

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200

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Commission Vote:

STAFF RECOMMENDATION

APPLICATION NO.: E-95-20

APPLICANT: Ultramar, Inc.

AGENT: Charles P. Eddy

PROJECT LOCATION: **Ultramar Refinery**
2402 East Anaheim Street, Los Angeles, Los Angeles County
(Exhibits 1 and 2)

PROJECT DESCRIPTION: Step 3 construction for Ultramar's Reformulated Fuels Program. The Step 3 project includes those components necessary to complete refinery modifications designed to conform with the California Air Resources Board standards for the production of reformulated diesel and gasoline fuel (see Section 4.2 Project Description).

LOCAL APPROVAL RECEIVED:

- Approval-in-Concept AIC-95-043; City of Los Angeles
- Zoning Variance ZA 94-0593; City of Los Angeles

SUBSTANTIVE FILE DOCUMENTS: See Appendix A

Staff Note: The Ultramar Refinery is located within the coastal zone in the dual permitting jurisdiction of the City of Los Angeles. The proposed project is necessary to comply with a government regulatory requirement for reformulated fuels and is therefore excluded from the dual permit jurisdiction and will not require a coastal development permit from the City of Los Angeles, pursuant to Coastal Act Section 30600.7.¹

¹ Public Resources Code § 30600.7: Where prior to delegation of coastal permit authority pursuant to Section 30519, a modification to a refinery facility or petrochemical facility is necessary to comply with a goal, policy or requirement of an air pollution control district, the State Air Resources Board, or the Environmental Protection Agency to provide reformulated or alternative fuels, that modification shall require a coastal development permit from the Commission only, notwithstanding the option afforded local governments under subdivision (b) of Section 30600.

SYNOPSIS

The federal Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have adopted regulations as set forth in the federal Clean Air Act Amendments (1990), and the California Clean Air Act (1992) respectively, for oil refiners to produce reformulated fuels with a goal of reducing emissions from motor vehicles. In order to comply with these requirements, Ultramar, Inc. has developed a three step program to reconfigure the existing Ultramar Refinery to produce reformulated fuels. Each of the three steps corresponds with mandatory deadlines imposed by the EPA and the CARB, to produce cleaner burning gasoline and diesel fuels.

The Commission has previously approved site preparation and construction activities for Step 1 and Step 2 of Ultramar's Reformulated Fuels Program. This CDP application (CDP E-95-20) consists of Step 3 of Ultramar's Reformulated Fuels Program (Step 3 Project). The Step 3 Project is designed to conform with the California Air Resources Board (CARB) standards for aromatic substances for the production of reformulated diesel fuel. The Step 3 Project also includes additional units for the production of reformulated gasoline.

The South Coast Air Quality Management District (SCAQMD) has prepared two environmental impact reports for the reformulated fuels program. The SCAQMD certified the Final Environmental Impact Report (FEIR), (SCH No. 92111042) in August 1993. The FEIR covers all three steps of Ultramar's Reformulated Fuels Program. The SCAQMD certified a Final Subsequent Environmental Impact Report (SEIR), (SCH No. 92111042, August 1994) to cover additional units which were added to the Step 2 project subsequent to certification of the FEIR.

The Step 3 project is located within the existing refinery property boundary located at 2402 East Anaheim Street in the Wilmington District of the city of Los Angeles. The Ultramar refinery is surrounded by industrial uses including railroad transportation, oil field production, a petroleum coke calcining plant, manufacturing, automobile wrecking and salvage yards, and facilities associated with the Port of Long Beach and the Port of Los Angeles. The Shell Terminal Pipeline extension lies within an existing Los Angeles Department of Transportation pipeline franchise for the purpose of constructing and operating petroleum pipelines.

The potential coastal resource impacts of Step 3 project construction activities include increased risk of hydrocarbon and/or other contaminant spillage, resulting in potential impacts to marine water quality and marine resources. These impacts are mitigated by Ultramar's implementation of a Spill Containment and Countermeasures Plan, Ultramar's Spill Contingency Plan, and mitigation measures imposed by the Los Angeles District of the California Regional Water Quality Control Board (RWQCB), and the South Coast Air Quality Management District (SCAQMD). While the Step 3 project will add additional refinery capabilities, all work is within the existing Refinery boundaries and the construction and operation of the new units will not introduce new significant coastal resource impacts. Similarly, the Shell Terminal Pipeline is located primarily within existing petroleum pipeline rights-of-way and will not result in new significant coastal resource impacts.

The staff recommends approval for construction of Ultramar's Step 3 Reformulated Fuels Program.

1.0 STAFF RECOMMENDATION

The staff recommends that the Commission adopt the following resolution for Ultramar's Step 3 Reformulated Fuels Program, Coastal Development Permit Application E-95-20:

APPROVAL WITH CONDITIONS

The Commission hereby grants a permit, subject to the conditions below, for the proposed development on the grounds that the development, as conditioned, will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program (LCP) conforming with the provisions of Chapter 3 of the Coastal Act, and as conditioned will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

2.0 STANDARD CONDITIONS See Appendix B.

3.0 SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. Prior to the issuance of the Coastal Development Permit, Ultramar must submit verification to the Executive Director that the South Coast Air Quality Management District has issued all required permits-to-construct for the Step 3 Project.

4.0 FINDINGS AND DECLARATIONS

The Commission finds and declares as follows:

4.1 Project Location and Background Information

4.1.1 Location

The Ultramar Refinery is located at 2402 East Anaheim Street in the Wilmington District of the City of Los Angeles. All of the Step 3 Project equipment additions and modifications are within the confines of existing refinery. The coastal zone portion of the Shell Terminal Pipeline (STP) is located within the refinery boundaries and within (below) the public right-of-way for Anaheim Street. Once the STP leaves the coastal zone, it continues within an existing Los Angeles Department of Transportation (LADOT) pipeline franchise and is located primarily within existing pipeline rights-of-way. The pipeline rights-of-way outside of the coastal zone are aligned primarily through industrial land uses with limited proximity to commercial and residential land uses.

The refinery is bounded by Anaheim Street and light industrial uses to the north, and the Dominguez Channel to the west. The southern and eastern boundaries of the refinery adjoin crude oil production properties. The Terminal Island Freeway (I-47) passes between the northern and southern portions of

the refinery. The existing refinery contains tanks, piping, and process units on both sides of the freeway.

4.1.2 Background

In order to comply with requirements of the federal Clean Air Act Amendments (1990), and the California Clean Air Act (1992), Ultramar, Inc. developed a three step program to reconfigure the existing Ultramar Refinery to produce reformulated fuels. Each of the three steps corresponds with a mandatory completion deadline imposed by the federal Environmental Protection Agency (EPA) and the California Air Resources Board (CARB), to produce cleaner burning gasoline and diesel fuels.

Ultramar initiated Step 1 of its Reformulated Fuels Program in 1993 upon receipt of permits from the Coastal Commission (*CDP E-93-5*; *CDP E-93-9*) and other agencies. The Step 1 project included those units required to produce reformulated gasoline mandated by the federal EPA. The EPA reformulated gasoline requirements only apply to "extreme ozone non-attainment areas." Construction started on the Step 1 units in August, 1993, and were completed in time to meet the federal EPA deadline of January 1, 1995 to have reformulated gasoline in the market place.

The Step 2 project was more complex than the Step 1 project. The CARB specifications for reformulated gasoline are substantially more stringent than those established by the federal EPA. Moreover, CARB standards apply statewide, whereas the EPA standards apply in only three non-attainment areas in the State. The Step 2 construction schedule was designed to allow the refinery to meet the April 1, 1996 deadline established by the CARB for introduction of reformulated gasoline into the California market. In order to meet this deadline, gasoline must be in the distribution system by March 1, 1996, which requires that the additional refinery process units and modifications to existing units be completed by January 1, 1996. The Step 2 refinery modifications are substantially complete.

The purpose of Step 3 of the Ultramar Reformulated Fuels Program is to meet CARB reformulated diesel fuel specifications for aromatic substances, which take effect October 1, 1996 for independent refiners, and to add additional units for production of reformulated gasoline. This CDP application constitutes the final stage in Ultramar's three-step reformulated fuels program.

4.2 Project Description for Step 3 Units

The additional units and equipment modifications included in the Step 3 Project will complete Ultramar's capability to assure reformulated diesel and gasoline fuel production. The Step 3 refinery modifications will not increase the crude oil design capacity of the refinery. The Step 3 refinery modifications, as shown in Exhibit 3, are immediately adjacent to or are integrated into the existing units within the present refinery boundaries. The following is a summary of each of the new units and system modifications required for the Step 3 Project.

4.2.1 Benzene Reduction Unit

To meet the federal reformulated gasoline specifications, the naphtha splitter permitted in Step 1 produces an overhead stream that contains virtually all of the benzene and benzene precursors. While Ultramar is presently producing reformulated gasoline which meets the federal Environmental Protection Agency's benzene specifications, it is expected that future feed stock will have higher benzene content. In order to provide the needed flexibility to continue to meet the benzene standard, the proposed benzene reduction unit will operate to reconfigure the benzene and benzene precursors found in the overhead stream.

This unit will utilize penex isomerization technology, which employs a catalyst containing platinum or palladium. It will convert the benzene in the light straight run gasoline stream from the naphtha hydrotreater/naphtha splitter through combination with hydrogen in the presence of a catalyst.

Principal components consist of a dryer train, reaction train, reactor heat exchangers, compressors and a product stripper. Air emissions consist of fugitive Reactive Organic Gas (ROG) and will be controlled by Best Available Control Technology (BACT).

The benzene reduction unit would be the first unit at the Refinery constructed south of the terminal Island Freeway. It will have a 200 foot setback from the freeway, which would place it approximately the same distance from the freeway as the Step 2 Gas Oil Hydrotreater Unit. The site is currently used for construction trailers, equipment laydown and a warehouse.

Site preparation would consist of demolition of the warehouse, and removal of the trailers and existing equipment. The site would be filled and leveled to approximately four to six feet above the existing grade to assure the units are sufficiently elevated to avoid flooding in the case of a severe storm event. There is no vegetation on the site.

4.2.2 Oxygenate Complex

Oxygenates are an essential blending component in meeting reformulated gasoline oxygen specifications. Ultramar has been able to meet this specification by purchasing oxygenates in the market and blending them into finished gasoline. However, the oxygenate market has been experiencing wide swings in pricing and availability, and it is uncertain whether sufficient oxygenate supplies will be available to meet future demand. The proposed oxygenate complex would assure the Refinery an adequate oxygenate supply at an acceptable cost.

A number of potential processes are available to manufacture oxygenates. Ultramar will ultimately employ the process which is most suitable for the refinery considering particularly the availability of the required feedstocks. The Unit evaluated in the FEIR would produce MTBE and /or TAME by treating ether precursors from the FCCU. The feed stream is first treated in a merox unit for sulfur removal, then fed to a splitter which separates the feed from the MTBE unit. In the MTBE unit an isobutylene feed stream from the FCCU, primarily un-reacted olefins, reacts with methanol purchased from offsite sources in the presence of a catalyst to form MTBE. The unit consist of a feed water wash column, a feed treater, a primary reactor, depentanizer column, a catalytic distillation column, a

merox unit and methanol recovery column. In the TAME unit an isomylene stream from the FCCU selectively reacts with methanol, also purchased from outside sources. The principal components are similar to the MTBE process.

Emissions consist only of ROG from the installation of valves, flanges, drains, relief valves and pumps. BACT will be employed in accordance with SCAQMD Guidelines.

The location of the oxygenate unit is shown on Exhibit 3. This L-shaped plot is adjacent to the water coolers. The site is unpaved and at grade. Site preparation would consist principally of relocating some existing piping.

4.2.3 Unibon Unit

The FEIR (p. 2-26) described the development of a diesel aromatic saturation unit to meet the CARB diesel aromatic standard of ten percent or less by volume. This unit would have further treated hydrotreated diesel from the existing Unibon unit and diesel components from the GOH. Instead of constructing this new unit, Ultramar is instead proposing to modify the existing Unibon unit. The Unibon is primarily a distillate hydrotreater used to produce diesel and jet fuel.

Modification of the Unibon Unit will divide the unit into two sections: a hydrotreating section and a hydro-dearomatization section. In the modified hydrotreating section, distillate from the new GOH will be hydrotreated and separated. Hydrogen-rich make up gas from the hydrogen plant and the Catalytic reformer will be compressed and added to the recycled hydrogen stream. The combined stream will be heated and introduced into a fixed bed reactor, cooled and separated into two streams. Vapor from the separator is recycled to the reactor feed. The liquid stream is sent to a fractionator, with the overhead sent to the refinery fuel gas system; and the bottom products (hydrotreated light jet fuel and hydrotreated light diesel) sent to the hydro-dearomatization section where, along with heavy naphtha from the FCCU, aromatics are removed in a process similar to that described above.

This modification will involve the installation of a reactor, a splitter and accumulator, and drums, spheres, coolers, condensers, re-boilers, exchangers and pumps. The emissions will consist of ROG from valves, flanges, drains, relief valves and pumps.

This modification will be made within the limits of the existing Unibon Unit. The site is paved and no significant site preparation is required.

4.2.4 Auxiliary Systems

The development of the following auxiliary systems are required in support of the Step 3 project. Except for the pipeline, each of these facilities will be within the existing refinery. The sites are adjacent to existing units, and site preparation may involve limited grading and removal of some temporary structures.

4.2.4.1 Cooling Towers

To minimize cooling water demand, the refinery utilizes air cooling whenever this is feasible. However, the additional units proposed will require supplemental water cooling capacity and will necessitate construction of an additional cooling tower.

4.2.4.2 Boiler/SCR

The additional process units proposed will require steam in excess of the refinery's current capabilities. Ultramar is proposing to install a boiler rated at 320 BTU per hour. The boiler would be fueled with refinery fuel gas. Emissions associated with the boiler include ROG, NO_x, SO_x, CO PM-10. Ultramar will employ BACT for boiler in accordance with the SCAQMD BACT Guidelines for Clean Fuels projects. This unit is evaluated in the FEIR (p. 2-22). BACT will consist of selective reduction (SCR) for the control of NO_x emissions. The SCR process involves the injection of aqueous ammonia and the use of a catalyst to selectively react with nitrogen oxides to produce oxygen, carbon dioxide, nitrogen and water.

4.2.4.3 Sour Water Storage Tank

The refining process produces water that contains hydrogen sulfide (H₂S) and ammonia (NH₃), known as sour water. Sour water produced during the production of reformulated fuels must be stored prior to treatment. As part of Step 2, Ultramar is installing a sour water stripper but with no additional sour water storage capacity. To accommodate the additional storage requirements, a 50,000 barrel capacity sour water tank will be constructed, with sour feed water pumping in addition to its existing sour water tank. BACT will consist of a vapor recovery system. This unit is described and evaluated in the FEIR (FEIR p. 2-21).

4.2.4.4 Waste Water Treatment System Modifications

The increase in waste water associated with the reformulated fuels units will necessitate upgrading of the refinery waste water treatment system. The proposed modification will consist of a second Induced Gas Floatation (IGF) unit which is essentially the final stage in the waste water treatment operation before the waste is discharged into the Los Angeles County Sanitation District system. The IGF unit removes oil and suspended solids from waste water streams by skimming the impurities off the top of the internal cells. Emissions consists only of ROG. The waste water treatment system modifications were addressed in the FEIR (FEIR p. 2-22).

4.2.4.5 Tail Gas Unit

As a part of the Step 2 project, Ultramar upgraded its Sulfur Plant to handle the additional sulfur-bearing streams originating with the new GOH Unit. The upgraded sulfur plant may require additional tail gas handling capability as additional units are placed on line. The Tail Gas Unit is described in the SEIR (SEIR p. 2-17). The purpose of the tail gas unit is to treat the acid gas effluent from the sulfur plant to a level acceptable for discharge to the atmosphere.

In the Tail Gas Unit, the combined tail gas stream is water-cooled in a quench tower and is then routed to an amine treater. An amine solution absorbs the hydrogen sulfide and some carbon dioxide from the tail gas, resulting in a "rich" amine solution, which is then pumped to the regenerator for reconditioning. The regenerator strips the H₂S and CO₂ which forms an overhead gas and is cycled back to the sulfur plant.

Emissions associated with this unit are SO_x from the amine absorber and the ROG emissions from various piping components. BACT will be employed.

4.2.4.6 Shell Terminal Pipeline

The refinery needs additional tank capacity for the storage of final refined product, intermediate streams and blend stocks associated with the Reformulated Fuels Program. The FEIR and the SEIR evaluated the impacts associated with a total of 9 new storage tanks, including two additional gasoline tanks and one diesel fuel storage tank. However, because construction of new storage tanks requires substantial use of scarce land, is costly, and has associated environmental impacts, the EIRs also evaluated the option of using available existing offsite tank storage to meet its requirements. The FEIR included an "Off-Site Storage Alternative" as a means of mitigating the impacts of constructing some additional tanks at the refinery (*FEIR p. 5-27 to 5-44*).

Ultramar has negotiated the use of storage tanks at the Shell Tank Storage facility in Carson. This will require construction of a single, 18" pipeline from the Refinery to the Shell Storage facility, a distance of approximately 3.2 miles (Exhibit 4). This will now allow Ultramar to use existing tanks at the Shell Facility for storage of reformulated petroleum products and avoid the need to construct additional tanks at the refinery. This pipeline will leave the Ultramar refinery near the eastern end of the property and cross Anaheim Street and then out of the Coastal Zone. Thus, only the short segment within the refinery property and crossing Anaheim Street falls within the coastal zone. The line will then pass through a right-of-way underlying or adjacent to city streets in a primarily industrialized area. The pipeline will utilize an existing petroleum pipeline franchise granted by the City of Los Angeles Department of Transportation.

4.3 Local Approvals

4.3.1 Approval-In-Concept

On October 12, 1995, the City of Los Angeles, as the local agency responsible for issuing local permits, has issued Approvals-in-Concept (AIC-95-043) for the construction of Ultramar's Reformulated Fuels Program.

4.3.2 Zoning Variance

The Ultramar Refinery is located within a district zoned by the City of Los Angeles for heavy industrial uses (M3-1-VL). The refinery's hydrogen production facility (HF) parcel is zoned [Q]M3-1-VL, which also allows for heavy industrial uses. Refinery land uses are compatible with these zoning designation. The southwestern portion of the HF site is qualified with a "Q" designation,

which conditions the property for marine-related uses. The HF parcel is surrounded by industrial land uses which include oil production and refining, automobile dismantling, and other industrial facilities.

The M3-1-VL zoning designation, for the existing refinery, the Gas Oil Hydrotreater site, and a portion of the Hydrogen production facility site, places a height limitation of 45 feet on buildings and structures. The existing refinery process units and other facility structures, as well as the height of surrounding land uses, substantially exceed the 45 foot height limitation. The City of Los Angeles has issued "Approvals-in-Concept" (AIC-94-020, AIC-94-021 & AIC-95-043) for the refinery upgrades and has previously modified the height restrictions in approving similar developments.

On October 14, 1994, the City of Los Angeles, Office of the Zoning Administrator issued Zoning Variance ZA 94-0593 to Ultramar for the Reformulated Fuels Program. The zoning variance permits various structures to be constructed to a maximum height of 250 feet and also permits petroleum refinery uses in the [Q]M3-1 zone.

4.3.3 Air Quality Permits

The South Coast Air Quality Management District (SCAQMD) is currently processing a total of 10 applications for Permits-to-Construct for the Step 3 Project. Table 1 list these permits along with dates of application submittal to the SCAQMD. Most of the technical issues regarding the Step 3 Project have been resolved. The permit applications will require administrative approval only and the SCAQMD expects to issue a Notice-of-Intent to issue the permits on January 26, 1995.²

Table 1. SCAQMD Permits to Construct for the Step 3 Project

Equipment	Date Application Submitted
Benzene Reduction Unit	07/10/92
Oxygenate Complex	10/10/95
Unibon Offgas Compression System	10/20/95
Unibon Modification	01/20/95
Tail Gas Unit	08/21/95
Waste Water System Modifications	08/21/95
SCR Equipment	08/10/95
Boiler	08/10/95
Sour Water Storage Tank	08/10/95
FCCU/Butamer/Alkylation Unit Modifications	08/31/95

² Personal Communication with Norman Ng, Air Quality Specialist, South Coast Air Quality Management District January 17, 1996.

4.4 Coastal Act Issues

4.4.1 Marine Resources

Coastal Act Section 30230 states:

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 such a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organism adequate for long-term commercial, recreational, scientific, and educational purposes.

Coastal Act Section 30231 states in part:

The biological productivity 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...

The project's proximity to the Dominguez Channel could result in adverse impacts to marine water quality and marine resources. Petroleum hydrocarbon and/or other hazardous substances could be spilled during site construction and operation, and migrate off-site via runoff, seepage and/or wind dispersion. These potential impacts are mitigated by the design of the facility's drainage system and the mitigation requirements imposed by the South Coast Air Quality Management District (SCAQMD).

Storm water runoff from the refinery process area will be contained on-site and treated in the refinery's existing effluent water treatment system prior to release into the Los Angeles County Sanitation District's sewage and waste water treatment system.

For storm water outside the process areas at the existing refinery and the GOH, and in the event of flooding, the refinery can release flows into the adjacent Union Pacific Resources Company water treatment system. Discharge from all refinery surface runoff outside of the process areas will be required to meet water quality standards as permitted under the National Pollutant Discharge Elimination System (NPDES).

A containment dike along both sides of the Dominguez Channel significantly reduces the potential that a spill at the facility would reach the channel. There is no other water body that could be impacted directly from a spill from the project and the existing refinery. Additionally, as explained in greater detail under Section 4.2.2, Oil and Hazardous Substance Spills, Ultramar is further required to reduce the risk of off-site contamination (including to the marine environment) by implementation of a Spill Prevention, Control and Countermeasure (SPCC) Plan, and an Oil Spill Contingency Plan. If a major spill should occur at the refinery, there is a possibility that it could enter into the Dominguez

Channel and migrate into the San Pedro Bay. However, the existing control systems, mitigate these potential impacts to the maximum extent feasible.

As required by the Los Angeles Regional Water Quality Control Board (RWQCB), Ultramar has an on-going groundwater monitoring program designed to detect hydrocarbon contamination. To date, the groundwater monitoring system has not detected off-site migration of significant amounts of hydrocarbons (*FEIR p. 3-37*).

Conclusion

Petroleum hydrocarbon and/or other hazardous substances could adversely impact marine waters and marine resources during construction and operation of refinery upgrades via runoff, seepage, and/or airborne transport. These concerns, however are mitigated by design of the refineries drainage system and the requirements imposed on the permittee by the SCAQMD, and the RWQCB. Adherence to the refinery's SPCC and implementation of development regulations, imposed by the SCAQMD and the RWQCB, will reduce the risk of off-site contamination, including potential impacts to the marine environment. Potential impacts to the quality of ground water and surface water are mitigated to the maximum extent feasible. Thus, the Commission finds that the project, as proposed, is consistent with the policies pertaining to marine resources contained in Sections 30230 and 30231 of the Coastal Act.

4.4.2 Oil and Hazardous Substance Spills

Coastal Act Section 30232 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 Ultramar refinery is currently capable of processing 70,000 barrels of crude oil per day. The additional units and refinery modifications included in the Step 3 project will not increase the crude oil throughput capacity of the refinery. However, construction and operation of Ultramar's Step 3 project raise concerns regarding the potential spillage or unintentional transport (air or water) of hydrocarbons and/or other hazardous products into the marine environment. These potential impacts are partially mitigated by design of the refineries drainage system, as modified, adherence to the Ultramar Refinery's SPCC Plan, and the development regulations imposed by the SCAQMD, and the RWQCB.

Spill Control and Containment

Section 30232 of the Coastal Act first requires that the applicant provide "protection against the spillage of crude oil, gas, petroleum products, or hazardous substances..." The second requirement of Section 30232 calls for "effective" containment and clean up facilities and procedures for spills that do occur. In the event of an oil spill at the facility, a containment dike provides the first line of

defense. This containment system was modified to accommodate the Step 2 and Step 3 projects. Experience with spills at other locations indicates that containment dikes are not always effective (Shell Martinez Spill, 1988). As described below, Ultramar has developed a Spill Prevention, Control and Countermeasure Plan, an Oil Spill Contingency Plan, as well as, contracted with a spill response contractor (Clean Coastal Waters) in part to respond to any spill that reaches the Dominguez Channel.

The Ultramar Refinery's Spill Prevention, Control and Countermeasure (SPCC) Plan is required by 40 Code of Federal Regulation (*CFR 40*) Part 112. The purpose of this plan is to prevent the discharge of oil into navigable waters and to contain such discharge should it occur. The SPCC plan establishes a management system to deal with potential releases of crude oil, intermediate process streams, and other products at the refinery. The SPCC plan provides for spill prevention systems, on-site and off-site containment measures, the procedures to contain and cleanup a spill once it has occurred, personnel training, spill notification, and other measures. The SPCC plan is currently being amended to include the new facilities.

In accordance with federal EPA regulations governing SPCC plans (*40 CFR Part 112*), Ultramar's SPCC plan must be amended to incorporate refinery modifications within six months of finalizing construction. A draft SPCC plan, which includes the reformulated fuels refinery modifications, has been submitted and includes a discussion the additional process units and spill prevention and response strategies for the Gas-Oil Hydrotreater, and the Hydrogen Facility. When the refinery modifications are completed, this draft SPCC plan will be finalized to include facility modifications in accordance with federal regulation.

The Ultramar Refinery also maintains an Oil Spill Contingency Plan, which includes support from Clean Coastal Waters (CCW) and other oil spill response companies which have the capability to provide oil containment booms and barriers in the event of an oil spill. In addition, a permanent containment boom is installed across the Dominguez Channel.

Regional Water Quality Control Board (RWQCB)

The RWQCB meets its obligation to protect surface and groundwater by requiring proper management and disposal of contaminated soil, thus precluding runoff from affecting surface or groundwater. Potential impacts to surface and groundwater during construction are additionally mitigated by the Los Angeles RWQCB Interim Waste Discharge Permit No. 88-57-270(93) requirements. The Interim Waste Discharge Permit is a general permit issued to the refinery which provides that all soils disturbed during site preparation and construction that exceed certain standards is managed as contaminated soil with appropriate treatment and/or disposal.

Under the supervision of the Los Angeles RWQCB, all refineries in the Los Angeles Basin are required to conduct groundwater monitoring. In a program approved by the RWQCB, Ultramar monitors the shallow groundwater underlying the refinery. Based on the results of Ultramar's groundwater monitoring program, the RWQCB has identified no significant groundwater impacts. (*Draft SEIR p. 4-37*)

State Water Resources Control Board

The State Water Resources Control Board (SWRCB) has issued order No. 97-08-DWQ setting forth storm water discharge requirements for discharges associated with construction activity. The SWRCB has elected to issue a state wide general National pollution Discharge Elimination System (NPDES) permit (*General Permit No. CA000002*) to cover storm water discharges from construction activities at sites in the State with disturbances of five acres or more. The proposed project will use approximately 3.2 acres and thus will not be subject to this requirement.

On June 14, 1994, in connection with the Step 2 Project, Ultramar completed a Storm Water Pollution Prevention Plan for the Reformulated Fuels Program facility upgrades at the refinery. Management of storm water in these construction locations relies primarily on the existing refinery storm water system which collects and treats storm water from the refinery and adjacent oil field prior to discharge to the Cerritos Channel under an existing NPDES permit. These controls will also apply to the Step 3 project.

South Coast Air Quality Management District

Construction activities associated with this project may result in spillage of oil, greases, solvents or high pH concrete wash water. The applicant is required by the SCAQMD's Rule 1166 Contaminated Soil Mitigation Plan to contain and immediately clean up, or direct to drains for collection and treatment in the refinery's waste water treatment system, any construction associated petroleum hydrocarbon or hazardous substance spillage.

Oil Spill Cleanup Capability

Notwithstanding the equipment and services provided at the Ultramar Refinery and by CCW, the second test of Coastal Act Section 30232, which requires "effective" containment and clean up equipment for spills that do occur, cannot be met at this time. The Coastal Commission interprets the word "effective" to mean that spill containment and recovery equipment must have the ability to keep spilled oil off the coastline. The equipment/technology currently available does not have the capability to recover all of the oil from large oil spills and often even small spills in the open ocean. Cleanup equipment and personnel have not always been able to keep spilled oil off the beaches. Testing results of equipment at government research facilities in the United States and Canada have demonstrated that oil recovery equipment operates with about 50% efficiency in relatively calm waters. These tests and actual experience in the field demonstrate that recovery efficiencies decrease as the dynamics of the sea (turbulence) increases. Cleanup capabilities in the open ocean will continue to deteriorate if sea dynamics increase. The existing state-of-the-art equipment is not capable of recovering measurable amounts of oil in seas exceeding six feet.

In addition to sea dynamics, weather conditions, characteristics of spilled oil, response time, amount of oil spilled, the availability of equipment and trained personnel all influence the degree to which a response to a spill is successful. Data from the General Accounting Office indicates that no more than 10-15% of the oil in most major oil spills is ever recovered. In the case of the Exxon Valdez, the Federal Office of Technology Assessment estimated that only 3-4% of the oil spilled was

recovered. In a much smaller spill, the tanker OMI Dynachem ruptured a pipeline at the El Segundo Marine Terminal in March 1991. In spite of the rapid and large response, none of the estimated 200 barrels of oil spilled was ever recovered due to rough seas.

The sheltered waters of the Dominguez Channel and the San Pedro Bay may afford better opportunities for recovering spilled oil than the open ocean does. However, this advantage is offset by the location of the facility, which is essentially sited on the shoreline. This location substantially reduces the response time available to contain a spill before it contacts the coast line. Furthermore, during high storms with increased water runoff, a spill would be difficult if not impossible to contain and recover in the Dominguez Channel.

Conclusion

Ultramar has incorporated a number of measures into their general refinery operations and the proposed Step 3 construction project that, in combination with the refinery's SPCC Plan, mitigation requirements of the SCAQMD, and the RWQCB, mitigate the potential impacts of oil or other contaminant spills at the refinery from impacting the marine environment. However, modifications to the storm water drainage and "process area" containment facilities cannot be shown to be fully capable of preventing hydrocarbon material from entering into the marine environment. Furthermore, if a spill does reach the Dominguez Channel, on-site spill equipment provided by Ultramar and the contracted equipment from CCW cannot "effectively" contain and recover it. Thus, the Commission finds that the project is inconsistent with Section 30232 of the Coastal Act. However, the project may be approved in spite of this finding of inconsistency if, under Coastal Act Section 30263, the project otherwise satisfies the standards and criteria set forth therein.

4.4.2.1 Section 30263 Override Provision

Coastal Act Section 30263 states:

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 effect 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; (5) the facility is sited so as to provide a sufficient buffer area to minimize adverse impacts on surrounding property.

Step 3 construction of Ultramar's Reformulated Fuels Program will not require the expansion of the current refinery property boundaries. The Step 3 project will however, add additional refinery processing units. The refinery is currently capable of processing 70,000 barrels per day of crude oil. The additional Step 3 units and refinery modifications will not increase the throughput capacity of the refinery.

- (1) The Step 3 facilities are integral to Ultramar's reformulated fuels program and must be located in close proximity to the existing refinery. An alternative location for the additional refinery units is not feasible.
- (2) The environmental impacts of Ultramar's Reformulated Fuels Program have been examined in a series of Environmental Impact Reports, as discussed in Section 4.5 of this report. Although expansion of the refinery has the potential to result in adverse environmental impacts, there are no feasible less environmentally damaging alternatives or additional feasible mitigation measures that would substantially lessen any significant adverse impact which the activity may have on the environment.
- (3) The purpose of the CARB-specified reformulated diesel fuel is to reduce emissions of certain criteria pollutants throughout the State of California. Not permitting Ultramar's Reformulated Fuels Program refinery upgrades would adversely effect the public welfare by hindering the production of cleaner burning fuels.
- (4/5) The Ultramar Refinery is located in a intensely industrialized area of the City of Los Angeles. This general area is developed with a number of nearby refineries, manufacturing plants and operations related to the Ports of Long Beach and Los Angeles. The immediate area of the refinery is not highly scenic or seismically hazardous, nor is it within or contiguous to environmentally sensitive areas.

Conclusion

Ultramar has incorporated a number of mitigation measures into the proposed Step 3 construction project, that in combination with mitigation requirements of the RWQCB and the SCAQMD (as discussed in Sections 4.4.1, 4.4.2, 4.4.3, 4.4.4 & 4.4.5 of this report), that will mitigate the potential impacts of the proposed refinery expansion. Further, the project meets the five criteria as outlined in Section 30263 as stated above. Thus, the Commission finds that the project is consistent with Section 30263 of the Coastal Act.

4.4.4 Air Quality

Coastal Act Section 30253 (3) states:

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

The California Air Resources Board (CARB), under the authority of the California Clean Air Act (CCAA), has required petroleum refineries to produce gasoline and diesel fuels to meet reformulated fuel requirements. Ultramar's Step 3 facility upgrades are an attempt to comply with the requirements of the CCAA, and the CARB. The purpose of the CARB-specified reformulated gasoline is to reduce emissions of certain criteria pollutants throughout the State of California.

The South Coast Air Quality Management District (SCAQMD) is the local air pollution control district responsible for implementing federal and state air quality standards in the project area. In evaluating the Ultramar Reformulated Fuels Program, the SCAQMD determined that the proposed refinery modifications were needed in order to meet the regulatory requirements for the production of reformulated fuels. The SCAQMD will monitor construction related air emissions consisting of operation of equipment on-site, fugitive dust and other particulate matter resulting from construction activities. Off-site emissions will result from transportation of materials and equipment, as well as workers' vehicles to and from the project site. To control on-site emissions, the active sites will be watered twice per day and will otherwise comply with SCAQMD Rule 403 related to fugitive dust. Ultramar has initiated a Trip Reduction Plan for the Reformulated Fuels Program which will also be applied to the Step 3 construction activities. The SCAQMD mitigation also includes proper maintenance of all vehicles and construction equipment, and the use of Best Available Control Technology on this equipment.

Conclusion:

Successful implementation of Ultramar's Reformulated Fuels Program would be consistent with the requirements of the South Coast Air Quality Management District and the California Air Resources Board. Further, Special Condition No. 1 requires Ultramar to submit verification that the SCAQMD has issued all required permits-to-construct prior to the issuance of the CDP. Thus the Commission finds that the project, as conditioned, is consistent with Section 30253(3) of the Coastal Act.

4.4.5 Public Access and Recreation

Coastal Act Section 30210 states:

In carrying out the requirements 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 people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

The project is located in an intensely industrialized area. The area contains numerous manufacturing facilities and other operations associated with the Ports of Long Beach and Los Angeles. A second major refinery complex is located to the north of the Ultramar facility. Due to the highly industrialized character of the surrounding area, there are no significant visual, wildlife, recreation, or other public uses. Additionally, coastal access and recreational opportunities are not available due to the project's relative proximity to the coastline, and public safety concerns associated with refinery operation, noises, and industrial emissions.

Visual impacts are not considered significant as the project site is currently developed as a refinery and the surrounding area is highly industrialized and developed with similar uses.

Conclusion:

The lack of recreational opportunities and general undesirability of the project area for recreation, reduce the applicability of Coastal Act Policies regarding coastal access and recreational opportunities. The Commission therefore finds the Step 3 project, as proposed, is consistent with the policies of Chapter 3, Section 30210 of the Coastal Act.

4.5 California Environmental Quality Act

California Public Resources Code. Section 21080.5(d)(2)(i) states:

The rules and regulations adopted by the administering agency shall require that an activity will not be approved or adopted as proposed if there are feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment.

Thus, CEQA requires the consideration of feasible alternatives and mitigation measures to lessen any environmental impacts of the project to a level of insignificance.

The Ultramar Reformulated Fuels Program is the subject of two environmental impact reports. As "Lead Agency" under the California Environmental Quality Act (CEQA), the SCAQMD prepared a project Environmental Impact Report (FEIR), which was certified in August of 1993. A Subsequent EIR evaluates the impacts associated with the facilities not included in the FEIR. The SCAQMD certified the Draft Subsequent Environmental Impact Report, Ultramar, Inc. Wilmington refinery Reformulated Fuels Program (SEIR) in August 1994. The project FEIR and the SEIR both include design alternatives and mitigation measures, which have been incorporated into project design and operation, that will substantially lessen the adverse environmental impacts of Ultramar's Reformulated Fuels Program.

A Special Condition is recommended in Section 3 of this report to mitigate potential air quality impacts associated with project implementation. Special Condition No. 1, requires that prior to CDP issuance, Ultramar shall submit verification to the Executive Director that the South Coast Air Quality Management District has issued all required permits-to-construct for the Step 3 Construction Project.

Conclusion

The project, as proposed and conditioned, meets the mitigatory requirements of Section 21080.5(d)(2)(i) of the CEQA. Although the Commission believes that implementation of Step 3 construction of Ultramar's Reformulated Fuels Program has the potential to result in adverse impacts to coastal resources, the Commission finds no feasible less environmentally damaging alternatives or additional feasible mitigation measures that would substantially lessen any significant adverse impact which the activity may have on the environment, other than those identified herein.

Appendix A

Substantive File Documents

Environmental Documents

Subsequent Environmental Impact Report, Ultramar Inc., Wilmington Refinery Reformulated Fuels Program, (SCH# 92111042), August, 1994.

Final Environmental Impact Report, Ultramar Inc., Wilmington Refinery Reformulated Fuels Program, (SCH# 92111042), August, 1993.

Final Environmental Impact Report, Union Pacific Resources, Gas-Oil Hydrotreater Facility, (SCH# 87072937) April, 1988.

Coastal Commission Permits

Coastal Development Permit, E-94-9, Reformulated Fuels Step 2 Construction GOH/Existing Refinery Modification; Coastal Commission Action: approved September 14, 1994.

Coastal Development Permit, E-94-10, Reformulated Fuels Step 2 Construction Hydrogen Facility
Coastal Commission Action: approved September 14, 1994.

Coastal Development Permit, E-94-4, Site Preparation for Step 2 of Ultramar's Reformulated Fuels Program; Commission Action, approved, April 12, 1994.

Immaterial Amendment to Coastal Development Permit, E-93-9, Construction of select Step 2 Components during Step 1 construction, Commission Action; No objection, October 27, 1993.

Coastal Development Permit, E-93-9, Construction for Step 1 of Ultramar's Reformulated Fuels Program; Commission Action, approved, August 11, 1993.

Coastal Development Permit E-93-5, Site Preparation for Step 1 of Ultramar's Reformulated Fuels Program, Commission Action, approved, April 4, 1993.

Correspondence

Letter to Mr. Darryl Rance, California Coastal Commission, from Charles P. Eddy, Ultramar, Inc., November 27, 1995.

Letter to Mr. Darryl Rance, California Coastal Commission, from Charles P. Eddy, Ultramar, Inc., January 5, 1996.

Letter to Mr. Darryl Rance, California Coastal Commission, from Charles P. Eddy, Ultramar, Inc., January 12, 1996.

Letter to Steven Epperson, Ultramar Inc., from John Lewis, California Regional Water Quality Control Board, Los Angeles Region, Waste Discharge Requirements, December 21, 1993.

Letter to Steven Epperson Ultramar Inc., from J.E. Ross, California Regional Water Quality Control Board, Los Angeles Region, Water Discharge of Hydrocarbon Impacted Soil, November 10, 1993.

Other

City of Los Angeles Department of City Planning, Approval-in-Concept, AIC 94-020, & AIC 94-021; February 24, 1994.

City of Los Angeles Department of City Planning, Approval-in-Concept, AIC 95-043, October 12, 1995.

Ultramar Inc., Wilmington Refinery, Draft Spill Prevention Control and Counter Measure Plan, August, 1994.

Ultramar Inc., Overview of Ultramar Refinery Upgrades for Clean Fuels Program, October, 1992.

South Coast Air Quality Management District's Rule 403, Fugitive Dust.

South Coast Air Quality Management District's Rule 1166, Volatile Organic Compound Emissions.

Appendix B

Standard Conditions

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If Development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions as set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any question of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

Scale 1:5,000,000
1 inch equals approximately 80 miles

50 0 50 100 150 MILES

100 50 0 100 200 KILOMETERS

1927 NAD. Albers equal area projection - standard parallels 29.5° and 45.5°.



Source: Map of

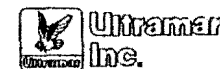
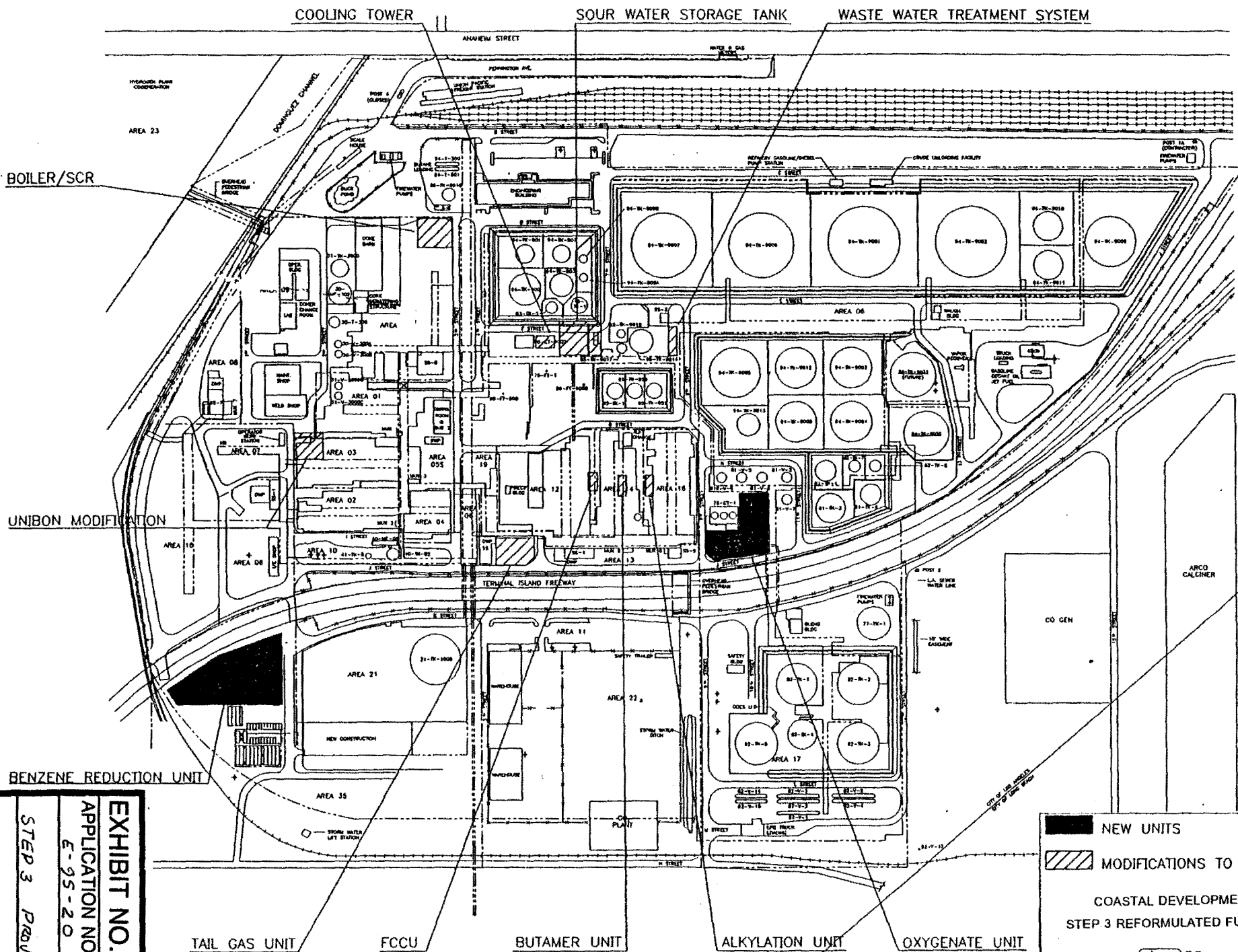
LOCATION MAP



EXHIBIT NO. 2

APPLICATION NO.
E-95-20

ULTRAMAR REFINERY



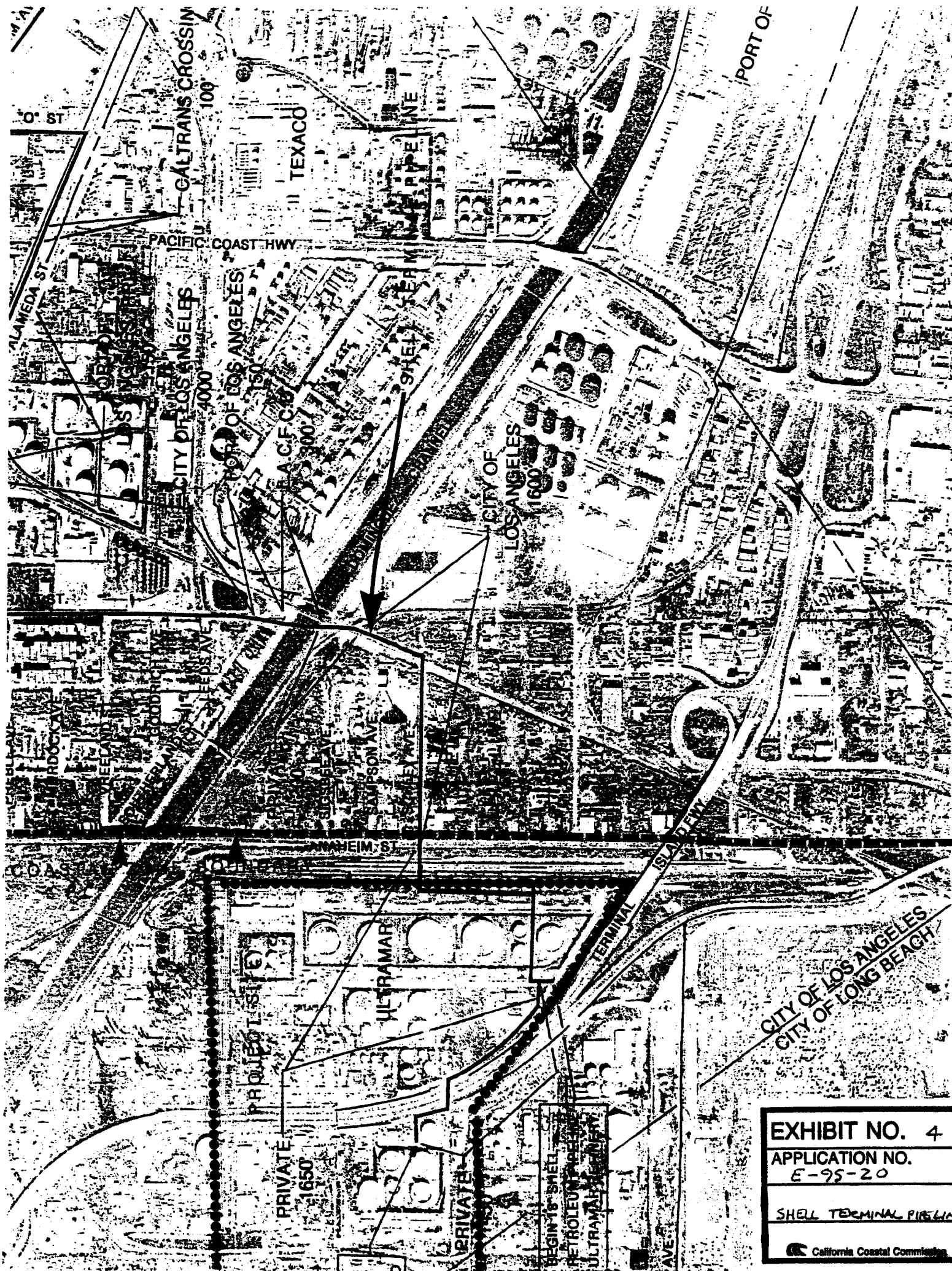


EXHIBIT NO. 4
APPLICATION NO.
E-95-20
SHELL TERMINAL PIPELINE
California Coastal Commission