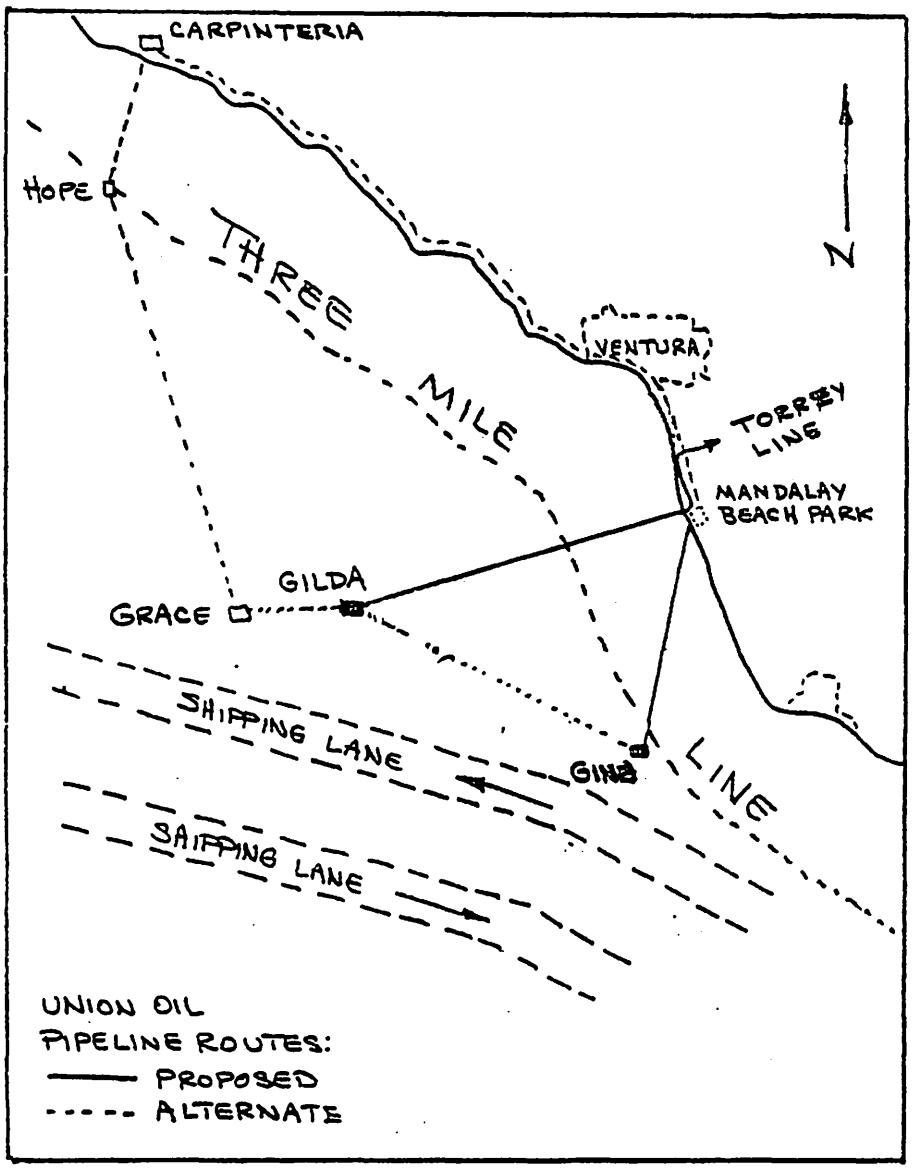
RECOMMENDATIONS:

EIR for project should fully consider alternate pipeline and consolidated facility proposal.

TAB A

Map of proposed sites.

ATTACHMENT B



2.0

RESPONSE TO COMMENT FROM OXNARD ADVISORY COMMITTEE

2.1 Chevron-Carpinteria Secondary Alternative

Please see response to California Coastal Commission comment number 27.3.

United States Department of the Interior

NATIONAL PARK SERVICE
WESTERN REGION
450 GOLDEN GATE AVENUE, BOX 36063
SAN FRANCISCO, CALIFORNIA 94102

IN REPLY REFER TO:
L7619
(WR)REQ

June 11, 1980

Mr. Gene L. Hosford, AICP
Planning Director
City of Oxnard
305 West Third Street
Oxnard, California 93030

Dear Mr. Hosford:

We have reviewed the environmental impact report/environmental assessment for Union Oil Company's proposed Platform Gina and Platform Gilda Project, Outer Continental Shelf oil and gas leases P-0216 and P-0202, in the eastern Santa Barbara Channel, offshore California. [We did not receive information
3.1 regarding the development of Outer Continental Shelf oil and gas lease P-0203. Please note that our comments reflect this.]

The proposed project is unlikely to have any direct adverse impact on our jurisdiction of the Channel Islands National Park. Our primary concern would be a major uncontained oil spill which would affect the offshore waters and shoreline of Anacapa or any other Channel Islands, or the shoreline adjacent to the proposed administrative headquarters and visitor center in the Ventura Marina. We are interested in the establishment of a Marine Sanctuary surrounding the islands and our interests relate quite closely to those of Fish and Wildlife Service. Most of the technical discussion concerning oil and gas production and transport are outside our areas of expertise.

We appreciate the opportunity to review the project and offer no further comment.

Sincerely,

Bruce M. Kilgore
Acting Associate Regional Director,
Resource Management and Planning

cc:
Geological Survey-Pacific OCS Region
Superintendent, Channel Islands

Year of the Visitor

RESPONSE TO COMMENT FROM
U.S. DEPARTMENT OF THE INTERIOR - NATIONAL PARK SERVICE

3.1 Lease OCS P-0203

Lease OCS P-0203 adjoins and is directly west of lease OCS P-0202. Both of these leases are currently held as capable of production. There are plans to further explore and develop the potential of lease OCS P-0203 from proposed Platform Gina. The pipeline from Platform Gina and the power cable to Platform Gina are sized to handle any production which might be developed from the lease.

United States Department of the Interior

HERITAGE CONSERVATION AND RECREATION SERVICE
PACIFIC SOUTHWEST REGION
SAN FRANCISCO, CALIFORNIA 94102
450 Golden Gate Avenue Box 36062

IN REPLY REFER TO:

PSW 200

JUN 12 1980

Mr. Ralph J. Steele, Project Coordinator
Planning Department
City of Oxnard
305 West Third Street
Oxnard, California 93030

Dear Mr. Steele:

We have reviewed the EIR/EA for the Union Oil Company Platform Gina and Platform Gilda Project and offer the following comment.

4.1 Copies of the cultural resources surveys (Dames and Moore 1980 a,b, and c) should be provided to the State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (ACHP) for review and comment, if this has not already been accomplished.

Written comments and approval of the proposed mitigation measures from the SHPO and the ACHP should be included in the Final EIR/EA.

Financial assistance toward the development of the proposed Mandalay Beach County park and the predicted minimal impact on cultural resources, suggests that the Mandalay Beach site would appear to be a desirable site for the proposed treatment facility.

Thank you for the opportunity to comment.

Sincerely,

Barry Pearl

Barry Pearl
Outdoor Recreation Planner

4.0

RESPONSE TO COMMENT FROM U.S. DEPARTMENT OF THE INTERIOR - HERITAGE CONSERVATION AND RECREATION SERVICE

4.1 Cultural Resources Surveys

Copies of the three Dames & Moore cultural resources survey reports have been provided to the State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (ACHP) for their review and comment. SHPO has completed their review and provided no comments. The ACHP review is in progress. Any comments ACHP provides, particularly with respect to mitigation measures, will be incorporated into the project review and approval process.

State of California — Business and Transportation Agency

Memorandum

To : Ms. Ann Barkley, Chief
Division of Transportation Planning
Department A-95 Coordinator

Attn: F. Darrell Husum

Date: June 11, 1980

File : Clearinghouse

From : DEPARTMENT OF TRANSPORTATION
Division of Aeronautics

Subject: Project Review - SCH 80052812 - Union Oil Company Platform Gina and Platform Gilda (Leases OCS P-0202 and P-0216) Offshore Ventura County.

This project has been circulated since December 15, 1978. On January 10, 1979, we commented on the Notice of Preparation to the City of Oxnard Planning Department with a copy to the State Clearinghouse. In April, 1979, we received a draft(?) EIR/EA, and on October 4, 1979, we received a final revised work program for the EIR/EA. We commented on the latter on November 1, 1979.

The Department of Transportation has reviewed the two-volume EIR/EA submitted jointly by the City of Oxnard and the United States Geological survey. The project is a proposed development by Union Oil Company of federal Outer Continental Shelf (OCS) leases in the HUENEME Field and Santa Clara Unit offshore of Ventura County, California. The project has been designated the Platform GINA and Platform GILDA project and involves two production platforms (GINA in the HUENEME Field, 4.5 miles offshore; GILDA in the SANTA CLARA Unit, 10 miles offshore); pipelines to shore; an onshore treating facility; and product crude oil/natural gas pipelines onshore that would connect the treating facility to existing distribution systems.

The two-volume EIR/EA has thoroughly treated the environmental aspects of the project, except that the on-shore facility has not been finally located. On Page 3.1-1 of Volume I, we find:

> "The onshore treating facility would be located on a 1.8-acre (0.73-ha) parcel of land located immediately south of and adjacent to the existing Southern California Edison Company (SCE) Mandalay Generating Station in Oxnard ...."

Yet, in Figure 3.1-1 there are shown 3 alternative sites - Union Oil Marine Terminal, East Mandalay, and Ormond Beach. Apparently the Mandalay Site is the preferred location, but it is owned by the County of Ventura, and its use - if approved - would require a number of corridors for pipelines and power cables.

We find no problems with the two offshore platforms and we note that they will be lighted.

5.1 One of the on-shore sites,however, is within about 2 miles of the Ventura County Airport. Any lighting for the facility should be provided so as not to interfere with (glare, etc.) air traffic.

Our review centers on those issues which are germane to our statutorv interests, i.e., noise impact on the project from airport operations; safety of individuals in the vicinity and of airport users themselves; encroachment of incompatible land uses on the airport, with subsequent public pressure to curtail operations or close the airport; and the effect of the project on the surface transportation complex serving airports in the area.

5.2 If the pipeline/powerline corridors can be so placed as not to impede access to the airport, and if the treatment plant lighting will not be a hazard to aircraft operations, then we would have no objection to the project as outlined. There should be a clear decision made as to which of the landside sites will be used for the treatment plant.

Thank you for the opportunity to comment.

G. A. MILLER
Acting Chief

Burd Miller
Environmental Planner

cc: Ralph J. Steele

5.0

RESPONSES TO COMMENTS FROM
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF AERONAUTICS

5.1 Glare

Exterior lighting at the proposed onshore treating facility would be provided such that beams of light are angled downwards rather than horizontally or upwards. Furthermore, all equipment will be painted Bayberry, a non-glossy color, to minimize reflection of light. Given these considerations, lighting at the facility is not expected to present interference problems (e.g., glare) for air traffic.

5.2 Significance to Airport Operations

The pipeline and powerlines are not expected to impede access to airports. The treating facility lighting should not be a hazard to aircraft operations.

A final decision on the location of the onshore treating facility site will be made as part of the project review and approval process.

Ventura County Air Pollution Control District
Comments on the
Draft Environmental Impact Report/
Environmental Assessment,
Union Oil Company Platform Gina and
Platform Gilda Project

June 26, 1980

6.1 The Ventura County Air Pollution Control District (VCAPCD) staff has reviewed the draft Environmental Impact Report/Environmental Assessment on the Union Oil Company Platform Gina and Platform Gilda Project. The document contains a clear and complete discussion of most of the potential air pollution problems associated with the project. The VCAPCD staff, however, is concerned - as it has been from the start of the project - with the potential emissions associated with transportation by tanker of crude oil produced from Platforms Gina and Gilda. The discussion of this issue in the EIR/EA is incomplete.

The document states that crude oil from the project will be transported to Los Angeles via the existing Union Oil Company pipeline rather than by tanker (pages 3.1-2, 4.10-11). Moreover, the document states that, should the production from the project exceed the unused capacity of the existing pipeline, the pipeline might have to be expanded (page 3.2-7). Peak production from the project is estimated to be approximately 20,000 barrels of oil per day, with the potential to reach 28,000 barrels of oil per day if the Monterey Formation can be successfully exploited (pages 3.1-2, 3.2-6, 3.2-7).

The VCAPCD staff concern is that estimated peak production from the project (20,000 - 28,000 barrels of oil per day) will exceed, by itself, the entire capacity of the existing Union Oil Company pipeline. In a letter to the VCAPCD dated April 25, 1978, Mr. Loren Grandey, Manager of Pipelines for the Union Oil Company, stated that the capacity of the existing pipeline from the Ventura Marina Terminal to the Santa Paula Pump Station was 24,000 barrels of oil per day and that the capacity of the existing pipeline from Santa Paula to the Torrey Canyon Pump Station was 18,000 barrels of oil per day.

The VCAPCD agrees, as stated in the EIR/EA, that expansion of the existing pipeline is a separate project from the project considered in the EIR/EA. Since, however, peak production from Platforms Gina and Gilda is predicted to occur within approximately two years, the VCAPCD staff is concerned that there is minimal time to complete a pipeline expansion project. The VCAPCD staff is interested in learning what specific actions that Union Oil has taken, and what actions will be taken in the immediate future, to assure that the existing pipeline will have the capacity to transport crude oil from Platforms Gina and Gilda in addition to other sources of crude oil which Union Oil is committed to carry. The EIR/EA should be expanded to include this information.

If you have any questions, I will be happy to respond to them.

KK:lw/696

6.0

RESPONSE TO COMMENT FROM
VENTURA COUNTY AIR POLLUTION CONTROL DISTRICT

6.1 Torrey Pipeline System

As acknowledged in the EIR/EA, implementation of the proposed Platform Gina and Platform Gilda Project may require expansion of the Torrey pipeline system. Union has been contacted regarding the current status of any plans for future modification of the pipeline system. A letter from Union to the Ventura County Air Pollution Control District dated 25 August 1980 is shown on the following pages, and documents the current status of plans.

Southern California District
2323 Knoll Drive, P.O. Box 6176, Ventura, California 93003
Telephone: (805) 659-0130

Union 76

ichard S. Gillen
gional Production Engineer

August 25, 1980

Mr. Jan Bush - Director
Ventura County Air Pollution
Control District
800 South Victoria
Ventura, CA 93009

Attn: Mr. Karl Krause

Gentlemen:

On June 26, 1980, you commented on the proposed Union offshore projects, namely: Platforms Gina and Gilda and the onshore site. Your primary comment concerned the movement of oil after it left the onshore site and the capacity of the existing facilities to move the oil by pipeline to the Los Angeles area. In that regard, we contacted Mr. Loren F. Grandey, Manager of Pipelines, and asked that he prepare a statement to address these concerns; a copy of his statement is attached.

Should additional information be needed, please contact Mr. Grandey at (213) 977-6466, in Los Angeles.

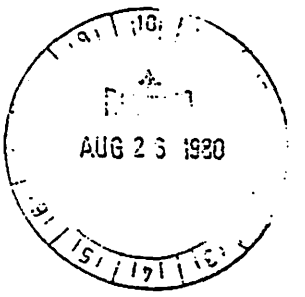
Very truly yours,

R. S. Gillen

RSG:pb

cc: Ralph J. Steele
Les Senger
Loren Grandey

bcc: R. M. Barnds

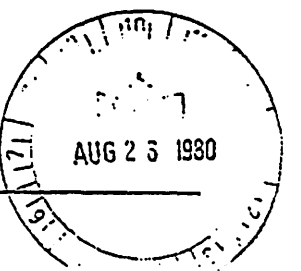


Union oil recognizes there esists a problem of inadequate capacity in its existing Ventura-to-Torrey pipeline system to accommodate the projected new production from Platforms GINA and GILDA. At this time, it is planned to increase the capacity of the existing system by the installation of additional pump capacity at existing pump stations, and the installation of an additional pump station.

It should be recognized that crude quality, i.e., crude gravity and viscosity, plays an important part in determining the capacity of any pipeline system. This creates a difficulty in assigning a specific line capacity to any system.

As an added variable, concurrent with the increase in production from Platforms GINA and GILDA will be the decrease in production from the Dos Quadras, and other areas served by our pipeline system. Design conditions. for increasing the capacity of the Ventura-to-Torrey section of pipeline will attempt to meet all requirements and variables.

Union again confirms the statement made in the Environmental Impact Report that it plans to move all production from the Platforms GINA and GILDA by pipeline to the Southern California area.



8-19-80

League of Women Voters of Ventura County

June 26, 1980

To: City of Oxnard, Planning Commission
Subject: Public Hearings, EIR/EA for Union Oil Company's Platform Gina and Platform Gilda Project

Honorable Commissioners:

The League of Women Voters of Ventura County would like to commend the Union Oil Company, the City of Oxnard Planning Department, and the United States Geological Survey for their efforts in the preparation of the EIR/EA for Platforms Gina and Gilda. From the layman's point of view (and doubtless from the professionals' also), it is obvious that every effort was made to produce a complete and comprehensive document, not only with respect to State and Federal law, but with respect to concerns expressed by the public at workshops for citizen input. The League is especially gratified to note that its request for an overall energy balance in equivalent barrels of oil for this project was clearly and cogently addressed.

Other than to recognize the general excellence of this document, the League offers the following brief comments.

7.1 1. Subsequent to the publication of this document, there has been some serious discussion at the County level concerning the possibility of a transfer of ownership of Mandalay Beach County Park to the State. One of the beneficial impacts of the Mandalay Beach on-shore facility (Vol. I, p. 7.0-9 and elsewhere) is "that prepayment of lease fees for the treating facility site would provide funds needed to facilitate development of the planned Mandalay Beach County Park." Since so many interested Oxnard residents have worked long and hard over the past few years to acquire this park, the League is most interested to know, that should a change of ownership occur, whether there is legal recourse available to assign these prepayment funds to the State for the same purpose, to insure that park development is not delayed.

7.2 2. We note that there is no discussion of the effects of an accidental spill on the operations of Point Mugu Naval Air Station. We grant that there may be none, but we think that a statement to this effect is necessary.

7.3 3. Because Ventura County has the potential for extensive energy-related resource development, the local League has for many years emphasized the need for discussion of the cumulative impacts, especially on air quality, of proposed or planned energy-producing projects in individual environmental documents for specific energy projects. We recognize the difficulties of impact assessments for proposals which may not materialize or which may be a number of years in the future. Nevertheless, we think it important at the least to list those projects which have been seriously considered for the area (e.g., the Boeing coal-slurry line)

7.3 (cont'd) if for no other reason than to provide this information to the public.

The League thanks you for this opportunity to comment.

Respectfully submitted,

Jeanne Harvey, President

Ann H. Rock, Energy Portfolio

7.0

RESPONSES TO COMMENTS FROM THE LEAGUE OF WOMEN VOTERS

7.1 Mandalay Beach Park

Discussions concerning the possibility of a transfer of ownership of Mandalay Beach Park from the County to the State have occurred. However, these discussions are at a preliminary stage and, consequently, any such transfer of ownership would be some time away.

Because of economic considerations, Union would like to proceed with their proposed project as quickly as possible. Consequently, if the project is approved, it is expected that Union and the County would consummate a lease agreement (including prepayment of fees) prior to possible transfer of ownership to the State. Presumably, existing County commitments would be honored if such a transfer occurred.

Should the park be transferred to State ownership prior to consummation of a lease agreement, it is possible that a prepayment clause could be incorporated into the agreement. Inclusion of such a clause would be contingent on discussions between Union and the State.

7.2 Potential Impact of an Oil Spill on Range Operations

In response to a request from Dames & Moore (letter dated 15 August 1980), the Navy has provided the following assessment of potential impacts:

> "...an accidental oil spill in the area of the proposed platform 'GINA' could, dependent on tidal activity and

under 'worst case' conditions, preclude the conduct of up to 65% of scheduled launch operations for the duration of spill clean up activity within PACMISTESTCEN range boundaries. The 65% figure is based on those operations which were scheduled between July 1979 and July 1980 and represents approximately 1,100 operations during that period which could be so affected." (U.S. Navy letter 3200-4, 3100, Ser L804; dated 26 August 1980.)

7.3 Proposed Energy Projects

Proposed energy-related projects which could affect Ventura County include:

- Oil and gas exploration and development on existing and future OCS leases; proposed development projects include Union Oil's Platform Gina and Platform Gilda Project and Texaco's plan for a gas production platform on the Pitas Point Unit. Exploration activities have been proposed for several leases, including OCS P-0209, -0219, -0217, -0320, -0322, -0319, -0329, -0341, -0342, -0343, -0344, -0352, -0353, -0354, -0356, -0357, -0359, -0360, and -0361. Additional tracts may be leased in upcoming Lease Sales No. 68 (1982), 73 (1983), and 80 (1984).

- Oil and gas exploration and development on State leases; Shell Oil proposes to resume exploration activities on lease PRC 3314.1. An EIR for this project is in preparation by the State Lands Commission.

- Coal slurry pipeline and terminal; the Boeing Engineering and Construction Company is conducting a feasibility study of a coal transportation system which would include a coal slurry pipeline and shiploading

facility which would be located in Ventura County. Currently, no formal activity is taking place with respect to this project.

- LNG facilities; proposed locations for siting of LNG facilities include Deer Canyon, Ormond Beach, and Ventura Flats (offshore). However, current activities are directed towards siting the LNG facilities at Point Conception, Santa Barbara County. Consequently, the Ventura County area sites are not under active consideration.

- Onshore oil and gas transportation; several government agencies and industry representatives are studying the feasibility of transporting all produced oil and gas by pipeline rather than tanker. Such a pipeline system would cross Ventura County; however, no specific plans have been formulated.

- Potential development of the Vaca tar sands from an area about 1.5 miles east of the City of Oxnard.

4504 Gateshead Bay
Oxnard, Ca. 93030
June 27, 1980

Dear Ralph,

As a citizen and League member long interested in the Coast, I have been most appreciative of the courtesy and education provided by you and the Union Oil Officials concerning OCS oil development. I look forward to the Dames and Moore addendum to the EIR, responding to the issues raised at the hearing last evening. In particular, I would like to see:

8.1 1. As required by the Land's Act, a comparison of Gina's resource potential with the potential negative environmental impact (safety hazard, aesthetics, etc.) from the platform's development.

8.2 2. A comparison of Gilda's resource and potential hazard.

3. Expansion of the information about:

8.3 a. pipeline for the produced fluids to Platform A and then to the existing Mobil-Rincon onshore separation facility

8.4 b. pipeline direct to the Rincon

8.5 c..pipeline to Platform Grace and then to the existing Chevron-Carpenteria onshore facility for produced fluids

8.6 4. Description of sub-sea facilities, especially those available from Vetco of Ventura

8.7 5. Discussion of the compatibility of the separation facility with a natural beach park at Mandalay Beach. [At

8.8 one time, we understood that this location had the advantage of use ofwarmed water from SCEdison's plant. Is this no longer an active part of the plant plan, and if not, why not?]

The voluminous EIR is impressive and well organized around discussing the five alternatives chosen for emphasis. The public would appreciate expansion of information in the addendum about these other alternatives.

Sincerely,

Joan Harris

8.0

RESPONSES TO COMMENTS FROM JEAN HARRIS

8.1 Platform Gina Resource Potential/Impacts

Platform Gina would be used to recover hydrocarbon fluids from the Hueneme sand of the Miocene Rincon Formation and the Oligocene Sespe Formation. The total estimated recovery would be 9.5 million barrels of oil and 1.7 billion standard cubic feet of gas during the field lifetime of 18 years.

The EIR/EA contains a detailed analysis of potential impacts directly associated with development of Platform Gina. These are discussed, by subject, on the pages listed below.

Subject	EIR/EA Pages
Geotechnical	4.1-1 to 4.1-2, 4.1-6 to 4.1-7, 4.1-9 to 4.1-10
Air Quality	4.2-2 to 4.2-8, 4.2-25 to 4.2-29
Acoustics	4.2-35, 4.2-41 to 4.2-43
Oceanography	4.3-1 to 4.3-2, 4.3-6 to 4.3-7, 4.3-9
Marine Biology	4.4-1 to 4.4-2, 4.4-7 to 4.4-9, 4.4-11 to 4.4-15, 4.4-33
Terrestrial Biology	4.5-1, 4.5-3, 4.5-5

Traffic (onshore)	4.6-34 to 4.6-35, 4.6-41 to 4.6-42, 4.6-43
Aesthetics	4.6-56 to 4.6-59, 4.6-68 to 4.6-69
Socioeconomics	4.7-1 to 4.7-5, 4.7-24 to 4.7-27, 4.7-33 to 4.7-36
Cultural Resources	4.8-3, 4.8-6
Marine Traffic Safety	4.9-1 to 4.9-2, 4.9-4 to 4.9-6

Potential adverse impacts of Platform Gina development generally are expected to be negligible to minor in magnitude and low in significance with respect to geotechnical, air quality, acoustics, oceanography, marine biology, terrestrial biology, onshore traffic, socioeconomics, cultural resources, and marine traffic safety considerations. Platform Gina would be approximately 4.5 miles from shore and would be the first platform in the local area. It would be visible from numerous vantage points. The U.S. Coast Guard requires that the platform be as visible as possible. Therefore, an adverse aesthetic impact of possibly moderate significance is anticipated. The platform would represent new hard substrate in the local marine environment. This would be a beneficial impact of low significance. Costs associated with platform development and operation would generate revenues to federal, state, and local governments as well as circulate dollars through the local economy. The resultant economic effects would be beneficial impacts of low to possibly moderate significance.

8.2 Platform Gilda Resource Potential/Impacts

Platform Gilda would be used to recover hydrocarbon fluids from the Repetto Formation and, potentially, the Monterey Formation. The total estimated recovery from the Repetto Formation would

be 43 million barrels of oil and 40 billion standard cubic feet of gas during the field lifetime of 20 years. No estimates of total recoverable reserves from the Monterey Formation are currently available.

The EIR/EA contains a detailed analysis of potential impacts directly associated with development of Platform Gilda. These are discussed, by subject, on the pages listed below.

Subject	EIR/EA Pages
Geotechnical	4.1-2, 4.1-7 to 4.1-8, 4.1-10 to 4.1-12.
Air Quality	4.2-2 to 4.2-8, 4.2-25 to 4.2-29
Acoustics	4.2-37, 4.2-42 to 4.2-43
Oceanography	4.3-2 to 4.3-3, 4.3-7 to 4.3-8, 4.3-9 to 4.3-10
Marine Biology	4.4-2 to 4.4-3, 4.4-9 to 4.4-11, 4.4-15 to 4.4-16, 4.4-33
Terrestrial Biology	4.5-1, 4.5-3, 4.5-5
Traffic (onshore)	4.6-35, 4.6-42, 4.6-43
Aesthetics	4.6-60 to 4.6-61, 4.6-68, 4.6-69 to 4.6-70
Socioeconomics	4.7-5 to 4.7-7, 4.7-27 to 4.7-30, 4.7-36 to 4.7-38

Cultural Resources	4.8-3, 4.8-6
Marine Traffic Safety	4.9-1 to 4.9-2, 4.9-4 to 4.9-6

Potential adverse impacts of Platform Gilda development generally are expected to be negligible to minor in magnitude and low in significance with respect to geotechnical, air quality, acoustics, oceanography, marine biology, terrestrial biology, onshore traffic, aesthetics, socioeconomics, cultural resources, and marine traffic safety considerations. The platform would represent new hard substrate in the local marine environment. This would be a beneficial impact of low significance. Costs associated with platform development and operation would generate revenues to federal, state, and local governments as well as circulate dollars through the local economy. The resultant economic effects would be beneficial impacts of low to possibly moderate significance.

8.3 Platform A/Mobil-Rincon Secondary Alternative

Please see response to California Coastal Commission comment number 27.3.

8.4 Mobil-Rincon Secondary Alternative

Please see response to California Coastal Commission comment number 27.3.

8.5 Chevron-Carpinteria Secondary Alternative

Please see response to California Coastal Commission comment number 27.3.

8.6 Subsea Production Systems

The Vetco Early Subsea Production System Concept uses template structures (steel frameworks), installed on the ocean floor, which provide a firm foundation, correct spacing of wellhead installations, and the connecting links to the surface from

the template-mounted completion trees. Provisions for receiving the production from nearby subsea exploratory wells may be incorporated as a part of the template assembly. Where reservoir shape or depth dictates, wells satellite to the template may be drilled and produced through flowlines to the template. For reservoirs where a group of template wells would not be practical, wells may be individually drilled and produced via flowlines connecting to a centrally located gathering manifold template. In all cases, production from each of the wells is transported through individual flowlines affixed externally to a production riser which connects the subsea template assembly to a floating production station (a facility that floats on the ocean surface) overhead. Processed crude is returned from a floating production station via the central core of the production riser system where it is directed to a loading or storage facility through a subsea pipeline.

Vetco manufactures two basic types of subsea production systems. These are outlined briefly as follows.

Tie back systems for platform completion: Wells are drilled from a conventional floating vessel through a subsea template; the platform jacket is set over the template; and, the subsea wellheads are tied back to the production platform.

Satellite well trees: Wells are drilled from a conventional floating vessel and completed separately; the wells are then connected by flowlines to a platform, gathering manifold, pipeline, template, shore facility, or floating production facility.

These two basic types of systems can be individually modified and they can be combined in various ways to yield optimum production from reservoirs of various types.

8.7 Treating Facility Compatibility with Mandalay Beach County Park

Compatibility of the proposed Mandalay onshore treating facility with the planned Mandalay Beach County Park was a special concern of the City of Oxnard expressed during development of the EIR/EA work program. The topic is addressed in EIR/EA Sections 3.2.3.1 (architectural design of the onshore treating facility); 4.6.1.1.1 and 4.6.1.1.3 (land use impacts); 4.6.3.1.1 and 4.6.3.1.3 (recreation impacts); and 4.6.5.1 (aesthetic impacts). To briefly summarize, construction and operation of the onshore treating facility at the proposed Mandalay site would not significantly interfere with plans for or operation of Mandalay Beach County Park for the following reasons:

(1) The site would be screened from public view by block walls on the south and west, and landscaped (if appropriate) to enhance visual compatibility with the adjoining park facilities;

(2) To most observers, the site would appear to be a part of the Mandalay Generating Station which is, and will continue to be, the dominant visual feature of the landscape;

(3) The facility is being designed to operate unattended and would be associated with minimal human activity; and,

(4) There are no intrinsic features of treating facility operations which would detract from the recreational appeal of the planned park given the existence of other major industrial facilities in the area.

8.8 Cooling Water, SCE Mandalay Generating Station

Use of cooling water from the Mandalay Generating Station is no longer part of the proposed project, principally because

the cost to connect into the warm water would be excessive. Down time for the generating station would be approximately 2 to 4 months, requiring SCE to operate other plants with Union paying for low-sulfur fuel to operate these plants. This cost, although not completely defined, was estimated to be $2-4 million. In addition, possible future operational modifications of the generating station would limit the availability of the warm water. It is also possible that any modification of SCE's cooling water system would result in adverse consequences relative to its discharge permit.

When it became apparent that use of the cooling water would not be feasible, Union and their vendors refined the use of stack gas economizers for heat recovery. These economizers recover what would otherwise be waste heat from the heater treater exhaust gases, thereby greatly reducing the amount of fuel gas needed to produce heat and the amounts of air pollutants which would be emitted.

4730 Foothill Rd.
Ventura, CA 93003
July 1, 1980

Ralph J. Steele
Planning Department
City of Oxnard
305 West Third Street
Oxnard, CA 93030

Dear Mr. Steele,

I have just finished reviewing a copy of the excerpts of the draft Environmental Impact Report prepared for Union Oil Company's Platform Gilda and Platform Gina project.

9.1 The following statement is made on page 12 of the executive summary:

> Platform Gina would be visible from numerous coastal vantage points and could have a moderately significant visual impact.

I looked at the maps supplied with the Environmental Impact Report summary, and the rig would definitely be very visible from many points on the county coast; however, I thoroughly disagree with the second part of the statement. I have lived in Ventura for 16 years. I have looked on as oil rigs, which have marred the ocean view of the Santa Barbara coastline, have slowly popped up off the coast of Ventura. They are very unsightly, and if erected, Platform Gina will have a much greater visual impact than stated in the above statement, ruining one of Ventura County's most attractive points.

I am of the opinion that no further oil drilling rigs should be permitted to protrude from the waters of our beautiful coast. I ask that you consider this opinion, which is shared by many other county residents, and halt the Union Oil Company Platform Gilda and Platform Gilda project.

Sincerely yours

Ian S. Dyer
642-1945 or
486-4311

9.0

RESPONSE TO COMMENT FROM

IAN S. DYER

9.1 Visual Impact of Platform Gina

On page 4.6-56 of the EIR/EA, the bases for the aesthetics evaluation are outlined as follows:

> "Assessment of aesthetic impacts involves evaluating the potential visibilities of the various project elements from representative public viewing points. These visibilities were evaluated based on distance from viewing points to the project element or activity, size of the project element, amount of potential public visual exposure, and potential for visual intrusion into the existing landscape. The degree of visual intrusion is influenced by form, line, color, texture, and contrast with the existing landscape, and by individual perceptions and attitudes. Because individual viewing preferences are highly varied and subjective, the following analyses deal with the more objective factors influencing visibility."

Because Platform Gina would be: considerably smaller than any platform now existing in the Santa Barbara Channel; located approximately 4 miles offshore; located in an area with frequent fog and haze which reduce visibility; located in an area where large ships and other marine vessels are frequently present; and, visible from several coastal (but few inland) viewpoints, it is believed that it would represent a moderate intrusion upon the existing visual setting.

As stated in the EIR/EA, there was no attempt to assess the subjective way in which this addition to the viewscape would be

perceived by potential viewers. Certainly Mr. Dyer has a valid opinion, one which is undoubtedly shared by many other persons. However, it must be noted that other local persons have considerably different feelings. For example, in the 23 June 1980 edition of the Ventura County Star Free Press, Mr. Fritz Huntsinger, Sr. (founder and Chairman of the Board of Vetco, Inc.) stated that "...the point of a 'vast forest of oil rigs off the county coast...'. To me, this is the most beautiful sight in the world. This provides needed energy to my nation, markets for my products and jobs for my employees."

Planning Commission
Oxnard CityHall

re: Union Oil Co. E.I.R.

Alice Wennerholm
605W. First St.
Oxnard, Ca. 93030
July 5, 1980

10.1 After attending the public hearing on the Union Oil Co. draft E.I.R. report 78-19 on June 26, it came to my attention the social aspects of the use of Mandalay Beach land was not considered. This approximately 80 acers was purchased by the city of Oxnard and the county of Ventura to be used as a park. One of the most valuable pieces of this parkland, i.e. nearly 2 acres of ocean front land, is being considered to be used by the Union Oil Co. for a separation plant.

Only bits and pieces of public beach land remain in Oxnard. Our beaches are among the best in Southern California. They should be jealously guarded for use of the public rather than shut off for private use, especially when the Union Oil Co. could use an already existing plant at Carpinteria or the Rincon.

Yours Truly
Alice I. Wennerholm

Alice I. Wennerholm

c.c. planning commission
city council
Ralph Steel

10.0

RESPONSE TO COMMENT FROM

ALICE I. WENNERHOLM

10.1 Mandalay Beach County Park

The property planned for Mandalay Beach County Park is currently essentially undeveloped and consists of 104 acres of disturbed sand dune and beach habitat with approximately 2,500 feet of ocean frontage. There are two existing small oil drilling sites on the property. The property is presently under the jurisdiction of the Ventura County Property Administration Agency. Detailed development plans for the park are currently being prepared that will include overnight primitive camping areas (no recreation vehicles), surf fishing, and picnic areas. The sand dunes and the two existing oil drilling sites will be accommodated within the developed park property.

There have been recent discussions concerning the possibility of a transfer of ownership of Mandalay Beach Park from the County to the State. However, these discussions are at a preliminary stage and, consequently, any such transfer of ownership would be some time away. Because of economic considerations, Union would like to proceed with their proposed project as quickly as possible. Consequently, if the project is approved, it is expected that Union and the County would consummate a lease agreement (including prepayment of fees) prior to possible transfer of ownership to the State. Presumably, existing County commitments would be honored if such a transfer occurred. Should the park be transferred to State ownership prior to consummation of a lease agreement, it

is possible that a prepayment clause could be incorporated into the agreement. Inclusion of such a clause would be contingent on discussions between Union and the State.

The site proposed for Union's onshore treating facility represents 1.8 acres of the total property (approximately 1.7 percent of the land). The site is bounded by the Mandalay Generating Station immediately to the north and east. Given this location, it is not one of the most valuable portions of the property. In fact, the site is not even included as part of the planned park.

Access to the beach adjacent to the site would not be permanently restricted if the proposed project were implemented. There would be a temporary restriction on use during the construction period when pipelines would be buried across the beach. However, after the pipelines were emplaced, there would be no restrictions on public beach access or use during the operational lifetime of the onshore treating facility. Furthermore, the City of Oxnard's proposed Local Coastal Plan (Policy 18.b) specifically states that any development on the beach (pipelines and power cables in the case of Union's proposed project) shall not restrict lateral beach access (i.e., movement along the beach).

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

WESTERN REGION
P O BOX 92007, WORLDWAY POSTAL CENTER
LOS ANGELES, CALIFORNIA 90009

July 2, 1980

Mr. Ralph J. Steele,
Project Coordinator
Planning Department, City of Oxnard
305 West Third Street
Oxnard, California 93030

Dear Mr. Steele:

Thank you for the opportunity to review and comment on the "Draft Environmental Impact Report/Environmental Assessment, Union Oil Company Platform Gina and Platform Gilda Project."

11.1 Our initial review indicates that the proposed project will not have an effect, from an environmental viewpoint, on existing or planned Federal Aviation Administration (FAA) facilities.

Please be advised, however, that Federal Aviation Regulation (FAR) Part 77, Objects Affecting Navigable Airspace, requires notice to be filed on FAA Form 7460-1, for the construction or alteration of temporary or permanent structures which may affect navigable airspace. Also, FAR Part 157, Notice of Construction, Alteration, Activation, and Deactivation of Airports, requires notice to be filed on FAA Form 7480-1, for the proposed new helipads associated with the proposed oil platforms.

Sincerely,

Royal W. Mink

ROYAL W. MINK
Regional Planning and
Appraisal Officer

11.0

RESPONSE TO COMMENT FROM
U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

11.1 Federal Aviation Administration Notices

Union has been advised that they will be required to file FAA forms 7460-1 and 7480-1. These forms will be filed as the project review and approval process proceeds.

Union Oil and Gas Division: Western Region

Union Oil Company of California
Southern California District
2323 Knoll Drive, P. O. Box 6176, Ventura, California 93003
Telephone: (805) 659-0130

Union

July 10, 1980

Mr. Ralph Steele
City of Oxnard
303 W. 3rd Street
Oxnard, CA 93030

Gentlemen:

Re: Comments on EIR/EA for
Union Oil Company of California
OCS P-0202 and OCS P-0216

The following comments concerning the subject draft EIR/EA were prepared by Mr. Ken Guziak, Environmental Specialist for Union Oil Company.

12.1 Some mention should be made of the proposed EPA Ocean Discharge Criteria (Section 403(c) and their application (or lack of) to the proposed project.

12.2 Also, note that sales gas from the project might end up as fuel for the county's power plant(s), thereby contributing indirectly to air quality benefits, since emissions from burning fuel oil would be eliminated by this option.

12.3 When considering alternate configurations, some mention should be made of the "energy-wasteful" nature of them, as compared to the proposed configuration (e.g. on p. 2.0-23).

12.4 In Section 3, it should be made clear that booster stations do not provide the same degree of separation for the production as would take place at a separation/treatment facility. This might be best described on or about p. 3.1-7. It is unclear in several sections of the report whether an onshore treatment facility is considered the same as a booster station. The booster stations would have some separation equipment, but these are mentioned in the text as being in series with an "onshore treating facility". Please clarify.

12.5 EXECUTIVE SUMMARY - This section should mention (somewhere) the water depths of the two platforms (to be consistent with the discussion of pipeline depths on p. 2.0-5).

12.6 p.2.0-2 end of 1st paragraph - should be "Figure 3.1-2"
p.2.0-3 end of 2nd paragraph - should be "Figure 3.1-2"
end of 4th paragraph - should be "Figure 3.1-4"
p.2.0-4 end of 3rd paragraph - should read "...are shown on Figure 3.1-5 in Section 3.0". (There is no Figure 3.1-6)

12.7 p.2.0-6 the last line of the 2nd paragraph says that "there are currently no plans to inject produced water". This disagrees with p. 2.0-7, 7th line from bottom, which says "produced water would be treated and injected". Please clarify.

12.8 p.2.0-8 1st paragraph - incorrectly describes the process flow, should be modified to explain that waste heat from the economizers would first heat the production - which would then flow into the FWKO, and thence to the HT (as shown in Appendix, Figure A-14).

12.9 p.2-0-14 1st paragraph of Section 2.2.2.1 - should read "...habitat (principally dune scrub) would be temporarily disturbed by this configuration with related displacement..."

12.10 p.2.0-15 Please add a "Total" row to the bottom of the page to indicate total habitat altered (for easy reference). Also, early in this document, it should be pointed out that only the marine terminal configuration would result in alteration of the Santa Clara River area habitat because all other configurations would use the existing bridge for attachment of pipelines.

12.11 p.2.0-17 3rd line from bottom - should be 58.7 acres.

12.12 p.2.0-21 Last line should read "...for project design should occur." (to be consistent with other sentences on this page).

12.13 p.3.1-2 Middle paragraph, 2nd line should read: 52.5 million barrels (to correspond with p.2.0-6). Also, in this paragraph, the peak production rates do not quite correspond with those given in Sect. 2.1.5.

12.14 Fig. 3.1-4
Is the separation/treatment facility located at the marine terminal? (not indicated.)

12.15 p.3.1-8 Top paragraph states "...from the platforms to the onshore treating facility and to send the product crude oil to the marine terminal". Where is the treating facility located? (not shown on Fig. 3.1.5.) (p.3.2-3, bottom - states that a treating facility would be located at any one of the configurations.)

12.16 p.3.3-6 Footnote (c) should contain a volume unit for the sewage per day.

12.17 p.3.5-15 3rd paragraph, 1st line: delete "entering the heater treater".

12.18 Table 3.8-2
(starting on p.3.8-5) should list "South Central Coast Regional" in brackets after the "California Coastal Commission" entry. A footnote could be added noting that all other necessary permits must be obtained before a Coastal Development Permit can even be applied for. In footnote (3), should be "Santa Clara River habitat area".

12.19 Tables 4.2-1, 4.2-4, 4.2-5, and 4.2-7:
at bottom, there is a row titled "Overall Average Emission Rate" - how were these values produced?

12.20 pp.4.3-15 to 4.3-17:
The section on Accidental Oil Spills should reference Appendix B-2 and sections 4.9.2 and 4.9.3. What about effects of a spill on benthic organisms (not mentioned)?

12.21 p.4.4-12 11th line from bottom - should be "californica".

12.22 p.4.4-24 Table 4.4-2, units should be defined for the values given with the eight fractions (%?)

12.23 p.4.12-5 Table 4.12-1 - this page appears to require Coastal Act sections to correspond to other pages of the table.

12.24 Table A-5 - add: vapor recovery system(s).

12.25 Table A-7 - the list does not agree with Figure A-7. The table states "1 separator" and a "500 bbl surge tank"; the Figure shows 2 separators and no surge tank. Also, both pages do not show the vapor recovery system that would be required for the tank. Finally, what happened to the "water" in the flow scheme of Figure A-7?

12.26 Table B.1-12 - contains emission factors that, in some cases, have been taken from compressor seals, valves and heater treaters for pump seals, compressor seals, valves and heater treaters are in the process of being revised. The API Study Draft - recently released - will provide considerably more accurate values than those presently in use.

12.27 p.12.4-32 - 1st line should read: "Anthopleura"
5th line should read: "Funebralis"

(end of K. E. Guziak's comments)

From oral testimony at the public hearing, it appears that additional discussion of secondary alternates which was presented in Section 7 of the EIR/EA, will be required. Union is prepared to cooperate in every way possible in amplifying this section.

Very truly yours,

R. S. Sullivan

RSG:pb

12.0

RESPONSES TO COMMENTS FROM UNION OIL COMPANY

12.1 EPA Proposed Ocean Discharge Criteria

EPA proposes to establish ocean discharge criteria under Section 403(c) of the Clean Water Act which the agency will apply in issuing and reviewing National Pollutant Discharge Elimination System (NPDES) permits under Section 402 of the Act. The proposed guidelines will be used to evaluate NPDES permit applications for the discharge of pollutants from a point source into the territorial seas, the waters of the contiguous zone, or the oceans. In addition, guidelines have been proposed to evaluate conditions for a general permit applicable to a class or category of point sources discharging into those waters. The guidelines would serve to protect marine resources and uses from the adverse impact of pollution, and to assure that sensitive marine systems are protected.

Although these regulations are entitled "guidelines" or "criteria", they have the effect of mandatory regulations because, at any time that promulgated guidelines are in effect, no permit may be issued under Section 402 of the Clean Water Act "except in complicance with such guidelines".

The criteria proposed 12 February 1980 (45 FR 9548) by EPA include requirements for the applicant to:

- Analyze alternatives to ocean discharge, such as onshore disposal
- Determine that the discharge does not contain pollutants prohibited under the Ocean Dumping Regulations (40 CFR 227.5)
- Prepare an evaluation of the actual and potential effects of the discharge on marine life, ecosystems, and on aesthetic, recreational, and economic values
- Submit a chemical analysis of the discharge to determine the amount of toxic pollutants.

The public comment period on the proposed criteria ended 28 April 1980 (after a 1-month extension). At present (20 August 1980), the guidelines are in rule-making and final guidelines will be promulgated by 30 September 1980.

The proposed Platform Gina and Platform Gilda project would include discharging of various substances (e.g., non-contaminated drill cuttings and muds, treated sewage, concentrated brine) to the ocean. Such discharges would require an NPDES permit (as indicated in the EIR/EA). Once the final guidelines have become effective, review of NPDES permit applications submitted by Union for the Platform Gina and Platform Gilda Project would be conducted in accordance with the newly established criteria.

12.2 Sales Gas as Power Plant Fuel

The comment is correct that replacement of fuel oil with natural gas would substantially reduce pollutant emissions. This emission rate reduction could occur at one of the county's power plants. However, since the potential locations of this emission reduction cannot be specified at this time, it is not possible to state the actual effects on ambient air quality that would result.

12.3 Energy Efficiency

Net energy production (amount of energy produced minus the amount of energy consumed) was considered important by both the City and a number of interested citizens. A detailed evaluation of energy consumption and production for the proposed project and alternatives is presented in EIR/EA Section 4.10.3.

12.4 Treatment Facilities/Booster Stations

Onshore booster stations would be used to provide the additional energy needed to transport produced fluids to the onshore treating facility sites associated with the Union Oil Marine Terminal and Ormond Beach alternative configurations. The only separation that would occur at a booster station would be a gas-liquid separation that would be necessary before the fluids can be pumped. The produced fluids entering the onshore treating facility via pipelines from a booster station would then be sent through additional facilities to separate the fluids into natural gas, crude oil, and water streams.

12.5 Platform Water Depths

Information on platform water depths was provided in the EIR/EA Project Description (Section 3.1) but omitted from the Executive Summary. Platform Gina would be set in water approximately 95 feet deep (29 m) mean lower low water (MLLW). Platform Gilda would be set in water approximately 210 feet deep (64 m) MLLW.

12.6 Incorrect Figure References in Section 2.1.2

The correct figure references are as stated below:

EIR/EA Page Number	Line Number	Correction
2.0-2	12	Change 'Figure 3.0-2' to 'Figure 3.1-2'

2.0-3	8	Change 'Figure 3.0-3' to 'Figure 3.1-3'
2.0-3	22	Change 'Figure 3.0-4' to 'Figure 3.1-4'
2.0-4	20	Change 'Figures 3.0-5 and 3.0-6, respectively,' to 'Figure 3.1-5'

12.7 Produced Water Injection

The apparent disagreement of the two statements can be explained. The two statements actually refer to the injection of produced water into two different formations. The first paragraph refers to the injection of produced water into the Monterey Formation. It is not certain that the drilling of this formation will occur and there are no plans to inject produced water into the formation at this time. The second paragraph refers to the treatment and injection of produced water into the Repetto Formation. The current plans are to treat and to inject produced water into this formation.

12.8 Process Flow at the Onshore Treating Facility

The process flow description in the first paragraph of EIR/EA page 2.0-8 is incorrect. This new information from Union provides needed clarification.

12.9 East Mandalay Alternative Site, Habitat Disturbance

The comment is correct. The reference to "foredunes and" should be deleted from page 2.0-14, Section 2.2.2.1, paragraph 1, line 3.

12.10 Total Habitat Disturbed During Construction

The total area of habitat disturbed during construction would be as follows:

Mandalay	18.0 acres
East Mandalay	19.5 acres
Union Oil Marine Terminal	31.4 acres
Ormond Beach (Option A)	76.7 acres
Ormond Beach (Option B)	120.9 acres

This information should be inserted as the last row on the first page (2.0-15) of Table 2.0-4. Alteration of the Santa Clara River area (which would be associated only with the Union Oil Marine Terminal alternative configuration) is first mentioned on page 2.0-3 of the document. Earlier mention would not be appropriate.

12.11 Temporary Disturbance of Habitat, Option A

The comment is correct. On page 2.0-17, in the third line from the bottom, '58.8' should read '58.7'.

12.12 Consultation With Local Agencies

The final mitigation measure listed on EIR/EA page 2.0-21 should be modified to read as follows:

> "Local agencies (e.g., police and fire departments) should be consulted regarding special requirements for project design."

12.13 Oil and Gas Production Projections

Relative to the apparent discrepancy in peak production rates reported in EIR/EA Sections 2.1.5 and 3.1.2, those in Section 2.1.5 represent peak production estimates for each individual reservoir as obtained from Figures 3.5-1 and 3.5-2. The peak production values reported in Section 3.1.2 are taken from Figure 3.5-3, and reflect the fact that the individual production peaks would not occur simultaneously.

12.14 Union Oil Marine Terminal Alternative Onshore Treating Facility Site Location

The Union Oil Marine Terminal alternative onshore treating facility site would be located within the boundaries of the existing Union Oil Marine Terminal at Ventura Harbor. Locational information is provided in EIR/EA Sections 3.1.3.2.2 and 12.6.1.2.4. Photographs of the site are presented in EIR/EA Figure 12.6-8.

12.15 Location of the Ormond Beach Alternative Onshore Treating Facility Site

The reference in line 4 of EIR/EA page 3.1-8 is to the Ormond Beach alternative onshore treating facility site. This site is located on Perkins Road approximately 0.2 mile (0.3 km) inland from Ormond Beach and 0.4 mile (0.6 km) south of Hueneme Road. The location of the site is illustrated on EIR/EA Figure 3.1-5 (noted by the hexagon approximately 5/8 inch above the center of the title block).

The statement appearing at the bottom of EIR/EA page 3.2-3 was intended to explain that the design and operation of Platform Gina and Platform Gilda (platforms only) would not be appreciably affected if the onshore treating facility were placed at one of the three primary alternative sites (i.e., East Mandalay, Union Oil Marine Terminal, or Ormond Beach) rather than at the proposed Mandalay site. As noted in other sections of the Project Description, some project characteristics (e.g., the length of offshore and onshore pipelines and the requirement for booster stations) would be sensitive to the geographic location of the onshore treating facility site.

12.16 Sewage Flow

No sewage flow rate was presented. The reason for this omission is that chemical toilets will be used and flow rates do not apply to such facilities.

12.17 Project Description Clarification

The third paragraph on EIR/EA page 3.5-15 is in error and should be corrected to reflect this latest information from Union.

12.18 Permits

Union would require a Coastal Development Permit from the South Central Coast Regional Coastal Commission. This permit could not be applied for until Union had obtained all other necessary permits.

The permit referred to in Footnote 3 to EIR/EA Table 3.8-2 is a Stream or Lake Alteration Agreement issued by the California Department of Fish and Game. It is required for all activities that change the natural state of any river, stream, or lake, and generally applies to all work undertaken within the mean high-water mark of a body of water containing fish or wildlife resources. (Reference: California Permit Handbook, State of California Office of Planning and Research, May 1980.)

12.19 Calculation of Overall Average Emission Rates During Construction

Overall average emission rates during construction for the proposed and three primary alternative project configurations (EIR/EA Tables 4.2-1, 4.2-4, 4.2-5, and 4.2-7) are derived in Appendix B.1. These basically represent total cumulative emissions of each pollutant summed over all construction emission sources divided by the total number of days during which construction is projected to occur.

12.20 Effects of An Oil Spill on Benthic Organisms

It would have been appropriate in EIR/EA Section 4.3.5 to refer the reader to discussions of the oil spill risk and oil spill trajectory analyses in Sections 4.9.2, 4.9.3, and Appendix B.2. The comment is appreciated.

The effects of accidentally spilled petroleum substances on benthic and other marine organisms are discussed in EIR/EA Section 4.4.6 (pages 4.4-22 through 4.4-33). Section 4.3.5 was limited to a discussion of the effects of an accidental spill on physical oceanography and ocean water quality.

12.21 Corynactis californica

The comment is correct. On page 4.4-12, paragraph 2, lines 6 and 7, 'Corynactis california' should read 'Corynactis californica'.

12.22 Units

In Table 4.4-2, no units were given for the values associated with the composition of various petroleum substances. The units actually reflect percent composition.

12.23 Missing Information, EIR/EA Table 4.12-1

Please see response to California Coastal Commission comment 27.18.

12.24 Vapor Recovery System

A vapor recovery system should be added to the list of major onshore treating facility equipment shown in Table A-5.

12.25 Booster Station Equipment

According to the most recent information provided by Union, each onshore booster station would be equipped with two separators and two 500 bbl surge tanks. EIR/EA Table A-7 and

Figure A-7 are therefore no longer correct. The surge tanks would be under vapor recovery. No oil/water separation would be accomplished at the booster station because no suitable method of produced water treatment or disposal would be available.

12.26 Emission Factors

The emission factor data used in the air quality impact analysis presented in the EIR/EA was based on review of existing published data regarding the subject. The emission factors used were taken from a variety of publications and represented the best available data. As noted in the comment, the API Study Draft was recently released and was not available for review or use at the time the EIR/EA was completed. The API report is in a draft form at present. The data in the report should be considered for use in evaluating future projects after any revisions have been made to it and the report has been finalized.

12.27 Anthopleura xanthogrammica, Tegula funebralis

The comment is correct. On page 12.4-32, lines 1 and 5, 'Anthopluera xanthogrammica' and 'Tegula funnebralis' should read 'Anthopleura xanthogrammica' and 'Tegula funebralis', respectively.

CITY OF OXNARD

MEMORANDUM

To: Ralph Steel, Planning Department

From: Public Works Director/City Engineer

SUBJECT: Public Works Response to Union Oil Company EIR 78-19

The following comments have been generated by Public Works personnel in the review of the two volumes:

General (R. Reitz)

1. The proposed Mandalay site is preferable from the standpoint of substantially less pipeline construction within Oxnard's sphere of influence.

General (P. Dowhaniuk)

13.1 1. Does the location of the platforms in the Channel pose a danger to small craft and sailboats running into them, especially during fog conditions? Is some kind of floating barrier planned to act as a fender?

13.2 2. In Volume I, page 4.7-87, "estimated costs of Santa Barbara oil spill", the oil company cost is $10,487,000 and the total cost is $16,400,000. Who paid for the difference? [~~Did the oil company admit fault and start cleanup on their own, or was it only after litigation that the oil company acted?~~ Yes. yes - to both Q's. I was there — Paul]

Traffic

I have reviewed EIR-78-19 as it relates to Traffic impacts and am in agreement with the findings.

13.3 The project includes on-shore pipelines within the Harbor Boulevard right-of-way. There are two bridges that must be crossed at the Edison Canal and the Santa Clara Rivers. It has been recommended that these bridges be modified to include safe bicycle paths since Harbor Boulevard is part of the State Department of Transportation Pacific Coast Bicycle/Hiking Route. The Ventura County Beach Study identified these two bridges as traffic hazards.

13.3 (cont'd) Any attachment to the bridges should not interfere with future bike facilities. The possibility of combining the pipeline supports with a bike facility should be investigated.

Water and Sewer (P. Dowhaniuk and J. Yurko)

13.4 1. A question arises regarding the accummulated effects of water use on the City of Oxnard pressurized system since, total quantities are shown but supply demand rates are not called out.

13.5 2. Would consumption totals for water remain the same for drilling and production if these phases were carried on simultaniously?

13.6 3. Volume I, page 4.7-42, paragraph 4.7.1.3.3, It is our estimate that approximately 3,000 feet of 8" line can deliver an estimated supply of 1,800 GPM and the maximum value of 16,000 GPM is incorrect. If 1,800 GPM would suffice for the fire demand, no increase in water supply facilities are needed. An onsite storage tank would be advisable.

13.7 4. Need verification that all water demands for on-shore facilities will be from the Union Oil Marine Terminal in the City of Ventura.

13.8 5. Need verification that the on-shore installation would not ever need an extension of a sewer line from the City of Oxnard.

Please let us know if we can be of further help in this EIR review.

R. Dennis Hogle
Public Works Director/
City Engineer

RDH:JAY:kic

CITY OF OXNARD

MEMORANDUM

July 14, 1980

To: Ralph Steel Planning Department

From: Public Works Director/City Engineer

SUBJECT: Public Works Response to Union Oil Company EIR 78-19

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Any attachment to the bridges should not interfere with future bike facilities. The possibility of combining the pipeline supports with a bike facility should be investigated.

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2. Would consumption totals for water remain the same for drilling and production if these phases were carried on simultaniously?

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5. Need verification that the on-shore installation would not ever need an extension of a sewer line from the City of Oxnard.

Please let us know if we can be of further help in this EIR review.

R. Dennis Hogle
Public Works Director/
City Engineer

RDH:JAY:kic

13.0

RESPONSES TO COMMENTS FROM
CITY OF OXNARD - PUBLIC WORKS DIRECTOR

13.1 Hazards to Small Craft and Sailboats

Platforms Gina and Gilda could represent a potential obstacle to small craft and sailboats. However, since the platforms would be equipped with 2-mile fog horns and high-intensity lights, it is considered more likely that their principal effect will be as an aid to navigation (by serving as a marker or location point for small boats).

Relative to the question of whether a floating barrier could be installed around the platforms to act as a "fender" to protect small sailing craft, Union indicates that the platforms are currently being designed with boat bumpers and barge bumpers. To install an additional barrier outward of the platforms would require very heavy framework, increasing the size of the platforms. The barrier, because of the strength necessary to withstand the action of the sea, would probably not constitute any "softer" a fender than the bumpers which are already planned. Moreover, an outer barrier would prohibit the platforms from being serviced by crew boats and supply boats.

13.2 Cost of Santa Barbara Oil Spill

Comment deleted by revised Public Works letter dated July 14, 1980 (see page 3-3).

13.3 Future Bike Facilities

The possiblity of combining pipeline supports with future bike facilities relative to the two bridges that must be crossed at the Edison Canal and the Santa Clara River would depend on available funding and policy decisions that must be made by The City of Oxnard and The City of San Buenaventura.

13.4 Water Supply Demand Rates

Currently, the only anticipated fresh water supply demand on the City of Oxnard's pressurized system is for firewater protection. Union would tie-in to an existing 8-inch City water line along Harbor Boulevard. Based on an EIR/EA comment from the City (see 13.6), a rate of 1,800 gpm could be provided without a necessity to increase water supply facilities.

13.5 Water Consumption

Water consumption totals would be the sum of those reported in EIR/EA Sections 4.1.1.2.3 and 4.1.1.3.3 regardless of whether drilling and production were performed sequentially or simultaneously.

13.6 Fire-Fighting Water

The comment is correct. Sentences 1 and 2 of paragraph 5, page 4.7-42 should be revised to read as follows: "The Oxnard Fire Department would require a minimum water flow of 1,500 gallons (5,680 L) per minute at the treating facility for fire protection. The existing 8-inch main in Harbor Boulevard could provide 1,800 gallons (6,815 L) per minute, sufficient to satisfy the fire department requirement."

Union has been working closely with the City of Oxnard, City of Ventura, and County of Ventura fire departments and has committed to meeting, or exceeding, all requirements in order to ensure adequate fire protection. It is probable that the

requirements would not include an onsite storage tank (Chief Perez, Oxnard Fire Department; oral communication, August 1980).

13.7 Water Sources for Onshore Project Elements

Fresh water required for the construction and operation of the onshore project elements (onshore treating facility and onshore pipeline system) includes: (1) hydrostatic test water; (2) water for the fire protection system; and, (3) potable water. No water for sanitation will be necessary since chemical toilets would be used.

Water needed for hydrostatic testing of the onshore pipelines would amount to approximately 50,000 gallons (EIR/EA Table 3.3-3). The source of this water would be the existing Union Oil Marine Terminal at Ventura Harbor, although the ultimate source of the water would be the United Water Conservation District.

Water for fire protection at the onshore treating facility would be obtained from the Calleguas Water District. An 8"-diameter water line runs down Harbor Boulevard in the vicinity of the proposed Mandalay site. It would be extended to the site and connected to the pumping equipment supplying the hose reels and monitors (EIR/EA Section 3.6.2). Union has already filed the necessary documents to annex to the Calleguas Water District.

Potable water requirements during the construction and operation of the onshore facilities would be met using bottled water purchased from a local vendor. About 50 gallons per day would be required during construction (EIR/EA page 3.3-11), declining to about 2 gallons per day during operation (EIR/EA Table 3.5-1).

13.8 Need for Sewer System Connection

Union indicates that their plans for the onshore treating facility would not necessitate a hook-up to the City of Oxnard sewerage system. All produced wastewater would be re-injected into the producing formations. Human sanitary wastes would be collected in chemical toilets and the contents emptied by a licensed contractor. No other wastewater sources potentially requiring sewer system disposal would be generated.

State of California — State Lands Commission

Memorandum

To : James Burns
Assistant Secretary for Resources

City of Oxnard
305 West Third Street
Oxnard, CA 93030

Attention: Ralph J. Steele

Date : July 7, 1980

File No.:

From : EXECUTIVE OFFICE
1807 13th Street, Sacramento 95814

Subject: Union Oil Company, Platforms Gina and Gilda - Draft EIR/EA
SCH #80052812

As it was concisely stated by one of the reviewers, "... the document (is) long on volume and short on substance...". Its major general deficiency, however, lies in its lack of objectivity and apparent lack of independent analysis. In major instances, the consultants have referenced or quoted from work done for the applicant by their own consultants without benefit of independent analyses or comments by Dames and Moore as to the validity of the data or conclusions so presented. Existing law and regulations do not prohibit the use of applicant data in such a manner so long as the lead agency attests to its objectivity and validity. In our opinion, the use of the data in the report as "gospel" is not sufficient.

14.1 In addition, Government Code Section 7800 (enacted in 1979) requires that specified information, as to document cost, etc., be included in a separate section. This information should be included without fail in the final EIR/EA.

Specifically:

14.2 (1) In Volume I on page 2.0-9 and on page 3.7-1 the document states that upon cessation of production ... the offshore pipelines would be purged and abandoned in place. The State Lands Commission lease for the pipelines in State waters will require Union to remove the pipelines at least through the surf zone and possibly out to a depth of minus 15-20 feet. The impacts of pipeline removal may be minor but should be addressed.

(2) In Volume I on pages 3.2-6 and 3.2-7 Union states that current excess capacity of the Torrey pipeline system is approximately 10,000 BOPD and that peak incremental flow from Gina and Gilda (excluding production from the Monterey Zone) would be 20,000 BOPD. With anticipated Monterey Zone flow could peak at 28,000 BOPD.

14.3 (3) Throughout the document and specifically on page 4.1-7, the consultants have assumed that drill cuttings will be disposed of on the ocean floor. Recognizing the EPA's position that cuttings and mud will be disposed of onshore, the consultants should assess the impacts resulting from this possible incremental increase in barge traffic associated with such disposal.

14.4 (4) Without knowing what "normal declines" are it appears that the existing Torrey pipeline system does not have sufficient capacity to carry anticipated production. The problem would be exacerbated if consolidation with Shell occurs (page 4.11-3). It appears that two alternatives exist for this excess production; tankship transport through Union's Ventura marine terminal or enlargement of the Torrey pipeline system. The likelihood of having to use one of these alternatives seems apparent. The document should address this situation in greater detail. This is especially necessary in light of Union's commitment to use the Torrey system and not the tanker terminal (page 4.10-11).

14.5 (5) The most deficient discussions in the document are with regard to the seismicity of the area and the response of the structures involved. In addition, the hazards associated with the nearness to the Hueneme Canyon of the pipeline from Gina are not assessed.

In regard to the seismicity, the document lacks information about expected accelerations and durations which might affect the platforms, pipelines, and onshore facilities. Specifically, the adequacy of the design of any of the structures or well drilling program are not assessed independently by the consultant. The only discussion about design criteria appears to be taken directly from Geotechnical Consultants, Inc., and other consultants to the applicant.

14.6 (6) We are also concerned that Dames & Moore had no access to any deep seismic data (page 17.1-25). As found by experience, it is sometimes difficult to assess the information gathered in the shallow seismic survey without some correlation with deep seismic data from the same area. Such correlation should be required in the final EIR/EA.

14.7 (7) Page 12.1-54 is indicative of the level of analysis in this EIR/EA. The paragraph states:

> "Geotechnical Consultants, Inc. (1976) concluded that 'liquefaction will not occur, even under the most critical earthquake conditions' at the Gina site."

As we specified in the "general comments", the EIR/EA would be considerably enhanced if Dames & Moore performed its own analysis instead of an apparent acceptance of another's conclusion.

14.8 (8) On page 5.0-13 a reference is made that, "Dames and Moore finds that the (Oil Spill) Plan is generally adequate ...". What is "generally adequate"? The analysis should contain a thorough discussion of any possible deficiencies in equipment or operation technique. "Generally adequate" is not a sufficient level of analysis.

Please advise if we can provide additional information or elaboration.

WILLIAM F. NORTHROP
Executive Officer

14.0

RESPONSES TO COMMENTS FROM STATE OF CALIFORNIA - STATE LANDS COMMISSION

14.1 Document Cost

This information has been developed. Details are presented in Section 29 of this Final EIR/EA.

14.2 Potential Impacts of Offshore Pipeline Removal

If removal of portions of the offshore pipelines is necessary, they would be purged, uncovered by jetting, cut, floated to the surface, pulled to shore, cut in approximately 40-foot lengths, and hauled away for re-use. This activity would require a small onshore marshalling area, and would occur over a period of approximately two to three weeks or less.

The types of potential impacts associated with removal of the offshore pipelines (out to a water depth of 20 feet) would be essentially the same as for installation of the pipelines. These impacts would include:

- Minor local disturbance of bottom sediments
- Temporary disturbance of a small onshore marshalling area
- Short-term emission of small amounts of air pollutants
- Creation of temporary localized ocean water turbidity
- Short-term emission of small amounts of water pollutants
- Temporary disturbance of localized areas of intertidal and benthic habitat
- Production of minor short-term effects on marine organisms as a result of decreased water quality

- Temporary exclusion of a small area from potential commercial fishing activity
- Temporary disturbance of a small area of foredune (and perhaps dune scrub) habitat and its associated animals (principally birds, rodents, and lizards)
- Temporary restriction of local beach use
- Temporary minor increased traffic levels on local roads
- Temporary minor intrusion to the local visual environment
- Negligible effects on local population, housing, utilities, services, employment, and economic base
- Commitment of a small amount of energy

These impacts would occur in the Mandalay Beach area for the proposed Mandalay and East Mandalay and Union Oil Marine Terminal alternative configurations. They would occur in both the Mandalay and Silver Strand Beach areas should the Ormond Beach alternative configuration (Options A or B) be implemented.

Because only portions of the offshore pipelines would be removed, a much smaller area would be affected for a shorter time than for installation activities. Consequently, although they would be of a similar nature, the magnitude and significance of the potential impacts would, in all cases, be less than those discussed for construction (see the following sections:

- Geotechnical - 4.1.1.1.2, 4.1.4.1.2
- Atmospheric Sciences - 4.2.1.1.1, 4.2.1.1.4, 4.2.2.1.1, 4.2.2.4.1
- Oceanography - 4.3.1.1.2, 4.3.4.1.2
- Marine Biology - 4.4.1.1.2, 4.4.4.1.2

- Terrestrial Biology - 4.5.1.1.2, 4.5.4.1.2
- Land Use - 4.6.1.1.1, 4.6.1.4.1, 4.6.3.1.1, 4.6.3.4.1, 4.6.4.1.1, 4.6.4.4.1, 4.6.5.1.1, 4.6.5.4.1
- Socioeconomics - 4.7.1.1.2, 4.7.4.1.2
- Archaeology - 4.8.2.1.2, 4.8.5.1.2).

Therefore, no significant impacts would be expected to result from removal of portions of the offshore pipelines.

14.3 Potential Impacts of Increased Marine Traffic

If onshore disposal of drill cuttings and muds were to be required, these materials would be transported to Port Hueneme and then trucked to an approved dump site. Marine traffic associated with such disposal could produce increased offshore traffic and additional air pollutant emissions.

Drill cuttings would be shipped in bulk containers aboard the supply boat(s), and excess drilling mud would be discharged from the platforms to dumb barges which would be towed to shore by the supply boat(s). In Table 14-1, information concerning the expected production and transport of cuttings and mud is summarized. Inspection of this table indicates that transport of cuttings and mud to shore could be accommodated within the currently proposed supply boat schedules for Platform Gina during the entire drilling program, and for Platform Gilda during the period when only a single drilling rig was utilized. Consequently, no additional supply boat trips would be required, no further increase to marine traffic levels would occur, and potential overall impacts on marine traffic and air quality would be essentially the same as those discussed for these drilling phases in Sections 4.9.1 and 4.2.1, respectively, of the EIR/EA.

However, during the period when two drilling rigs would be in use on Platform Gilda, transport of cuttings and mud to shore would require 15 supply boat trips per month additional to those scheduled for the project as proposed. These 15 additional trips per month (during the drilling phase) would represent an increase to the proposed project boat traffic of approximately 7 percent. Although these additional trips would increase slightly the associated impact on marine traffic levels, the overall impact of the project would not be significantly greater than for the proposed project as discussed in Section 4.9.1 of the EIR/EA.

Additional supply boat trips would also increase the drilling phase air pollutant emissions. As shown in Table 14-2 these additional emissions would increase the drilling phase emissions for each pollutant by less than 10.5 percent. The impact of the project with these slightly increased emissions would not be substantially greater than that discussed for the proposed project in Section 4.2.1 of the EIR/EA.

14.4 Torrey Pipeline System

Please see response to Ventura County Air Pollution Control District comment number 6.1.

14.5 Engineering Design Procedural Review and Other Matters

Numerous analyses have been conducted and reports prepared in connection with the design of Platforms Gina and Gilda, including studies related to geotechnical conditions, oceanographic conditions, meteorological conditions, and platform structural design. Studies of these platform design subjects were conducted by consultants under contract to Union. The findings from these studies were then reviewed by a Certified Verification Agent (CVA). Under OCS Order No. 8, the

U.S. Geological Survey requires that the operator (Union in this case) select a CVA (PMB Systems Engineering, Inc. in this case) to verify all aspects of the design, including seismic loading, wind, wave and current loading, live and dead loads imposed on a platform by drilling and production equipment, and the appropriateness of the design criteria. The CVA is nominated by the operator in a verification plan submitted to the U.S. Geological Survey and reports directly to the U.S. Geological Survey. Finally, the U.S. Geological Survey reviews all information prior to approval of the final platform design.

Copies of confidential reports for platform design and associated documentation have been provided by Union to the State Lands Commission for review by them and the California Division of Mines and Geology (transmittal letter dated 28 August 1980). Copies of these materials were also provided to Dames & Moore. Based on correspondence between Union and the State Lands Commission (letter dated 22 August 1980) and verbal discussions (Dwight Sanders, State Lands Commission, 16 September 1980), Dames & Moore was requested to conduct a procedural review of the materials. The objective of the review was to identify whether the various design reports comply with the intent of the Design procedures specified in the U.S. Geological Survey OCS Operating Orders, particularly OCS Order No. 8, and documents cited in the Operating Orders. A technical evaluation was not conducted because this has already been done twice via review by the CVA and the U.S. Geological Survey. The design for Platform Gina has been approved by the U.S. Geological Survey and approval for design of Platform Gilda is pending.

Dames & Moore completed the procedural review of platform design considerations. The reports and documents reviewed

comply with the basic intent of the procedures and the qualitative requirements described in the OCS Operating Orders. The design for the two platforms closely adheres to the API recommended practice for offshore platforms. The verification plan followed by the CVA and detailed design specifications for the platforms were submitted to the U.S. Geological Survey in accordance with procedural requirements. These items were not reviewed by Dames & Moore. The Dames & Moore Design procedural review was based on the requirements in the OCS Operating Orders and documents referenced therein. Certain subjects were not addressed in the reports prepared by Union's consultants, but these subjects were addressed by the CVA; thus, procedural requirements are considered to be met.

Several minor items required by the procedures were identified by the CVA as not completed or not addressed. Furthermore, for purposes of meeting the procedural requirements, complete information on the design life criteria and corrosion protection details was not identified in the confidential reports made available to Dames & Moore.[1] Discussions were held with the U.S. Geological Survey (Maury Adams, oral

[1]These subjects are addressed in the confidential Plans of Development for the platforms (Maury Adams, oral communication, 24 September 1980).

communication, 24 September 1980) to clarify the importance of the identified procedural deficiencies. The U.S. Geological Survey indicated that sufficient information to satisfy the requirements of OCS Operating Orders was provided for Platform Gina and the design of the platform was approved. In the case of Platform Gilda, they are still in the process of reviewing the design information and CVA evaluation to determine if the data are sufficient for approval of platform design. Furthermore, the U.S. Geological Survey permitting approvals for all phases of platform activities (design, fabrication, installation, drilling, operation) are conditional upon complete information being provided by the operator throughout the project lifetime as it becomes available.

With respect to potential hazards associated with Hueneme Canyon, no project elements are planned sufficiently close to the canyon to be susceptible to significant hazard.

Approval of the well drilling program would be conducted by the U.S. Geological Survey. Also please see response to comment number 23.1.

14.6 Deep Seismic Data

Deep seismic data are proprietary information and were not available for review by Dames & Moore as part of the shallow hazards evaluation. However, the deep seismic data were available to and used by the U.S. Geological Survey in their legally required independent analysis and evaluation of the shallow seismic data. The results of their independent study are included in the EIR/EA in Appendix B.3. The conclusions of the U.S. Geological Survey study do not differ from those reached by Dames & Moore.

14.7 Engineering Analysis

Please see response to comment number 14.5.

14.8 Oil Spill Contingency Plan

The word "generally" was left in from a prior draft writeup. At that time, the oil spill contingency plan was considered deficient in that no boat would be permanently at Platform Gilda for deployment of oil spill containment equipment in the event of an accidental spill. At the request of the California Coastal Commission, the plan was subsequently modified to include a boat at the platform at all times. Based on this modification, Dames & Moore considers the oil spill contingency plan to be adequate relative to current regulatory requirements, other approved oil spill contingency plans in effect, and local environmental conditions.

TABLE 14-1

PRODUCTION AND TRANSPORT OF DRILL CUTTINGS AND MUDS

	Duration of Drilling (months)	Production Rate (bbl/day)		Disposal Frequency (times/month)		Transport Method		Supply Boat Movements (trips/month)	
		Cuttings	Mud	Cuttings	Mud	Cuttings	Mud	Proposed Project	With Onshore Disposal
Platform Gina	13	41	165	10	2	Supply boat	Dumb barge and supply boat	15	15
Platform Gilda (one drilling rig)	9	50	145	15	2	Supply boat	Dumb barge and supply boat	15	15
Platform Gilda (two drilling rigs)	48	100	290	30	4	Supply boat	Dumb barge and supply boat	15	30

TABLE 14-2

DRILLING PHASE EMISSIONS - PLATFORM GILDA

Pollutant	Emissions (tons/year)[a] Proposed Project	With Onshore Disposal	Increase (%)
NO_x	20.30	22.00	8.37
THC	3.34	3.52	5.39
CO	21.60	22.07	2.18
SO_2	1.46	1.61	10.27
PM	1.02	1.02[b]	Negligible

[a]Exclusive of electrical power generation.
[b]Negligible increase.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

11 JUL 1980

Project A-IGS-K03008-00

Mr. Ralph J. Steele, Project Coordinator
Planning Department, City of Oxnard
305 West Third Street
Oxnard, CA 93030

Dear Mr. Steele:

The Environmental Protection Agency (EPA) has received and reviewed the draft environmental impact report (DEIR) titled UNION OIL COMPANY PLATFORM GINA AND PLATFORM GILDA PROJECT.

The EPA has the following comments to offer at this time.

15.1 I. The DEIR states, "Mud discharges would be made in conformance with OCS Order No. 7 and are not expected to have significant or lasting effect on ocean water quality" (page 4.3-6). The DEIR does not provide information to substantiate this statement, and this data should be included in the final environmental impact report (FEIR). Additionally, EPA recommends the following reports to be included as part of a comprehensive review of the effects of the discharge of drilling muds and cuttings:

a) Tanner Banks Mud and Cuttings Study, (where no adverse impacts were found as a result of discharge; ECOMAR I978);

b) Papers presented at the Drilling Muds Symposium in January, I980, (some of which concluded that long-term sublethal effects associated with drilling muds do exist).

15.2 2. The DEIR should also provide data on typical drilling muds composition, toxicities, and the dilution which would be expected upon discharge. This information should be included in the FEIR.

We appreciate the opportunity to review and comment on this DEIR. If you have any questions regarding our review, please contact Susan Sakaki, EIS Coordinator, at (415) 556-7858.

Sincerely yours,

Jake Mackenzie, Director
Surveillance and Analysis Division
Region IX

15.0

RESPONSES TO COMMENTS FROM U. S. ENVIRONMENTAL PROTECTION AGENCY

15.1 Discharge of Drilling Muds and Cuttings

To comply with OCS Order No. 7, Union would:

- Dispose of liquids as recommended
- Monitor discharges for oil content
- Inspect facilities for leaks and unusually large quantities of oil or oil-containing liquids
- Require that all accidents be reported to the Company supervisor

The Tanner Bank Mud and Cuttings Study (ECOMAR, 1978) was reviewed. Principal findings reported were:

- the cuttings separated from the mud and fell rapidly to the bottom
- the mud that adhered to the cuttings (usually 1 to 5 percent by volume) formed a plume in which dilution greater than 100,000 to 1 was reached within 330 feet (100 m) of the discharge point; within 650 feet (200 m), the concentration of suspended solids had reached background levels
- only minor accumulations of barium, chromium, and lead were found in the sediment after 2 months, and concentrations of these metals did not exceed background levels beyond 650 feet (200 m) from the discharge point

- barium had no apparent toxic effect on marine species
- the temperature, pH, dissolved oxygen, and salinity of the surrounding water were not altered measurably.

Results of studies reported at the Symposium Research on the Environmental Fate and Effects of Drilling Fluids and Cuttings (January 1980) were also reviewed. As indicated in the comment, some of the papers included findings that sublethal effects may result from exposure to drilling muds (not cuttings) (Gerber et al.; Krone and Biggs; Doughtie et al.; Benech et al.; Rubinstein and Rigby). It is important to note, however, that none of the studies which led to such findings were conducted on marine organisms or natural communities under actual drilling conditions. Most were laboratory studies, and one was an investigation of the fouling communities on a drilling vessel. Results of several other studies reported at the Symposium indicate that, under actual drilling conditions, discharged muds and cuttings are diluted very rapidly (Zemel; Ayers, Bowers, et al.; Ayers, Meek, et al.; Ray and Meek) and do not result in significant effects on water quality, marine organisms, or natural communities (Neff et al.; Houghton et al.; Hudson and Robbin; Shinn et al.; McCulloch et al.; Gilfillan et al.; Reish et al.).

In light of these, as well as other, data, it is concluded that discharge of oil-free mud and cuttings would have no significant or lasting effect on ocean water quality.

15.2 Composition, Toxicity, and Dilution of Typical Drilling Muds

The muds to be used during drilling operations at Platforms Gina and Gilda would be composed principally of sea water, clays, barium sulfate, and lignosulfonates. Small amounts of other compounds, such as sodium hydroxide, organic polymers, sodium carbonate, aluminum stearate, and defoamers, may also be

added. Three examples of simple drilling mud compositions are given in Table 15-1. Such muds have relatively low toxicities, with TL_m-96 values ranging from approximately 3,000 to 560,000 milligrams per liter (Ray and Shinn, 1975; Sheen Technical Committee, 1976; Ocean Production Company, 1976; NALCO, 1976; Houghton et al., 1980). Studies on the dispersion of discharged drilling muds have shown that dilution occurs rapidly and that background levels of the mud components are reached within short distances of the discharge point. Examples of these data are presented in Table 15-2. Results of several studies which were reported at the 1980 Drilling Fluids Symposium (see preceding response) indicate that, because of rapid dilution, drilling muds are essentially non-toxic under actual drilling conditions.

TABLE 15-1

TYPICAL COMPOSITIONS OF SIMPLE DRILLING MUDS

Component	Concentration (mg/L)		
	Mud A[a]	Mud B[b]	Mud C[b]
Bentonite clay	7,125	57,000	57,000
Barium sulfate	135,000	228,000	170,000
Lignosulfonates	12,500	14,250	11,400
Sodium hydroxide	9,400	2,850	2,850
Organic polymers	1,700	2,850	--
Sodium carbonate	--	--	3,000
Defoamer	150	--	--
Water	as needed	as needed	as needed

[a]USGS (1975)
[b]BLM (1979)

TABLE 15-2

DILUTION OF DISCHARGED DRILLING MUDS

Investigator	Reported Dilution
ECOMAR (1978)	100,000:1 within 100 m of discharge point; background levels reached within 200 m
Ray and Meek (1980)	500 - 6,000:1 within 3 m of discharge point; 50,000 - 600,000:1 within 100 m
Ayers, Meek, et al. (1980)	1,000:1 within 40 m of discharge point
Brandsma et al. (1980)	100:1 10 seconds after discharge; 1,000:1 after 1 minute
Ayers, Bowers, et al. (1980)	100:1 in immediate vicinity of discharge point; 10,000:1 within 120 m; background levels reached within a few hundred meters
Shinn et al. (1980)	32:1 within 5 m of discharge point; 64:1 within 96 m
Zemel (1980)	1,000:1 within 10 m of discharge point

City of
San Buenaventura
mission san buenaventura - founded 1782

July 9, 1980

Ralph J. Steele, Project Coordinator
Planning Department
City of Oxnard
305 West 3rd Street
Oxnard, CA 93030

RE: EIR/EA for Union Oil Company Platform Gina and Platform Gilda Project

Dear Mr. Steele:

Thank you for the opportunity to comment on the draft EIR/EA for Platform Gina and Platform Gilda. The City would like to make the following comments on the draft EIR/EA:

16.1 Page 2.0-9; Section 2.1.7: What is the reason that the offshore and onshore pipelines are abandoned in place instead of being removed? A statement should be included on the advantages and disadvantages of the abandonment. (Also referred to on Page 3.7-1).

16.2 Page 2.0-12; 4.6-56 through 4.6-89: Although individual viewing preferences are highly subjective, it would seem appropriate to give greater emphasis to the degree of exposure of the platforms to both the onshore and offshore recreational public for the following reasons. The high value placed on coastal property with a view, either residential, commercial or visitor serving facilities, is significant. It is reflected in both property values and in the number of coastal recreational areas and their intensity of use. There is also a high value placed by offshore recreational users on the 'wide expanses of open ocean'. The platforms lie within the area in which the majority of the offshore recreational use occurs.

16.3 Page 3.6-2; Section 3.6.3: A discussion should be included on the types of immediate effects, if any, of H_2S exposure in the case that an accidental release in excess of 10 ppm were to occur. The long term effects of H_2S exposure should also be discussed.

16.4 Page 3.6-3: An analysis of the effectiveness of the Blow Out Prevention System should be provided.

16.5 Page 3.8-7: Footnote (2) is incorrect. No permit application (either CUP or Zone Change) will be accepted until after any required amendments to the City's General Plan have been made.

post office box 99 • ventura, california • 93001 [805] 648-7881

16.6 Page 3.3-17: What was the method for determining the 20 foot depth for the pipeline crossing the Santa Clara River? Does this depth account
16.7 impacts from severe storm conditions, e.g. the 1969 storm?] [What are the long term effects of the sand and gravel operations upstream, on the depth of the riverbed in this area?] [Are these pipes to be abandoned in
16.8 place when the Platforms are disassembled? What kinds of safety precautions would be implemented particularly in light of the proximity of these pipes to an environmentally sensitive habitat?]

16.9 Page 4.6-7; Section 4.6.1.3.3. Production: Further discussion should be given in the report to the surrounding land uses, including the approved expansion of Ventura Harbor Facilities and the City's Marina Ponds/Wildlife Lagoon. Lines 5 through 8 should be reanalyzed in light of these uses and changes made if appropriate.

16.10 Page 4.6-19; Lines 3-4: The General Plan Amendment must be approved prior to the processing and review of any other Planning Permit applications.

16.11 Page 7.0-9; Paragraph 2: There is no mention of the visual impacts of the platforms from marine vantage points as related to offshore recreational boat use. Also, a discussion on the visual impacts at night from the lights on the platforms should be added.

16.12 Page 8.0-1; Section 8.1; Paragraph 2: Why are the "residual cutting mounds" not restored to conditions as near to those which existed prior to construction? What kinds of impacts would be associated with leaving the residual cutting mounds in place?

16.13 Page 8.0-1; Section 8.1; Paragraph 3: This paragraph states that there would be 'no long term risk to health or safety resulting from the proposed project'. It also includes statements to the effect that no environmental impacts would be of major significance and in most cases recovery is expected to be rapid. From the analysis in Section 4.9, the limitations described (Page 4.9-6 and 4.9-7) indicate that it is very difficult to accurately estimate several important factors needed to forecast the size and frequency of oil spills from this project. Although the structural design of the platform has been modified to accommodate local geologic and climatic conditions, it would not appear that the accuracy of current spill occurrence projection techniques is great enough to suggest the conclusions that are made (and paraphrased above) on Page 8.0-1.

16.14 Page 8.0-2: Cumulative impacts from multiple spills that might occur as a result of a combination of severe geologic and climatic conditions should be discussed.

16.15 Page 4.1-15. This section should include the following analysis:

a) Biological impacts from the pipeline's lying in close proximity to the Santa Clara River mouth wetland and riparian habitat, which is an environmentally sensitive habitat.

16.16 b) Impacts to endangered species, e.g. the Least Tern nesting site, from construction, maintenance and possible leakage from these pipes.

16.17 c) Although there is little or no flow during the dry season, there is water entering the lagoon from the City's Water Reclamation Plant. The increase in water depth during the dry season should be addressed.

16.18 d) An analysis of the increased siltation from construction should be undertaken.

16.19 Page 12.7-12; Section 12.7.4.2.3: Under Station "No. 5" it should be added to read:

Normal Crew size

Three Persons	1500 gpm pumper
Two Persons	85 feet snorkel

Also, it should be added to the line stating "in total the City possesses eight not five engines and one snorkel" that the City maintains one 65 foot aerial ladder and one 1250 gpm O.E.S. pumper.

In reviewing this draft document, there were concerns that the DEIR/DEA was trying to 'convince' the reader that the impacts from this proposal were minor in their significance. This concern, though reflected in the City's request for additional information and analysis, prevails throughout the report.

In the event that the Ventura Alternative is chosen for the location of the onshore facility, it should be reiterated that the project will still be subject to the City's environmental review procedures. We do appreciate this opportunity to comment on the draft document. Please contact me at (805) 648-7881, Ext. 335 if you have any questions or need additional information.

Very truly yours,

Susa Gates

Susa Gates
Assistant Planner

SG/lm/3/682

16.0

RESPONSES TO COMMENTS FROM
CITY OF SAN BUENAVENTURA

16.1 Pipeline Abandonment/Removal

There are three principal reasons that offshore and onshore pipelines are abandoned in place rather than being removed:

(1) the abandoned pipelines would present no particular environmental hazard;
(2) removal of the pipelines would produce adverse environmental impacts (e.g., see response to State Lands Commission comment number 14.2); and
(3) the cost of removal is much greater than the value of the recovered pipe.

16.2 Platform Visibility

In the EIR/EA, considerable emphasis was given to the degree of exposure of the platforms to onshore coastal recreational users. The viewing points shown on Figure 4.6-2 in the EIR/EA are representative of the range of views of the platforms which would occur along the Oxnard-Ventura coast. A main concern in choosing these points was that they should include coastal recreational areas because of the potential for high visibility to a large number of persons. Inspection of the figure shows that several recreational areas were represented, including the following:

2.1 Ormond Beach
2.3 Silver Strand Beach/Channel Islands Harbor Area
2.4 Mandalay Beach

2.5 McGrath State Park

2.6 Ventura Marina

2.7 Emma Wood State Beach

The potential exposure of the platforms to users of each of these areas was fully assessed in the EIR/EA. The visual intrusion of Platforms Gina and Gilda was judged to be moderate and low, respectively.

Although it would be located relatively close to shore (approximately 4 miles) and be potentially visible to a large number of persons, the visual intrusion of Platform Gina would be moderate because it would be: (1) smaller than existing Santa Barbara Channel platforms; (2) frequently obscured by fog and haze; and (3) located in an area utilized by a considerable number of large marine vessels which, when present, represent similar visual intrusions.

The visual intrusion of Platform Gilda would be low because it would be: (1) farther from shore (approximately 10 miles); (2) frequently obscured by fog and haze; and (3) located in the same visual field as the existing Platform Grace.

Viewing points 2.3 and 2.6 also would be representative of the nearshore views of the platforms as seen by recreational boaters. Additional discussion of the visual exposure of the platforms to offshore boaters is included in the response to comment number 16.11.

16.3 H_2S Effects

An accidental release of hydrogen sulfide (H_2S) could result in effects on workers at Platform Gilda, assuming Monterey Formation natural gas contains H_2S. Possible effects of exposure to H_2S in the ambient air for periods of up to one

hour are shown in Table 16-1. No data are available on the long-term effects of H_2S exposure at low levels.

16.4 Blowout Prevention System

All blowout prevention equipment on Platforms Gina and Gilda will comply with the U.S. Geological Survey OCS Orders and other regulations. All equipment will be state-of-the-art, and will be inspected and tested regularly by Union and government inspectors. Furthermore, the U.S. Geological Survey has the responsibility of developing, administering, and enforcing a regulatory program to ensure that drilling and production operations are conducted in a safe and environmentally sound fashion. Procedures associated with this program are described in detail in a document entitled "The Use of Best Available and Safest Technologies (BAST) During Oil and Gas Drilling and Producing Operations of the Outer Continental Shelf (OCS), Program for Implementing Section 21(B), OCS Lands Act Amendments of 1978." Single copies of this document may be obtained free upon request to:

Office of Deputy Division Chief for Offshore Minerals Regulation
U.S. Geological Survey
Mail Stop 640
Reston, Virginia 22092

16.5 Permitting Process

This clarification of the City of San Buenaventura's sequence of permitting procedures is appreciated. These procedures would apply to the Union Oil Marine Terminal alternative configuration.

16.6 Pipeline Burial Depth

On page 3.3-17 of the EIR/EA, it is stated that "The pipelines would be buried approximately 20 feet (6 m) below the surface of the riverbed." This depth represents a preliminary estimate which would probably allow protection from potential scour conditions similar to those which occurred during the 1969 water year. However, this estimate should not be construed as a final design specification. As stated in Section 5.1.1 (Mitigative Measures), it is recommended that potential erosion (scour) at the Santa Clara River pipeline crossing be evaluated prior to construction should the Union Oil Marine Terminal alternative configuration be implemented. Union has committed to follow best engineering practices in designing the river crossing. Such practice should include evaluation by a certified engineering geologist of potential scour depth to ensure appropriate pipeline burial depth.

16.7 Potential Effects of Upstream Mining Operations

Because the hydrologic characteristics of the Santa Clara River are complex, it is not possible to determine precisely the effects that upstream sand and gravel mining operations could have on the depth of the river bed in the project area. However, potential long-term effects of mining operations would not be expected to produce significant adverse impacts on the project for the following reasons:

- burial of pipelines across the river bed would be required only if the Union Oil Marine Terminal alternative configuration was implemented;

- burial depth of the pipelines would be determined following an engineering design study which would include consideration of upstream mining activities; and

- in response to concern over potential effects of mining activities, hydrologic conditions in and around the Santa Clara River are being closely monitored. Because the project pipelines would be located adjacent to an important structure (the Harbor Boulevard bridge) and because potential effects of mining operations would manifest themselves gradually, it is expected that these effects would be noticed and that there would be sufficient time to mitigate these potential effects before they had significant adverse impacts on the project pipelines.

16.8 Abandonment Procedures for Onshore Pipelines

Project termination and abandonment procedures as they relate to onshore pipelines are discussed in EIR/EA Section 3.7.3. If allowed by applicable regulations in existence at that time, the pipelines would be purged, cleaned, filled with an inert substance such as barite base mud, and abandoned in place. If regulations required removal of the pipelines, they would be purged, cleaned, excavated, dismantled, and the individual segments hauled away for salvage or reuse. Abandoned pipelines that have been purged and cleaned pose no environmental hazard.

16.9 Potential Land Use Impacts, Union Oil Marine Terminal Alternative Configuration

Should the Union Oil Marine Terminal alternative configuration be implemented, the onshore treating facility would be located within an area of existing industrial land use. Industrial use of the area would continue whether or not this alternative configuration was selected. During production, the only effect that the onshore treating facility would have outside the boundaries of Union's existing facility would be to produce small intermittent increases to traffic volumes on local roads as a result of occasional maintenance and waste removal activities. These increases would represent a negligible

impact and, consequently, operation of the onshore treating facility would not interfere significantly with surrounding land uses, including those at Ventura Harbor and the City of San Buenaventura's wildlife ponds.

16.10 Union Oil Marine Terminal Approval Process

The City indicates that a General Plan Amendment would have to be approved prior to the processing and review of any other Planning Permit applications, if the Union Oil Marine Terminal alternative were selected. This clarification by the City is appreciated.

16.11 Visual Impacts

Recreational boating activity offshore Oxnard and Ventura is relatively heavy. On a typical Sunday, as many as 600 and 450 boats may exit Ventura Harbor and Channel Islands Marina, respectively. To ensure maximum navigational safety (and in accordance with U.S. Coast Guard requirements), Platforms Gina and Gilda would be painted and lighted so as to be as conspicuous as possible to mariners. Therefore, both Platforms Gina and Gilda would be quite visible to recreational boaters. However, as discussed in the EIR/EA (page 4.6-56) and the response to comment number 9.1, it is difficult to determine how individual viewers would react to the presence of the platforms. On a clear sunny day, many persons would be likely to find the platforms an unattractive addition to the seascape. However, during periods of low visibility, many mariners would be likely to appreciate the platforms as useful aids to navigation.

At night, lights on the platforms would be visible from onshore (see Figure 4.6-2 for representative viewpoints) and offshore locations. Again, it is difficult to determine how individual viewers would perceive the presence of these lights. Some

persons would probably find the lights unattractive; however, others would probably find them appealing, as suggested by the number of expensive homes in southern California situated so as to afford views of the "city lights."

16.12 Residual Cuttings Mounds

The potential impacts associated with deposition of discharged drill cuttings are discussed in Section 4.4.1.2 of the EIR/EA (see page 4.4-8 in particular). These impacts would not be significant because of the limited areal extent of the cuttings mounds and their expected recolonization by a variety of marine organisms. Leaving the mounds in place should not result in any adverse impacts beyond those which would have occurred during their deposition. Conversely, efforts directed toward removing or modifying the mounds to restore pre-drilling conditions would result in additional disturbance and elimination of marine organisms. Therefore, it would be environmentally preferable to leave the mounds in place rather than to attempt to restore the areas to their original conditions.

16.13 Long-Term Effects

The evaluation of potential environmental impacts was based on normal project operation over an approximately 20-year lifetime and the possibility that one oil spill comparable in size to the 1969 Santa Barbara Channel oil spill might occur. Although it is difficult to precisely predict the future occurrence of major oil spills, examination of historic data (particularly those from the period subsequent to the 1969 spill, during which significantly stricter regulations and improved technologies have been implemented) indicates there is a low probability of even one major spill occurring from the proposed project. The probability of 2 or more such spills occurring as a result of the proposed project is remote and, therefore,

potential consequences of such a combination of events were not assessed.

Based on a reassessment of the impact evaluations, it is believed that the intent of the statements presented in Section 8.1 is both reasonable and justified. However, to clarify the intent, paragraph 3 should be modified to read as follows:

> "Several mitigative measures would be included in the project (Sections 3.0 and 5.0) to minimize the effects of potential environmental impacts. As discussed in Section 4.0, most environmental impacts would be of short duration; none would be of major significance; and, in most cases, recovery from impacts is expected to be rapid. As a result, there should be no narrowing of the range of beneficial uses of the environment, and ~~no~~ negligible risk of long-term environmental damage would result from implementation of the proposed project, whether the proposed Mandalay configuration or one of the primary alternatives were selected."

16.14 Multiple Spills

Platforms in the Santa Barbara Channel are designed to withstand rare, intense seismic and storm events without structural failure (refer to EIR/EA Section 4.9.4). It is conceivable that some combination of simultaneous seismic and storm events could exceed the design limits of all platforms in the Channel and result in multiple oil spills. However, the likelihood of such an event is exceedingly low. By way of illustration, assume that a platform would fail structurally if it were exposed simultaneously to a 100-year seismic event combined with a 100-year storm (these values are hypothetical; a 100-year event is an extreme condition which occurs with an

average recurrence interval of 100 years). The total probability of these two events occurring simultaneously during a given year is given as the probability of the independent event occurrence probabilities times the conditional probability that the events would overlap in time, or

$$P = (P_{seismic} \times P_{storm}) \times \frac{(T_{seismic} + T_{storm})}{y}$$

where: P = the total probability of simultaneous occurrence during a given year

$P_{seismic}$ = the annual probability of the seismic event

P_{storm} = the annual probability of the storm event

$T_{seismic}$ = the duration of the seismic event (minutes)

T_{storm} = the duration of the storm event (minutes)

y = the number of minutes in one year (= 525,600 minutes)

Assuming a 60-second duration for a 100-year seismic event and a 24-hour duration for a 100-year storm, the equation can be solved as follows:

$$P = (0.01 \times 0.01) \times \frac{(1 + 1440)}{525{,}600} = 0.0000003$$

or about 3 chances in 10 million that the 100-year seismic event and 100-year storm would occur simultaneously during any given year. This is equivalent to the probability of flipping a fair coin 22 times and obtaining 22 consecutive heads. Expressed in another way, the average time interval between consecutive 100-year seismic + 100-year storm events (simultaneous occurrence) is over 3.3 million years.

This example is purely hypothetical, but it does provide an order-of-magnitude perspective of the likelihood that two rare, independent events would occur simultaneously to cause a spill. Another factor to consider is that the USGS requires each OCS well capable of flowing to the surface to be equipped with a subsurface safety valve. These valves are typically installed some 500 to 1,000 feet below the ocean bottom and are of two general types: a surface-operated valve held open by hydraulic pressure and a subsurface valve held open by spring pressure which closes when the well flow rate exceeds a certain value. In the case of both types of valves, a failure of the system will cause the valve to close and the well to shut in ("fail close"). Even if an OCS platform were to be sheared completely off at the mud line, the subsurface safety valves would automatically shut in the wells and prevent the escape of oil.

Because of the extremely low likelihood of occurrence of simultaneous seismic and storm events that might result in multiple platform failure, as well as the safety systems discussed above, the multiple oil spill scenario is not considered to be a credible event for the purposes of assessing the cumulative environmental impact of the proposed Platform Gina and Platform Gilda Project.

16.15 Potential Biological Impacts at Santa Clara River Mouth

It should be noted that the page cited in the comment (4.1-15) is within the Geotechnical impacts section. Potential biological impacts on the Santa Clara River mouth are discussed on pages 4.5-9, 4.5-10, 4.5-17, 4.5-18, 4.5-19, and 4.5-20. The river mouth is identified as a sensitive habitat on the pages cited as well as in Section 12.5.7.

16.16 Impacts on Endangered Species

Impact on rare or endangered species and sensitive habitats is acknowledged to be an important consideration in weighing the potential environmental consequences of the proposed action. EIR/EA Section 4.5.5 discusses the impacts of project activities on the least tern and other rare or endangered species which may occur in the project area. Section 4.5.6 addresses the potential impact of normal project activities and accidental spills of hydrocarbon fluids on nearby sensitive biological habitats (McGrath Lake, salt marsh, coastal dunes, and the Santa Clara River mouth).

16.17 Santa Clara River Mouth, Dry Season Flow

Hydrologic conditions in the Santa Clara River mouth are constantly changing because of variations in natural flow, influx of treated effluent and irrigation return water, sand bar formation, and ocean tides.

When the river's discharge is low, a sand bar forms across the mouth and a lagoon is formed which may extend to Harbor Boulevard. If the sand bar is not breached, water in the lagoon can raise the level of ground water in adjacent low-lying areas.

Under present management, the berm is mechanically breached with shovel or tractor by State Park System employees or farm

maintenance personnel before ground water levels become high enough to affect operations. Hugo McGrath Associates and successors retain the right to breach the sand bar when necessary to protect agricultural lands. Once the bar is breached, the outflow widens and deepens the channel until the lagoon reaches minimum volume, usually within a few hours.

Should the Union Oil Marine Terminal alternative configuration be implemented, pipeline construction activities in the Santa Clara River bed would take place immediately adjacent to the Harbor Boulevard bridge on its upstream side. Thus, construction activities would be separated from the effluent discharge point by more than 1,000 feet (300 m). In addition, should the rising level of water in the lagoon cause it to extend upstream to the vicinity of construction activities, Union would arrange to have the sand bar breached and the lagoon drained. Consequently, no significant adverse impacts on the hydrology of the Santa Clara River are expected.

16.18 Potential Increased Siltation

Emplacement of pipelines across the Santa Clara River bed (Union Oil Marine Terminal alternative configuration only) would result in no significant downstream siltation because construction activities would be conducted during the dry season (when there is little or no flow in the river) and upstream from the river mouth lagoon. Any minor siltation which could occur would be indistinguishable in relation to the amounts of sediment transported during flood flows in the river.

16.19 City of San Buenaventura Fire Department Facilities

The City of San Buenaventura has provided information to supplement that currently included in the EIR/EA. These data are appreciated.

TABLE 16-1

EFFECTS OF EXPOSURE TO HYDROGEN SULFIDE

Parts Per Million	Effects		
	0 to 2 minutes	15 to 30 mintues	30 minutes to 1 hour
1-20	Detectable by "rotten egg" smell.	Detectable.	Detectable. Maximum allowable concentration for 8-hour exposure without protective mask.
50-100	Coughing. Slight irritation of eyes. Loss of sense of smell.	Disturbed respiration. Pain in the eyes. Sleepiness.	Throat and eye irritation.
150-250	Loss of sense of smell.	Throat and eye irritation.	Throat and eye irritation.
250-350	Irritation of eyes. Loss of sense of smell.	Irritation of eyes and respiratory tract.	Painful secretion of tears, weariness; may cause death in longer exposure.
350-450	Irritation of eyes. Loss of sense of smell.	Difficult respiration. Irritation of eyes.	Increased irritation of eyes and nasal tract. Dull headache. Serious respiratory disturbances.
500-900	Coughing; unconsciousness. Serious respiratory disturbances.	Respiratory disturbances. Eye irritation. Unconsciousness.	Serious eye irritation. Slow pulse, rapid shallow breathing. Respiratory paralysis, convulsions, asphyxia and death.
1000	Unconsciousness.	Death.	Death.

DEPARTMENT OF THE NAVY
COMMANDER
PACIFIC MISSILE TEST CENTER
POINT MUGU, CALIFORNIA 93042

IN REPLY REFER TO:
3200-4
3900
Ser A974

10 JUL 1980

Mr. Gene L. Hosford
Planning Director
City of Oxnard
305 West Third Street
Oxnard, CA 93030

Dear Mr. Hosford:

Thank you for your letter of 30 May 1980 inviting comment on the "Draft Environmental Impact Report/Environmental Assessment, Union Oil Company Platform Gina and Platform Gilda Project".

The following comments are accordingly submitted for appropriate consideration:

17.1 a. Though approximate locations for the proposed platforms are shown in the "Draft Environmental Assessment" provided, their precise locations could not be identified. An accurate assessment of any threatened adverse impact on Pacific Missile Test Center (PACMISTESTCEN) operations is therefore not possible.

b. Proposed platform GILDA however, appears well clear of PACMISTESTCEN range boundaries and so is not expected to impose any adverse impact.

17.2 c. The location of proposed platform "GINA" remains a source of serious concern to PACMISTESTCEN. Any portion of a platform or any of its associated functions intruding south of the Test Center's range boundary would be incompatible with Range Operations. In the interest of safety of lives and property, these elements should be planned to be well clear to the north of this critical boundary formed by lines joining the following points:

Latitude North	Longitude West
34°-07'-08"	119°-09'-32"
34°-05'-55"	119°-11'-15"
34°-05'-30"	119°-13'-00"
34°-00'-00"	119°-40'-00"

3200-4
3900
Ser A974
15 JUL 1980

17.3 d. The first sentence on page 12.7-21 of the Draft Environment Impact provided refers to the "Pacific Missile Range"; it is noted that the correct name is now Pacific Missile Test Center.

Should additional information regarding this issue prove to be desirable, kindly contact Mr. Paul Foster at phone 982-8731.

Sincerely,

F. H. BAUGHMAN
Rear Admiral, U.S. Navy

17.0

RESPONSES TO COMMENTS FROM

U.S. DEPARTMENT OF THE NAVY - POINT MUGU PMTC

17.1 Potential Impact of Platform Gina on Range Operations

In response to this comment, the Navy was provided with a map showing the exact location of Platform Gina with respect to the northern PACMISTESTCEN range boundary (Dames & Moore letter dated 15 August 1980). Based on the information provided to them, the Navy concluded that Platform Gina would be located outside PACMISTESTCEN range boundaries and would not be expected to adversely affect range operations (U.S. Navy letter 3200-4, 3100, Ser L804; dated 26 August 1980).

17.2 Platform Gina Location

See response to preceding comment.

17.3 Pacific Missile Test Center

The first paragraph of EIR/EA page 12.7-21 makes reference to the "Pacific Missile Range." The correct name is now the Pacific Missile Test Center.

NAVAL CONSTRUCTION BATTALION CENTER
PORT HUENEME, CALIFORNIA 93043

IN REPLY REFER TO

20B:GDW:sr

JUL 11 1980

Planning Department
City of Oxnard
305 W. Third Street
Oxnard, CA 93030

Attn: Ralph J. Steele

Gentlemen:

Re: Draft Environmental Impact Report/Environmental Assessment, Union Oil Company Platform Gina and Platform Gilda Projects (EIR 78-19)

18.1 All alternatives of the subject project, except the Ormond Beach alternative, appear to have no direct impact on operations at the Naval Construction Battalion Center (NCBC). The Ormond Beach alternative proposes an onshore pipeline corridor across the mouth of Hueneme Harbor. This configuration is unacceptable to the Navy.

Hueneme Harbor and land on both sides of the harbor are controlled by the U. S. Navy; a fact not mentioned in the EIR. Institutional and operational considerations would prevent consideration of any easement across Navy property for the proposed onshore pipeline.

Thank you for the opportunity to provide comments.

Sincerely,

J. G. SHANLEY
Captain, CEC, USN
Commanding Officer

18.0

RESPONSE TO COMMENT FROM

U.S. DEPARTMENT OF THE NAVY - CONSTRUCTION BATTALION CENTER

18.1 Site Location Conflict

At the time of EIR/EA preparation, this was not known. Clarification of the situation is appreciated.

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS:
COMMANDER (MOCS)
ELEVENTH COAST GUARD DISTRICT
UNION BANK BLDG.
400 OCEANGATE
LONG BEACH, CA. 90822

16613/31

RECEIVED
JUL 15 1980
PLANNING DEPT.
CITY OF OXNARD

Mr. G. L. Hosford
Planning Director
City of Oxnard
305 West Third Street
Oxnard, CA 93030

Ref: Platforms GINA and GILDA
Project Environmental Impact
Report and Assessment

Dear Mr. Hosford:

The above referenced documents have been reviewed.

Our navigational safety interests have been included in the mitigation measures that are described in subsection 4.9.1.3. It should be noted that omission of painting Platform GINA to enhance its visibility would constitute grounds for objection.

The platforms' required private aids to navigation, both lighting and fog horns, shall be in accordance with the requirements of 33 CFR part 67 for Class "A" structures. Their installation shall be approved by the Aids to Navigation Branch of this office. The subject of the potential installation of a RACON on Platform GINA has been left open. The need for a RACON at this location will be evaluated in the near future and the Coast Guard reserves the right to install a RACON on the platform should it be deemed necessary.

The platforms will also be subject to the standard regulations in 33 CFR Parts 140-147 for Artificial Islands and Fixed Structures on the Outer Continental Shelf.

This office intends to establish a safety zone of 500 meter radius around each platform in accordance with 33 CFR Part 147 upon commencement of installation and for construction activity at each site. Therefore, it is necessary that this office be informed as soon as it is known when the activity will occur. It can be anticipated that all vessels not directly involved in the construction will be excluded from the safety zones during the installation phase.

19.1 The actual locations of pipelines and cables need to be shown on navigation charts. This information should be provided to the Aids to Navigation Branch of this office and to the National Ocean Survey Office of NOAA.

(mocs)
16613/31

Thank you for this opportunity to review and comment on the referenced project.

Sincerely,

D. M. TAUB
Captain, U. S. Coast Guard
Chief, Marine Safety Divistion
Eleventh Coast Guard District
By direction of the District Commander

Copy to: CCGD11(oan)

19.0

RESPONSE TO COMMENT FROM
U.S. DEPARTMENT OF TRANSPORTATION - COAST GUARD

19.1 Location of Pipelines and Power Cables

The actual alignments of the pipelines and power cables depends on final engineering studies not yet completed. When this information becomes available, the locations of the alignments will be provided to the Aids to Navigation Branch of the U.S. Coast Guard and to the National Ocean Survey Office of NOAA.

RESOURCE MANAGEMENT AGENCY

county of ventura

Victor R. Husbands
Agency Director

July 9, 1980

Planning Department
City of Oxnard
305 West Third Street
Oxnard, California 93030

Subject: Ventura County Comments on Draft EIR for Offshore Platforms Gina and Gilda and Related Facilities.

The above referenced environmental document has been reviewed by appropriate Ventura County Agencies. Specific reviewing agency comments are attached. Please respond to the comments as required by the California Environmental Quality Act. All responses should be addressed to the commenting agency with a copy to the Subdivision and Environmental Review Section, Resource Management Agency.

RESOURCE MANAGEMENT AGENCY

Victor R. Husbands, Director
Resource Management Agency

VRH:jnw

Attachments (4)

800 South Victoria Avenue, Ventura, CA 93009

County of Ventura

RESOURCE MANAGEMENT AGENCY

MEMORANDUM

To: BOB LAUGHLIN

Date: JUNE 19, 1980

From: KIM HOCKING

Reference No.:

Subject: DRAFT EIR/EA RE: UNION OIL'S PROPOSED PLATFORMS GINA AND GILDA

The Advance Planning Section has the following comments on the subject document:

20.1 1. We support the California Coastal Commission staff's Findings and Declarations regarding "Alternatives" in their economic and technical feasibility analysis (p. 5 in the Consistency Certification Summary). It would not be feasible (Grace pipeline to Hondo is already constructed) to construct a pipeline from Chevron's Platform Grace to proposed Platform Gilda, but the possibility that Gilda could be connected to Grace should be discussed.

20.2 2. Consolidation of both pipelines and processing facilities with Shell OCS Lease P-0361 (adjacent to Shell PRC-3314 lease) should be addressed at least to the level that consolidation with Shell PRC-3314 is addressed in the document.

KH:lca

PAOF-89A

ATTACHMENT 2

Alternatives. Union plans to build a new processing facility to process the oil and gas from Gina and Gilda and install pipelines from the two platforms to the onshore processing plant. (Exhibit 1) Union could use existing excess processing capacity available at Mobil's Rincon facility and thereby avoid constructing a new coastal facility. Union could also use the new offshore pipeline from Grace to Carpinteria, via Platform Hope, which is sized to handle all production from the Santa Clara Unit. Platform Grace is on the lease adjacent to Gilda, less than 3 miles away.

Neither of the above alternatives have been seriously considered by Union or the City of Oxnard in its EIR. Both the economic and technical feasibility of these alternatives should be fully analyzed in the Final EIR to enable the Coastal Commission to have sufficient information available for its permit review on the proposed onshore processing facility.

B. Protection Against Spillage of Crude Oil. Regardless of the precautions taken against well blowouts and resulting spills of crude oil in the open ocean, there is always a risk of this occurring at a drill site. Such a spill may reach the coast of California and damage marine life, scenic areas, and recreational uses of the coast. Because of this risk, the proposed drilling operations must be consistent with Section 30232 of the Coastal Act, incorporated in Chapter 3 of the Coastal Management Program, which states:

> Protection against the spillage of crude oil, gas, petroleum products or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

The history of offshore exploration shows that an oil spill blowout during oil and gas exploration is a low probability event. Union has included the oil spill measures which the Coastal Commission has found to be adequate in previous Plans of Exploration and Development Consistency determinations for U.S. Geological Survey Permits to Drill. These measures include additional onsite oil spill containment and cleanup equipment, access to oil spill contractors or cooperatives for large spills, Union's oil spill contingency plan, and the added protection provided by the State and Federal oil spill contingency plans.

The Commission has developed specific standards for onsite oil spill equipment in previous consistency determinations for Plans of Exploration and Development in the Outer Continental Shelf. These standards are the product of consultation with the Department of Fish and Game, oil spill research organizations, and oil spill contractors with direct experience in the field of oil spill containment and cleanup. The following list includes the onsite equipment that the Commission has established as a minimum. This equipment exceeds the equipment previously approved by the U.S. Geological Survey for exploratory drilling and development plans:

1) 1500 feet of open ocean oil spill containment boom;
2) an oil skimming or recovery device capable of open ocean use;
3) oil sorbent material capable of containing 15 barrels of oil; a boat capable of deploying this equipment onsite or within 15 minutes of the drillsite.

County of Ventura

ENVIRONMENTAL HEALTH DEPARTMENT

MEMORANDUM

To: ROBERT LAUGHLIN

Date: June 23, 1980

From: TERRY GILDAY

Reference No.:

Subject: EIR FOR UNION OIL PLATFORMS GINA AND GILDA

We have reviewed the above subject. The only comment we make is that the EIR proposes disposal of well drilling muds and cuttings by dumping at sea. This is a presently permitted practice, however EPA is to hold hearings soon to consider stopping the practice. Should EPA stop sea dumping of this waste, an increased burden will be placed on land disposal facilities. This burden may exceed the capacity of existing facilities and thus require the development of additional dump sites.

TOG/erf

PAOF-89A

ATTACHMENT 3

County of Ventura

PUBLIC WORKS AGENCY
Flood Control and Water Resources

MEMORANDUM

To: Planning Department Date: June 26, 1980

From: Flood Control & Water Resources Reference No.: _____

Subject: EIR'S FOR PLATFORM GINA AND GILDA AND AUXILIARY STRUCTURES

The above referenced documents were submitted to this office for review and comment. The documents have been superficially reviewed. Our comments are as follows:

20.3 1. The site of the onshore treatment facility is located adjacent to the beach at the Mandalay Generating Station and southerly of the mouth of the Santa Clara River. Although in close proximity to the ocean and on a beach which has been subject to ocean related erosion problems in some areas in the past, the subject of ocean related beach erosion and beach stability are not found in the document.

20.4 2. The beach in this area is heavily dependent upon the Santa Clara River as a source of beach building sand to be carried by littoral drift. Since the river only brings sediment to the ocean in large quantities following larger floods, the hydrologic cycle becomes important when beach stability is discussed. What will happen to this beach area during prolonged periods of drought?

It is also noted that littoral drift from areas upcoast from the river is dependent upon removal of material by man from the sand trap at the Ventura Marina.

20.5 3. Pg. 3.3-17 makes reference to placing pipe across the Santa Clara River mouth by trenching to a depth of about 20 feet rather than hanging pipe from the Harbor Blvd. bridge. A quick review of the document indicates that problems will occur at the river mouth as a result, but the significance of the effect upon the lagoon which presently exists does not appear to be fully set forth.

20.6 4. Pg. 3.3-14 notes that the pipe lines crossing the beach will be buried 3 feet below the winter beach profile. Considering beach stability, which winter beach profile?

The concern of this agency relates to the ability of the onshore treating facility and the pipe lines crossing the beach profile to remain in "good health" over the long term. Considering the problems in other areas along the coastline that relate to beach stability, this is a significant concern.

WGH/tb

PAOF-89A

ATTACHMENT 4

20.0

RESPONSES TO COMMENTS FROM
COUNTY OF VENTURA - RESOURCE MANAGEMENT AGENCY

20.1 Chevron-Carpinteria Secondary Alternative

Please see response to California Coastal Commission comment number 27.3.

20.2 Consolidation Issues

Although it may not have been readily apparent from the structure of the report, consolidation opportunities related to Shell OCS lease P-0361 were discussed in equivalent detail to the consolidation discussion presented for Shell's State tidelands lease PRC-3314 (The P-0361 consolidation discussion is contained in EIR/EA Section 4.11.3; the PRC-3314 discussion appears in Section 4.11.1). In both instances, available information is presently limited. Until Shell has analyzed data from their proposed exploratory drilling program on lease P-0361 and determined that economically recoverable quantities of hydrocarbons are present, the detailed information necessary to establish the feasibility of consolidation will not be available. A similar situation applies to Shell's State tidelands lease PRC-3314. As noted in Sections 4.11.1 and 4.11.3 of the EIR/EA, all development activities associated with leases PRC-3314 and P-0361 would be subject to detailed environmental review and applicable permit approvals. Consistency with Coastal Act consolidation policies would have to be demonstrated for a Coastal Development Permit to be granted.

20.3 Beach Erosion and Stability

Longshore sediment transport and beach erosion are discussed on pages 4.1-3; 5.0-3,-4; 12.1-57; and 12.3-13 of the EIR/EA. These discussions are briefly summarized as follows.

Historically, beach erosion has been a problem in the Oxnard-Ventura area. Although part of this problem has resulted from normal fluctuations in the supplies of beach sand, much of it has been caused by man's alteration of sediment transport processes in the Ventura, Santa Clara, and other river systems, and construction of coastal facilities such as Ventura Marina and Channel Islands Harbor. Because of the short duration and limited areal extent of project-related disturbance of sediment transport processes, the proposed project would have no significant effect on beach erosion and stability. However, beach erosion could present a hazard to the proposed project. Therefore, it has been recommended that the potential for beach erosion be evaluated by a certified geologist (or similarly qualified individual) and that the results of this investigation be incorporated into the final design of the project.

20.4 Beach Sand Supply

On page 12.1-57 of the EIR/EA, it is stated that "the current level of beach erosion in the project area would accelerate if the natural flow of sand deposits along the Santa Clara and Ventura rivers were further decreased." A prolonged period of drought would be one way in which the flow of sediments in the rivers might be decreased.

The statement is correct that longshore sediment transport is presently maintained in large part by dredging of material from Ventura Harbor. However, this is a corrective action, taken to offset the interruption of sand transport caused by construction of the harbor and other local coastal facilities. In a state unaltered by man's activities, such dredging would

not be necessary and, if the dredging was discontinued, it would take only a few years time for uninterrupted flow to reestablish itself (although the harbor would no longer be usable).

20.5 Potential Impacts on Santa Clara River Mouth

Potential impacts associated with emplacement of pipelines across the Santa Clara River (Union Oil Marine Terminal alternative configuration only) are discussed on pages 4.1-15, 4.5-9, 4.5-10, and 4.5-18 of the EIR/EA (also refer to response to City of San Buenaventura comment number 16.17). Significant effects on the river mouth would not be expected to occur because:

- construction activities would be of short duration;
- construction activities would be conducted during periods of little or no flow in the river;
- the river bed would be restored upon completion of construction activities; and
- construction-related disturbance would be small in relation to disturbance which occurs during flood flows in the river.

20.6 Beach Erosion

In the EIR/EA, it is recommended that, prior to final project design, an evaluation of potential beach erosion be conducted (pages 12.1-57; 5.0-3,-4). One objective of this study would be to determine the appropriate depth of burial for pipelines crossing nearshore and beach areas to ensure safe operation. It is further suggested that, during the course of this study, the Ventura County Flood Control District (and other agencies with expertise regarding local beach erosion) be requested to provide input based on their knowledge of the local area.

United States Department of the Interior

FISH AND WILDLIFE SERVICE

ECOLOGICAL SERVICES
24000 Avila Road
Laguna Niguel, CA 92677

July 16, 1980

Ralph Steele, Project Coordinator
Oxnard Planning Department
305 W. 3rd Avenue
Oxnard, CA 93030

Re: EIR/EA Union Oil Company

Dear Mr. Steele:

U.S. Fish and Wildlife Service (Service) appreciates the opportunity to make comments on the Environmental Impact Report/Environmental Assessment (EIR/EA) for Union Oil Company's Platform Gina and Platform Gilda Project (OCS Leases P-0202 and P-0216).

In this brief review the following concerns are addressed from general and specific levels of comments. Further, it must be pointed out that the Service is providing technical assistance and reserves the right to provide more formal and additional comments as the project progresses and as more information about the project area is acquired.

GENERAL REMARKS

Considering that this two volume EIR/EA is being circulated at this stage of planning, the Service found the assessment to be informative and a good effort. The assessment could be simplified by avoiding repetitious descriptions of the same habitat types, general ecological principles, general species lists, and similar information throughout the reports. The biological information provided a good compilation of existing literature. It can be expanded by personal communications with knowledgeable people, as long as it is properly referenced. Aspects of the oil pollution problems are handled in a reasonable manner, although other influences and more details will be needed in subsequent documents to comply with requirements for National Environmental Protection Act of 1969, California Environmental Quality Act of 1970, and other appropriate legislation. The Service will review other documents, permits, licenses, and biological opinions for completeness and related to the Fish and Wildlife Coordination Act; Endangered Species Act of 1973, as amended; regulations related to Presidential Executive Orders; Water Resource Council's policies; and other legislation.

SPECIFIC COMMENTS

Due to the limitations of existing literature, limited biological studies by consultants, and the changing state of the knowledge on local biological resources, oil pollution, and environmental responsibilities associated with this project, the following comments are subject to revision. In order to address remarks to the various components of the Union Oil Company EIR/EA for Platform Gina and Platform Gilda Project, the Service has consolidated its remarks for distinct components of the project.

Offshore Platforms

21.1 Analysis appears good and informative. [Oceanographic data is pertinent,
21.2 but will need additional year-round sampling with some monitoring for the neccesary permits and licenses to be issued.] [Transport to and from the platforms does not appear to be fully described although some information is provided.] [The potential benefits of a drilling platform as a
21.3 horizontal/vertical "reef" type habitat is mentioned. Studies from nearby offshore platforms in the Carpinteria area should be referenced, as well as other information from other offshore California oil fields.]
21.4 A worst case scenario with the anticipated contingency plans should be presented and analyzed, as well as scenarios for minor oil spills.

Offshore Pipelines/Conduits

The transport of oil from the drilling platform to land based facilities, as well as ancillary facilities for electricity, water, etc. to support oil drilling and pumping operations are described in the two volumes.
21.5 Questions of environmental concern must be expressed regarding use of jetting to bury pipelines and entrench conduits which can affect grunion spawning runs, rearing conditions for larval and juvenile marine nearshore fish species; affecting feeding behavior of migratory fish and wildlife species, impacting feeding and resting habitat of endangered species, and altering biological values of the area. These short term and persistent impacts should be fully addressed.] The Service needs additional information and may suggest:

21.6 1) Alternative means of construction,

21.7 2) The use of rock riprap over the pipelines as a mitigation/compensation measure for Corps of Engineers' and California Coastal Commission's permits,

21.8 3) Schedule of maintenance/operation of pipelines,

21.9 4) Contingency plans in case of breakdowns.

Nearshore/Beach Construction

The basic analysis of impacts associated with nearshore/beach construction is covered in the documents provided to the Fish and Wildlife Service in Laguna Niguel. The Service has questions which relate to the need for
21.10 additional information regarding: [1) timing of construction;][2) manner
21.11 of control of turbidity, pollutants, and erosion from onshore fabrication

21.11 (cont'd), 21.12, 21.13 of pipeline components;] [3) associated with manner of dragging pipe segments through the surf zone;] and [4) proposed mitigation/compensation measures, if any, during this phase of construction and subsequent operations associated with pipeline and pumping facilities.]

Processing Plant Site Alternatives

The Service was presented with several proposed locations (Ormond Beach, East Mandalay, proposed Mandalay, and Ventura Marina), with some information on existing Mobil facilities at Rincon. [First, the Service needs a better description of existing facilities, the potential for consolidated operations at Rincon, and any associated problems and benefits.] [Second, the terrestrial biology of the habitats and their associated fish and wildlife resources for the proposed locations needs additional study. Reliance on a short, two-day site visit for an analysis of the project site is questionable. Additional communication and coordination with knowledgeable people of the specific sites, the Ventura coastal zone, and similar California coastal habitat should be done before final site selection.] [Third, special attention must be focused on associated developments in the project area which will influence this project, its potential cumulative impacts on air quality, water quality, and fish and wildlife species, especially endangered species.]

21.14, 21.15, 21.16

Pipeline Corridors

After the separation of the raw petroleum from natural gas, water, and other components of the drilling/pumping phases, the resultant products will be transported away from the selected processing site. Proposed routing across the Santa Clara River and through riparian and associated wetland habitats is important. [Although short term changes occur daily by man-related activities and these habitats have been recently affected by seasonal flooding after a prolonged drought period, the description of the resources of the Santa Clara River, Santa Clara River's lagoon, McGrath Lake, and adjacent and contiguous wetlands needs to be analyzed very carefully before a detailed assessment can be made.]

21.17

The presence of endangered species in the lower Santa Clara River ecosystem is known. The federally listed unarmored sticklebacks (Gasteroteus aculeateus williamsoni) is a concern. Additional proposed threatened/endangered species to the Federal list include the tidewater goby (Eucyclogobius newberryii) salt marsh yellow-throat (Geothylypsis trichos sinuosa), least Bell's vireo (Vireo bellii pusillus), Belding's savannah sparrow (Passerculas sandwichensis beldingi), and others. Therefore, the Fish and Wildlife Service believes that an Endangered Species Act Section 7 Consultation will be needed in relation to the necessary Federal permits and licenses. [In addition, contract with California Department of Fish and Game regarding State of California and endangered species should be made. Concerns for these species and their habitats may affect the future evaluation of this project by Service biologists on this project.]

21.18

Restoration of Project Site(s)

21.19 Offshore activity will involve disassembly and removal of drilling platform. It is conceivable that the platform could be converted to

21.19 (cont'd) other uses and still provide habitats for associated fish and wildlife resources after oil pumping is completed. This should be evaluated before a final document is issued.

21.20 Pipelines and conduits may have to be removed. However, the possibility of covering segments of the pipeline with rock riprap as an enhancement feature needs to be analyzed for its effect on present and future fish and wildlife resources.

Beach/pumping facilities will have to be removed carefully to prevent any oil spills. The actual structure may be converted to other uses associated with its selected locations.

21.21 Processing plant site is to be restored to a condition specified at a later date according to the EIR/EA. Additional details need to be provided on the rationale for this statement, possible restoration techniques, and ultimate objective(s).] This should be discussed with interested parties and incorporated into the future statements and permits for this project.

Transmission corridor across the Santa Clara River will have significant impact on important resource problems of the Fish and Wildlife Service. The presence of listed and proposed endangered species (terns, pelicans, unarmored sticklebacks, Belding's savannah sparrow, etc.) require planning now to prevent additional losses of habitats for these species. Further, efforts are needed to enhance the habitats for the species, wherever possible.

The Fish and Wildlife Service appreciated this opportunity to provide early comments on this project. We want to be kept informed about this project and any potential meetings which can result from the above comments. Please contact John Wolfe or Ralph Pisapia at the Laguna Niguel Field Office at (714) 831-4270, if you have any questions on the above.

Sincerely yours,

Ralph C. Pisapia
Field Supervisor

JCW:jw

cc: USGS, Los Angeles, CA (Attn: Ed Keppert)
EPA, Permits Branch, San Francisco, CA
NMFS, Terminal Island, CA
CDFG, Marine Res. Br., Long Beach, CA
CDFG, Env. Services, Long Beach, CA
County of Ventura Res. Mgmt. Agency, Ventura, CA (LCP Coordinator)
AE, Portland, OR (Attn: J. Bryne)
AM, Sacramento, CA (Attn: Gene Forbes)

United States Department of the Interior
FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
24000 Avila Road
Laguna Niguel, CA 92677

August 26, 1980

Mr. Ralph Steele, Project Coordinator
Oxnard Planning Department
305 W. 3rd Avenue
Oxnard, California 93030

Re: EIR/EA Union Oil Company, Platforms Gina and Gilda (OCS Leases P-0202 and P-0216)

Dear Mr. Steele:

This regards our July 16, 1980 letter to you on the referenced planning document. Paragraph 3, page 3, of that letter requires correction and clarification. The entire fourth, fifth, and sixth sentences of paragraph 3 should be deleted. In place of the three deleted sentences, please insert the following:

> Specific effects of the proposed projects on these and other species and their habitats will be addressed during a site analysis conducted by the Service for any Federal permits (e.g. Corps of Engineers) which will likely be required. During our analysis we will identify the beneficial and adverse effects of the project on fish and wildlife resources and will recommend mitigation or enhancement measures as are appropriate.

The above adjustment to our July 16, 1980 letter is necessitated to relieve a possible inconsistency with a November 1, 1979 Service letter (Biological Opinion) to the Director, U.S. Geological Survey on oil and gas exploration and certain development activities in southern California.

As a matter of clarification, the requirement on all Federal agencies under the Endangered Species Act is to review their programs for possible effects on endangered and threatened species. Federal agencies are to consult, if necessary, with the Fish and Wildlife Service if they determine their actions may possibly affect endangered or threatened species. A consultation for endangered species does not relieve the Service, nor other Federal agencies, of any of their responsibilities under other authorities or programs.

We request that you modify our July 16, 1980 letter as described. Your indulgence is appreciated.

Sincerely yours,

Ralph C. Pisapia
Field Supervisor

cc: USGS, Los Angeles, CA (Attn: Ed Keppert)
EPA, Permits Branch, San Francisco, CA
NMFS, Terminal Island, CA
CDFG, Marine Res. Br., Long Beach, CA
CDFG, Env. Services, Long Beach, CA
County of Ventura Res. Mgmt. Agency, Ventura, CA (LCP Coordinator)

21.0

RESPONSES TO COMMENTS FROM
U.S. DEPARTMENT OF THE INTERIOR - FISH AND WILDLIFE SERVICE

21.1 Oceanographic Monitoring/Sampling

Oceanographic monitoring and sampling would provide data concerning potential effects on water quality from platform discharges (e.g., cuttings, mud) during the drilling phase. Union would comply with such data collection and analysis specifications if they were required by the NPDES permits that would be issued for Platforms Gina and Gilda.

21.2 Vessel Transport

Platforms Gina and Gilda would be serviced by crew (personnel transfer) and supply boats. Any discharges to the ocean from these vessels would be in compliance with statutory regulations and permits governing their operation. Therefore, no potential adverse impacts on ocean water quality are anticipated.

21.3 Platforms as Reef Type Habitats

The two proposed platforms would represent new hard substrate in the local marine environment. This would result in increased biomass and species diversity in the vicinities of the two platforms. This is considered a localized, long-term beneficial impact. The magnitude of the potential impact, based on studies from nearby offshore platforms in the Carpinteria area, is discussed in the EIR/EA on pages 4.4-12 and 4.4-13.

21.4 Oil Spills

A worst case scenario for oil spills was presented in Section 4.9.3.3 of the EIR/EA. This scenario assumed a spill similar in nature to the 1969 Santa Barbara oil spill. In Section 4.9.3.1, the results of a trajectory analysis were discussed, with supportive technical details included in Appendix B.2. The oil spill trajectories are applicable to the movement of spills up to about 10,000 barrels in size. An evaluation of oil spill effects is presented in Sections 4.1.1.3 (Geotechnical), 4.3.5 (Oceanography), 4.4.6 (Marine Biology), 4.5.7 (Terrestrial Biology), 4.6.6 (Land Use), and 4.7.5 (Socioeconomics). National, regional, and Union's oil spill contingency plans (designed to accommodate oil spills of various sizes) are addressed in Section 5.9.

The various oil spill analyses did not include a possible collision of a tanker with a platform. The possible sizes (minor to worst case) and effects of oil spills associated with such an event would be similar to those discussed in the EIR/EA and referenced in the preceding paragraph.

21.5 Persistent Impacts

Persistent impacts of pipelines buried through the surf zone refer to the potential for accidental releases of oil during the lifetime of the project. One possible cause of such an accidental release would be pipeline breakage/rupture resulting from a large earthquake. Section 4.9.3.2 of the EIR/EA discusses the fate of a pipeline oil spill in the nearshore zone, while Section 4.4.6 addresses possible effects on marine biota of spilled oil.

21.6 Alternative Nearshore Pipeline Installation

The proposed project would involve the use of jetting to bury pipelines through the surf zone. An alternative to this method is trenching. This would involve excavation of a trench, use of sheet piling to keep the trench open while pipelines were being installed, installation of the pipelines, and backfilling the trench. Although minor in magnitude and significance, the impacts of trenching on marine biota would be greater than those associated with jetting because of the greater area which would be disturbed.

21.7 Rock Riprap

Rock riprap could be placed over pipelines. This would add new hard substrate to the local marine environment and increase biomass and local species diversity. A localized, long-term beneficial impact would result. On the other hand, riprap would constitute a "foreign substance" in a sandy beach area, present a minor negative visual impact, and modify the distribution of sand in the local area. The actual need for this "mitigation/compensation measure" would have to be determined during the permitting process.

21.8 Pipeline Maintenance Schedule

U.S. Geological Survey OCS operating orders require that pipelines be inspected annually either externally (by visual methods) or internally (by wall thickness measuring devices). The operation of the sacrificial anodes for corrosion control will be checked periodically to ensure that pipelines are under protection.

21.9 Contingency Plans

Union has prepared oil spill contingency plans for the proposed project. These plans are on file with the U.S. Geological Survey and were reviewed by Dames & Moore.

The latter review indicated that the plans are adequate. A summary of Union's contingency plans, as well as national and regional plans, is included in Section 5.9 of the EIR/EA.

21.10 Construction Timing

The timing for construction of various project elements will depend on the dates of issuance of specific permits. This information is not currently available. However, Union would cooperate with the U.S. Fish and Wildlife Service in discussing any specific concerns that the agency has regarding construction timing (also see response to California Department of Fish and Game comment number 22.1).

21.11 Turbidity, Pollutant, and Erosion Control

When the pipelines are pulled through the surf zone, they would have buoys added to reduce the drag or digging effects of the pipelines. Furthermore, the surf zone area is primarily sand and gravel, with very little clay. Therefore, turbidity caused by the pipeline pull would be minimal. No pollutant discharges or erosion are anticipated.

21.12 Pipeline Dragging Through the Surf Zone

Please see response to comment number 21.11.

21.13 Pipeline Mitigation/Compensation Measures

The potential impacts of constructing and operating the pipelines are expected to be minor in magnitude and low in significance. Therefore, no special mitigation/compensation measures have been proposed by Union or recommended in the EIR/EA.

21.14 Mobil-Rincon Alternative

Please see response to California Coastal Commission comment number 27.3.

21.15 Terrestrial Biologic Investigations

It should be noted that the terrestrial biologic investigations conducted for this project included considerably more than "short, two-day site visits for analysis of the project site." The investigations were conducted in accordance with an approved scope of work developed in consultation with several concerned agencies (see Section 3.8.1, Table 3.8-1). The approved scope of work was felt by the City of Oxnard and commenting agencies to be appropriate for preparation of the EIR/EA. A summary of the investigations follows.

Existing literature, professional contacts, interpretation of aerial imagery, and site reconnaissance were employed to produce a site-specific vegetation map, species list, and narrative describing the species composition, distribution, and function of the vegetation types (communities) within and adjacent to the alternative onshore sites and associated pipeline corridors. This description included consideration of rare and endangered plant species and sensitive biological habitat.

The vegetation types were defined and mapped on the basis of habitat requirements of the species encountered, species association patterns, and land management histories. The relative abundances of the dominant species in each vegetation type were objectively assessed in the field. The potential for the occurrence of rare and endangered plant species (California Native Plant Society; recently promulgated State List) was based on observations and habitat analyzed during site reconnaissance, CNPS data, local records, and professional contacts.

Published and unpublished data, literature, professional contacts, and site reconnaissance were employed to develop a description of the terrestrial vertebrate fauna associated with the habitats on, or adjacent to, the onshore processing site alternatives and pipeline corridors. This included considera- tion of rare and endangered animal species and utilization of sensitive habitats.

During site reconnaissance, animal habitats were systematically explored, and all terrestrial vertebrates or their signs were identified. In addition to the survey, local Audubon Society records, Ventura County Staff Conservationist records, and data available from local colleges were sought. California Department of Fish and Game publications on the Carpinteria and Mugu lagoons were incorporated by reference. The occurrence of rare and endangered species was assessed through observations and habitat analysis during site reconnaissance, California Department of Fish and Game records, local contacts, and existing literature.

The description of the aquatic resources of McGrath Lake and the Santa Clara River mouth was based on existing literature, professional contacts, and site reconnaissance survey.

During the course of the investigations, several persons with particular knowledge of the project area were consulted. These included representatives of the U. S. Fish and Wildlife Service, U. S. Navy, California Department of Fish and Game, California Department of Parks and Recreation, California Native Plant Society, Ventura County, Ventura College, Ventura County Museum, Hugo McGrath Company, and Los Angeles Museum of Natural History.

21.16 Cumulative Impacts

Please see response to League of Women Voters comment number 7.3 and Section 8.2 of the EIR/EA.

21.17 Wetlands Analysis

A literature review and field studies were conducted to assess the limnological resources of McGrath Lake, two locations in the Santa Clara River, and three locations in the coastal lagoon. Analyses of the resources included the composition and distribution of invertebrate faunal species and water quality characteristics (transparency, dissolved oxygen, pH, temperature, conductivity, and salinity). The results of these investigations and investigative procedures are presented in Section 12.5.5 and Appendix C.3, respectively, of the EIR/EA.

Based on information resulting from the baseline studies mentioned above, the potential for these resources to be impacted by the proposed project and primary alternatives was evaluated. It was concluded that no significant impacts would occur as a result of normal construction, drilling, and production operations (Section 4.5 of the EIR/EA). Adverse impacts to these resources could result from an accidental oil spill; the potential impacts are discussed in detail in Section 4.5.6 of the EIR/EA.

21.18 Contact With California Department of Fish and Game

Please see response to comment number 21.15.

21.19 Other Platform Uses

The U.S. Geological Survey requires that platforms be removed at the end of the project lifetime. The plans for removal are discussed in the Plans of Development for Platforms Gina and Gilda on file with the U.S. Geological Survey. No other

practical uses for the platforms after project termination are known.

21.20 Rock Riprap for Pipelines

Please see response to comment number 21.7.

21.21 Onshore Treating Facility Site Restoration

The onshore treating facility site would be restored in a manner acceptable to and approved by the regulatory agencies having jurisdiction. All equipment would be removed, the sand reshaped into dunes if required, and the site revegetated. Details of restoration plans would be established, necessarily, at the time of project termination to accommodate prevailing agency concerns.

State of California — The Resources Agency

Memorandum

To : 1. Jim Burns, Projects Coordinator
Resources Agency

Date: July 1, 1980

2. City of Oxnard
305 West Third Street
Oxnard, California 93030

ATTN: Ralph J. Steele, Project Coordinator

From : Department of Fish and Game

Subject: SCH 80052812 - Union Oil Company Platform Gina and Platform Gilda Project, Draft EIR/EA Offshore Ventura County

We have reviewed the subject document that deals with the construction of two oil and gas production platforms located on OCS tracts P-202 and P-216 (approximately 4.5 miles west-southwest of Port Hueneme and 10 miles west of Oxnard respectively), two offshore pipeline systems to convey produced oil/water/natural gas to an onshore treating facility, an onshore treating facility, and an onshore pipeline system to convey produced oil and natural gas to existing distribution systems. The document adequately depicts (1) existing biological resources; (2) impacts of the proposed and alternative project configurations on these resources; and (3) measures that will mitigate project impacts.

22.1 However, we believe that certain project elements could be scheduled in a manner that would further reduce the potential for impacts to the California grunion and the endangered California least tern. Grunion are known to spawn along McGrath State Beach and in all probability along Mandaley Beach. Spawning activities for this species occur from mid-March through August. The least tern nests within an area adjacent to the Santa Clara River and forages within the river system and along the adjacent coastal area. This species is present from April through August. Therefore, to reduce project impacts to both of these species, we recommend that onshore and offshore pipeline and power cable placement activities be conducted from September through February.

If you have any questions regarding our recommendation, please contact Mr. R. E. Mall, Environmental Services Supervisor, 350 Golden Shore, Long Beach, California 90802. The telephone number is (213) 590-5155.

EC Fullerton
Director

22.0

RESPONSE TO COMMENT FROM
STATE OF CALIFORNIA - DEPARTMENT OF FISH AND GAME

22.1 Construction Timing

The project construction schedule, inclusive of timing for onshore and offshore pipeline and power cable emplacement activities, will be governed by the permit approval process. Union would coordinate with the California Department of Fish and Game to identify an appropriate construction schedule for project elements to minimize potential effects on the California grunion and the California least tern.

State of California

THE RESOURCES AGENCY OF CALIFORNIA

Memorandum

To : Jim Burns
Resources Agency

Gene L. Hosford
Planning Department
City of Oxnard
305 West Third Street
Oxnard, CA 93030

From : Department of Conservation—Office of the Director

Date : July 7, 1980

Subject: Union Oil Company of California Platforms Gina and Gilda Project, DEIR/EA, SCH 80052812

The Division of Oil and Gas of the Department of Conservation has reviewed the DEIR/EA for the Union Oil Company proposal to develop the Hueneme field and the Eastern portion of the Santa Clara Unit by the placing of Platforms Gina and Gilda in federal waters offshore from the Port Hueneme-Ventura area.

Ultimate recovery of oil from the Hueneme field is expected to total about 9.5 million barrels and production from Platform Gilda is expected to total about 43 million barrels.

23.1 The DEIR states that drilling operations and blowout prevention measures will be conducted in conformance with federal regulations and OCS orders issued by the U. S. Geological Survey. However, the proposed casing description for the Santa Clara Unit wells do not specifically conform to the OCS orders or state requirements. Has the USGS adopted field rules for these wells? If so, on what basis?

It is also noted in Section 12.1-60 that shallow dispersed gas accumulations have been detected that could cause problems related to structural foundations. The division agrees with the report conclusion that these gas accumulations should be considered in detail during final engineering design and drilling program planning.

M. G. Mefferd
State Oil and Gas Supervisor

APPROVED BY:

Patrick G. Nevis
Environmental Program Coordinator

RESPONSE TO COMMENT FROM
STATE OF CALIFORNIA - DEPARTMENT OF CONSERVATION

23.1 Well Casing Programs, Santa Clara Unit

The casing program descriptions for Platform Gilda (Santa Clara Unit, Lease OCS P-0216) included in the EIR/EA (Appendix A) represent generalized preliminary versions based on field rules established by the U. S. Geological Survey (USGS) for drilling from Chevron's Platform Grace (Santa Clara Unit, Lease OCS P-0217). Field rules (based on local drilling histories) are currently being developed by the USGS for drilling from proposed Platform Gilda (a separate set are being developed for proposed Platform Gina). Casing programs for each well will be reviewed individually by the USGS as applications for drilling are submitted by Union. Approved casing programs will be in accordance with the field rules, which will be adopted prior to review of drilling applications. Specifications in the field rules will be somewhat different from those contained in OCS Order No. 2.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
300 South Ferry Street
Terminal Island, California 90731

July 14, 1980 F/SWR31:DJS

Mr. Ralph J. Steele
Project Coordinator
Planning Department
City of Oxnard
305 West Third Street
Oxnard, CA 93030

Dear Mr. Steele:

Subject: Review of Environmental Impact Report for Union Oil Company's Platform Gina and Platform Gilda Project

We have reviewed the subject Environmental Impact Report (EIR) and offer the following comments.

24.1 The EIR accurately states our finding that those fishery resources for which we have a responsibility will not be significantly affected, and that construction of these platforms could impact certain marine mammal species. Our concerns are for those whale species identified in our September 25, 1979 biological opinion which was issued pursuant to an Endangered Species Act, Section 7 consultation between the National Marine Fisheries Service and the Geological Survey. That consultation addressed all Geological Survey supervised activities ongoing and proposed for sites that were leased in either lease sale number 48 or prior lease sales in the Southern California Bight. Section 4.4.6.5 should reference this consultation as the source of the determination that no significant long term impacts should occur to endangered species populations for which the National Marine Fisheries has responsibility.

24.2 We note that the locations of these platforms are within the known migration route of the endangered California gray whale. Because the impacts of oil and gas development on the migratory habits of this species are poorly understood, we believe that the placement of these platforms will present a valuable opportunity to gather information concerning the interactions of drilling operations and the activities of migrating gray whales. The Bureau of Land Management currently has a contract to study such interactions within the Santa Barbara Channel region. We suggest that the U.S. Geological Survey and Mr. Philip Thomas, BLM New York OCS Office, 26 Federal Plaza, Suite 32-120, New York, NY 10278, telephone (FTS) 264-0810 be contacted so they may take full advantage of this opportunity.

24.3 Section 12.4.7, Environmental Setting, Marine Mammals, is incomplete. Apparently a number of pages were inadvertently excluded in the process of preparation. We would appreciate your sending the missing information to us for review.

Thank you for including us in the review process. Should we be able to assist you in any way please contact either Mr. James H. Lecky or Mr. Dana J. Seagars of my staff at (213) 548-2518.

Sincerely yours,

Floyd S. Anders, Jr.
Acting Regional Director

24.0

RESPONSES TO COMMENTS FROM
U. S. DEPARTMENT OF COMMERCE -
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

24.1 Section 7 Consultation Reference

The information concerning the biological opinion resulting from the Section 7 consultation is appreciated. The independent analyses conducted for the EIR/EA also support this opinion.

24.2 Impacts of Oil and Gas Development on the California Gray Whale

NOAA's suggestion has been communicated to the Los Angeles office of the United States Geological Survey (USGS). The USGS is amenable to working with NOAA in conducting studies on the California gray whale and is willing to work with the operator to facilitate NOAA's conducting of such studies. USGS recommends that a letter be drafted from the NOAA regional conservation manager or his designated representative to the USGS Conservation Manager, Pacific OCS area, requesting an informal meeting between NOAA, USGS, and Union to explore the matter in greater detail.

24.3 Marine Mammals, Missing Information

The missing information concerning marine mammals is provided below.

...seasons. The data reflect relative abundances of the species and, in addition, rookeries and haul out grounds within the SCB are described.

Daugherty (1966) listed 32 species of marine mammals that have been recorded within the Santa Barbara Channel and around the Channel Islands. Within the project region, principal species of marine mammals expected to occur include the California sea lion, Dall's porpoise, Minke whale, and California grey whale (BLM, 1978). The seasonal abundance of the marine mammals within the region is discussed below.

Spring months (April through June)

The major concentration of pinnipeds (seals and sea lions) is on the Channel Islands. The California sea lion is common on San Miguel Island, while Dall's porpoises, Pacific whitesided dolphins and northern right whale dolphins were present in relatively low numbers in the waters offshore the Channel Islands.

Summer months (July through September)

The number of individuals and diversity of species in offshore waters in the Santa Barbara Channel is higher during the summer months. Within the project region, concentrations of pinnipeds are approximately 2.6 per square mile (1/km^2) (BLM, 1978). Greater numbers of baleen and toothed whales occur offshore the Channel Islands.

Fall months (October through December)

The number of cetaceans (whales and porpoises) in the Santa Barbara Channel is greatest during these months (BLM, 1978). The California grey whale is common in the project region during its annual southern migration. Pinnipeds utilize an area up to 30 miles (50 km) offshore the Channel Islands for feeding activities and were observed in numbers as high as 26 individuals per square mile (10/km^2).

State of California

Memorandum

To : Jim Burns, Project Coordination
Resources Agency

Date : July 14, 1980

Subject: Comments on Union Oil Company's Platform Gina and Platform Gilda Project

From : Air Resources Board
Harmon Wong-Woo, Chief
Stationary Source Control Division

Introduction

Union proposes to develop two oil fields in OCS waters off Ventura County. One drilling and production platform will be placed in each field. Platform Gina will be located 4.5 miles southwest of Port Hueneme, in 95 feet of water, while Platform Gilda will be located 10 miles west of Oxnard, in 210 feet of water. Pipeline systems will run from the platforms to a new onshore treating facility. Oil, water, and natural gas will be piped from each platform to the onshore facility, where water will be separated and returned by pipeline to the platforms for reinjection. Natural gas will be separated, cleaned, and routed into the existing Southern California Gas Company pipeline network in the area. Oil will be routed into existing pipeline facilities and transported to refineries in the Los Angeles area.

Plans call for six production wells and six water injection wells for Platform Gina, with three well slots held in reserve. Platform Gina is expected to produce a maximum of 6,450 bbl/day of 15.5 to 16.0° API gravity crude, with a gas-oil ratio of 200 cubic feet per barrel of oil. Submersible electric pumps will be used to pump oil from the wells to the onshore facility, and no separation of the gas, oil, and water are planned at the platform. A separate pipeline will carry the separated water from the onshore facility to the platform for reinjection. For the first three years of production, this returned water will be supplemented by seawater for injection purposes. A single drilling rig will be used during the development phase. For the production phase, most power will be supplied by an electrical cable running from an onshore substation to the platform.

An expected 40 production wells and 10 injection wells will be drilled into the Repetto Formation from Platform Gilda. A maximum of 30 additional wells will be drilled into the Monterey Formation (deeper than the Repetto), and 10 well slots will be held in reserve for use by Chevron to develop potential reserves in Chevron's adjacent lease to the east. Maximum production is expected to be 18,000 bbl/day of 16 to 20° API gravity crude from the Repetto Formation, with a gas-oil ratio of about 400. Peak production from the Monterey Formation may be as high as 8,000 bbl/day, with a gas-oil ratio of 1,000.

At Platform Gilda, production will first pass through a separation unit for initial separation of gas from the crude oil/water stream. The oil will then flow to a shipping surge tank, where it will be routed to the onshore processing

facility. The separated gas will be dehydrated first before being routed to the onshore facility. After five years of production, the water content of the produced fluids should be sufficient to require gross oil/water separation at the platform. The water separated on the platform will then be treated and injected into the Repetto Formation without going to the onshore facility. Gas produced from the Monterey Formation will be cleaned of H_2S (if necessary) on the platform and reinjected into the same formation to achieve maximum recovery of reserves. Two drilling rigs will be used during the development stage. Most power during the production phase will be provided by an electrical cable from an onshore substation.

The onshore facility is to be located next to Southern California Edison's Mandalay Generating Station. Alternative sites for this facility include a site just east of Mandalay, the Union Oil Marine Terminal at the Ventura Marina, and Ormond Beach. The onshore equipment are identical for all sites, except for a booster station for the Marine Terminal and one of the Ormond Beach options, and two booster stations for the other Ormond Beach option. The booster stations would pump and heat the produced fluids, and compress the produced gas. At the onshore facility, a three-phase separator would separate the oil, gas, and water. The oil would flow to a heater treater, where additional water would be separated from the oil. The oil would then pass on to a free water knockout vessel for further heating and additional separation. Water from the heater treater will be treated in an induced gas floatation cell to further separate the oil from the water.

The principal sources of emissions will be combustion related emissions from the diesel powered equipment, boats, supply trucks, employee transportation, and fugitive hydrocarbon emissions from valves, pumps, and compressors. If required, a Stretford unit will remove H_2S from the Monterey gas. Two gas turbines, using natural gas as fuel, may be used to inject gas into the Monterey Formation. The onshore facility and booster stations will use natural gas for heating purposes.

Production is expected to continue for approximately 20 years before abandonment.

General Comments

25.1 The draft states or implies several times that the emissions for the project are relatively low, and that the project will thus not have a significant impact on air quality. These statements are incorrect. Moreover, even if the emissions were relatively low, the draft should have pointed out that the cumulative impact of the project emissions, in conjunction with emissions from other OCS sources are substantial. Any increase in emissions in a nonattainment area such as Ventura County is significant, as this increase will exacerbate existing violations.

25.2 The draft should have also described existing air quality in Ventura County in more detail. The highest concentrations for the most recent years should have been listed, along with a comparison of these concentrations with the applicable federal and state ambient air quality standards.

25.3 The draft states that, even though Union claims that all oil will be transported from the onshore facility to the Los Angeles area by pipeline, this would only

25.3 (cont'd) occur if pipeline throughput from other production declines substantially or the pipeline capacity is expanded. It is not clear whether either of these two events will occur. If neither occurs, then the oil would probably be loaded onto tankers from Union's marine terminal in Ventura for shipment to refineries. The draft should have emphasized that this method of transportation could result in huge increases in hydrocarbon emissions for the project, and would also substantially increase emissions of oxides of nitrogen, sulfur oxides, and particulate matter.

25.4 There are also several statements concerning the insignificance of temporary emissions in the draft which could be misleading. The draft should have emphasized that temporary emissions can adversely affect short-term standards. In addition, the draft should not have stated that the impact from temporary emissions is less than the impact from long-term emissions. The impact should be a function of the emission rate. The duration of these emissions will affect the duration of the impact, but should not affect the magnitude of the maximum potential impact.

Specific Comments

25.5 1. On page 3.2-7, it is stated that both SCE and PG&E have existing gas pipeline distribution systems in the vicinity of the proposed onshore treating facility site. This statement should be corrected to indicate that Southern California Gas Company (SCG) and its parent company, Pacific Lighting Service Company (PLSC) both have nearby pipeline distribution systems.

25.6 2. On page 3.5-6, the NO_x emissions of 17.4 pounds per day for Platform Gilda - Repetto Formation production should be corrected to 174 pounds per day.

25.7 3. On page 4.2-4, note b, the statement that emissions of nitrogen oxides are listed as "nitrogen oxide" should be corrected to indicate that emissions of nitrogen oxides are listed as nitrogen dioxide.

25.8 4. On page 4.2-29, the draft states that the project will not have a significant impact on air quality because emissions are less than that required for mitigation by the applicable air quality regulations. This statement is incorrect. The emission levels found in the air quality regulations are generally determined by administrative constraints, and do not indicate that emissions below these levels are insignificant. In a nonattainment area such as Ventura County, any increase in emissions can exacerbate existing violations, and thus is considered significant. Moreover, we have analyzed the Department of Interior air quality regulations for OCS oil and gas production and have found that these regulations require little or no mitigation for projects that not only significantly, but substantially impact onshore areas (see attached Comments on Lease Sale #53).

25.9 5. Again on page 4.2-29, the draft states that construction emissions will not cause significant long-term, adverse, air quality impacts. This statement should be clarified by indicating that construction emissions could cause significant adverse impacts, although such impacts would not be long-term. Short-term impacts are important, since many air quality standards are for short (one to 24-hours) averaging time periods.

25.10 6. Again on page 4.2-29, the draft states that drilling and production opera-

25.10 (cont'd) tions have a greater potential to impact air quality because such operations are long-term. This statement should be clarified. Impact is generally understood to mean ground-level pollutant concentration. Thus, impact is determined by emission rates, locations of sources, and meteorological and topographical phenomenon, not the duration of the emissions. The duration of emissions will determine how long an impact occurs, or will increase the probability that a given impact will occur, but will not affect the maximum potential short-term impact.

25.11 7. The modeling discussed on pages 4.2-29 through 4.2-35 uses several questionable assumptions which could result in significantly underestimating onshore impacts. The turbulent structure over water is entirely different than that over a land surface due to the differences in the thermal properties of water and the land surface. Previous studies made by Dames & Moore* for Exxon recognized this problem and modified the land turbulent parameters in their modeling analysis to reflect this difference. These modifications result in substantially increased onshore impacts.

In addition, the modeling analysis should have investigated the impact for an onshore flow situation where pollutants are injected offshore into a relatively stable atmosphere, with fumigation occuring at the shoreline. This situation could result in substantially greater concentrations than those presented in the draft (see attached Comments on Lease Sale #53).

25.12 8. On page 4.2-34, the statement that the modeled concentrations are below EPA's de minimis levels and thus are not significant may be in error, since the modeling used in the draft was not a "worst case" analysis (see comment 7 above). Moreover, even if the "worst case" concentrations are below EPA's de minimis levels, this situation would not automatically imply that such emissions or their impact are insignificant. As stated previously, any increase in emissions in an area which is exceeding air quality standards is significant, regardless of EPA proclamations. It should also be noted that the de minimis levels do not take into account the role of NO_x emissions as a precursor to oxidant, nor do they take into account the role of hydrocarbons, NO_x, and SO_x emissions as precursors to particulate matter. In addition, the de minimis levels are listed in tons per year, and thus do not adequately protect short-term standards if sources are intermittent in nature rather than continuous.

25.13 9. Again on page 4.2-34, the draft should have pointed out that EKMA is a relatively crude model that was designed to determine the maximum downwind oxidant concentration from an urban plume of NO_x and hydrocarbons, and the changes that would take place in the downwind area if substantial uniform changes are made in emissions within the urban area. EKMA is not designed to determine the impact of individual sources, and any quantitative results from using EKMA in this manner should be viewed with a great deal of caution.

25.14 10. On page 4.11-1, the draft indicates that the onshore treating facility and

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*Dames & Moore, 1979: "Air Quality Impact Assessment - Petroleum Operations - Hondo Field, Santa Ynez Unit - Santa Barbara Channel, Offshore California - For Exxon Co. U.S.A." Job No. 08837-027-01. Santa Barbara, CA, Sept. 29, 1979.

25.14 (cont'd) pipelines are designed to handle crude oil and gas volumes that are substantially greater than the maximum volumes from the two platforms in question. However, the draft focuses exclusively on the impact from the two platforms only, and does not discuss the impact of the onshore facility operating at maximum capacity. It is not clear whether a separate EIR would be required if throughputs are increased, and thus it appears as though the draft should have considered the impact of the pipelines and onshore facility operating at maximum capacity.

25.15 11. On pages 7.0-3 and 7.0-4, the draft repeats statements made on page 4.2-29 concerning significance and temporary emission sources. Comments 4 and 5 above apply to these statements.

25.16 12. On page 8.0-6, Table 8.0-1, listing the potential cumulative air quality effects of the project, rates the offshore sources as "low" and the onshore sources as "moderate". These ratings appear highly inconsistent when air quality standards for several pollutants are violated in Ventura County, and the emissions from the offshore facilities are substantially greater than the onshore facilities. Although the offshore facilities are farther from populated regions than the onshore facility, this situation should have little or nothing to do with their ratings, as virtually all emissions blow onshore (see attached Comments on Lease Sale #53).

25.17 13. On page 8.1-1 and 8.1-7, in the calculation of employee transportation emissions, it appears to be more reasonable to assume that employees working continuously for 14 or 35 days would not leave their vehicles in a parking lot for this length of time, as assumed in the draft, but instead would be driven to and be picked up at work, resulting in a doubling of emissions from this source.

If you have any questions, or if we can be of further assistance, please do not hesitate to call on Don Koeberlein of my staff at (916) 322-9335.

cc: State Clearinghouse
Ralph J. Steele, City of Oxnard-Planning Department
Dr. Bruce Wales, Dames & Moore

25.0

RESPONSES TO COMMENTS FROM
STATE OF CALIFORNIA - AIR RESOURCES BOARD

25.1 Cumulative Air Quality Impacts

The magnitude of the atmospheric emissions for this project and the significance of their associated impacts on air quality, including impacts on a non-attainment area for some pollutants such as Ventura County, are discussed in the response to comment 25.8. Although the air impacts of this project are minor, the cumulative impact of this project, taken in conjunction with emissions from other proposed offshore sources, could be substantial. This impact would depend on the location and timing of other projects and the degree of air pollution control mitigation applied.

25.2 Existing Air Quality

Existing air quality in Ventura County is discussed in Section 12.2.2.3 of the EIR/EA. Highest concentrations for the most recent years for which data were available at the time the report was written were listed and compared to applicable state and federal ambient air quality standards.

25.3 Torrey Pipeline System

All oil produced from Platforms Gina and Gilda would be shipped by pipeline to the southern California area. Union plans to increase the capacity of the existing Torrey pipeline system by installation of additional pumping capacity at existing pump stations and by the installation of an additional pump station. Modification of the pipeline system is considered a separate

project and would undergo independent environmental review, as appropriate. For additional details, see response to Ventura County Air Pollution Control District comment number 6.1.

25.4 Temporary Emissions

Please see responses to comment numbers 25.9 and 25.10 for response to this comment.

25.5 Gas Pipeline Distribution Systems

Currently, the natural gas pipelines nearest the proposed Mandalay Beach onshore treating facility site are those owned by the Southern California Edison Company (SCE) and the Pacific Gas and Electric Company (PGandE). In addition, the Southern California Gas Company (SCG) has an existing natural gas line in the general area. However, Union has indicated that the natural gas produced by this project would probably to sold to SCE or PGandE through their existing pipelines.

25.6 NO_x Emissions

The NO_x emission rate on page 3.5-6 was a typographical error. It should read 174.0 pounds per day rather than 17.4 pounds per day.

25.7 Nitrogen Oxide/Nitrogen Dioxide

A typographical error was made in Footnote b on page 4.2-4. The footnote should read "nitrogen oxides expressed as nitrogen dioxide."

25.8 Significant Impact on Ambient Air Quality

On page 4.2-29 of the EIR/EA, it is stated that "atmospheric emissions from the proposed and alternative project configurations would not have a significant impact on ambient air quality." This determination was made by comparing the calculated emissions with the applicable air quality

regulations. In all cases, emissions were either offset or were below the level warranting mitigation by the regulating agency. Notwithstanding this or the CARB's analysis of the DOI air quality regulations as presented in the OCS Lease Sale No. 53 Draft EIS, the air quality impacts of this project were analyzed by modeling both offshore and onshore sources under "worst case" conditions (also see response to comment number 25.11). Modeled concentrations do not exceed concentrations given in EPA's de minimis guidelines and are thus considered insignificant.

Within the context of "significance" as it is defined and interpreted in the USEPA (44 FR 51924) and the DOI (45 FR 15128) air quality regulations, the statement that the proposed project would not have a significant impact on air quality is correct. In the preamble to the 5 September 1979 PSD regulations (44 FR 51938) reference is made to de minimis emissions guidelines. EPA believes that these de minimis guidelines are justified by both the associated insignificant air quality impacts and administrative necessity. These de minimis guidelines are a criterion by which significant air quality impacts are determined.

It is recognized that any increase in air emissions within a non-attainment area could exacerbate the air quality conditions to a certain degree. The Ventura County APCD new source review regulations (Rule 26.3A2) account for limited growth in non-attainment areas through application of an emissions allocation plan. This plan recognizes and allows for a limited amount of air emissions increase without corresponding emissions offsets in non-attainment areas. This emissions allocation plan would apply to the proposed project's onshore air emissions.

25.9 Construction Emissions

On page 4.2-29, the EIR/EA states that atmospheric emissions occurring during construction would not cause significant long-term adverse impacts on ambient air quality. The CARB is correct in its assertion that although construction emissions would not cause long-term adverse impacts, short-term adverse impacts could occur. However, short-term adverse impacts resulting from construction emissions associated with this project would be very localized and short-lived since most heavy construction activity would occur offshore.

25.10 Drilling and Production Emissions

The statement on page 4.2-29 in the EIR/EA concerning drilling and production operations having a greater potential to impact air quality because such operations are long-term does need some clarification. The emissions that would occur during drilling and production operations have a greater potential to impact long-term air quality because of the duration (greater than one year) of their occurrence. It is true that air quality impact is not determined by the duration of the emissions but by emission rates and other factors such as terrain and meteorology. In the EIR/EA, it was intended that drilling and production emissions should be considered in relation to long-term air quality impacts and construction emissions considered in relation to short-term impacts because of the duration of the various operations.

25.11 Over-Water Modeling

The over-water modeling techniques applied by Dames & Moore for Exxon were not applied in the EIR/EA because preliminary modeling with conventional methods indicated relatively low maximum concentrations. Furthermore, onshore sources, which are not subject to over-water dispersion properties, contributed the major portion of these concentrations as

mentioned in the report. Because of these low concentrations, the effort required to modify the Dames & Moore over-water dispersion model to accept both offshore and onshore sources was not considered justified based on the anticipated changes in calculated concentrations. The modification of a conventional model such as TEM to employ the over-water dispersion techniques used for Exxon requires considerably more effort than simply multiplying the Pasquill-Gifford dispersion coefficients by a constant factor as was apparently done for the CARB Comments on OCS Lease Sale No. 53.

Estimates of concentrations which would have resulted by using over-water dispersion techniques are most appropriately discussed in terms of NO_2 concentrations because these concentrations were much higher than for the other pollutants modeled. As mentioned in the EIR/EA, the maximum NO_2 concentration was 28 $\mu g/m^3$ which was composed of 27 $\mu g/m^3$ due to the onshore sources and 1 $\mu g/m^3$ due to the offshore sources. This concentration was calculated under neutral (Class D) stability conditions with a wind speed of 3 m/sec and wind direction parallel to a line connecting Platform Gilda and the onshore treating facility. The over-water dispersion techniques used for Exxon were applied to the offshore sources with these meteorological conditions. The resulting concentration at the location where 28 $\mu g/m^3$ was calculated was 5 $\mu g/m^3$ due to the offshore sources alone. This indicates a maximum concentration of 32 $\mu g/m^3$ (27 $\mu g/m^3$ from onshore sources plus 5 $\mu g/m^3$ from offshore sources). This increase of 4 $\mu g/m^3$ would not alter the conclusions reached in the report regarding the 1-hour State NO_2 standard. Calculations using these techniques with other meteorological conditions indicate that the onshore sources remain the dominant contributors and that total concentrations would be less than 32 $\mu g/m^3$.

Regarding the effect of using over-water dispersion techniques when calculating annual average concentrations, the following comments are appropriate: (1) the contribution of offshore sources to the annual concentrations reported is conservatively estimated at 0.1 $\mu g/m^3$ or less. This estimate is based on an examination of the concentration pattern indicated by CDM output at locations removed by a reasonable distance from the onshore sources; (2) experience gained in evaluating Exxon's emissions using both over-water and conventional dispersion techniques indicated very little difference between concentrations calculated using both techniques; and, (3) therefore, annual concentrations calculated with the over-water techniques would not be expected to differ (within round-off error) from concentrations reported in the EIR/EA.

The methods used for Exxon employ a land-sea turbulence interface and separate stability classes for offshore and onshore areas. The phenomenon of shoreline fumigation is considered in the over-water techniques by assuming this land-sea turbulence interface. A plume which has crossed this interface from sea to land begins to disperse at a rate commensurate with over-land turbulence and stability conditions. This technique is explained in Appendix C of the referenced report for Exxon.

25.12 EPA de minimis Levels

The point is made in this comment that the "worst case" modeling approach was not used to determine air quality impacts associated with this project because the effects of over-water transport were omitted. The results of applying over-water transport techniques are discussed in response number 25.11 and the results do not change the conclusions presented in the EIR/EA. Response number 25.8 addresses the fact that the project is located in a non-attainment area for some

pollutants. The role of NO_x emissions as a precursor to oxidant was assessed by photochemical oxidant modeling techniques in the EIR/EA. The role of hydrocarbons, NO_x, and SO_x emissions as precursors to particulate matter is the subject of active research in academic circles at the present time. However, the contribution of these processes to suspended particulate matter exceedances in Ventura County is obviously minor. Such exceedances result primarily from wind blown dust associated with natural sources and agricultural operations, as well as sea salt aerosol. The air emissions associated with drilling and production operations are continuous, not intermittent; thus, comparisons to de minimis levels should be relevant and valid.

25.13 EKMA Modeling

The EKMA approach is admittedly a simple one which is best applied to uniform changes in NO_x and RHC emissions within an urban area. The point to be made is that ambient increases in NO_x and RHC concentrations for this project are small and their chemical interaction is not expected to produce perceptible increases in ozone concentrations. The NO_2 and RHC concentrations needed to make this assessment are not the maximum calculated concentrations because these occur a short distance from the emissions sources (several minutes travel time) before most of the photochemical conversion to ozone could occur. Under meteorological conditions conducive to photochemical formation of ozone, NO_2 concentrations at 30 minutes travel time from the emissions sources are only about 1 $\mu g/m^3$ (0.0005 ppm) or one-fifth of one percent of the State 1-hour NO_2 standard. Project-related RHC concentrations are less than one-tenth of NO_2 concentrations. Concentrations of this magnitude result in almost imperceptible ozone concentration differences. EKMA was used merely as a screening technique to demonstrate the relative magnitude of the ozone

impact, and the limitations of using it in this fashion were considered.

25.14 Onshore Treating Facility Maximum Capacity

The EIR/EA states that the proposed onshore treating facility can be expanded to process oil and gas flow rates exceeding those from the proposed project. However, this expansion would require additional equipment that is not included as part of the current facility design. The air quality impact of any additional equipment would be reviewed by the Ventura County APCD and the CARB before it could be installed. The air quality impacts of all equipment currently planned for use in this project were evaluated in the EIR/EA assuming the equipment was operating at maximum capacity.

25.15 Emission Sources

See responses to CARB comment numbers 25.8 and 25.9.

25.16 Cumulative Air Quality Impacts

Table 8.0-1 on page 8.0-6 of the EIR/EA does rate the potential cumulative air quality effects of the project as "low" for offshore sources and "moderate" for onshore sources. Modeling results for NO_x (discussed in the response to comment 25.8), which were higher impacts than other pollutants for this project, show the relative contribution to air quality impacts of both onshore and offshore sources. These modeling results show that the onshore emission sources cause the major portion of potential air quality impacts. Therefore, their cumulative air quality effect would be relatively higher than the offshore sources.

25.17 Employee Transport

Use of the CARB recommended assumption may or may not be valid. Its use in calculating the emissions associated with employee transport would double the emission rates shown in the EIR/EA for this category. This change would increase the overall construction emission rates for the proposed project by less than 1 percent. This would not significantly alter the conclusions stated in the EIR/EA.

July 2, 1980

Planning Department
City of Oxnard
305 West Third Street
Oxnard, California 93030

Re: EIR-EA Union Oil Company-Gina and Gilda Project EIR 78-19

Gentlemen:

26.1 On page 3.6-7, under the heading of Personnel Safety, reference is made to crew boats that could reach the platform within an hour in case of accident or injury. Also, ambulance service would be about 2 hours away. Is there an alternative that could provide qualified medical help more quickly, if needed? Reference is made to the use of helicopter service to a local hospital. Is there a heli-pad on the platform? How long would it take to reach a local hospital by helicopter?

Can U.S. Government records be secured showing the frequency of accidents and illness on other platforms?

I would appreciate it if these questions could be answered in the final EIR/EA.

Thank you.

Sincerely,

Selma Dressler
Planning Commissioner

SD:zcs

26.0

RESPONSE TO COMMENT FROM
CITY OF OXNARD - PLANNING COMMISSIONER

26.1 Personnel Safety

Injured personnel could be transported to a local hospital by helicopter if the need should arise. Each of the proposed platforms is equipped with a helicopter landing pad. St. John's Hospital in Oxnard and General Hospital of Ventura both offer full-time emergency medical services and both have adequate space available for helicopter landing (refer to EIR/EA Section 4.7.1.2.1).

The time required to evacuate an injured person to a local hospital by helicopter from either of the platforms (Oxnard Airport to the platform and then to a hospital) has been estimated by a local helicopter charter service to be 15 minutes for an accident occurring during normal daytime hours and a maximum of 30 to 40 minutes for nighttime hours (Fouts, 1980). The speed of their helicopters is in the range 115-125 miles per hour, so the time in transit would be relatively short. Most of the round-trip flight time would be consumed in mobilizing a helicopter.

The U.S. Geological Survey maintains records of personnel injury accidents on OCS platforms in the form of individual accident reports. However, these have not been compiled into statistical summaries (Kreppert, 1980). Union Oil Company has compiled the following tabulation of lost-time accidents on Platforms A, B, and C based on data through 1 January 1980 (Gillen, 1980):

	PLATFORM		
	A	B	C
Number of Union employees	13	13	11
Date of last lost-time accident	3-13-74	5-22-74	(None)
Days since last lost-time accident	2,118	2,049	975
Man-hours since last lost-time accident	156,105	150,360	54,250

The total number of man-hours for all three platforms compiled since the last lost-time accident occurrence is 405,665, equivalent to about 200 man-years.

References:

Fouts, J., 1980, Condor Helicopters & Aviation, Inc., personal communication, 4 September

Gillen, R., 1980, Union Oil Company of California, personal communication, 27 August

Kreppert, E., 1980, United States Geological Survey, personal communication, 20 August

State of California, Edmund G. Brown Jr., Governor

California Coastal Commission
631 Howard Street, 4th floor
San Francisco, California 94105
(415) 543-8555

July 8, 1980

City of Oxnard Planning Department
305 West Third Street
Oxnard, CA 90303

Attention: Mr. Ralph J. Steele, Project Coordinator

Subject: Review Comments On The Draft EIR/EA 78-19 Union Oil Platform Guilda And Platform Gina Project.

Dear Mr. Steele:

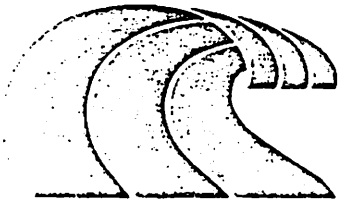
We are pleased to have received the Draft EIR/EA 78-19 on the Union Oil Platform Gilda and Gina project. Regional and State staffs have reviewed the document and wish to offer the following comments and suggestions, further elaborated in attachments. It must be remembered that these comments have not been reviewed by the Regional or State Commissions.

The EIR/EA 78-19 generally provides an adequate environmental data base and analysis on the proposed project. However, there are several areas where further detailed information and impact review appears necessary for full analysis of Coastal Act considerations and policies.

27.1 (1) Under the Public Policy section, there should be more discussion of the Local Coastal Program documents of Ventura County, Ventura City, and the City of Oxnard. For example, to the extent possible there should be detailed discussion on the proposed LCP designations for the configurations based on draft energy issue papers and Land Use Plans.

27.2 (2) Throughout the report's impact analysis on the primary alternatives, it was difficult to differentiate the Union Oil Marine Terminal Site from the proposed Mandalay or East Mandalay configurations as far as having greater potential adverse impacts.

27.3 (3) Due to the consolidation potential of the secondary alternatives, especially use of the existing Rincon processing facility, they should have been analyzed in greater detail for their potential advantages over any of the primary alternatives which were considered in significantly more detail.



27.4 (4) An alternative format addressing Coastal Act policies should have been utilized to gain a greater insight into the consistency of the configurations (including the secondary alternatives) with the Coastal Act of 1976. For example, the chart (Table 4.12-1) should be broader in scope to include the specific wording of each policy, a specific indication of consistency with each policy and not merely a description statement, and relevant mitigations to Coastal Act policy.

We would like to submit the attached list of detailed comments to be considered for incorporation into the final EIR/EA. If you have any further questions, please call Billie Blanchard at (805) 963-6871.

MICHAEL L. FISCHER
Executive Director
California Coastal Commission

CARL C. HETRICK
Executive Director
South Central Regional Commission

Attachment

South Central Coast Region
Staff Response to Draft EIR/EA
78-19 Union Oil Platform Gilda
and Gina Projects

2.0 Executive Summary

27.5 (1) In order to increase an understanding of all alternatives, there should be a table or chart similar to Table 2.0-3 or 2.0-4 on the potential Production Impacts of the other proposed alternative configurations.

27.6 (2) Page 2.0-20, 2.2.3 paragraph 2 - Throughout the report's impact analysis, it was difficult to differentiate the Union Oil Marine Terminal site from the proposed Mandalay or East Mandalay configurations as having greater potential adverse impacts. For example, the Mandalay configuration would be located on foredune utilized by such endangered species as the California Brown Pelican and the Least Tern. The Union Oil Terminal site is covered with asphalt located within the boundaries of an existing Union Oil Company terminal and storage facility.

Further, under 4.0 Environmental Consequences, the Union Oil Terminal Configuration has associated "no significant adverse impacts" on many environmental issues (i.e., 4.1.3.1.4, 4.5.6.1, 4.6.1.3.1, 4.6.5.3, 7.2.8)

3.2 Project Facilities

27.7 (1) Figure 3.2-3 In order to facilitate an understanding of all proposed alternative configurations, there should be an aerial view of all proposed sites similar to Figure 3.2-3.

4.2.2 Environmental Acoustics

27.8 (1) P.4.2-43 and 48 Onshore Treating Facility - With the development of the Mandaly Park north of Fifth Street, the nearest noise-sensitive receptors would not be the Oxnard Shores Mobile Home Park.

4.4 Marine Biology

27.9 (1) P.4.4-30 Marine Birds - The endangered California Brown Pelican and Least Tern inhabit this area. With a moderate and major oil spill it is questionable that this would represent only a significant short-term impact on these already endangered species.

27.10 (2) P.4.4-33, 4.4.6.5 Potential Impacts on Sensitive Habitats and Rare or Endangered Speicies Paragraph 1 - In reference to your p. 12.3-28 12.3.7.1.1 the Santa Clara River Mouth should also be considered a sensitive habitat. Paragraph 2 - Please refer to my comments under page 4.4-30 Marine Birds.

4.5 Terresterial Biology

27.11 (1) P.4.5-17 4.5.6.1 Normal Project Activities - The statement, "Implementation of the proposed project (either proposed Mandalay configuration or one of the Alternatives) would not result in significant long-term impacts on terrestrial areas within the project area that may be designated as sensitive biological habitat," is questionable. The Mandalay onshore facility would be located on foredune utilized by the endangered Brown Pelican and Least Tern.

4.6 Land Use

27.12 (1) P.4.6-1 and 4.6-22 Onshore Treating Facility - The statement, "However, the site itself is not part of the area planned for park development," is questionable. The City of Oxnard Draft LCP Land Use Plan has designated the area "Recreation" based upon the park proposal.

27.13 (2) P.4.6-14 through 22 and Page 12.6-6, 4.6.2 and 12.6.2 Public Policy along with the local permit and plan discussion, four additional items should be included for the final EIR/EA. The City of Oxnard LCP Land Use Plan designations approved by City Council which will be submitted within the next few weeks for the 90-day Regional certification should be discussed. Secondly, the permit procedures for the State Coastal Commission should be addressed in this section. There should be an elaboration on the Ventura City and Ventura County LCP processes and proposals (i.e., the issue papers on energy, etc.).

4.11 Consolidation

27.14 (1) P.4.11-1 - This section discusses consolidation with Shell's future development, Chevron's Platform Grace, and/or with other future production projects. This consolidation discussion is necessary and encouraged under the Coastal Act of 1976 (i.e., section 30260). However, the secondary alternatives should also be considered as consolidation proposals and should be discussed under this section with much greater detail and feasibility analysis, along with the three items on Page 4.11-1.

4.12 Coastal Act Considerations

27.15 (1) Page 4.12-3 Table 4.12-1 - The particular Coastal Act policies should be fully stated on the chart or attached adjacent to the chart in order to easily compare the statements with the specific wording of each relevant policy.

27.16 The table does not provide a suitable summary wording to compare the consistency of each alternative configuration with each relevant Coastal Act policy. In other words, given the description statement it is difficult to determine the alternative which is most consistent with Coastal Act policy. It would seem that this should be the major purpose of the chart.

27.17 In line with this Consistency question with the Coastal Act of 1976, this table or another should tabulate mitigations relevant to Coastal Act policy porposed by the applicant and/or government agency.

27.18 Page 4.12-5 - The statements made on this page are confusing since no Coastal Act policies are referenced on the opposite side of the page.

27.19 Page 4.12-4 - It is questionable that section 30230 of the Coastal Act is not applicable to these configurations. The section reads:

> "Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine

27.19 (cont'd) environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes."

As an example on Page 4.4-3 4.4.1.1.2 Offshore Pipelines and Power Cables, the first sentence reads, "Impacts on the marine biota that could potentially occur during installation of the offshore pipelines and power cable from Platform Gina would result from: disturbance and displacement of sedimentary substrate and associated biota during jetting, burial, and implacement of the pipelines and cable; and discharge of hydrostatic test water.

The chart provides only statements under Platforms for Section 30230. Pipeline considerations should be placed under the configuration columns or a new column.

5.0 Mitigation Measures

27.20 (1) Page 5.0-6 5.2.2 Environmental Accoustics - The mitigation measures do not discuss the walls to be constructed around the possible onshore treatment facility particularly the one located at Mandalay where there has been discussion on the park and the Oxnard Shores Mobile home park.

27.21 (2) Page 5.0-8 5.6 Land and Water Use paragraph 3 - It is questionable whether a plain block wall without adjacent landscaping is preferable to one with landscaping. (all configurations)

7.3 Secondary Alternatives

27.22 (1) Page 7.0-19 and 20 7.3.1 Alternative 1, 2 and 3 - Alternatives 1, 2 and 3 suggest sending oil and natural gas to the existing Mobile-Rincon facility which are capable of handling the produced fluids associated with the proposed project. There is not sufficient information given under this section to clearly indicate that the costs associated with these differences would be "prohibitive". For example, what are some of the costs associated with developing the Mandalay configuration facilities as opposed to utilizing existing facilities (treatment plant and pipelines) at Mobil-Rincon with the development of additional off-shore facilities?

27.23 In general, pipeline routes drawn for the primary alternatives are chosen for reasons not clear to the reader. For example, the route to the Union Marine Terminal does not have to go under the river bed, but could come in from the ocean at a landfall point further northwest.

27.24 (2) Page 7.0-21 7.3.4. Alternative 4 - The same discussion on Mobile-Rincon alternatives applies to Alternative 4 utilizing the Chevron facilities at Capinteria and Platform Grace OCS P.0217.

27.25 (3) 7.3 Secondary Alternatives- These alternatives should be considered more than just as secondary proposals since they represent consolidation and encourage oil/coastal-dependent facilities to locate or expand within existing sites.

Therefore, the impact/comparison analysis should be considered in much more detail for these alternatives verses the primary alternatives (Mandalay, East Mandalay, Ormond Beach, and Union Oil Marine Terminal). A technical and economic feasibility analysis should be done for at least the Rincon alternative which represents an excellent possibility for consolidation.

27.26 The analytical process described in PRC Section 30260 should have been more fully utilized via the analysis of all the stated primary and secondary alternatives. Section 30260 of the Coastal Act reads as follows:

> "30260. Coastal-dependent industrial facilities shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with this division. However, where new or expanded coastal-dependent industrial facilities cannot feasibly be accommodated consistent with other policies of this division, they may nonetheless be permitted in accordance with this section and Sections 30261 and 30262 if (1) alternative locations are infeasible or more environmentally damaging; (2) to do otherwise would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible."

Add to discussion on alternatives:

27.27 -There is no discussion of why certain alternatives were chosen as primary and others as secondary. Some of the secondary alternatives, notably the Rincon processing facility, appear to offer substantial advantages over the proposed project. The Coastal Commission specifically requested analysis of the Rincon alternative, not adequately done in the Draft EIR. The Rincon facility is presently operating at 20% capacity and could easily handle production from Gilda and Gina.

27.28 -Why do all of the configurations have the same offshore pipeline landfalls and routes? Other routes may be less environmentally damaging, particularly the pipeline landfall to the Union Marine Terminal site. Was any study done to determine the safest, shortest, or most feasible route before these lines were drawn? It does not appear so.

27.29 -No economic or technical feasibility analysis of the alternatives, either primary or secondary appears to have been done. Such an analysis will be necessary for consideration of alternative sites in the Coastal Commission permit review and should be part of the Final.

-In general, there seems to be a bias in the Draft EIR toward the proposed onshore processing facility at Mandalay Dunes. Alternatives, whether primary or secondary, should have been more thoroughly discussed We hope to see this corrected in the Final and would be happy to work with Oxnard and the consultants to make this possible.

BB/ms

RESPONSES TO COMMENTS FROM STATE OF CALIFORNIA - COASTAL COMMISSION

27.1 Local Coastal Programs

The Local Coastal Programs (LCPs) for the County of Ventura, City of Ventura, and City of Oxnard are still in an evolving process of development and subject to changes by the local jurisdictions, South Central Regional Coastal Commission, and California Coastal Commission. Based on these considerations and discussions with the South Central Regional Coastal Commission (Ms. Billie Blanchard, oral communication, 29 August 1980) and the California Coastal Commission (Ms. Mari Gottdiener, oral communication, 2 September 1980), it is not appropriate or meaningful to discuss these LCPs at this time.

27.2 Union Oil Marine Terminal Alternative Configuration Impacts

The comment indicates that "it was difficult to differentiate the Union Oil Marine Terminal Site from the proposed Mandalay or East Mandalay configurations as far as having greater potential adverse impacts." If only potential impacts at onshore treating facility sites were being evaluated, it is true that development at the Union Oil Marine Terminal alternative site would result in less impacts than at the proposed Mandalay or alternative East Mandalay sites. This is because the Union Oil Marine Terminal alternative site is already graded and essentially unvegetated. In contrast, both the proposed Mandalay and alternative East Mandalay sites would require clearing of a natural vegetation cover and grading to prepare the sites. Although the adverse impacts of the latter would be minor in magnitude and significance, they would be greater than those associated with the Union Oil Marine Terminal alternative site preparation activities.

However, evaluation of the proposed project and the primary alternatives requires that the entire onshore system, or "configuration" (treating facility site, pipeline routes, and booster stations if applicable), rather than one element (e.g., treating facility site) of the system be assessed for potential adverse impacts. The Union Oil Marine Terminal alternative configuration differs from the proposed Mandalay and alternative East Mandalay configurations in three important ways:

(1) It would require construction and operation of a booster station. The booster station would be on a 0.7-acre site at the location where the proposed Mandalay onshore treating facility is planned for installation. A booster station is not required for the other two configurations.

(2) Five pipelines would have to be emplaced along the east side of Harbor Boulevard and extend all the way to the Ventura Marina. In contrast, only one pipeline would be needed within the same routing for the other two configurations. Consequently, a wider pipeline corridor with associated construction disturbance impacts would be required for the Union Oil Marine Terminal alternative configuration.

(3) The five pipelines for the Union Oil Marine Terminal alternative configuration probably could not be attached to the Harbor Boulevard bridge and therefore would have to be buried beneath the Santa Clara River bed. The single pipeline associated with the other two configurations would be attached to the Harbor Boulevard bridge, and thereby avoid direct construction impacts on the Santa Clara River bed.

These additional requirements for the Union Oil Marine Terminal alternative configuration would result in potential

adverse impacts on about 31.4 acres of land during construction. In contrast, the comparable acreages for the proposed Mandalay and alternative East Mandalay configurations are 18.0 and 19.5, respectively. Furthermore, energy consumption for the Union Oil Marine Terminal alternative configuration would be 30 percent higher than for either of the other two configurations. Based on these considerations, the Union Oil Marine Terminal configuration was evaluated as having greater potential adverse impacts than the proposed Mandalay and alternative East Mandalay configurations.

27.3 Secondary Alternatives

The California Coastal Commission, South Central Regional Coastal Commission, City of Oxnard, and Union Oil Company have agreed (Dames & Moore letter dated 5 September 1980; South Central Regional Coastal Commission letter dated 17 September 1980; and, City of Oxnard letter dated 23 September 1980) that an additional detailed evaluation of secondary alternatives will be conducted independently of the EIR/EA. The five secondary alternatives include: a direct pipeline route to the Union Oil Marine Terminal; three possible pipeline routings to Mobil-Rincon (direct, via Platform A, and via a tie-in to the Dos Cuadras pipeline system); and, a pipeline routing to Platform Grace for subsequent treating at Chevron-Carpinteria. The details of the scope of work for an engineering feasibility and any other needed related studies (e.g., environmental, Coastal Act consistency determination) will be determined in consultation with the California Coastal Commission and the work completed subsequent to EIR/EA finalization and prior to Union's filing of the Coastal Development Permit application. The studies will be funded by Union and carried out in coordination with the California Coastal Commission.

An economic and technical feasibility study of the five secondary alternatives will be conducted by Hallanger

Engineers for Union in accordance with specifications provided by the California Coastal Commission. Hallanger will be initiating this work immediately upon receipt of a contract that is being sent to them (Ms. Mari Gottdiener, oral communication, 24 September 1980).

These studies would provide additional information needed by the Coastal Commission to complete a Coastal Act consistency determination for the proposed project. The additional information would provide further background to other parties who have expressed an interest in secondary alternatives.

27.4 Coastal Act Analysis

Table 27-1 is a revision of Table 4.12-1 in Volume I of the EIR/EA. This revised table reflects minor editorial modifications discussed with the California Coastal Commission (Ms. Mari Gottdiener, oral communication, 29 August and 2 September 1980) and includes the specific policies from Chapter 3 of the California Coastal Act (also see response to comment number 27.19). Based on the discussions with the California Coastal Commission, two other related matters were clarified:

(1) Determinations of consistency of a proposed project with Coastal Act policies involve interpretations and decisions by Coastal Commission personnel as part of the review and approval process for a Coastal Development Permit application. The latter application cannot be submitted until after the EIR/EA has been certified and all other agencies have issued permits for the proposed project. It is not appropriate for other agencies to make such determinations on behalf of the Coastal Commission. It was agreed that the associated analyses and decisions should not be included in the EIR/EA.

(2) A Coastal Act analysis of secondary alternatives, comparable to that in Table 27-1 for primary alternatives, cannot be completed until after the special studies identified in the response to comment number 27.3 have been conducted. Therefore, it was agreed that the EIR/EA should not address this subject.

27.5 Comparative Evaluation of Production Impacts

A comparison of production impacts for the proposed and primary alternative project configurations is presented in Table 27-2.

27.6 Union Oil Marine Terminal Alternative Configuration Impacts

Please see response to comment number 27.2.

27.7 Aerial View of Alternative Onshore Treating Facility Sites

Figure 3.2-3 shows an aerial view of the proposed Mandalay onshore treating facility site. A conceptual schematic of the layout of proposed facilities overlies the air photo. This schematic is typical of what facilities layouts would be at the primary alternative onshore treating facility sites. Figure 12.5-1 in Section 12.5 (Terrestrial Biology) is an aerial photograph that includes the locations of the proposed and primary alternative onshore treating facility sites. Ground photographs of the proposed and primary onshore treating facility sites are provided in Section 12.6 on Figures 12.6-6 (proposed Mandalay), 12.6-7 (alternative East Mandalay), 12.6-8 (alternative Union Oil Marine Terminal), and 12.6-9 (alternative Ormond Beach).

27.8 Location of Nearest Noise-Sensitive Receptor

Reference to the Oxnard Shores Mobile Home Park as the nearest "noise-sensitive receptor" to the proposed Mandalay and East Mandalay alternative onshore treating facility sites (pages 4.2-43 and 4.2-48) was an oversight. In earlier references (e.g., pages 4.2-37; 4.2-38), it was correctly identified as the nearest noise-sensitive residential receptor.

Sound levels at the planned Mandalay Beach County Park boundaries were afforded less emphasis in the EIR/EA because the Oxnard Shores Mobile Home Park is an existing land use and the Mandalay Beach County Park is only planned. Development of the park may be contingent upon Union's prepayment of lease fees for use of the proposed Mandalay onshore site. Nevertheless, the Commission's point is well taken. Upon development, the Mandalay Beach County Park would replace the Oxnard Shores Mobile Home Park as the closest noise-sensitive receptor. Sound levels at the nearest park property boundaries would be approximately as given for measurement site No. 2 in EIR/EA Section 4.2.2.

27.9 Potential Impacts of an Oil Spill on Endangered Species

The greatest threat to the existence of many rare or endangered species is the continued destruction of their natural habitats as a result of human activities. This is true of the California least tern as its favored breeding locations in sandy areas near estuaries have been destroyed largely by spreading urbanization. In addition to habitat removal, the California brown pelican has suffered the effects of food chain concentration of DDT. Both of these types of effects result from the gradual incremental accumulation of individual impacts continued over long periods of time. In order for a catastrophic event, such as an oil spill, to have significant long-term effects on the California least tern or California brown pelican, it would have to result in elimination of a significant portion of either species' population, or create a substantial disturbance to the species' breeding activities.

The direct effects of an oil spill would be confined to the ocean (and perhaps estuarine) waters, and to land areas below the level of the highest tide that occurred during the spill. Consideration of the biological characteristics of the California least tern and California brown pelican suggests

that the major potential threat to these species from an oil spill would result from contamination of plumage of individuals feeding in waters covered by an oil slick. Such an impact would be likely to affect a limited number of individuals only, and would not be expected to cause a significant reduction in species populations because members of these species typically are dispersed over areas much greater than the extent of an expectable oil spill.

An oil spill would not be expected to have any direct effect on California least tern or California brown pelican breeding activities because their breeding areas are located above the high tide level. Indirect effects could occur, however, as a result of careless cleanup operations. These potential impacts would be prevented by not conducting cleanup activities at principal known breeding sites (Anacapa Island - California brown pelican; Ormond Beach and Santa Clara River mouth - California least tern).

Because some individual California least terns and California brown pelicans could be eliminated by an oil spill, there is a potential for significant short-term impacts on these species (it should be noted that neither species suffered any reported significant impact during the 1969 Santa Barbara Channel oil spill). However, because of the nature of the two species and the nature of potential oil spills, it is not likely that an oil spill would produce a significant long-term effect on either species.

27.10 Potential Impacts on Sensitive Habitats

On page 4.4-33 (Marine Biology section), the following statement is made: "Sensitive marine habitats, <u>such as</u> the Channel Islands and Mugu Lagoon, could be affected by an accidental oil spill." This statement was not meant to be a complete listing of sensitive habitats in the project region. As indicated in Section 12.5.7 (Terrestrial Biology), the Santa

Clara River mouth is considered to be a sensitive habitat. Potential impacts of an accidental oil spill on the river mouth are discussed in Section 4.5.6.2 (Terrestrial Biology) (pages 4.5-19 and 4.5-20).

27.11 Potential Impacts of Normal Project Activities

In the comment, it is implied that the proposed Mandalay site should be considered to be sensitive biological habitat because of its use by the endangered California least tern and California brown pelican. As discussed on pages 4.5-16 and 12.5-24 through 12.5-27, use of the site by these species is restricted to occasional resting, with feeding occurring in nearby aquatic habitats. Such transient activity does not represent significant utilization of the site and, therefore, it is not considered an important criterion for designating the site as sensitive biological habitat. In any case, no significant long-term impact on the site is expected because: during the operational phase, human activity at the site would be very limited and, consequently, little or no disruption of potential resting activities would occur; and, upon termination of the project, the site would be restored as nearly as is practicable to its currently existing condition.

27.12 Onshore Treating Facility Site

The cited statements from the EIR/EA are correct. The proposed treating facility site is <u>not</u> planned for development as part of the Mandalay Beach Park (Ms. Ginny Morton, Ventura County Property Administration Agency; oral communication, August 1980).

The City of Oxnard has, indeed, designated the area "Recreation" in its Draft LCP Land Use Plan. However, Policy 40 of the City's Draft LCP Land Use Plan states that: "The proposed Union Oil Separating Facility may be located in any one of the three (proposed or) alternative sites evaluated in the EIR (the fourth site, at the Union Oil Marine Terminal, is

outside the City of Oxnard's jurisdiction)." Therefore, siting of the onshore treating facility at the Mandalay Beach location would be consistent with the Mandalay Beach Park development plan and the City of Oxnard Draft LCP Land Use Plan.

27.13 Local Coastal Plans

Please see response to comment number 27.1.

27.14 Consolidation With Secondary Alternatives

Please see response to comment number 27.3.

27.15 Coastal Act Analysis Table - Policies

Please see response to comment number 27.4.

27.16 Coastal Act Analysis Table - Policy Consistency

Please see response to comment number 27.4.

27.17 Coastal Act Analysis Table - Mitigations

Please see response to comment number 27.4.

27.18 Missing Information, EIR/EA Table 4.12-1

Portions of EIR/EA page 4.12-5 (the third page of Table 4.12-1) were inadvertently erased during word processing operations. A corrected copy of this page is presented as Table 27-3.

27.19 Consistency of Offshore Pipelines with Coastal Act Policies

The column headings for EIR/EA Table 4.12-1 were not sufficiently descriptive and understandably may have confused some reviewers. The column headings relating to the various project configurations in Table 4.12-1 actually refer to <u>onshore</u> project components (i.e., onshore treating facility, onshore pipelines, and onshore booster stations where applicable). The column labeled 'Platforms' actually deals with all <u>offshore</u> project elements (platforms, offshore pipelines, offshore power cables) and should have been labeled more clearly or footnoted. Relative to the Coastal

Commission's comments, Section 30230 of the Coastal Act is definitely applicable to the offshore pipelines and power cables. Relevant information about offshore pipelines and power cables is presented in EIR/EA Sections 4.3 and 4.4.

27.20 Acoustical Shielding

The block wall to be constructed around the southern and western borders of the proposed Mandalay onshore treating facility site was discussed in the Project Description (page 3.2-4) and also mentioned under land use mitigation measures on page 5.0-8. However, it was omitted from the list of acoustics mitigation measures given in EIR/EA Section 5.2.2 (page 5.0-6), and should be inserted as an acoustics mitigation measure which Union has committed to provide as part of the proposed Platform Gina and Platform Gilda Project.

27.21 Landscaping

The comment indicates a misunderstanding of the proposed mitigation. "A plain block wall without adjacent landscaping" was not recommended for "all configurations." On page 5.0-8, it is stated that: "The block walls surrounding the treating facility (all configurations) and booster stations (Union Oil Marine Terminal and Ormond Beach alternatives) should be pale gray or beige in color. No ornamental landscaping should be introduced <u>at the proposed Mandalay or East Mandalay alternative sites</u> as it would highlight the facility against the natural color of the surrounding dunes." Ornamental landscaping is recommended, however, for the Ormond Beach and Union Oil Marine Terminal alternative sites.

27.22 Mobil-Rincon Secondary Alternative

Please see response to comment number 27.3.

27.23 Pipeline Route Selection

The offshore and onshore pipeline routes for the proposed project and the primary alternatives were selected by Union and the City of Oxnard, based on analyses conducted them. A summary of the reasoning involved is presented below.

PROPOSED MANDALAY CONFIGURATION

In developing a preferred pipeline system (offshore and onshore) routing for the proposed Mandalay configuration, Union considered several criteria. These included: (1) coming ashore in as short a route as possible; (2) avoiding heavily populated or developed areas; (3) avoiding crossing offshore terminal lines and mooring buoys; and (4) avoiding adverse subsea conditions. Based on inhouse data and knowledge of the local area, Union determined that the nearest most acceptable landfall point was at the Mandalay Generating Station area. With this location as a focus, the offshore pipeline routes were then defined in terms of the selection criteria. The onshore pipeline route reflects the most direct way to get from the proposed treating facility location to the Union Oil Marine Terminal with maximum use of rights-of-way adjacent to roads.

ALTERNATIVE EAST MANDALAY CONFIGURATION

The East Mandalay alternative treating facility site location would be directly inshore of that for the proposed Mandalay configuration and on the east side of Harbor Boulevard. Given this locational relationship, it was logical to use the same basic offshore and onshore pipeline routes for this alternative as for the proposed project. Therefore, the selection criteria for this alternative would be the same as for the proposed Mandalay configuration.

ALTERNATIVE UNION OIL MARINE TERMINAL CONFIGURATION

A study by Union of possible pipeline routes to the Union Oil Marine Terminal resulted in the identification of two potential scenarios: (1) a landfall north of the mouth of the Santa Clara

River; or, (2) a landfall south of the mouth of the Santa Clara River.

Crossing the mouth of the Santa Clara River on the north would require almost twice as much offshore pipeline as for the proposed project. The pipelines from Platform Gina would have to parallel the coast at least 1-1/2 miles offshore to avoid interference with existing marine terminals and their mooring systems. The pipelines would have to cross the mouth of the river at least one mile offshore to avoid damage to them during storm flood conditions. Furthermore, a crossing of the Ventura Marina would be required. Union did not consider the costs and potential risks to the environment of this routing to be acceptable.

The shoreline immediately south of the Santa Clara River is all either sensitive biological habitat (e.g., lagoons, McGrath Lake) or developed for recreational use (McGrath State Beach Park). The industrial area at the Mandalay Beach Generating Station was considered the first location south of the river at which a landfall could be made without significant environmental impact. Given this landfall point, the logical routings for the pipelines were considered to be the same as for the proposed Mandalay configuration.

Based on cost and environmental risk considerations, a landfall south of the Santa Clara River mouth was assessed as better than one north of the river. This then dictated the offshore and onshore pipeline routings for the alternative Union Oil Marine Terminal configuration.

ALTERNATIVE ORMOND BEACH CONFIGURATION

The Ormond Beach alternative treating facility site is located in the southern portion of the City of Oxnard in contrast to the "north coast" sites (Mandalay, East Mandalay, Union Oil Marine Terminal). This location dictated one change in

offshore pipeline routing and the identification of two conceptual onshore pipeline routing possibilities.

The landfall at the Mandalay Generating Station area remained the same for the offshore pipelines from Platform Gilda. This represented the closest, least environmentally sensitive shoreline location for a landfall. The onshore routing from this point to the Ormond Beach alternative treating facility site reflected the shortest distance to the site using rights-of-way adjacent to roads and avoiding the Naval Construction Battalion Center. For the Platform Gina offshore pipelines, the routing was governed by a conceptual requirement that the landfall be at the closest shoreline location north of the Hueneme submarine canyon. This landfall was at Silver Strand Beach. The onshore routing from this landfall was governed by use of rights-of-way adjacent to roads and an existing Southern California Edison Company pipeline easement along Ormond Beach.

The City of Oxnard identified two potential conceptual pipeline routings to exit from the Ormond Beach alternative treating facility site. The first was designated as the "urban" route (Option A). This routing reflected the shortest distance to the Union Oil Marine Terminal (where the Torrey pipeline system connection exists) taking into account: (1) maximum use of rights-of-way adjacent to roads; and (2) avoidance of the Naval Construction Battalion Center. The second was designated as the "rural" route (Option B). This routing reflected the shortest distance to the Union Oil Marine Terminal taking into account: (1) maximum use of rights-of-way adjacent to roads; and, (2) avoidance of the urbanized portions of the City of Oxnard.

27.24 Chevron-Carpinteria Secondary Alternative

Please see response to comment number 27.3.

27.25 Secondary Alternatives

Please see response to comment number 27.3.

27.26 Secondary Alternatives - Coastal Act Analysis

Please see responses to comment numbers 27.3 and 27.4.

27.27 Selection of Primary and Secondary Alternatives

In response to the Notice of Preparation (NOP) issued in connection with the proposed project, several agencies identified a number of alternatives to the proposed project. Based on the nature of these inputs, a Request for Proposal (RFP) to prepare the EIR/EA was issued. The RFP identified the East Mandalay, Union Oil Marine Terminal, and Ormond Beach alternatives as requiring special (primary) attention. Other alternatives (e.g., Mobil-Rincon, Chevron Carpinteria, Platform A tie-in, offshore treating, subsea completions) were identified, but without a requirement for evaluation in the same detail as for the primary alternatives. These were subsequently labelled secondary alternatives.

Prior to initiation of EIR/EA work, the City of Oxnard had a scope of work approval study conducted. At that time, the only platform included in the proposed project was Gina. Over 30 agencies were contacted to obtain their concurrence that the level of evaluation for subjects to be addressed in the EIR/EA was appropriate. This procedure resulted in some modifications and additions (e.g., oil spill trajectory analysis) to the original scope of work for the EIR/EA. However, no agency requested that any of the secondary alternatives be evaluated in the same detail as the primary alternatives. Based on verbal inputs and letters of concurrence, a Work Program for completion of the EIR/EA was finalized and subsequently adopted by the City Council on 19 June 1979. An agency orientation

meeting was also held on 27 July 1979 to review the Work Program. No changes in the scope of work for the EIR/EA resulted from the meeting.

Platform Gilda was added to the proposed project on 15 August 1979. Because this new project element had the potential to change agency thinking on what should be an appropriate scope of work for the EIR/EA, the procedures discussed in the preceding paragraph were repeated. The same agencies were contacted to solicit their inputs to a Revised Work Program. The basic agency reaction was that this addition to the project required that more of the same type of studies be conducted; i.e., Platform Gilda should be evaluated in the same detail as Platform Gina. No agency requested that any secondary alternative be evaluated in the same detail as the primary alternatives. Based on verbal inputs and letters of concurrence, a Revised Work Program for completion of the EIR/EA was finalized and subsequently adopted by the City Council on 16 October 1979.

A meeting was also held on 8 November 1979 to obtain citizens' inputs to the EIR/EA scope of work. This resulted in a requirement for an energy balance analysis of the proposed project and the primary alternatives. No interest in a detailed evaluation of secondary alternatives was expressed.

27.28 Offshore Pipeline Route Selection

Please see response to comment 27.23.

27.29 Economic/Technical Feasibility Analyses

Please see response to comment number 27.3.

TABLE 27-1

DIRECTORY OF COASTAL ACT STANDARDS AND RELEVANT EIR/EA INFORMATION
PROPOSED AND PRIMARY ALTERNATIVE PROJECT CONFIGURATIONS
(REVISED)

Standards[1]	Proposed Mandalay Configuration	East Mandalay Alternative Configuration	Union Oil Marine Terminal Alternative Configuration	Ormond Beach Alternative Configuration (Option A)	Ormond Beach Alternative Configuration (Option B)	Platforms and Offshore Pipelines
PUBLIC ACCESS AND RECREATION 30210-30244, as appropriate	The onshore treating facility would be located contiguous with the SCE Mandalay Generating Station between the beach and Harbor Blvd. West Fifth Street is nearby. The site is publically owned adjacent land to the south is planned for beach park use. Prepaid lease fees by Union for the treating facility site would facilitate development of the park (Sections 3.1.3, 4.7.1, 12.6).	The onshore treating facility site would be located on the inland side of Harbor Blvd. within property adjacent to power transmission facilities and the Edison Canal (Sections 3.1.3, 12.6).	The onshore treating facility would be located within the existing Union Oil Marine Terminal facility off Spinnaker Dr. at Ventura Marina (Sections 3.1.3, 12.6). The Mandalay booster station would be located on a portion of the onshore treating facility site described for the proposed Mandalay configuration.	The onshore treating facility site would be located on vacant land between existing industrial facilities off Perkins Rd. (Section 3.1.3, 12.6). The Mandalay booster station would be located on a portion of the onshore treating facility site described for the proposed Mandalay configuration. The booster station for Platform Gina would be located on Silver Strand Beach (Sections 3.1.3, 12.6).	The onshore treating facility site would be located on vacant land between existing industrial facilities off Perkins Rd. (Section 3.1.3, 12.6). The Mandalay booster station would be located on a portion of the onshore treating facility site described for the proposed Mandalay configuration. The booster station for Platform Gina would be located on Silver Strand Beach (Sections 3.1.3, 12.6). The inland booster station would be located near the intersection of Rice and Gonzales Rds. (outside of the coastal zone).	Platform Gina would be located on OCS Lease P-0202 about 4.5 miles west-southwest of Port Hueneme (Section 3.1.3). Platform Gilda would be located on OCS Lease P-0216 about 10 miles west of Oxnard (Section 3.1.3).

TABLE 27-1 (continued)

Standards[1]	Proposed Mandalay Configuration	East Mandalay Alternative Configuration	Union Oil Marine Terminal Alternative Configuration	Ormond Beach Alternative Configuration (Option A)	Ormond Beach Alternative Configuration (Option B)	Platforms and Offshore Pipelines
MARINE ENVIRONMENT						
30230	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Impacts on oceanography and marine biological resources are discussed in Sections 4.3 and 4.4, respectively.
30231	Runoff would be contained onsite and disposed of in accordance with appropriate regulations. The onshore treating facility is designed to operate unattended and requires no process water, thus minimizing water consumption (Sections 3.3.3 and 3.5.3).	Runoff would be contained onsite and disposed of in accordance with appropriate regulations. The onshore treating facility is designed to operate unattended and requires no process water, thus minimizing water consumption (Sections 3.3.3 and 3.5.3).	Runoff would be contained onsite and disposed of in accordance with appropriate regulations. The onshore treating facility and Mandalay booster station are designed to operate unattended and require no process water, thus minimizing water consumption (Sections 3.3.3 and 3.5.3).	Runoff would be contained onsite and disposed of in accordance with appropriate regulations. The onshore treating facility and booster stations at Mandalay and Silver Strand Beach are designed to operate unattended and require no process water, thus minimizing water consumption (Sections 3.3.3 and 3.5.3).	Runoff would be contained onsite and disposed of in accordance with appropriate regulations. The onshore treating facility and three booster stations (at Mandalay, Silver Strand Beach, and inland near the intersection of Rice and Gonzales Rds.) are designed to operate unattended and require no process water, thus minimizing water consumption (Sections 3.3.3 and 3.5.3).	Wastewater discharges and entrainment are addressed in Sections 4.3 and 4.4.
	The product crude oil pipeline would be attached to the Harbor Blvd. bridge across the Santa Clara River (Section 3.3.4).	The product crude oil pipeline would be attached to the Harbor Blvd. bridge across the Santa Clara River (Section 3.3.4).	The onshore pipelines would be emplaced within the riverbed of the Santa Clara River (Section 3.3.4.2.2). Impacts on terrestrial and aquatic biology are discussed in Section 4.5.	The product crude oil pipeline would be attached to the Harbor Blvd. bridge across the Santa Clara River (Section 3.3.4).	The product crude oil pipeline would be attached to the Harbor Blvd. bridge across the Santa Clara River (Section 3.3.4).	
30232	Contingency plans are discussed in Section 5.9. Copies of complete plans are on file with USGS.	Contingency plans are discussed in Section 5.9. Copies of complete plans are on file with USGS.	Contingency plans are discussed in Section 5.9. Copies of complete plans are on file with USGS.	Contingency plans are discussed in Section 5.9. Copies of complete plans are on file with USGS.	Contingency plans are discussed in Section 5.9. Copies of complete plans are on file with USGS.	Contingency plans are discussed in Section 5.9. Copies of complete plans are on file with USGS.
30233	Not Applicable	Not Applicable	Not Applicable	Minor dredging in Port Hueneme Harbor only (Section 3.3.4).	Minor dredging in Port Hueneme Harbor only (Section 3.3.4).	Not Applicable

TABLE 27-1 (continued)

Standards[1]	Proposed Mandalay Configuration	East Mandalay Alternative Configuration	Union Oil Marine Terminal Alternative Configuration	Ormond Beach Alternative Configuration (Option A)	Ormond Beach Alternative Configuration (Option B)	Platforms and Offshore Pipelines
LAND RESOURCES						
30240(a)	Habitats described as sensitive in Draft LCPs are discussed in Section 12.5.7. Impacts are discussed in Section 4.5.6.	Habitats described as sensitive in Draft LCP's are discussed in Section 12.5.7. Impacts are discussed in Section 4.5.6.	Habitats described as sensitive in Draft LCP's are discussed in Section 12.5.7. Impacts are discussed in Section 4.5.6.	Habitats described as sensitive in Draft LCP's are discussed in Section 12.5.7. Impacts are discussed in Section 4.5.6.	Habitats described as sensitive in Draft LCP's are discussed in Section 12.5.7. Impacts are discussed in Section 4.5.6.	Sensitive marine biological habitats are discussed in Section 12.4. Potential impacts are discussed in Section 4.4.
30240(b)	The treating facility site is being incorporated into plans for a public beach park to be developed to the south. (Section 4.6.3.1)	Not Applicable	The Mandalay booster station would placed on a portion of the onshore treating facility site described for the proposed Mandalay configuration. The treating facility site would be located within the existing Union Oil Marine Terminal site at the Ventura Marina (Section 3.1.3).	The Mandalay booster station would placed on a portion of the onshore treating facility site described for the proposed Mandalay configuration. The booster station on Silver Strand Beach could be placed adjacent to the Port Hueneme Harbor (Section 5.0).	The Mandalay booster station would placed on a portion of the onshore treating facility site described for the proposed Mandalay configuration. The booster station on Silver Strand Beach could be placed adjacent to the Port Hueneme Harbor (Section 5.0).	Not Applicable
30241(b)	Not Applicable	Not Applicable	Not Applicable	The treating facility site would be located on vacant land surrounded by industry. This appears to be too small a parcel for viable agriculture.	The treating facility site would be located on vacant land surrounded by industry. This appears to be too small a parcel for viable agriculture. The inland booster station would probably convert 0.7 acre of agricultural lands near Rice and Gonzales Rds. to industrial use (Section 4.5.1, 4.6.1, 12.6).	Not Applicable
30241(d)	Air and water quality impacts would be minor (Sections 4.1 and 4.2.1).	Air and water quality impacts would be minor (Sections 4.1 and 4.2.1).	Air and water quality impacts would be minor (Sections 4.1 and 4.2.1).	Air and water quality impacts would be minor (Sections 4.1 and 4.2.1).	Air and water quality impacts would be minor (Sections 4.1 and 4.2.1).	Air and water quality impacts would be minor (Sections 4.2.1 and 4.3).
30243	Not Applicable	Not Applicable	About 5.1 acres of agricultural soils would be disturbed for onshore pipeline emplacement (Section 4.1.3). However, mitigations (Section 5.0) could be employed to maintain the productivity of these soils.	About 1.0 acre of agricultural soils would be disturbed for onshore pipeline emplacement (Section 4.1.4). However, mitigations (Section 5.0) could be employed to maintain the productivity of these soils.	About 33.9 acres of agricultural soils would be disturbed for onshore pipeline emplacement (Section 4.1.4). However, mitigations (Section 5.0) could be employed to maintain the productivity of the soils.	Not Applicable
30244	Potential cultural resources would be avoided (Section 12.8). Where avoidance is not practicable, impacts would be mitigated (Section 5.8).	Potential cultural resources would be avoided (Section 12.8). Where avoidance is not practicable, impacts would be mitigated (Section 5.8).	Potential cultural resources would be avoided (Section 12.8). Where avoidance is not practicable, impacts would be mitigated (Section 5.8).	Potential cultural resources would be avoided (Section 12.8). Where avoidance is not practicable, impacts would be mitigated (Section 5.8).	Potential cultural resources would be avoided (Section 12.8). Where avoidance is not practicable, impacts would be mitigated (Section 5.8).	Potential cultural resources would be avoided (Section 12.8). Where avoidance is not practicable, impacts would be mitigated (Section 5.8).

TABLE 27-1 (continued)

Standards[1]	Proposed Mandalay Configuration	East Mandalay Alternative Configuration	Union Oil Marine Terminal Alternative Configuration	Ormond Beach Alternative Configuration (Option A)	Ormond Beach Alternative Configuration (Option B)	Platforms and Offshore Pipelines
DEVELOPMENT 30250(a)	The onshore treating facility site would be located contiguous with SCE Mandalay enerating Station. The land is publically owned but would be leased to Union in return for pre-paid fees that would be used to facilitate park development on the rest of the property.	The onshore treating facility site would be located within property adjacent to power transmission facilities and Edison Canal.	The onshore treating facility site would be located within existing Union Oil Marine Terminal facilities.	The onshore treating facility site would be located within an existing industrialized area.	The onshore treating facility site would be located within an existing industrialized area.	Not Applicable
			The Mandalay booster station would be located on a portion of the onshore treating facility site described for the proposed Mandalay configuration.	The Mandalay booster station would be located on a portion of the onshore treating facility site described for the proposed Mandalay configuration.	The Mandalay booster station would be located on a portion of the onshore treating facility site described for the proposed Mandalay configuration.	
				The booster station at Silver Strand Beach could be located adjacent to Port Hueneme Harbor facilities.	The booster station at Silver Strand Beach could be located adjacent to Port Hueneme Harbor facilities.	
					The inland booster station would be located near the intersection of Rice and Gonzales Rds. (outside the coastal zone).	
30251	Onshore treating facility equipment would be emplaced in a pit. Sides open to public view would be surrounded by a block wall and landscaped as appropriate (Section 4.6.5).	Onshore treating facility equipment would be emplaced in a pit. Sides open to public view would be surrounded by a block wall and landscaped as appropriate (Section 4.6.5).	Onshore treating facility equipment would be installed within an existing diked area within the Union Oil Marine Terminal. Principal public views are presently shielded by slat fencing and landscaping (Section 4.6.5).	Onshore treating facility equipment would be emplaced in a pit. The facility would be surrounded by a block wall and landscaped as appropriate (Section 4.6.5).	Onshore treating facility equipment would be emplaced in a pit. The facility would be surrounded by a block wall and landscaped as appropriate (Section 4.6.5).	Certain characteristics relative to visibility of the platforms (such as color and lighting) would be determined in accordance with recommendations of the U.S. Coast Guard. Where this results in a potential conflict with aesthetic concerns, navigational safety would take precedence (Section 4.6.5).

TABLE 27-1 (continued)

Standards[1]	Proposed Mandalay Configuration	East Mandalay Alternative Configuration	Union Oil Marine Terminal Alternative Configuration	Ormond Beach Alternative Configuration (Option A)	Ormond Beach Alternative Configuration (Option B)	Platforms and Offshore Pipelines
30251 (contd)			The Mandalay booster station would be shielded from public view by block walls and landscaped as appropriate.	The Mandalay, Silver Strand Beach booster stations would be shielded from public view by block walls and landscaped as appropriate (Section 4.6.5).	The Mandalay and Silver Strand Beach, booster stations would be shielded from public view by block walls and landscaped as appropriate (Sections 4.6.5 and 5.0). The inland booster station could be shielded in similar fashion.	
30253 (1 & 2)	Geologic and hydrologic phenomena that could represent hazards to the project are discussed in Section 12.1.6. Project plans and mitigation measures responsive to these considerations are discussed in Sections 3.0 and 5.0.	Geologic and hydrologic phenomena that could represent hazards to the project are discussed in Section 12.1.6. Project plans and mitigation measures responsive to these considerations are discussed in Sections 3.0 and 5.0.	Geologic and hydrologic phenomena that could represent hazards to the project are discussed in Section 12.1.6. Project plans and mitigation measures responsive to these considerations are discussed in Sections 3.0 and 5.0.	Geologic and hydrologic phenomena that could represent hazards to the project are discussed in Section 12.1.6. Project plans and mitigation measures responsive to these considerations are discussed in Sections 3.0 and 5.0.	Geologic and hydrologic phenomena that could represent hazards to the project are discussed in Section 12.1.6. Project plans and mitigation measures responsive to these considerations are discussed in Sections 3.0 and 5.0.	Geologic and hydrologic phenomena that could represent hazards to the project are discussed in Section 12.1.6. Project plans and mitigation measures responsive to these considerations are discussed in Sections 3.0, 4.9.4, and 5.0.
30253 (3)	Union has received an Authority to Construct Permit from the Ventura County APCD for the onshore treating facility (Section 4.2.1.2).	Union would apply for an Authority to Construct Permit from the Ventura County APCD for the onshore treating facility (Section 4.2.1.2).	Union would apply for an Authority to Construct Permit from the Ventura County APCD for the onshore treating facility and Mandalay booster station (Section 4.2.1.2).	Union would apply for an Authority to Construct Permit from the Ventura County APCD for the onshore treating facility and Mandalay and Silver Strand Beach booster stations (Section 4.2.1.2).		A discussion of proposed USGS OCS regulations for offshore California and an evaluation of the emissions from Platforms Gina and Gilda in relation to these proposed regulations is found in Section 4.2.1.2.
30253 (4)	See Section 4.10.3 for a project energy balance analysis. Mitigation measures related to vehicle miles travelled are discussed in Section 5.0.	See Section 4.10.3 for a project energy balance analysis. Mitigation measures related to vehicle miles travelled are discussed in Section 5.0.	See Section 4.10.3 for a project energy balance analysis. Mitigation measures related to vehicle miles travelled are discussed in Section 5.0.	See Section 4.10.3 for a project energy balance analysis. Mitigation measures related to vehicle miles travelled are discussed in Section 5.0.	See Section 4.10.3 for a project energy balance analysis. Mitigation measures related to vehicle miles travelled are discussed in Section 5.0.	See Section 4.10.3 for a project energy balance analysis. Mitigation measures related to vehicle miles travelled are discussed in Section 5.0.
30255	This project requires a site on, or adjacent to, the sea to be able to function at all.	This project requires a site on, or adjacent to, the sea to be able to function at all.	This project requires a site on, or adjacent to, the sea to be able to function at all.	This project requires a site on, or adjacent to, the sea to be able to function at all.	This project requires a site on, or adjacent to, the sea to be able to function at all.	This project requires a site on, or adjacent to, the sea to be able to function at all.

TABLE 27-1 (continued)

Standards[1]	Proposed Mandalay Configuration	East Mandalay Alternative Configuration	Union Oil Marine Terminal Alternative Configuration	Ormond Beach Alternative Configuration (Option A)	Ormond Beach Alternative Configuration (Option B)	Platforms and Offshore Pipelines
INDUSTRIAL DEVELOPMENT						
30260 (1)	Primary and secondary alternatives were evaluated in this EIR/EA in accordance with a Work Program developed with inputs from over 30 regulatory agencies. See Section 7.0.	Primary and secondary alternatives were evaluated in this EIR/EA in accordance with a Work Program developed with inputs from over 30 regulatory agencies. See Section 7.0.	Primary and secondary alternatives were evaluated in this EIR/EA in accordance with a Work Program developed with inputs from over 30 regulatory agencies. See Section 7.0.	Primary and secondary alternatives were evaluated in this EIR/EA in accordance with a Work Program developed with inputs from over 30 regulatory agencies. See Section 7.0.	Primary and secondary alternatives were evaluated in this EIR/EA in accordance with a Work Program developed with inputs from over 30 regulatory agencies. See Section 7.0.	Primary and secondary alternatives were evaluated in this EIR/EA in accordance with a Work Program developed with inputs from over 30 regulatory agencies. See Section 7.0.
30260 (2)	This project is consistent with the objectives of the National Energy Plan (Section 3.1.2).	This project is consistent with the objectives of the National Energy Plan (Section 3.1.2).	This project is consistent with the objectives of the National Energy Plan (Section 3.1.2).	This project is consistent with the objectives of the National Energy Plan (Section 3.1.2).	This project is consistent with the objectives of the National Energy Plan (Section 3.1.2).	This project is consistent with the objectives of the National Energy Plan (Section 3.1.2).
30260 (3)	Mitigative measures are given in Section 5.0.	Mitigative measures are given in Section 5.0.	Mitigative measures are given in Section 5.0.	Mitigative measures are given in Section 5.0.	Mitigative measures are given in Section 5.0.	Mitigative measures are given in Section 5.0.
30262 (a)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Drilling and production operations would be conducted in accordance with the USGS Pacific Area OCS Orders and mitigative measures discussed in Section 5.0.
30262 (b)	Consolidation is evaluated, in accordance with Work Program directives, in Sections 4.11 and 7.3.	Consolidation is evaluated, in accordance with Work Program directives, in Sections 4.11 and 7.3.	Consolidation is evaluated, in accordance with Work Program directives, in Sections 4.11 and 7.3.	Consolidation is evaluated, in accordance with Work Program directives, in Sections 4.11 and 7.3.	Consolidation is evaluated, in accordance with Work Program directives, in Sections 4.11 and 7.3.	Consolidation is evaluated, in accordance with Work Program directives, in Sections 4.11 and 7.3.
30262 (c)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Subsea completions are discussed in Section 7.3.
30262 (d)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Marine safety and associated mitigations are discussed in Section 4.9.1.
30262 (e)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Potential subsidence and associated mitigative measures are discussed in Sections 12.1.6, 4.1.1, and 5.1.
30262 (f)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Produced water from both platforms will be re-injected. Refer to Sections 3.5.1.1, 4.1, and 5.1.

[1]Chapter 3, Articles 2 through 7, California Coastal Act of 1976.

CHAPTER 3. COASTAL RESOURCES PLANNING AND MANAGEMENT POLICIES

Article 1. General

30200. Consistent with the basic goals set forth in Section 30001.5, and except as may be otherwise specifically provided in this division, the policies of this chapter shall constitute the standards by which the adequacy of local coastal programs, as provided in Chapter 6 (commencing with Section 30500), and, the permissibility of proposed developments subject to the provisions of this division are determined. All public agencies carrying out or supporting activities outside the coastal zone that could have a direct impact on resources within the coastal zone shall consider the effect of such actions on coastal zone resources in order to assure that these policies are achieved.

Article 2. Public Access

30210. In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

30211. Development shall not interfere with the public's right of access to the sea where acquired through use, or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

(a) **30212.** Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

(b) For purposes of this section, "new development" does not include:

(1) Replacement of any structure pursuant to the provisions of subdivision (g) of Section 30610.

(2) The demolition and reconstruction of a single-family residence; provided, that the reconstructed residence shall not exceed either the floor area, height or bulk of the former structure by more than 10 percent, and that the reconstructed residence shall be sited in the same location on the affected property as the former structure.

(3) Improvements to any structure which do not change the intensity of its use, which do not increase either the floor area, height, or bulk of the structure by more than 10 percent, which do not block or impede public access, and which do not result in a seaward encroachment by the structure.

(4) Any repair or maintenance activity for which the commission has determined, pursuant to Section 30610, that a coastal development permit will be required unless the regional commission or the commission determines that such activity will have an adverse impact on lateral public access along the beach.

As used in this subdivision, "bulk" means total interior cubic volume as measured from the exterior surface of the structure.

(c) Nothing in this division shall restrict public access nor shall it excuse the performance of duties and responsibilities of public agencies which are required by Sections 66478.1 to 66478.14 inclusive, of the

Government Code and by Section 4 of Article X of the California Constitution.

30212.5 Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

30213. Lower cost visitor and recreational facilities and housing opportunities for persons of low and moderate income shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. New housing in the coastal zone shall be developed in conformity whith the standards, policies, and goals of local housing elements adopted in accordance with the requirements of subdivision (c) of Section 65302 of the Government Code.

30214. (a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:

(1) Topographic and geologic site characteristics.

(2) The capacity of the site to sustain use and at what level of intensity.

(3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.

(4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.

(b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article X of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the pulic under Section 4 of Article X of the California Constitution.

(c) In carrying out the public access policies of this article, the commission, regional commissions, and any other responsible public agency shall consider and encourage the utilization of innovative access management techniques, including, but not limited to, agreements with private organizations which would minimize management costs and encourage the use of volunteer programs.

Article 3. Recreation

30220. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

30221. Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

30222. The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public opportunties for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.

30223. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

30224. Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water-dependent land uses that congest access corridors and preclude boating support facilities, providing habors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.

Article 4. Marine Environment

30230. Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and education purposes.

30231. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

For the purposes of this section, "commercial fishing facilities in Bodega Bay" means that no less than 80 percent of all boating facilities proposed to be developed or improved, where such improvement would create additional berths in Bodega Bay, shall be designed and used for commercial fishing activities.

30234. Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.

30235. Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fishkills should be phased out or upgraded where feasible.

30236. Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.

Article 5. Land Resources

30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values.

30232. Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

30233. (a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland; provided, however, that in no event shall the size of the wetland area used for such boating facility, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, be greater than 25 percent of the total wetland area to be restored.

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities.

(5) Incidental public service purposes, including, but not limited to burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(7) Restoration purposes.

(8) Nature study, aquaculture, or similar resource-dependent activities.

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable longshore current systems.

(c) In addition to the other provisions of this section, diking, filling, or dredging in

and only uses dependent on such resources shall be allowed within such areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

30241. The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas' agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:

(a) By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.

(b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses and where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.

(c) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.

(d) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.

(e) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b) of this section, and all development adjacent to prime agricultural lands shall not disminish the productivity of such prime agricultural lands.

30242. All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

30243. The long-term productivity of soils and timberlands shall be protected, and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of noncommercial size shall be limited to providing for necessary timber processing and related facilities.

30244. Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Article 6. Development

30250. (a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.

(b) Where feasible new hazardous industrial development shall be located away from existing developed areas.

(c) Visitor-serving facilities that cannot feasibly be located in existing developed areas shall be located in existing isolated developments or at selected points of attraction for visitors.

30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

30252. The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing nonautomobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas

by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facitlities to serve the new development.

30253. New development shall:

(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

(3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.

(4) Minimize energy consumption and vehicle miles traveled.

(5) Where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses.

30254. New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal-dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

30255. Coastal-dependent developments shall have priority over other developments on or near the shoreline. Except as provided elsewhere in this division, coastal-dependent developments shall not be sited in a wetland. When appropriate, coastal-related developments should be accomodated within reasonable proximity to the coastal dependent uses they support.

Article 7. Industrial Development

30260. Coastal-dependent industrial facilities shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with this division. However, where new or expanded coastal-dependent industrial facilities cannot feasibly be accommodated consistent with other policies of this division, they may nonetheless be permitted in accordance with this section and Section 30261 and 30262 if (1) alternative locations are infeasible or more environmentally damaging; (2) to do otherwise would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible.

30261. (a) Multicompany use of existing and new tanker facilities shall be encouraged to the maximum extent feasible and legally permissible, except where to do so would result in increased tanker operations and associated onshore development incompatible with the land use and environmental goals for the area. New tanker terminals outside of existing terminal areas shall be situated as to avoid risk to environmentally sensitive areas and shall use a monobuoy system, unless an alternative type of system can be shown to be environmentally preferable for a specific site. Tanker facilities shall be designed to (1) minimize the total volume of oil spilled, (2) minimize the risk of collision from movement of other vessels, (3) have ready access to the most effective feasible containment and recovery equipment for oilspills, and (4) have onshore deballasting facilities to receive any fouled ballast water from tankers where operationally or legally required.

(b) Because of the unique problems involved in the importation, transportation, and handling of liquified natural gas, the location of terminal facilities therefore shall be determined solely and exclusively as provided in Chapter 10 (commencing with Section 5550) of Division 2 of the Public Utilities Code and the provisions of this division shall not apply unless expressly provided in such Chapter 10.

30262. Oil and gas development shall be permitted in accordance with Section 30260, if the following conditions are met:

(a) The development is performed safely and consistent with the geologic conditions of the well site.

(b) New or expanded facilities related to such development are consolidated, to the maximum extent feasible and legally permissible, unless consolidation will have adverse environmental consequences and will not significantly reduce the number of producing wells, support facilities, or sites required to produce the reservoir economically and with minimal environmental impacts.

(c) Environmentally safe and feasible subsea completions are used when drilling platforms or islands would substantially degrade coastal visual qualities unless use of such structures will result in substantially less environmental risks.

(d) Platforms or islands will not be sited where a substantial hazard to vessel traffic

might result from the facility or related operations, determined in consultation with the United States Coast Guard and the Army Corps of Engineers.

(e) Such development will not cause or contribute to subsidence hazards unless it is determined that adequate measures will be undertaken to prevent damage from such subsidence.

(f) With respect to new facilities, all oilfield brines are reinjected into oil-producing zones unless the Division of Oil and Gas of the Department of Conservation determines to do so would adversely affect production of the reservoirs and unless injection into other subsurface zones will reduce environmental risks. Exceptions to reinjections will be granted consistent with the Ocean Waters Discharge Plan of the State Water Resources Control Board and where adequate provision is made for the elimination of petroleum odors and water quality problems.

Where appropriate, monitoring programs to record land surface and near-shore ocean floor movements shall be initiated in locations of new large-scale fluid extraction on land or near shore before operations begin and shall continue until surface conditions have stabilized. Costs of monitoring and mitigation programs shall be borne by liquid and gas extraction operators.

30263. (a) New or expanded refineries or petrochemical facilities not otherwise consistent with the provisions of this division shall be permitted if (1) alternative locations are not feasible or are more environmentally damaging; (2) adverse environmental effects are mitigated to the maximum extent feasible; (3) it is found that not permitting such development would adversely affect the public welfare; (4) the facility is not located in a highly scenic or seismically hazardous area, on any of the Channel Islands, or within or contiguous to environmentally sensitive areas; and (5) the facility is sited so as to provide a sufficient buffer area to minimize adverse impacts on surrounding property.

(b) In addition to meeting all applicable air quality standards, new or expanded refineries or petrochemical facilities shall be permitted in areas designated as air quality maintenance areas by the State Air Resources Board and in areas where coastal resources would be adversely affected only if the negative impacts of the project upon air quality are offset by reductions in gaseous emissions in the area by the users of the fuels, or, in the case of an expansion of an existing site, total site emission levels, and site levels for each emission type for which national or state ambient air quality standards have been established do not increase.

(c) New or expanded refineries or petrochemical facilities shall minimize the need for once-through cooling by using air cooling to the maximum extent feasible and by using treated waste waters from in-plant processes where feasible.

30264. Notwithstanding any other provision of this division, except subdivisions (b) and (c) of Section 30413, new or expanded thermal electric generating plants may be constructed in the coastal zone if the proposed coastal site has been determined by the State Energy Resources Conservation and Development Commission to have greater relative merit pursuant to the provisions of Section 25516.1 than available alternative sites and related facilities for an applicant's service area which have been determined to be acceptable pursuant to the provisions of Section 25516.

TABLE 27-2

POTENTIAL PRODUCTION IMPACTS - PROPOSED MANDALAY AND PRIMARY ALTERNATIVE CONFIGURATIONS

Environmental Factor	Nature of Impact	Magnitude/Significance[1]				
		Mandalay	East Mandalay	Union Oil Marine Terminal	Ormond Beach Option A	Ormond Beach Option B
GEOTECHNICAL (Section 4.1)	1. Depletion of non-renewable resources					
	a. Oil (10^6 bbl)	52.5/L	52.5/L	52.5/L	52.5/L	52.5/L
	b. Gas (10^9 SCF)	41.7/L	41.7/L	41.7/L	41.7/L	41.7/L
	2. Consumptive use of fresh water (cumulative acre-feet)	9.4/L	9.4/L	9.4/L	9.4/L	9.4/L
AIR QUALITY (Section 4.2.1)	1. Offshore and onshore increases in emissions of nitrogen oxides, sulfur dioxide, carbon monoxide, total hydrocarbons, and particulate matter	Minor/L	Minor/L	Minor/L	Minor/L	Minor/L
ACOUSTICS (Section 4.2.2)	1. Localized sound level increases at onshore and offshore locations	Minor-Moderate/L-M	Minor-Moderate/L-M	Minor-Moderate/L-M	Minor-Moderate/L-M	Minor-Moderate/L-M
OCEANOGRAPHY (Section 4.3)	1. Localized alteration of ocean water quality resulting from treated sanitary waste discharges and leaching of metals from sacrificial anodes	Minor/L	Minor/L	Minor/L	Minor/L	Minor/L
	2. Water temperature alteration caused by heat dissipation from offshore pipelines	Negligible/L	Negligible/L	Negligible/L	Negligible/L	Negligible/L
MARINE BIOLOGY (Section 4.4)	1. Increased biomass and species diversity related to new substrate (platforms, pipelines, and cuttings mounds)	Minor-Moderate/L-M	Minor-Moderate/L-M	Minor-Moderate/L-M	Minor-Moderate/L-M	Minor-Moderate/L-M
	2. Localized alteration of plankton productivity	Minor/L	Minor/L	Minor/L	Minor/L	Minor/L
	3. Entrainment of 300 plankton for 3-year period at Platform Gina related to seawater intake for reservoir pressure maintenance program (lbs/day)	1300/L	1300/L	1300/L	1300/L	1300/L
	4. Loss of potential commercial fishing area (square miles)	0.6/L	0.6/L	0.6/L	0.6/L	0.6/L
	5. Possible effects on marine mammal populations from presence of platforms, increased noise, and human activity	Minor/L	Minor/L	Minor/L	Minor/L	Minor/L
TERRESTRIAL BIOLOGY (Section 4.5)	1. Secondary effects related to increased noise and air pollutant emissions	Minor/L	Minor/L	Minor/L	Minor/L	Minor/L

TABLE 27-2 (Concluded)

Environmental Factor	Nature of Impact	Magnitude/Significance[1]				
		Mandalay	East Mandalay	Union Oil Marine Terminal	Ormond Beach Option A	Ormond Beach Option B
LAND USE (Section 4.6)	1. Commitment of land to industrial use	Minor/L	Minor/L	Moderate/L	Moderate/L	Moderate/L-M
	2. Visual intrusion of offshore and onshore project elements	Minor-Moderate/L-M	Minor-Moderate/L-M	Minor-Moderate/L-M	Minor-Moderate/L-M	Moderate/M
	3. Increase in traffic volumes on the local road system	Negligible/L	Negligible/L	Negligible/L	Negligible/L	Negligible/L
SOCIOECONOMICS (Section 4.7)	1. Increased demand on housing, services, and utilities	Minor/L	Minor/L	Minor/L	Minor/L	Minor/L
	2. Increase in employment opportunities	Negligible-Minor/L	Negligible-Minor/L	Negligible-Minor/L	Negligible-Minor/L	Negligible-Minor/L
	3. New property tax revenues (estimated for first tax year)	$99,700/L	$103,400/L	$251,400/L	$337,300/L	$398,300/L
	4. New taxable retail sales in Ventura County (dollars per year)	$2.54x10^6/L	$2.54x10^6/L	$3.02x10^6/L	$3.13x10^6/L	$3.42x10^6/L
	5. Sales and use tax revenues accruing to					
	a. Local governments (dollars per year)	$25,400/L	$25,400/L	$30,200/L	$31,300/L	$34,200/L
	b. State of California (dollars per year)	$127,000/L	$127,000/L	$151,000/L	$156,500/L	$171,000/L
	6. Total estimated royalty payments to United States government	$232.8x10^6/L	$232.8x10^6/L	$232.8x10^6/L	$232.8x10^6/L	$232.8x10^6/L
CULTURAL RESOURCES (Section 4.8)	1. Possible disturbance/elimination of known archaeological resources	Negligible/L	Negligible/L	Negligible/L	Negligible/L	Negligible/L
ENERGY CONSUMPTION	1. Energy ratio (units produced : units consumed)	33.3:1	33.3:1	25.8:1	20.5:1	17.0:1
ACCIDENTS	1. Accidental oil, gas, or produced water spills (magnitude and significance depend on a number of variables)	Negligible-Major/L-H	Negligible-Major/L-H	Negligible-Major/L-H	Negligible-Major/L-H	Negligible-Major/L-H

[1]Significance abbreviations:
L = low
M = moderate
H = high

TABLE 27-3 (page 3 of Table 4.12-1)

Standards[1]	Proposed Mandalay Configuration	East Mandalay Alternative Configuration	Union Oil Marine Terminal Alternative Configuration	Ormond Beach Alternative Configuration (Option A)	Ormond Beach Alternative Configuration (Option B)	Platforms
LAND RESOURCES						
30240(a)	Habitats described as sensitive in Draft LCPs are discussed in Section 12.5.7. Impacts are discussed in Section 4.5.6.	Habitats described as sensitive in Draft LCP's are discussed in Section 12.5.7. Impacts are discussed in Section 4.5.6.	Habitats described as sensitive in Draft LCP's are discussed in Section 12.5.7. Impacts are discussed in Section 4.5.6.	Habitats described as sensitive in Draft LCP's are discussed in Section 12.5.7. Impacts are discussed in Section 4.5.6.	Habitats described as sensitive in Draft LCP's are discussed in Section 12.5.7. Impacts are discussed in Section 4.5.6.	Sensitive marine biological habitats are discussed in Section 12.4. Potential impacts are discussed in Section 4.4.
30240(b)	The treating facility site is being incorporated into plans for a public beach park to be developed to the south. (Section 4.6.3.1)	Not Applicable	The Mandalay booster station would placed on a portion of the onshore treating facility site described for the proposed Mandalay configuration. The treating facility site would be located within the existing Union Oil Marine Terminal site at the Ventura Marina (Section 3.1.3).	The Mandalay booster station would placed on a portion of the onshore treating facility site described for the proposed Mandalay configuration. The booster station on Silver Strand Beach could be placed adjacent to the Port Hueneme Harbor (Section 5.0).	The Mandalay booster station would placed on a portion of the onshore treating facility site described for the proposed Mandalay configuration. The booster station on Silver Strand Beach could be placed adjacent to the Port Hueneme Harbor (Section 5.0).	Not Applicable
30241(b)	Not Applicable	Not Applicable	Not Applicable	The treating facility site would be located on vacant land surrounded by industry. This appears to be too small a parcel for viable agriculture.	The treating facility site would be located on vacant land surrounded by industry. This appears to be too small a parcel for viable agriculture. The inland booster station would probably convert 0.7 acre of agricultural lands near Rice and Gonzales Rds. to industrial use (Section 4.5.1, 4.6.1, 12.6).	Not Applicable
30241(d)	Air and water quality impacts would be minor (Sections 4.1 and 4.2.1).	Air and water quality impacts would be minor (Sections 4.1 and 4.2.1).	Air and water quality impacts would be minor (Sections 4.1 and 4.2.1).	Air and water quality impacts would be minor (Sections 4.1 and 4.2.1).	Air and water quality impacts would be minor (Sections 4.1 and 4.2.1).	Air and water quality impacts would be minor (Sections 4.2.1 and 4.3).
30243	Not Applicable	Not Applicable	About 5.1 acres of agricultural soils would be disturbed for onshore pipeline emplacement (Section 4.1.3). However, mitigations (Section 5.0) could be employed to maintain the productivity of these soils.	About 1.0 acre of agricultural soils would be disturbed for onshore pipeline emplacement (Section 4.1.4). However, mitigations (Section 5.0) could be employed to maintain the productivity of these soils.	About 33.9 acres of agricultural soils would be disturbed for onshore pipeline emplacement (Section 4.1.4). However, mitigations (Section 5.0) could be employed to maintain the productivity of the soils.	Not Applicable
30244	Potential cultural resources would be avoided (Section 12.8). Where avoidance is not practicable, impacts would be mitigated (Section 5.8).	Potential cultural resources would be avoided (Section 12.8). Where avoidance is not practicable, impacts would be mitigated (Section 5.8).	Potential cultural resources would be avoided (Section 12.8). Where avoidance is not practicable, impacts would be mitigated (Section 5.8).	Potential cultural resources would be avoided (Section 12.8). Where avoidance is not practicable, impacts would be mitigated (Section 5.8).	Potential cultural resources would be avoided (Section 12.8). Where avoidance is not practicable, impacts would be mitigated (Section 5.8).	Potential cultural resources would be avoided (Section 12.8). Where avoidance is not practicable, impacts would be mitigated (Section 5.8).

ORIGINAL

PLANNING COMMISSION OF THE CITY OF OXNARD

PUBLIC HEARING RE:

Adequacy of Draft EIR 78-19, prepared for UNION OIL COMPANY of California Platform Gilda and Platform Gina Project.

REPORTER'S TRANSCRIPT

Thursday, June 26, 1980; 7:30 P.M.
Oxnard City Council Chambers
305 West 3rd Street
Oxnard, California

PRESENT:

HUGH O'CONNELL, Commission Chairman
JOE LOPEZ, Vice Chairman
DR. ELLIOTT STOLL, Commissioner
RAYMOND FLORES, Commissioner
ALBERT DUFF, Commissioner
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CHAIRMAN O'CONNELL: (The first part of the question was not reported.) How many, and who decided what the alternates are going to be?

DR. WALES: Les, do you want to take that?

DR. SENGER: The question is basically who made a decision on picking the primary alternatives and the routes?

CHAIRMAN O'CONNELL: Right. How many were actually discussed, and were they just these five or whatever.

DR. SENGER: Okay. Basically the request for proposal that was issued for the project identified as the primary alternatives the three key sites, East Mandalay, the Union Oil Marine Terminal site and the Ormond Beach site.

Originally the assumption was made that the pipeline routes would basically, for the north coast alternatives, follow generally the same routing at Mandalay with some special construction on Ormond.

The Ormond Beach pipeline routes did not really get resolved until the Phase 1 scoping exercise and those basically were worked out in conjunction with the Planning Department staff at the City.

28.1 CHAIRMAN O'CONNELL: Okay. Was any consideration ever given to an alternate of just making everything go from the platforms directly to the terminal and across the river?

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DR. SENGER: To the best of my knowledge, no.

CHAIRMAN O'CONNELL: The only reason why I was asking is because something like that will eliminate any onshore pipes at that point.

DR. SENGER: That could well be. That was not an alternative that was presented to us for evaluation.

CHAIRMAN O'CONNELL: Does any other member of the commission have any comments or questions about what the consultants have presented at this time?

COMM. DRESSLER: In the onshore treating facility you speak of periodic visits to the facility. What kind of time frame would "periodic visits" entail?

DR. SENGER: Once a day.

COMM. DRESSLER: Thank you.

COMM. DUFF: Mr. Chairman, just to follow up on the question you are concerned about, I think in reading through some of this material in deciding the project alternatives, I think that first, if I'm not mistaken, it was selection of the site in the ocean, and all the work was done around locating the site out there, and the onshore facilities as well as the pipelines were secondary to locating the site in the ocean, is that correct, the platforms?

DR. WALES: Well, given the nature of the reserves, we're kind of stuck with the locations of the platforms offshore.

Then it boils down to where do you locate the onshore treating facility, and to our knowledge these alternatives

were picked by the steering committee prior to our selection to do the work.

When we got involved with the scoping exercise there was a, shall we say, a refinement of those considerations in terms of the relative depth of investigation that would be devoted to the various alternatives, inclusive of the primary as well as the secondary ones, and there was also the elimination of one or two alternatives that had been indicated earlier and were dropped when we began to talk to the various agencies.

CHAIRMAN O'CONNELL: Any more questions?

Ralph, are you the one that has the question cards to pass out to the members of the audience? I guess you're in the back.

The commission will take a short recess, and all of you in the audience that would like to make comments or questions later on in the evening, get your question cards from the gentleman in the back.

(Recess.)

CHAIRMAN O'CONNELL: I do have one question in regards to the energy balance analysis you made. You gave an energy ratio. How does this compare with other operations? If you've got a 33.3-to-1 ratio of--

DR. WALES: I'm going to turn this over to Doug Brewer in a minute here, but I'm not sure we can answer your question because, as Les indicated, this is the first project we've done this for.

Doug, can you elaborate on that?

MR. BREWER: I'm afraid that's about the best we can do. We haven't really looked at enough projects to make any kind of quantitative statement about that. All we can really say is, looking at those four alternatives, that's what we came up with.

CHAIRMAN O'CONNELL: All right. Is it something that could be looked into in some short period of time? When I say "short period of time," before we certify the report we're going to have to go back to the Board, I think, for an extension.

MR. BREWER: Well, I think we could look at some other projects but it would be-- there is some question about what we could really come up with, relative to how accurate it would be or how representative it would be. But we could certainly look into it, probably.

DR. SENGER: I think one thing that might be mentioned in that regard is that in order to actually do this type of analysis we do require a certain minimum amount of information about a given project, and this would influence our ability to do that type of analysis.

CHAIRMAN O'CONNELL: Well, it would seem to me that, since Union Oil has other platforms in the channel area, they might be able to supply some of that information: What it's consuming, what they're getting out of the wells.

Does any other member of the commission have any questions that they would like to ask at this time?

COMM. STOLL: Mr. Chairman, I would have a question somewhat related to one that you asked. I'm

presuming that those ratios between energy developed and energy required in the process of developing in the operation of the production are related to-- very much related to the distances which oil and water and those kinds of things have to be pumped around. Is that not the case?

MR. BREWER: Yes, that's true. There's also the overriding factor of the use of the different booster stations that are involved for the different alternatives.

COMM. STOLL: Well, then, also the value of the products, which are oil and natural gas, is somewhat based on current values, or are you projecting that the OPEC nations are going to double the value of oil that they charge everybody, and therefore local oil is worth that, and how much is-- you're talking about the other end of the scale where you're using an energy source. You're talking about electrical power that the oil companies would be buying from Southern California Edison, I presume.

COMM. DUFF: They say those costs are going up, too.

MR. BREWER: That's true. Well, economics was not directly considered into the energy balance itself. Economics only plays a sort of indirect role in regards to telling you how much oil you can economically recover at whatever price.

Basically the energy balance focused only on the energy content of how much oil and natural gas was produced, and then how much energy is used in the development of those resources.

So in other words, the proposed Mandalay project, for example, had an energy ratio of 33.3 to 1. What that indicates is for every one BTU, for instance, that you would use to produce that resource, you would get back 33.3 BTU's in energy.

COMM. STOLL: In other words, in order to make it more simplified, you would eliminate the Edison Company and just use the oil produced to develop energy and so forth, pump things around. Then you get those same kinds of ratios. Is that true?

MR. BREWER: That's right.

COMM.STOLL: Okay.

DR. WALES: One other thing we might add is that entire analysis was based on the 9.5 million barrels of oil from Gina and the gas there and development of the Repetto Formation only. Platform Gilda did not include any oil or gas from the Monterey Formation because the commercial reserves there are currently unknown.

So those ratios could go up considerably if commercial reserves are found in the Monterey Formation resulting in the full development of the 30 wells.

CHAIRMAN O'CONNELL: Any other questions by members of the commission? Okay. I'd like to remind all those of you in the audience that would like to speak to this project to get your question cards and fill them out and turn them into the staff before we convene after this break. We'll take a short recess at this time.

(Recess.)

CHAIRMAN O'CONNELL: I'd like to call the meeting of the Planning Commission back to order.

At this time, if there are no further comments by members of the commission or the staff or the consultants, I'll open the testimony up to the members of the audience that would like to speak.

I have several cards here of people that would like to talk to us about this project. I'd like to remind you again that the only thing that we are considering is the adequacy of the environmental impact report and the environmental assessment.

Sometime after the report has been certified there will be tests and public hearings on the project itself, so if you will please confine yourself to the environmental impact report, it would be much appreciated.

At this time I'd like to ask Mrs. Ann Rock if she would come up and talk to us and make her comments to us, please.

COMM. FLORES: Still five minutes?

CHAIRMAN O'CONNELL: Yes, five minutes' time is what we would like to limit you to.

MS. ROCK: Thank you, Mr. Chairman. This evening I'm representing the League of Women Voters of Ventura County, and we'd like to commend the Union Oil Company, the City of Oxnard Planning Department, and the United States Geological Survey for their efforts in the preparation of the EIR/EA for platforms Gina and Gilda.

From the layman's point of view it is obvious that every effort was made to produce a complete and

comprehensive document, not only with respect to state and federal law, but with respect to concerns expressed by the public at workshops for citizen input.

The League is especially gratified to note that its request for an overall energy balance in equivalent barrels of oil for this project was clearly and cogently addressed.

And I might add as an aside, honorable commissioners, this is the first time to our knowledge that an environmental document has ever included an overall energy balance, and so that I dare say it's going to be very difficult to find that information comparatively for other projects.

Other than to recognize the general excellence of this document, the League offers the following brief comments: Subsequent to the publication of this document, there has been some serious discussion at the County level concerning the possibility of a transfer of ownership of Mandalay Beach County Park to the State.

One of the beneficial impacts of the Mandalay Beach onshore facility is that prepayment of lease fees for the treating facility site would provide funds needed to facilitate development of the planned Mandalay Beach County Park.

Since so many interested Oxnard residents have worked long and hard over the past few years to acquire this park, the League is most interested to know that, should a change of ownership occur, whether there is legal recourse available to assign these prepayment funds to the State for

the same purpose, to ensure that the park development is not delayed.

We note that there is no discussion of the effects of an accidental spill on the operations of Point Mugu Naval Air Station. We grant that there may be none, but we think that a statement to this effect is necessary.

And lastly, because Ventura County has the potential for extensive energy-related resource development, the local League has for many years emphasized the need for discussion of the cumulative impacts, especially on air quality, of proposed or planned energy-producing projects in individual environmental documents for specific energy projects.

We recognize the difficulties of impact assessments for proposals which may not materialize or which may be a number of years in the future.

Nevertheless, we think it important at the least to list those projects which have been seriously considered for the area, for example, the Boeing coal-slurry line, if for no other reason than to provide this information to the public.

The League thanks you for this opportunity to comment. And if I could make one other comment, as kind of an aside, in going through the report I found two words used. They were "finalization" and "analyzation." Please, please delete them. The word is "analysis" and we have lots of other verbs other than to finalize. Thank you.

CHAIRMAN O'CONNELL: Thank you. Are you going to leave a copy of your comments with the staff?

MS. ROCK: Yes.

CHAIRMAN O'CONNELL: Thank you. The next person that would like to talk is Mari Gottdiener from the Coastal Commission.

MS. GOTTDIENER: Good evening. I'm speaking for the State Coastal Commission and representing the staff of the South Central Regional Commission as well in our comments.

We agree with the Ventura County League of Women Voters that generally this is an excellent EIR. We think the format is very useful in the way that it leaves in the alternatives of the discussion of the issues and the impacts. Now, that's one of the things that we had requested at the scoping, and we appreciate that it's been done.

I'd just like to mention that the State Coastal Commission, a week ago on June 19th, acted on the plan of development for Platform Gilda, that is, just the offshore portion of this development, saying that the platform as proposed would be consistent with the California Coastal Management Program. This in no way binds or affects the permit review by the Regional Commission of the onshore section of the project.

We regret that we were not able to review a preliminary draft of this EIR. In general we found that it's very useful to have preliminary drafts to identify any shortcomings that could later be corrected before formal hearings on the draft.

The other problems that we've had with this EIR are the

fact that the land use discussions were very brief and, we feel, scant.

There was no discussion of the draft LCP's for the City of Oxnard and the LCP work that was done for the City of Ventura and the County of Ventura. If this were done, it's very possible that the selection of primary and secondary alternatives might have been different.

And just to illustrate this point, use of the City of Oxnard draft LCP land use plan shows that the proposed onshore processing facility site at the Mandalay dunes is designated as recreation. This is inconsistent with the statement in the EIR that the site itself is not planned for park development. So we would like to see a more extensive discussion of the local coastal program documents in the final.

On alternatives, this probably is the most deficient section in the EIR. The Coastal Act requires a consideration of alternatives inciting industrial development to ensure mitigation of adverse environmental impacts.

There seems to generally be a bias in favor of the onshore facility at Mandalay dunes in the EIR because of the short discussions of the other alternatives.

For instance, at the early scoping meetings, the Coastal Commission staff requested that serious consideration be given to Number 1, the use of Mobil Rincon's processing facility to process the oil and gas from Gilda and Gina, and also consideration of the alternative of using

Chevron's Platform Grace on a lease adjacent to Platform Gilda.

The reason that we felt that these were alternatives worth consideration in detail are that, Number 1, Rincon is currently operating at 20-percent capacity.

There's a decline in the production in the State leases. The 20-percent capacity is the 20 thousand barrels a day of oil.

Rincon is a very large site and can handle 100 thousand barrels a day, easily could handle production from Gilda and Gina the way things are now, as well as Platform Grace.

Grace has just been installed with a large pipeline to shore, sized to carry production from the entire Santa Clara unit.

Now, the unit is a group of, I think, nine leases, maybe a little larger, which includes Platform Gilda. Gilda, as I said before, is right next to Platform Grace.

We think that this should have at least been considered more thoroughly in the EIR beyond just saying that Union didn't feel that this alternative was economically viable and that a third platform was needed. Why is a third platform needed, and is it in fact actually needed?

The EIR has relegated both the Rincon and the Platform Grace alternatives to, quote, "secondary alternatives," with very little description of their feasibility, technical or economic.

The Coastal Commission, in its permit review, will have to develop information on the technical and economic

feasibility of these alternatives, possibly causing a delay in the regulatory process, if this deficiency is not corrected in the final EIR.

We feel that Rincon and Platform Grace present excellent opportunities for consolidation. Grace received a coastal permit a year ago from the Regional Commission and on appeal to the State Commission, and could easily have been analyzed as a known quantity with certainty that the pipelines would be constructed.

We'd like to say that both the primary and secondary alternatives should be more thoroughly discussed in the final, and we would be happy to work with the City of Oxnard planning staff and Dames & Moore to make this possible.

I hope these comments are constructive. They're not meant to just be merely critical. We feel they're important for our coastal permit review. And that concludes my presentation.

CHAIRMAN O'CONNELL: Okay. Thank you. Mr. Karl Krause.

MR. KRAUSE: Good evening. My name is Karl Krause, and I'm representing the Ventura County Air Pollution Control District.

The Ventura County Air Pollution Control District has reviewed this EIR, and I'd like to concur with the first two speakers and say that I think the air quality discussion in the EIR is generally clear and complete.

However, we have had a concern from the beginning of this project, and it continues, and that is we're concerned

with the potential for air pollutant emissions from transport of the oil from Gina and Gilda by tanker, and we're not satisfied with the discussion as it is in the EIR at the present time.

First of all, the EIR states that Union intends to use the existing pipeline from the Ventura Marine Terminal to Los Angeles to transport this oil.

It also states that the pipeline may be expanded if the capacity in the line isn't sufficient to handle the oil, if the excess capacity in the line isn't sufficient to handle the oil from Gina and Gilda.

Our concern revolves around the fact that the EIR states that potential peak production from Gina and Gilda would be 20 thousand barrels a day and perhaps up to 28 thousand barrels per day if the Monterey Formation can be exploited successfully.

However, information that we've received previously from Union indicates that the Ventura Marina to Santa Paula Pump Station leg of the existing pipeline can only hold or can only carry 20 thousand barrels a day of oil, and that the pipeline from the Santa Paula Pump Station to the Torrey Canyon Pump Station can only handle 18 thousand barrels a day of oil.

So it would appear that there already is a problem with the pipeline handling the oil that would be produced from Gina and Gilda.

We don't disagree that possible expansion of the pipeline would be a separate project from the project that's

being considered in this EIR, but if all these facts are correct, and if a 20- or 28-thousand-barrel-per-day production could be achieved within approximately a two-year time frame, which the EIR indicates could happen, we think that actions should be being taken now and certainly planned in the very near future for how that pipeline is going to be expanded.

So the Air Pollution Control District is interested in what actions are being taken, and we feel that the EIR should include a more thorough discussion of what actions are being taken to expand the pipeline.

If you have any questions, I'd be happy to answer.

CHAIRMAN O'CONNELL: Thank you. Any questions of Mr. Krause?

MR. KRAUSE: Thank you.

CHAIRMAN O'CONNELL: Thank you. Mrs. Jean Harris.

MS. HARRIS: I guess all of us are going to compliment this very extensive EIR. I also would like to compliment the steering committee concept. This seems to me a fine way to get the concerns of the people who are knowledgeable.

And I personally would like to thank the Union Oil officials. They have been very open to the public, very accessible, and have been available to educate us about offshore oil wells and about their plans and projects; and the people of this area appreciate that education that they have given us.

I have a basic problem with the EIR. It's great on alternatives and deciding between those alternatives that were selected, but the alternatives that I really needed was: According to the law, the federal law, the Land's Act about offshore oil says that we need energy, of course, and so what you need to compare is the amount of oil you're going to get and the amount of energy you're going to get, as compared to the potential environmental damage from the way you're going to get it.

And maybe it's because the document is so large that I simply didn't find it, but I didn't find anywhere that comparison between the resource and the potential damage.

The other comparison that I need-- I'd refer back to their Mutt and Jeff. I've forgotten who is big, Mutt or Jeff, but Gina and Gilda, I know which one is little and which one is big.

If you think of Gina with the nine potential wells that they're speaking of now, and Gilda with the 90 potential wells, they're so different. Also, Gina is four and a half miles from the coast and Gilda is ten miles from the coast. Just in many ways the two oil wells are so different.

The fact that they both are included in the same EIR gives me difficulties because their impact is so different and the resource is so different, and I would like to see some kind of comparison there of those two wells in terms of resource and in terms of environmental impact.

28.2 Otherwise-- I noticed someone else has pre-empted me, so I probably don't need to talk about it, but near the end

28.2 (cont'd)

of the summary, which I confess I looked at more completely, on page 22 they have a number of alternatives. They don't include Mr. O'Connell's alternative, the pipeline to Ventura, and I would like to suggest that as a Number 8 alternative on that page 22.

But I do think that they should talk more about the fact that we do not need a separation facility in terms of needing to separate the oil from the water. There is one in the Rincon; there is one in Carpinteria, and they are under capacity, and so a new facility actually is not needed.

The fact that they want to build one, a more modern one, I'm sure, is something that we could consider, but they could do it two ways: They could take the pipeline from the new wells to their own Platform A, which is near the separation facility there, or they could take the oil from Gilda only two miles over to Grace, which has, in existence and being built, pipeline that has the capacity to take the oil then into an already existing facility. And I think this should be-- those two alternatives should be talked about more in the EIR.

The last thing I'd like to mention is the aesthetic effect. I'm sure to an oil man the platforms are beautiful, but if I go to Santa Barbara and drive along the coast and I want to see how Santa Cruz looks today, I see platforms instead. In Oxnard I do not see platforms; I see the islands.

I think the aesthetic effect was brought out in the EIR, but there was only maybe two sentences about anything being

sub-sea.

Now, I haven't done a lot of investigation about sub-sea, but I read a letter to the editor by Mr. Huntsinger, who owns Vetco Company in Ventura, in the last week.

He was talking about the potential for offshore oil in the Santa Barbara Channel, and he said, "I love to look at oil platforms, but for those who do not, there are sub-sea facilities."

I think that he implied that it was more than just sub-sea well heads because he said "if you don't like looking at it." So I really would like more explanation in the EIR for the general public about what aspects can be sub-sea, and therefore remove the aesthetic effect for those who do not appreciate it.

Again, I'd like to thank you, appreciate this opportunity, and thanks again to Union Oil and all tne consideration they have given the people in this area. Thank you.

CHAIRMAN O'CONNELL: Thank you, Mrs. Harris. Mr. James Wolf.

MR. WOLF: Mr. Chairman and members of the staff, I just had a couple comments. One is that in the beginning of the report, the summary report, why, a large number of the terms have been defined.

28.3 However, when it comes to the bottom line, for instance, in Table 2.0-1, under "Significance," why, they use a few fuzzy terms like low, moderate and high, which are not defined at all in the report. I would just think that some

28.3 (cont'd) definition of what they mean by low, moderate or high could be included in the report.

The second item is in the area of traffic. The report goes into considerable detail on the increases in traffic on the various streets and roadways of the project; in some cases it can be up to seven percent.

28.4 However, they really don't, what I consider, describe the real impact of the traffic, and that is what would be the potential for increase of accidents, for instance, on Harbor Boulevard, with the type of traffic that they're going to have.

28.5 And second, what would be the degradation of the roadway. In other words, there would be more maintenance and costs to the City because of the heavy trucks using the roadway, particularly if it's in wet weather.

28.6 And the third item was in the area of alternatives, why, they have one alternative which is, you know, no project, but another alternative, when we're really talking about energy generation, is how about development of alternate resources. In other words, instead of getting the oil out of the channel, let's just get some more coal somewhere. Thank you.

CHAIRMAN O'CONNELL: Thank you. And last but not least, Mr. Carroll Lorbeer.

MR. LORBEER: Thank you, Mr. O'Connell. I'm Carroll Lorbeer, 542 West Fifth Street. Since I have only five minutes I'll try to speak fast.

The main book, Volume 2, Chapter 12.6-23, it goes into

the matter of Mandalay Beach County Park, which has been mentioned all evening.

28.7 It states here that it's undeveloped and consists of 104 acres. The tax assessor says it's 94; Jim Wolf says it's 75 to 80 acres. I think that should be clarified.

28.8 In relationship to transportation, what Jim Wolf just mentioned, I wish you would turn to Figure 12.6-5, if you can find it in your big Volume 2, because the main impact, it snows here, is a road connecting the facility to Harbor Boulevard through this proposed Mandalay Beach park, which would make a major intersection on Harbor Boulevard.

28.9 And so, as Mr. Wolf pointed out-- he mentioned accidents on Harbor, but the impact on travel to Harbor Boulevard, I think, would be quite severe.

28.10 And in relationship to this, on page 12.6-28 and then 12.6-29, no mention is made of Mandalay Beach Road, and I think that is a major deficiency in describing the location, describing the project.

Mandalay Beach Road, as you know, extends from Fifth Street north in front of the Edison plant, in front of this facility, and the County has on purpose blocked it with sand so that the people, many people do not even know a road exists; but when it was annexed to the City it became part of the city streets.

28.11 So the definition of Mandalay Beach park as going from Harbor Boulevard to the ocean isn't really correct. It goes from Harbor Boulevard to Mandalay Beach Road.

28.12 So an alternative in mitigating measures that could be

28.12 (cont'd) taken would be to then use Mandalay Beach Road for the primary access to the plant, which would involve West Fifth Street west of Harbor Boulevard, and also a road which exists now not to public County standards on the north side of the Southern California Edison Company through privately owned McGrath land. It comes right out almost to the northwest corner of the Edison plant and Mandalay Beach Road.

So access for construction trucks could be coming south on Harbor Boulevard and to this new area, and over to Mandalay Beach Road and exiting on West Fifth Street, which would provide very little impact to the people.

28.13 Also, there is no traffic stop shown for the traffic on West Fifth Street west of Harbor Boulevard. They do have it on the east side of Harbor Boulevard, but I think this is something that will affect us all every day when this plant goes in. That road should be considered.

And also, it is mentioned that the County has voted three to one to proceed with making the trade to the State of this Mandalay Beach land in exchange for 17 hundred acres in Moorpark, and I notice our Parks and Recreation Commission is discussing it violently.

28.14 So that would change the money available for any additional road, which is shown on this map as the major road going from the facility to Harbor Boulevard, that Union Oil would then probably have to construct that itself. But I think if they can recognize the existence of the Mandalay Beach Road, they can solve that particular problem.

In relationsnip to Union Oil facility, it shows

pictures on 12.6-36 of the Union Oil facility to Ventura. The Port District is very much opposed to even the maintenance of that road or a rotatory facility for a helicopter.

I'm sure they would in no way permit this to be located in that area because it's not related to the Ventura Harbor or the Port District, so I think that option is not a real alternative option.

In regards to any other option of trying to force them to get in the same bed with Chevron or Mobil, I hate to see our government force the increase in cooperation between oil companies. There's too much of that now, and price fixing and charging us all the same high price for gasoline. If they allow individuals to be competitive and really set their own prices, I think it would be far better.

And in relationship to employment, Chapter 12.7-30, I think that is one of the most valuable tables that we have, because it shows the tremendous variation in numbers of people that are employed in the existing facilities in Oxnard.

People have challenged it because it says that employment would only be temporary. If you have page 12.7-30, you'll see that the number of companies in Oxnard that vary over 100 percent in employment during the year, there's about ten of them.

Architectural Fiberglass goes from 50 to 100. Deardorff-Jackson goes from 40 to 200. Coastal Ag-chem goes from 100 to 120. Dullam Harvesting goes from 75 to 160.

Mel Fennerman goes from 50 to 1000.

Hiji Brothers goes from 80 to 135. Heublein goes from 200 to 1200, a 600 percent variation. Bob Jones Ranch goes from 50 to 300, Oxnard Frozen Foods from 75 to 500. So I think if you are considering the variation impact as produced by this facility, it is minor to what we already have today.

In relationship to water, on this 12.7-8 it méntions that it's in the Colonia Water District and would have to be annexed to the Metropolitan Water District.

The Southern California Edison Company plant already is in the City and is in those particular districts, and if the park is annexed-- I mean is developed by the County or the City, which it's already in the City, it would then have to get water from the City, and so that whole thing would be taken care of by that one particular action of the City.

I think too that it is a very good report, and I appreciate the chance of having learned about this since last October 20th, when the Oxnard Advisory Committee and the Neighborhood Council had a tour of the area.

And if you gentlemen and lady have not yet toured this facility, I believe you will agree that the Union Oil people have selected the far and the best site that would benefit the environment and the citizens of Oxnard. Thank you.

CHAIRMAN O'CONNELL: Thank you. Are there any members of the commission that would like to make comments or questions at this time?

28.15 I know one of the comments that Mr. Duff had made-- he

28.15 (cont'd)

had to leave earlier. That's the reason why he's not here. But he had spoken yesterday at lunch about one of the things he thought might be considered, and that's the beach erosion, what effect this project would have on beach erosion.

He made the comment that he didn't see anything on the EIR on beach erosion. Since we're going to break the beach line, there's a possibility that it could have an effect. I think we would like to have some comment made about that.

DR. WALES: I think it's in there.

CHAIRMAN O'CONNELL: Is it?

DR. WALES: Yes.

CHAIRMAN O'CONNELL: Maybe you can point it out to me somehow.

At this point I'd like to defer to staff as to how to continue our procedure. As I understand it, we could close the public hearing tonight if we so desire, but that would not preclude any further testimony from anybody else-- or written testimony, I mean, up until a certain date. Is that correct?

MR. STEELE: Mr. Chairman, the summary statements that you made are correct. The chairman of the commission can close the public hearing concerning the adequacy of the EIR this evening, and that's what staff would recommend to you.

We would like to point out, as an advisory type of notice, that anyone interested in submitting comments on the EIR can submit them after this meeting in written form to the Planning Department up through July 14.

CHAIRMAN O'CONNELL: As an add-on to that, we are not certifying the EIR tonight if we close the hearing.

DR. WALES: That's correct.

MR. STEELE: That is correct, Mr. Chairman.

CHAIRMAN O'CONNELL: Okay. What's the pleasure of the commission?

COMM. LOPEZ: Mr. Chairman, I feel that we have had sufficient testimony tonight and the others have an opportunity to submit comments in writing, so I feel that we should close the public hearing.

CHAIRMAN O'CONNELL: Okay. Is that a motion?

COMM. LOPEZ: I'll make that a motion.

COMM. STOLL: I'll second it.

CHAIRMAN O'CONNELL: We have a motion and a second to close the public hearing on the adequacy of the draft EIR for the Union Oil project. All in favor? (Unanimous)

CHAIRMAN O'CONNELL: Opposed? So carried.

I want to thank the staff and the members of the consultant team that presented this project tonight. Very good job.

And was there a date that we would continue this to, a date certain? I think that we are going to expect some responses back to us on the comments that were made tonight. We have to continue this.

MR. EISNER: Mr. Chairman, with the closing of the public hearing this aspect is completed. We still, as we've stated, have the continuation of the review period

through the 14th of July.

However, at such time as we move on into the next phase, those additional hearings will be duly advertised and noticed, and we will then hold public hearings on additional aspects.

CHAIRMAN O'CONNELL: So we don't have to set a date, then.

MR. EISNER: That's correct.

CHAIRMAN O'CONNELL: Is there a motion to adjourn?

COMM. STOLL: So moved.

CHAIRMAN O'CONNELL: Second?

COMM. LOPEZ: Second.

CHAIRMAN O'CONNELL: All in favor? (Unanimous) Carried.

(End of transcript.)

28.0

RESPONSES TO COMMENTS FROM
CITY OF OXNARD - PLANNING COMMISSION - PUBLIC HEARINGS

28.1 Union Oil Marine Terminal Secondary Alternative
Please see responses to California Coastal Commission comment numbers 27.3 and 27.23.

28.2 Union Oil Marine Terminal Secondary Alternative
Please see response to California Coastal Commission comment numbers 27.3 and 27.23.

28.3 Definitions of Significance
Significance refers to the importance of an environmental effect relative to the magnitude of the potential impact. Assessment of significance involves a qualitative professional judgment of a specific impact magnitude within the context of the local and/or regional resource base. The conventional terms used to describe significance are low, moderate, and high.

Low significance means that an impact (whether small or large in magnitude) is not particularly important in relation to the local or regional resource base. For example, a project could result in the elimination of 200 acres of grassland habitat. Although this number appears large, grassland is a very common and widespread habitat geographically. Therefore, the significance of eliminating 200 acres would be low compared to a very large available resource base. For the proposed Union project, about 132,000 gallons of fresh water would be required for hydrostatic testing at the Mandalay onshore treating facility during construction. This appears to be a large number, but

would actually represent about 0.00037 percent of the annual demand for fresh water in the Oxnard Plain area. Therefore, the significance of this potential impact was judged to be low.

Moderate significance means that an impact (whether small or large) may be important because the resource is relatively scarce or sensitive locally and regionally. The EIR/EA indicates that the Ormond Beach Option B alternative configuration would result in the disturbance of about 34 acres of agricultural soils. This number appears relatively small. However, agricultural soils are an important resource within California that are declining in geographic extent due to urbanization and other development pressures. Therefore, the potential significance of disturbing 34 acres of agricultural soils was judged to be moderate.

High significance means that an impact (whether small or large) is important because the resource is scarce or highly sensitive locally and regionally. For example, a project could result in the elimination of individuals of rare and endangered plant species. Regardless of the number of individual plants that could be eliminated, this type of impact would be considered of high significance. This is because such plant species have limited geographic distributions and impacts on them could present a real threat to continued survival of the species. None of the potential impacts for the proposed Union project were judged to be of high significance.

28.4 Traffic Hazards

An increase in traffic on local roadways would cause a proportional increase in the statistical likelihood of accidents involving motor vehicles, bicyclists, and pedestrians. The expected increases in traffic volumes on various roadway segments within the project area (expressed as a percentage of projected 1980 and 1982 daily traffic volumes) are given in EIR/EA Section 4.6.4. The absolute magnitude of the incremental risk can be estimated knowing the duration of various project phases (EIR/EA Figure 3.3-1); daily vehicle usage on various segments of the local roadway system (EIR/EA Tables 4.6-1 and 4.6-2); the length of the various roadway segments (as determined from topographic maps and EIR/EA Figure 4.6-1); the percent increase in daily traffic volumes on these roadway segments (see various tabulations in EIR/EA Section 4.6.4); and the accident rate specific for each roadway segment. For example, the City of Oxnard (Genovese, August 1980, personal communication) reports that the segment of Harbor Boulevard between Channel Islands Boulevard and Fifth Street had a 1976-1977 accident rate of 8.4 accidents (injury or property damage exceeding $250) per million vehicle-miles. This segment of roadway is approximately 1.7 miles in length and has a projected 1980 average daily traffic volume of 12,700 vehicles per day (EIR/EA Table 4.6-1). During the four month project construction period, approximately 1.5 million vehicles would be expected to traverse this route (exclusive of construction traffic), traveling a total of $1.5 \times 10^6 \times 1.7$, or about 2.6 million miles. Based on an accident expectation of 8.4 accidents per million vehicle miles, about 21.8 accidents would be statistically expected to occur independently of the project. If construction traffic attributable to the proposed Platform Gina and Gilda Project were to increase these traffic volumes (and hence the accident expectation) by 0.38 percent (EIR/EA Table 4.6-3 for Road Location No. 15), an additional 0.007 acci-

dents (0.32 percent of 21.8) would be statistically expected to occur.

By similar calculations it can be demonstrated that the proposed project would increase the statistical accident expectation on Harbor Boulevard between Channel Islands Boulevard and Fifth Street by about 0.09 incidents during the total 6 year drilling phase and by about 1.04 accidents during the total 20 year production phase. Overall, an incremental increase of about 1.14 accidents would be statistically expected to occur on this roadway segment as a direct consequence of the proposed project.

The City has not determined specific accident rates for most other roadway segments shown on EIR/EA Figure 4.6-1, or computed an average accident rate applicable to the entire city. Hence it is not possible to perform comparable calculations for the other roadway links. Nevertheless, it is apparent from EIR/EA Section 4.6.4 that the increase on any particular segment of the roadway system would be small (a maximum increase of 1.24 percent for the proposed Mandalay configuration).

28.5 Roadway Maintenance

Union indicates that a maximum of four loads requiring permits for extra width would be needed to transport the three heater treaters and free-water knock-out unit to the onshore treating facility site. All other materials would be hauled by freight handling companies in their standard trucks. Details on vehicle sizes and gross vehicle tonnage cannot be provided until contracts for equipment manufacture are let. However, vehicles would have to comply with size, weight, and axle restrictions given in Section 35550 of the California Vehicle Code. Caltrans requires a special permit for any vehicle or combination of vehicles (not exceeding a maximum length of 60 feet) having a gross weight in excess of 80,000 pounds, or a maximum width

exceeding 100 inches (104 inches including the rear view mirrors). The City also requires an oversize load permit for shipments exceeding 8 feet in width, 13 feet 6 inches in height, or 75 feet in length. These permits specify permissible routes, hours of transport, and other conditions affecting the shipment. Fees are assessed for oversize shipment permits which are used to help offset increased roadway maintenance costs.

The more routine shipments of materials and equipment would also contribute to the degradation of roadway surfaces. However, Union would indirectly contribute to roadway maintenance through payment of gasoline taxes, sales taxes, and property taxes to the City and State.

28.6 Alternative Energy Sources

Oil and natural gas presently constitute about 46 and 31 percent, respectively, of the total United States energy supply. For each barrel of oil consumed, approximately 52 percent is used for transportation fuels; 20 percent for space and water heating; 17 percent for industrial heating and feedstock; 10 percent for the generation of electricity; and 1 percent for miscellaneous uses. A comparable breakdown for natural gas is: 46 percent for industrial heating and feedstock; 34 percent for space and water heating; 17 percent for the generation of electricity; and 3 percent for transportation.

The contribution of oil, natural gas, and other fuels to major energy end uses in the United States is shown in Table 28-1. The tabulated values show that for every use category except for the generation of electricity, the United States is now totally dependent upon fossil fuels (oil, natural gas, and coal).

Net energy consumption by fuel type in California is shown in EIR/EA Table 4.10-3. In 1978, petroleum products and natural

gas accounted for nearly 87 percent of California net energy consumption. By the year 2000, a California Energy Commission forecast predicts that this dependence could be reduced to about 74 percent of net energy consumption assuming a future use pattern which minimizes reliance on conventional resources and reduces oil use drastically. Even assuming aggressive conservation and a shift to alternate fuel sources, the Energy Commission believes that California will continue to be strongly dependent on oil and natural gas through the remainder of this century.

The reasons that oil and natural gas will continue to be needed in the United States through at least the end of this century are primarily two-fold:

1. For certain energy applications, such as the manufacture of transportation fuels, there are presently no commercially available substitutes to oil and gas. Even though increased attention is being focused on producing synthetic crude oil or natural gas from coal, the time and expense required to develop satisfactory processes and to build large-scale plants will preclude a significant contribution from these technologies until the 1990s.

2. Oil and natural gas have many uses besides the production of energy (e.g., in the manufacture of petrochemicals, pharmaceuticals, plastics, fertilizers, synthetic fibers, etc.). For certain of these applications there are no known substitutes.

The crude oil supply and demand outlook in the United States and California are discussed in EIR/EA Section 4.10.1. By many estimates it has been predicted that the 1980s will represent a turning point in the world's economy when global petroleum production plateaus. Sometime before the year 2000, many analysts

believe that increasing global consumption will outstrip the dwindling petroleum supply. When this happens, the prime concern will be the forced curtailment of consumption in at least some industrial countries.

Recognizing that the global supply of crude oil and natural gas resources is finite and diminishing, and that the United States is vulnerable to foreign supply interruptions, the Carter Administration is implementing several policies designed to: (1) promote aggressive conservation of remaining oil and gas resources; (2) increase domestic production of oil and gas while simultaneously curtailing continued United States dependence on foreign oil; and (3) encourage, to the maximum extent feasible, substitution of oil and gas with alternative energy sources. The following paragraphs highlight the current technical and economic feasibility of employing different energy technologies as a substitute for oil and natural gas.

COAL

Coal is especially abundant in the United States, which has reserves adequate to support several hundred years of production at current rates. In fact, in terms of Btu content, coal accounts for over 80 percent of known recoverable United States energy reserves. Most of our current technology for using coal was developed at the end of the 19th century and early in the 20th, when coal replaced wood and charcoal as fuels for both steam generation and metallurgy.

Coal can readily be used in place of oil and gas as boiler fuel and in a few process heat applications such as cement manufacturing. In its natural state, it has limited utility as a transportation fuel, although there has been recent mention of reviving the coal-fired steam-powered locomotive engine. The principal opportunities for increased use of coal are as a

replacement for the oil and gas now burned in boilers and to supply the growing needs for electricity and industrial steam.

The major impediments to increased coal utilization involve economic factors and environmental concerns. The cost of coal varies widely around the world, especially when transportation and handling costs are considered. In addition, air pollution abatement equipment required on coal-burning equipment in the United States is expensive to install and maintain, serving to discourage full utilization of known coal reserves. Nevertheless, coal is inexpensive in comparison to oil, and will probably remain so to compensate for the nuisance factors in handling it and disposing of the ash. Coal now being delivered to United States power plants is roughly one-third the price of oil on a per-Btu basis. However, coal cannot be easily substituted for oil except at a few utility and industrial plants that were originally designed to burn both coal and oil. Utilities and industry are reluctant to replace oil- and gas-fired boilers with coal-fired units costing three to five times as much. However, many new electrical generating facilities coming online between now and the end of the century will be coal-fired.

The environmental effects of mining and burning coal continue to be an impediment to full-scale coal utilization, although recent advances in strip mine land reclamation and air pollution abatement technology are helping to make coal utilization more environmentally compatible. Two principal pollution problems remain. In the heavily industrialized northeastern United States and northwestern Europe, significant levels of airborne particulate sulfate have been detected, giving rise to acidified rainfall that has affected the ecology of lakes and streams over a widespread geographic area. These problems have been blamed on SO_2 and NO_x emissions from coal burning and other fuel burning. Some observers fear that a widespread increase in coal use would exacerbate this problem.

Another concern of a global nature is the slowly increasing concentration of carbon dioxide in the atmosphere which is believed to have been caused by the burning of fossil fuels including coal. If, as some suspect, increased carbon dioxide levels will raise the temperature of the atmosphere, it could adversely affect crop production, cause the melting of the polar ice caps, and result in widespread economic and environmental disruption. This would argue against a worldwide shift to coal as a primary energy source. The issue is likely to remain controversial for some time.

NUCLEAR POWER

The current generation of commercial nuclear power plants produce electricity by the controlled fission of uranium atoms. Heat released during the fission process is used to generate steam, which is in turn delivered through a steam turbine connected to a generator to produce electricity.

The energy value of one pound of enriched uranium is equivalent to approximately 52 tons of coal or 26 barrels of oil. Both volumetrically and cost-wise, the fuel component of a nuclear power generating system is much smaller than for a coal- or oil-fired system of comparable size. In addition, when operating properly, nuclear power plants have fewer associated environmental problems than a comparably-sized coal-fired or oil-fired power plant. Despite its many positive attributes, the future of nuclear power in the United States is uncertain for a number of reasons, including: (1) delays in licensing due to increasingly lengthy hearing procedures; (2) industry uncertainty regarding the future regulatory environment; (3) concern over the adequacy of a long-term supply of uranium for fuel; (4) rapidly escalating capital construction costs; (5) uncertainty regarding projections of utility load growth; and (6) growing public opposition to nuclear power.

Although the commercial nuclear power industry has compiled an unparalled 23-year safety record, and government studies have shown that the risk of a catastrophic accident is very small, many persons feel that the societal risk of nuclear power is unacceptable as long as other energy alternatives are available. Additional public concerns are centered around the "front-end" (mining and milling) and "back-end" (waste disposal and long term waste stabilization) of the fuel cycle. The front-end problems relate primarily to worker safety during the mining and milling process, but they also include public safety considerations (radiation exposure from structures constructed with or built upon uranium mill tailings). The back-end problems involve the safe disposal and management of high-level nuclear wastes which may remain hazardous for 250,000 years or more.

The Carter Administration continues to believe that nuclear power is a necessary component of the nation's power generation mix. Efforts are currently underway to accelerate the licensing process through the use of early site reviews; to increase the intrinsic safety of nuclear power facilities through the use of standardized plant designs and more stringent regulatory review procedures; to complete pilot plant studies leading to selection of a preferred high level waste disposal method; and to identify and license suitable terminal waste disposal sites.

Nuclear power could replace oil and gas as a means of generating electricity, but could not serve as substitute transportation fuel or industry feedstock.

SYNTHETIC FUELS

Syngas (snythetic natural gas) and synoil (synthetic oil) constitute a very large potential energy resource since they are both derived from coal. The main obstacle to the development of these synthetic fuels has been the large initial capital investment required. However, because of the current energy situation, the federal government may subsidize their production and make up the price differential between the synthetic fuels and their natural hydrocarbon counterparts.

Syngas is made by passing steam over hot coal which produces a low-energy (150 Btu per cubic foot) gas consisting mostly of hydrogen and carbon monoxide. The hydrogen and carbon monoxide are then reacted catalytically to produce methane and carbon dioxide.

Commercial experience in producing syngas has been almost entirely with the Lurgi process. The Republic of South Africa has been aggressively developing this technology in an effort to reduce its dependence on politically unreliable foreign oil. A number of other gasification technologies are being developed in the United States, primarily to optimize conversion of a broad spectrum of domestic coal types. The high capital investment required for these processes makes the resulting gas too expensive for large scale commercial development (at least $4.00 per million Btu compared to $2.50 for natural gas...expressed in 1978 dollars). However, a number of pilot plants have been financed by the U. S. Department of Energy, and construction of a few small commercial plants is beginning.

Methane produced in coal gasification can be easily converted to methyl alcohol (methanol or wood alcohol), a liquid fuel. Coal can also be converted to gasoline or oil (synoil), either directly or by reactions of the methane produced in the

gasification process. Unfortunately, the synoil process is less energy-efficient than the gasification process because of the extra steps needed to produce the heavier, long-chain molecules. Nevertheless, there is considerable political support for the production of gasoline from coal. The Republic of South Africa has developed a process called SASOL which is similar to the Lurgi gasification process, but which produces gasoline directly. Their second SASOL unit is nearing completion and by 1983 the country hopes to be nearly 50 percent self-sufficient in oil.

OIL FROM SHALE AND TAR SANDS

Oil from shale and tar sands is not presently commercial in the United States, but these sources are expected to see considerble activity during the 1980s as the market price of crude oil rises. Oil from tar sands can be produced for about $4 per million Btu, whereas shale oil currently costs in the neighborhood of $8 per million Btu. Despite their present high costs, the total energy resource trapped in United States oil shale and tar sands has been estimated to exceed 1,100 quads (a quad is a short for quadrillion, or 10^{15} Btu). Total United States energy consumption currently totals about 80 quads per year. Passage of the Energy Securities Act should provide further incentive to oil companies to develop domestic oil shale and tar sand resources by providing federal sponsorship and partial funding for new energy development projects.

The major environmental concerns related to petroleum extraction from oil shale are related to mining impacts and consumptive water use. Shale oil is really not oil at all, but rather a waxy solid called kerogen. When it is heated it becomes less viscous. The hydrocarbons can then be forced out under pressure. Heating can be performed either above ground in retorts, or underground in caverns filled with crushed rock.

The aboveground process requires a substantial capital investment for the retort and materials handling equipment. A large amount of water is also required for the process of separating the product oil from the crushed rock. When the extraction is completed, the volume of water-soaked rock must be disposed of by landfill in canyons because the residue occupies a larger volume than the original ore. In addition, an underground process has been developed which reportedly requires less water and results in spent ore disposal in place. However, details about this process have not been made public.

In the United States, Utah alone may have as much as 30 billion barrels of oil locked in tar sands, but the quality of the deposits (oil concentration per ton of rock) is vastly inferior to that found in Canada (Alberta). As with shale oil, the source rock (sedimentary deposits that contain viscous bitumen compounds within the pore spaces) must be heated and/or fractured to recover the hydrocarbon, which can then be refined by conventional techniques. In the United States, the technology for recovering hydrocarbons from tar sands has not progressed as far as that for recovering shale oil.

SOLID WASTE

For several years, the City of Nashville, Tennessee has been heating a major portion of the downtown area with steam produced by burning municipal solid waste. Although the fuel is essentially free, the material does not have a heating value high enough to support efficient electric power generation. The Union Electric Company of St. Louis, Missouri conducted a demonstration program using a fuel consisting of 90 percent coal and 10 percent solid waste. The solid waste was shredded fine enough to be fed into the boilers through the same type of nozzles used for pulverized coal.

Environmental concerns relative to the use of solid waste as an energy source primarily involve the adverse aesthetic impacts of trash storage facilities and collector truck traffic required to transport the wastes to a central collection point. The Union Electric Company demonstration project discussed above was terminated a few years ago, partly because of community protest over the location of trash storage facilities.

Although use of solid waste as an energy source may have utility in certain areas, it is not considered to be a viable widespread substitute for oil and natural gas.

HYDROPOWER

Hydropower is the largest renewable energy source in the United States, currently providing over 10 percent of our electricity. Its use has expanded very slowly in recent years, while total electricity production has increased over five-fold, because most of the good hydropower sites have already been taken. In the future, development efforts will be concentrated on the less efficient low-head (and even run-of-the-river) sites, where water turbines will harness the power of the current. The exploitation of even these marginal resources will be restricted geographically to sites or rivers with a sufficiently steady flow.

Being limited in its use to the generation of electricity, hydropower is not considered to be a total substitute for oil and natural gas. Although the fuel is "free" and essentially non-polluting, the damming of rivers can result in severe ecological damage.

BIOMASS

The fermentation of alcohol from various agricultural products appears to have been practiced since the beginning of civilization. In response to the hardships induced by the 1979 oil shortage, some enterprising distillers have switched from the production of ethyl alcohol (ethanol) for drinking to motor fuel. The distillers can save money because the product need not be of such high purity, but the alcohol is still more expensive than the gasoline it is intended to replace, even with strong tax incentives.

The synthesis of ethanol from corn is only marginally efficient considering the energy required for producing the fertilizer and powering the agricultural machinery required to harvest the crop. The process can be brought into a more favorable balance by burning the non-grain parts of the corn as a heat source for the distillation process or by increasing the efficiency of the distillation process. Even greater efficiencies are also possible by substituting crops with a higher sugar content (i.e., sugar beets or sugar cane).

Another energy source in this category is wood, which can either be burned directly or converted to alcohol. Ever since the oil embargo of 1973, many homes have converted to burn wood for winter space heating, especially in New England, where firewood supplies are plentiful due to natural reforestation of abandoned agricultural lands. Wood can be fermented to alcohol, but feeding bacteria on cellulose is much more complex than fermenting sugar to alcohol. Since wood is fairly uniform chemically, it can also be converted to alcohol via nonbiologic chemical processes, but these reactions are fairly complex and must usually be performed at high pressures (which complicates the problem of feeding raw material to the reactor).

Some advocates of biomass have spoken of devoting half our agricultural acreage to energy crops, but the resulting competition for prime agricultural land and skilled farm management would greatly increase the price of foodstuffs. Biomass could be obtained without impacting prime agricultural land if low-density crops were grown on marginal land, or by collecting agricultural and forest residues which currently are largely wasted. However, the energy required for gathering such dispersed sources would probably be as great as the energy to be obtained from the process.

GEOTHERMAL ENERGY

Geothermal energy is generally thought to be the result of the decay of radioactive elements in the earth's interior. This heat is conducted outward toward the earth's surface producing a geothermal gradient (average $1^{o}F/100$ feet). However, in some areas, heat is concentrated in "hot spots" near the surface as a result of magmatic intrusion, volcanic activity, crustal plate movements and associated faults. The heat of the magma (molten rock) is conducted through layers of crystalline rock and in some areas surface water contacting the hot rock produces hot springs, geysers, or fumaroles.

Naturally occurring steam has been used for production of electrical power since 1904 in Italy. Today, geothermal resources are used for generating electric power in Italy, the United States, Japan, Mexico, New Zealand, Russia, and Iceland. A geothermal steam field in Sonoma County, California, produces 600 megawatts of electricity, satisfying a major part of the electrical needs of San Francisco, and will soon support an increase in power output of over 1,000 MWe. The only other commercial geothermal facility in North America (at Cerro Prieto, Mexico) produces 75 megawatts and will soon be expanded to 150 megawatts.

There are four major types of geothermal systems: vapor-dominated, hot water, geopressurized reservoir, and hot dry rock systems. Vapor and hot water systems are created naturally when (1) a significant heat source (hot rock, magma) exists near the earth's surface, (2) the heat source is overlain by a permeable formation (aquifer) enabling groundwater to transfer the heat, and (3) an impermeable formation caps the aquifer, preventing loss of the hot fluids. Geopressurized reservoirs occur where highly porous sands are saturated with high temperature brines under high pressure. They are located in sedimentary basins that have been subjected to geologic deformation. Hot dry rock is the most common geothermal resource. In principle, hot dry rock can be reached from anywhere on the earth by drilling deep enough (20,000 -50,000 feet). Such depths are beyond present drilling capability. However, there are many areas exhibiting above-normal geothermal gradients indicating hot rock systems relatively near the surface.

Presently, large-scale power generation from geothermal energy is limited to vapor-dominated and hot water systems. In vapor-dominated systems, the dry high-temperature steam flows directly from the reservoir to, and is expanded in, a low-pressure turbine which drives a conventional electric generator. Superheated water deposits underlying California's Imperial County represent another potentially large geothermal energy source. But, their commercial feasibility remains questionable. Here, the circulating fluid would be brine which would be "flashed" to steam, or its heat transferred to a secondary fluid which would drive the turbine generator. These brines are highly corrosive, which may necessitate frequent, expensive turbine replacement, and the spent brine must be disposed of with minimum environmental impact. Also, this relatively low-temperature electrical generating process will require large volumes of water for cooling.

The commercial feasibility of geopressurized reservoirs and hot rock geothermal resources has yet to be demonstrated, but many millions of dollars have been invested in research and development. Medium-temperature geothermal reservoirs, which could be exploited for space heating, have been identified in Idaho, Oregon, and Texas.

Although geothermal energy has some applications which could reduce United States reliance on crude oil and natural gas, it is a geographically-limited resource. The geographic restriction implies a limit to the total production rate.

WIND

Wind has historically been used primarily to propel sailing vessels and power windmills for pumping water and is certainly the oldest source of mechanical energy. Today, most wind development efforts are aimed at the production of electrical energy, with several small projects being funded by DOE. The first wind energy project to feed electricity into the grid will probably be the 3-megawatt (peak) wind turbine being constructed for the Southern California Edison Company. Although the winds at the site (in Banning Pass, near Palm Springs) have the highest persistence of any in southern California, the duty cycle of the wind turbine is expected to average only 25 percent. The cost of the electricity thus generated will be significantly higher than that generated by conventional methods, but mass production may bring the price down. The crucial factor may be the lifetime of the windmill blades, which could fail from stress or from erosion by sand or other windborne particles.

Like geothermal energy, wind is also a geographically-limited resource which could reduce—but not eliminate--the nation's need for crude oil and natural gas.

SOLAR ENERGY

The United States is already benefitting from the growing use of solar energy for water heating and space cooling. Over 1,000 solar hot water heaters were in use in southern California at the turn of the century, and, until about 10 years ago (when natural gas became widely available), there were nearly 40,000 simple rooftop units in use in central Florida. A significant number of similar units are in widespread use in Israel, Australia, and Japan.

In some parts of the country, residential solar water heating is already cost competitive with electric water heating and is becoming competitive with natural gas (especially given state and federal tax incentives). Heating a swimming pool by solar energy will produce an economic payback within 10 years—even at today's artificially low natural gas prices of about $3.00 per thousand cubic feet. With decontrol, that price will at least double within the next 4 years, making other domestic uses of solar water heating competitive.

In addition to residential uses, solar low temperature systems are also suited to some industrial applications. Examples are drying applications and low-temperature evaporation as required in some distillation processes. In most of these systems, a back-up conventional fuel source is usually provided to carry the customer through the night and the inevitable cloudy days. The main items of expense in a completely self-sufficient system is for a large water storage tank.

Additional future roles for solar energy may include thermal-electric conversion, wherein specially designed solar reflectors would focus sunlight on a central boiler to generate steam and electricity, and photovoltaic semiconductor cells, which would permit the direct conversion of solar energy into

electricity. At the present time, neither of these technologies is commercially feasible, being at least 10 times more expensive than present conventional electric generating processes. Additional Research and Development work will be required to lower the cost of these systems enough to make them commercially feasible. The FY 1980 DOE budget has allocated $680 million for this purpose.

OTHER CONCEPTS

Several other concepts, such as Gulf Stream hydro, wave power, tidal power, ocean thermal electric conversion (OTEC), windmills in the ocean (where the prevailing winds are steadier than over the continents), and thermonuclear fusion have been advanced. However, they are either seriously limited in their geographical application (e.g., tidal power); unproven even on a small scale (e.g., thermonuclear fusion); or potentially beset with numerous engineering problems (e.g., OTEC). Some of these energy sources may play a significant role in the United States energy future, but they are unlikely to make a significant contribution until sometime during the 21st century.

28.7 Mandalay Beach County Park Acreage

The planned Mandalay Beach County Park property is essentially undeveloped, with the exception of two small oil drilling sites and an access road. Based on information from the Ventura County Property Administration Agency (Ginny Morton, oral communication, August 1980), the property is 104 acres in size.

28.8 Figure 12.6-5

Figure 12.6-5 shows the local road system in the vicinity of the proposed and alternative onshore treating facility sites. There is a heavy dark line shown on the figure that connects the proposed Mandalay onshore treating facility to Harbor Boulevard. However, as indicated in the legend for the figure, this line represents a pipeline corridor, not a road. There is no road currently planned between the onshore treating facility and Harbor Boulevard.

28.9 Potential Traffic Accidents

Please see response to James Wolf comment number 28.4.

28.10 Mandalay Beach Road

As noted by Mr. Lorbeer, Mandalay Beach Road has been blocked off from West Fifth Street. Furthermore, the road is in poor condition and would require considerable improvement before it could be used as a service road to the proposed Mandalay onshore treating facility site. The objective of the discussions on pages 12.6-28 and 12.6-29 was to provide traffic data for roads in the area that could be used to service the proposed project without substantial improvements; i.e., project plans are to use the existing local road system. The proposed project could then be evaluated for its potential impact on the local road system. Because Mandalay Beach Road cannot be used in its present condition to service the proposed project, it was not appropriate to discuss it on pages 12.6-28 and 12.6-29.

28.11 Mandalay Beach County Park Boundaries

Based on information from the Ventura County Property Administration Agency (Ginny Morton, oral communication, August 1980), Mandalay Beach Road does not form part of the boundaries of the planned Mandalay Beach County Park property.

The western boundary extends past the Mandalay Beach Road to the Pacific Ocean.

28.12 Road Access

Current project plans involve using the existing Chevron road that crosses the planned Mandalay Beach County Park property for access to the proposed Mandalay onshore treating facility. The entrance/exit for this road is off of West Fifth Street. This road provides the advantage of construction traffic being able to enter and exit off of relatively lightly travelled West Fifth Street and enter/leave the immediate area via the signalized intersection at Harbor Boulevard and East/West Fifth Street. The potential traffic impacts on West Fifth Street, as noted by Mr. Lorbeer and also documented in the EIR/EA, would be minor.

The alternative suggested by Mr. Lorbeer could achieve similar objectives to those described above. However, it would require that substantial improvements be made to Mandalay Beach Road. Furthermore, it is likely that improvements would have to be made to the road north of the Mandalay Generating Station. Given these considerations and that the area north of the Mandalay Generating Station is more environmentally sensitive than the area to the south, use of the Chevron road is considered more appropriate for access than the alternative.

28.13 West Fifth Street Traffic Stop

The comment indicates that there is no traffic stop for traffic on West Fifth Street west of Harbor Boulevard. This is not correct. The intersection of Harbor Boulevard and East/West Fifth Street is completely signalized.

28.14 New Access Road

Please see response to Mr. Lorbeer's comment number 28.8.

28.15 Beach Erosion

The complex organization of the EIR/EA has understandably led to some confusion about where particular impacts are addressed. The subject of beach erosion is discussed in EIR/EA sections 4.1.1.1.2 (beginning on page 4.1-2) and 4.3.1.1.2 (beginning on page 4.3-3).

TABLE 28-1

UNITED STATES ENERGY USAGE BY FUEL TYPE

Energy Use Category	Percent of Total U.S. Energy Usage	Percent of Use Category Supplied by All Others			
		Oil	Natural Gas	Coal	Non-Fossil
Industrial Heating and Feedstock	28	28	51	21	0
Generation of Electricity	26	19	16	51	14
Transportation	25	96	4	0	0
Space and Water Heating	20	46	52	2	0
Miscellaneous	1				
	100				

29.0

CONTRACT INFORMATION

In accordance with Section 7800 of the State of California Government Code, Dames & Moore has prepared information concerning EIR/EA costs for the proposed Platform Gina and Platform Gilda Project. This includes total contract value, actual dollars spent (rounded to nearest five dollars), and budgeted dollars for work associated with completion of the Final EIR/EA. This information is provided below.

TOTAL CONTRACT VALUE		$998,902.97
EIR/EA SCOPE OF WORK DEVELOPMENT		
Dames & Moore	$ 45,140	
Subcontractors:		
J. Ray McDermott & Co., Inc.	4,000	
Subtotal		49,140
SPECIAL SHALLOW HAZARDS/CULTURAL RESOURCES REPORTS		
Dames & Moore	47,345	
Subcontractors:		
McClelland Engineers, Inc., (Geophysical)	105,450	
Fairfield Aquatronics (Geophysical)	42,525	
Stephen Horne (Cultural Resources)	3,500	
Larry J. Pierson (Cultural Resources)	715	
Subtotal		199,535
DRAFT EIR/EA PREPARATION		
Dames & Moore	544,485	
Subcontractors:		
Stephen Horne (Archaelogy)	4,860	
Thomas Montgomery (Onshore Traffic)	2,315	
Frank Gremse (Oceanography)	115	
Gerald Johnson (Marine Biology)	2,475	
Gerald Llewellyn (Lab Analysis-Marine Biology)	190	
Kelly Steele (Terrestrial Biology)	790	
Agri Science (Lab Analysis-Oceanography)	240	
Marine Ecological Consultants (Lab Analysis-Marine Biology)	12,645	
Mary Ann Scott (Limnology)	590	
Subtotal		568,705

DRAFT EIR/EA DISTRIBUTION AND PUBLIC HEARINGS

Dames & Moore	$35,215	
Subcontractors:		
Blair Graphics (Printing)	14,935	
Subtotal		50,150

FINAL EIR/EA COMPLETION AND PUBLIC HEARINGS (BUDGETS)

Dames and Moore	91,530	
Subcontractors:		
Blair Graphics (Printing)	7,000	
Subtotal		$98,530