CALIFORNIA COASTAL COMMISSION

NORTH COAST AREA 45 FREMONT, SUITE 2000 SAN FRANCISCO, CA 94105-2219 (415) 904-5260





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STAFF RECOMMENDATION ON CONSISTENCY CERTIFICATION

APPLICANT:

UNOCAL North American Oil and Gas Division

PROJECT LOCATION AND DESCRIPTION:

UNOCAL proposes to repair a 10-3/4 inch oil pipeline, a 6-5/8 inch water return pipeline, and riser sections at Platform Gina, which were damaged in an accident. The pipelines and riser sections are located approximately 4.5 miles offshore Ventura County, in OCS block P-0202, within 910 feet of Platform Gina, at a water depth of 95 feet (Exhibit 1 and 2).

SUBSTANTIVE FILE DOCUMENTS: Appendix A (page 12)

<u>SYNOPSIS</u>

Union Oil Company of California (UNOCAL) proposes to repair a 10-3/4" oil emulsion pipeline and a 6-5/8" produced water return pipeline between Platform Gina and the Mandalay Processing Facility in the City of Oxnard. These pipelines were damaged in a grappeling hook accident on May 10, 1991. This accident resulted in a spill of approximately 50 barrels of oil, which was contained and cleaned up. The pipelines are currently out of service, and production of oil from Platform Gina is shut down.

Repairs will consist of cutting and replacing two sections in each pipeline. The two sections will be a maximum of 200 feet per pipeline, and include repairs to the vertical riser attached to the platform.

UNOCAL incorporated mitigation measures in its proposed repair plan to avoid potential impacts to the coastal zone. Nonetheless, the proposed repair activities could result in adverse impacts to the State's coastal zone in the following ways: 1) potential temporary blockage of access to some commercial fishermen (i.e., purse seiners) and sports fishermen; 2) snagging hazards to fishermen as a result of anchor scars on the seafloor; and 3) adverse impacts to biological productivity of marine and coastal resources in the event of an oil spill.

UNOCAL has incorporated mitigation measures into its revised pipeline repair plan which minimize the potential for impacts to the commercial and sports fishing activities associated with the State's coastal zone, resulting from the disruption of the fishermen and from the anchor scarring of the seafloor, to a level of insignificance.

With regard to the oil spill risk, UNOCAL has taken measures to remove the remaining oil from the line. They have incorporated several mitigation measures into their pipeline repair project as safequards for containment and clean-up of any oil in the event of an accident. Nonetheless, although the risk of oil spill is small, and containment and clean-up measures are provided, there still exists the potential for adverse impact to the marine and coastal resources of the coastal zone in the event of a spill.

Therefore, although the project, is found to be inconsistent, in part, with certain Chapter 3 policies policies of the Coastal Act, staff recommends the Commission concur with the consistency certification for the proposed Platform Gina pipeline repair project, in accordance with Sections 30260, 30261, and 30262 of the California Coastal Management Program, because the proposed repair activities are considered to be coastal dependent development and meet the three tests of Section 30260.

STAFF RECOMMENDATION

The staff recommends the Commission adopt the following resolution:

Concurrence

The Commission hereby <u>concurs</u> with the consistency certification made by UNOCAL Corporation for the proposed Platform Gina pipeline repair project, as revised and supplemented, because although the proposed repair project affects the coastal zone, it does meet the policies of the approved California Coastal Management Program (CCMP) and is therefore consistent with the CCMP. Specifically, the Commission finds that the revised UNOCAL Platform Gina Repair Plan includes adequate information to permit an assessment of its probable coastal zone effects, including cumulative impacts, and it complies with the enforceable policy requirements of Chapter 3 of the California Coastal Act (Public Resources Code Section 30000 et seg.).

II. FINDINGS AND DECLARATIONS

The Commission finds and declares as follows:

A. Project Description and Background

On May 10, 1991, during an anchor retrieval operation, a grappeling hook from a workboat damaged a 10-3/4" oil emulsion pipeline and a 6-5/8" produced water return pipeline between Platform Gina and the Mandalay Processing Facility at Oxnard. The pipelines were buckled at the point of contact with the grappeling hook, displaced horizontally to the east approximately 65 feet, and unearthed from the seafloor to a point 875 feet from the platfrom. Damage was also caused to the 10-3/4" and 6-5/8" platform risers. Damage is confined to within 910 feet of Platform Gina, which is located in 95 feet of water on OCS block P-0202, approximately 4.5 miles offshore (Exhibits 1 and 2).

Damage to the 10-3/4" pipeline resulted in an oil spill of 50 barrels. An automatic shut-off valve stopped the oil spill instaneously. The spilled oil was contained and cleaned up.

Emergency repair operations consisted of: 1) recovering hydrocarbons from the line by vacuum operation to prevent any further release; 2) completing temporary patching operations to secure the pipeline; 3) pigging the line to remove any remaining hydrocarbons in the line; and lastly, 4) filling the line with sea water and shut-down of the platform oil production. No spills occurred from the water return line, which was out of service at the time, and no emergency repairs were performed on that line.

Repairs will consist of cutting and replacing two sections in each pipeline. The two sections will be a maximum of 200 feet per pipeline. The first repair, in each pipeline, is located approximately 600 feet from Platform Gina and will consist of replacing a minimum of 20 feet and a maximum of 60 feet of pipeline. The second repair, in each pipeline, will be a maximum of 140 foot in length consisting of a 100 foot vertical riser attached to the platform, a 10 foot radius bend attached to the riser, and a 30 foot horizontal section.

The total time for the repair activities is estimated to be twenty-one days maximum, which includes three days for inclement weather. The repairs consist of several sequential steps. No one step is longer than two days. In order to reduce the risk of oil spill and danger to people, repair operations will be secured and suspended in inclement weather.

The damaged water return pipeline has been out-of-service since October 1988, when a leak was discovered in the section of pipeline in the surf zone near Mandalay. UNOCAL has submitted a Development and Production Plan (DPP) Revision for repairing that section of the water line in state waters and to convert the use of this pipeline to a gas pipeline. The DPP Revision also proposes further development of gas resources at the Platform Gina area. This DPP revision is currently under review by MMS and CCC. Commission approval

for the repair of the section of the water return line which is the subject for this consistency review does not in any way constitute approval for the repair of the other section of the pipeline in state waters, or constitute approval for the conversion of the water return pipeline to a gas service, or constitute approval of any other activity described in that DPP Revision.

B. Post Project Pipeline Protection

Pipeline design and operation were not the cause of this pipeline rupture. The accident was the result of an error in judgement by an individual vessel operator. As a result of this accident, UNOCAL has implemented the following preventive measures:

- o Taken steps to increase awareness in its offshore operations, including close monitoring of all activities in the vicinity of company platforms and supporting facilities such as pipelines.
- o Implemented a company-wide policy prohibiting grappeling in offshore operations.
- o Adopted a procedure requiring utilization of diver and/or ROV assistance in all sub-sea operations which have the potential of damage to pipelines or power cables. (As recommedned in the MMS Safety Alert, May 25, 1991)
- o Initiated the development of a mooring buoy maintenance program, and prepared a plot survey identifying location of subsea equipment in vicinity of platforms, pipelines, and buoys. (These programs were initiated in response to the MMS Letter to Operators, August 19, 1991, and as a result of the accident investigation reports)

C. Coastal Act Issues

1. Air Quality

The Coastal Act contains several air quality requirements. Additionally, Section 1456(f) of the Coastal Zone Management Act directs that federal, state, and local requirements adopted pursuant to the Clean Air Act shall be the air pollution control requirements applicable to the state and local coastal zone management programs.

Section 30253 (3) of the Coastal Act states, in part, that:

New development shall...[b]e consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.

Section 30414(c) of the Coastal Act provides, in part, that:

The State Air Resources Board and any air pollution control district may recommend ways in which actions of the commission or any local government can complement or assist in the implementation of established air quality programs.

The proposed repair activities are adjacent to Platform Gina, which is located approximately 4.5 miles offshore Santa Barbara and Ventura Counties. The meteorological conditions of California's coastal areas are such that pollutants released at the offshore repair activity site could impact the onshore areas of both Santa Barbara County and Ventura County.

Both the Santa Barbara County Air Pollution Control District and Ventura County Air Pollution Control District reviewed the air emissions data submitted by UNOCAL for the proposed pipeline repair activities. Ventura County determined "that there are no existing Ventura County APCD rules that would apply to the proposed project." Santa Barbara County Air Pollution Control District determined that "although the information ... received was not adequate to fully analyze the air quality impacts of the pipeline repair project ... after additional review of the project description the District has determined that a project of this type (i.e., repairs or maintenance not involving structural changes to any equipment) would be exempt from our permit requirements."

Therefore, because the air emissions resulting from the proposed repair activities are allowable under the applicable local air pollution control requirements set forth by the Santa Barbara County Air Pollution Control District and the Ventura County Air Pollution Control District the Commission finds the proposed pipeline repair project consistent with Sections 30252 and 30414 of the California Coastal Management Program.

2. Ocean Discharge of Waste Materials

Sections 30230 and 30231 of the Coastal Act provide for the protection and maintenance of healthy populations of all species of marine organisms and for the maintenance and restoration of the biological productivity and quality of coastal waters. In addition, under section 1456(f) of the Coastal Zone Management Act, federal, state, and local requirements adopted pursuant to the Clean Water Act are incorporated into the State's coastal zone management program.

UNOCAL indicates in the proposed repair plan (Appendix III) that supplemental produced water will be added to the seawater (already present in the pipeline) for the hydrostatic test for the 10 3/4" oil pipeline. Prior to injection into the pipeline for the hydrotest, the produced water will be treated with the following chemicals: Oxygen Scavenger, 25ppm; biocide, 45ppm; dispersant, 3ppm; polymer, lppm; corrosion inhibiter, 90ppm. These chemicals will be used during processing of the produced water at the Mandalay facility to remove any hydrocarbons, solids, and scales before the water enters the pipeline. These chemical levels are within the terms of UNOCAL's NPDES permit.

The hydrostatic test water will be a one time disposal, which UNOCAL will discharge into the ocean off Platform Gilda, which is approximately ten miles offshore. Before any water is discharged into the ocean it will be processed at the Mandalay facility to remove any remaining hydrocarbons, toxics, or solids to ensure compliance with the NPDES permit requirements.

As additional mitigation measures, UNOCAL has committed in the amended repair plan to: 1) comply with any monitoring measures imposed by the Environmental Protection Agency (EPA) (e.g., sampling of processed water) to ensure that the seawater and produced water used in the hydrotest meet EPA requirements; and, 2) submit a copy of the monitoring report to the Commission.

In conclusion, the Commission finds the impacts to the coastal zone from the discharge of the hydrostatic test to be insignificant for the following reasons: 1) the discharge will be a one time event and will occur ten miles offshore at Platform Gilda; and 2) the hydrotest water will be processed to ensure compliance with the terms of the NPDES permit before it is discharged. Therefore, the Commission finds the repair plan, as amended with the mitigation measures, to be consistent with the water quality provisions of Sections 30230 and 30231 of the California Coastal Management Program.

3. Marine Resources and Commercial Fishing Impacts

Section 30230 of the Coastal Act provides for the protection and maintenance of marine resources, and requires development in the marine environment to be carried out in a manner sustaining the biological productivity of coastal organisms adequate for long-term commercial and recreational purposes. Section 30231 provides for the maintenance and restoration of the biological productivity and quality of coastal waters. Section 30703 provides specific legislative declaration of importance to the commercial fishing industry to the State of California. Both offshore oil drilling and commercial fishing activities are coastal dependent industries of special priority under the Act, and the Commission has undertaken extensive efforts to minimize the conflicts between these two important industries.

a. <u>Preclusion of Fishing Activity As a Result of Workboat Repair Operations</u>

The proposed pipeline repair activities are within the 500 meter safety zone of Platform Gina. Pursuant to the requirements of the Code of Federal Regulations (CFR) Title 33, section 147.1103, vessels larger than 100 feet in length overall are not permitted in this zone. As a result, this area is off limits for the larger commercial fishing vessels, so typically commercial fishermen do not fish within this area. However, some commercial and sports fishing boats do fish within the outer edges of the proposed repair work area.

UNOCAL consulted with the fishermen's associations to determine if there was any potential impact on blockage of access for commercial fishermen who fish the general vicinity of Platform Gina. The California Department of Fish and Game was also consulted to assess potential impacts on the commercial fishing and sports fishing activities within the State's coastal zone.

According to Craig Fusaro, of the Joint Oil/Fisheries Liaison Office, the workboat activities associated with the pipeline repair project will not adversely impact the halibut trawlers, salmon trollers, trappers, and

gillnetters who fish in the general vicinity around Platform Gina. However, Mr. Fusaro could not predict if the activities would temporarily block access for the purse seiners, because of the nature of their fishing practice in which their movements are dependent upon the movement of the pelagic fish migrations. (Letter to Bill Weldon, UNOCAL, June 13, 1991; confirmed by CCC staff in telephone conversation on July 25, 1991.)

The Department of Fish and Game confirmed Mr. Fusaro's assessment of no impact on trapping, trawling, gillnetting, and trolling activities, and commented that the potential impact on purse seiners was minimal.

In order to minimize any potential conflicts with commercial or sports fishing activities resulting from the workboat activities or pipeline repair operations UNOCAL has incorporated the following mitigation measures into the pipeline repair plan: 1) provide advance notice of the construction schedule prior to the commencement of the repair operations, at a minimum of two weeks in advance. (The notice will be posted with the Joint/Oil Fisheries Liaison Office and placed in the Sea Grant Oil and Gas Newsletter for Fishermen and Offshore Operators.); 2) send notice to the U.S. Coast Guard for posting in the Local Notice to Mariners, at least two weeks in advance. (The notice will include vessels involved, radio calls, and frequencies.); and 3) demarcate the work area with buoys and light the oil spill containment booms at night.

Therefore, the Commission finds that the proposed pipeline repair project, amended with the above mitigation measures, minimizes to a level of insignificance, any potential impacts on the commercial and sports fishing activities associated with the State's coastal zone.

b. Sea Floor Habitat and Disturbance

According to the repair plan:

video inspections (May 10th and 11th) reveal that no hard bottom habitats exist in the area of the pipelines. The bottom consists of soft sediments. An additional review by consultants, MBC Applied Environmental Sciences...substantiate the lack of hard bottom habitat...No kelp beds are present.

Prior to the accident, the pipelines were buried in the mud of the soft bottom seafloor. The grappeling hook lifted and unearthed the sections of the pipeline needing repair. Thus, the repair will be conducted with a minimum of disturbance to the seafloor since the pipe is now exposed on the seafloor.

According to the repair plan, there are three work operations which may cause minor disturbance to the seafloor. UNOCAL has sought to design these repair operations to avoid impacts to the seafloor, or to minimize unavoidable impacts to an insignificant level. They are:

a. A 30' area of the pipeline extending from the 875' point to the 905' point from the platform will be exposed to allow visual inspection.

Damage to the pipelines in this area is not anticipated but inspection will insure no damage is present.

- b. Pipe will be shifted back to the original as-built locations. As mitigation for minimizing seafloor disturbance, UNOCAL has designed this work operation such that the majority of the pipe will be held above the seafloor; thus only one contact point with the seafloor will occur during the shifting of the lines.
- c. Anchoring will cause some disturbance to the seafloor. However, as part of the revised pipeline repair plan (Appendix VII) UNOCAL prepared an anchoring mitigation plan. This plan ensures that anchors will be deployed and retrieved without dragging an anchor on the seafloor. Anchors will be set on position, by the anchor handling boat, to precise pre-determined environmentally preferred locations in the plan. Thus, anchor scarring on the seafloor will be minimal.

Previously, the pipeline was buried in the sea floor and had not created any reported snagging hazards to date. In order to avoid creating snagging hazards from the new pipeline itself, UNOCAL has designed the pipeline with a smooth profile. In addition, studies and the previous condition of the existing pipeline demonstrate that the pipeline will self-bury itself in the soft bottom of the seafloor. UNOCAL also contributes to the "Fisherman's Contingency Fund" which was established to compensate fishermen for net and equipment losses resulting from offshore oil and gas operations.

UNOCAL will also perform a post-repair survey of the seafloor in the vicinity of the repair area to ensure that any debris which could potentially create snagging hazards has not been deposited on the sea floor as a result of the repair operations.

The seafloor scarring resulting from anchoring can create potential snagging hazards for the commercial fishermen, and thus have an impact on the commercial fishing activities associated with the State's coastal zone. The Commission finds, however, that UNOCAL's anchor mitigation plan has minimized any such potential impacts to a level of insignificance. The Commission further finds the turbidity impacts associated with the pipeline repair and realignment are very short term and will cause minimal impacts to the State's coastal zone.

c. Oil Spills and Affected Habitat

As discussed in more detail in the following section (3. Oil Spill Containment and Cleanup) UNOCAL has provided several mitigation measures in the proposed repair plan that significantly reduce the risk of oil spill during the repair operations on the oil pipeline. In addition, they have provided mitigation measures for the containment and cleanup of oil in the event of a spill. Nonetheless, the risk of an oil spill remains, therefore the Commission finds there still exists the potential for adverse impacts on the biological productivity of the coastal and marine resources of the State's coastal zone.

d. Whale Migration

The proposed repair activities are scheduled to begin in September (pending Commission approval) and terminate 21 days later, before the end of October. The southbound migration for Gray Whales typically occurs between November and January, and most of these (60%) migrate more than five miles from shore. The repair activity area is within 4 miles of shore. Thus, because UNOCAL has scheduled this activity to occur during the non-migration period, the Commission finds the proposed repair activities will not interfere with the Gray Whale.

e. Conclusion

The Commission finds that the proposed pipeline repair project has potential adverse impacts on the commercial fishing activities, sports fishing activities, marine resources, and coastal resources of the State's coastal zone. However, the Commission finds that the mitigation measures, discussed previously, which UNOCAL has incorporated into the revised pipeline repair plan, minimize the potential impacts to the State's coastal zone, resulting from the disruption of fishing activity and anchor scars. The Commission further finds the project's potential impacts on the Gray Whale and the turbidity impacts on the marine resources of the coastal zone are very short term and minimal. The Commission, therefore, finds the proposed pipeline repair project is consistent, in part, with the marine and coastal resource protection policies of Sections 30230 and 30231 of the California Coastal Management Program.

However, although the risk of oil spill has been reduced, there still exists the potential for adverse impacts to the marine and coastal resources of the State's coastal zone in the event of a spill. Therefore, because of the oil spill risk, the Commission finds the pipeline repair project is inconsistent, in part, with the provisions for protection and maintenance of marine and coastal resources of Sections 30230 and 30231 of the Coastal Act. (This is discussed in more detail in the following section.)

4. Oil Spill Containment and Cleanup

Section 30230, 30231, and 30232 provide for the protection of coastal and marine resources. Section 30232 requires the protection of the marine environment against the spillage of crude oil, gas, petroleum products, or other hazardous substances. For any development or transportation of these materials, section 30232 further requires "effective containment and cleanup facilities and procedures" for any spills that do occur.

The Commission interprets the word "effective" to mean that spill containment and recovery equipment must have the ability to keep oil off the coastline and/or away from environmentally sensitive marine resources.

Part of the proposed project is the repair and replacement of a 10-3/4" oil emulsion pipeline which was damaged and buckled as a result of the accident. The accident resulted in a spill of 50 barrels of oil, which was contained and cleaned up.

At the time of the accident, emergency repair operations were performed. These consisted of: 1) recovering hydrocarbons from the line to prevent any further release by vacuuming operations; 2) completing temporary patching operations to secure the pipeline; and 3) pigging the line to remove any remaining hydrocarbons in the line.

UNOCAL indicates in the repair plan (Appendix VI) that, as a result of the extensive vacuum and pigging operations, the 10-3/4" line is "clean of hydrocarbons", and is now filled with seawater. As a result of these emergency repair and mitigation measures, "UNOCAL is confident that the 10-3/4 inch oil pipeline does not pose any further oil release risk during repair operations" (Letter to Thomas Dunaway, MMS, August 16, 1991.)

UNOCAL originally designed their repair plan with the following mitigation measures to reduce the risk of oil spills:

- a. Inflatable packers will be inserted in the pipeline after cutting to seal the pipeline.
- b. Stand by vessel Coronado can deploy sorbent boom if necessary to catch hydrocarbons. Fifteen booms will be kept for such a contingency.
- c. UNOCAL Platform Gina Oil Spill Contingency Plan is in place at all times in the event of an oil spill. Oil spill equipment is at Gina in event of a release.

UNOCAL amended their repair plan to include the following additional mitigation measures (letter to Thomas Dunaway, MMS, August 16, 1991):

- a. The initiation of a more extensive pigging program on August 6, 1991 to remove any hydrocarbons that could still remain in the 10-3/4" line.
- b. A tenting plan to be utilized during cutting operations on the pipeline.
- c. Sorbent boom deployment to surround the work area during removal of the damaged pipeline and riser sections to recover any possible oil release.

UNOCAL incorporated mitigation measures into the proposed repair plan to minimize the potential risk of any oil spill during the repair operations and to provide additional safeguards for effective containment and cleanup in the event of an oil spill. Although the risk of an oil spill is small, were it to occur it could have adverse impact on the fisheries, marine resources, and birds of the State's coastal zone. Therefore, because of this oil spill risk, the Commission finds the proposed pipeline repair project inconsistent with Section 30232, and inconsistent, in part, with the provisions for protection and maintenance of marine and coastal resources in Sections 30230, 30231 of the California Coastal Management Program.

5. Coastal Dependency and Industrial Development

Section 30101 of the Coastal Act defines a coastal dependent development or use as "any development or use which requires a site on, or adjacent to, the sea to be able to function at all. Offshore oil and gas development is specifically referenced in the Coastal Act as coastal dependent. The Commission has also found that the oil, gas, and water pipelines connecting offshore platforms to onshore processing facilities to be coastal dependent. Therefore, the Commission finds the proposed repair activities to Platform Gina's offshore oil and water return pipelines to be coastal dependent.

Section 30260 provides:

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.

As indicated in the preceding discussion, the proposed pipeline repair activities are not consistent with the requirements of section 30230, 30231, 30232 in regards to protection of marine and coastal resources from oil spills. The Commission, therefore, applies the three tests of Section 30260 and finds the following:

- a) <u>Alternative locations</u>. The pipelines are in place in the water, alternative locations for repair or replacement of the damaged pipelines are infeasible or more environmentally damaging.
- b) <u>Public Welfare</u>. In comparison to the potential adverse impacts associated with the proposed repair activities, to deny the proposed repair activities would be a greater adverse affect on the public welfare due to the loss of continued oil production from Platform Gina.
- c) <u>Mitigation to the Maximum Extent Feasible</u>. In the repair plan, UNOCAL has committed to the implementation of extensive oil spill prevention, containment, and cleanup measures that will mitigate the potential adverse effects of an oil spill on the marine and coastal resources in the State's coastal zone to the maximum extent feasible.

Therefore, although the project, is found to be inconsistent, in part, with certain Chapter 3 policies of the Coastal Act, the Commission concurs with the consistency certification for proposed Platform Gina pipeline repair project, in accordance with Sections 30260, 30261, and 30262 of the California Coastal Management Program, because the proposed repair activities are coastal dependent development and meet the three tests of Section 30260.

Appendix A

Substantive File Documents

I. California Coastal Commission

- A. DPP Consistency Certification CC(E)-6-79 for Platform Gina
- B. Commission staff's comments on UNOCAL's "Platform Gina, Revision I, Repair Plan for Platform Gina Pipelines", contained in August 6, 1991, letter to Mr. Thomas Dunaway, Minerals Management Service (MMS).
- C. California Coastal Management Program.
- D. Coastal Zone Management Act, Section 1456(f).

II. <u>Federal Agencies</u>

A. Minerals Management Service (MMS) staff's comments, incorporating Commission staff's comments, on "Platform Gina 10-3/4 inch and 6-5/8 inch Pipeline Repair, May 17, 1991," contained in June 21, 1991, letter to Mr. Donald E. Gluyas, District Production Manager, UNOCAL.

III. UNOCAL

- A. "Platform Gina 10-3/4" and 6-5/8" Pipeline Repair, May 17, 1991."
- B. Evaluation of pipeline material, contained in letter May 16, 1991 from Enersource Engineering to Chris Culver, UNOCAL.
- C. "Platform Gina, Revision I, Repair Plan for Platform Gina Pipelines, July 3, 1991".
- D. UNOCAL's response to MMS comments (June 21, 1991), contained in July 10, 1991 letter to Thomas Dunaway, MMS, from William Weldon, UNOCAL.
- E. UNOCAL's responses to CCC comments (August 6, 1991), contained in August 16, 1991 letter to Thomas Dunaway, MMS, from William Weldon, UNOCAL.
- F. UNOCAL: 10-3/4" Oil Pipeline Pigging Procedures
- G. UNOCAL: Sub-Sea Containment Tenting Plan

IV. County Agencies

A. County of Ventura Resource Management Agency, Air Pollution Control District's determination that there are no existing Ventura County APCD rules that apply to proposed project, contained in August 1, 1991, letter to Mike Silverman, MMS.

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