

CHAPTER 1.0

REGULATORY FRAMEWORK AND PROJECT DESCRIPTION

1.1 REGULATORY BACKGROUND

For the past two decades, oxygenates have been used to increase the octane of gasoline. More recently, oxygenates have been used as an emission control strategy to reduce carbon monoxide (CO) and, to a lesser extent, hydrocarbon emissions from motor vehicles. In 1990, the amendments to the Federal Clean Air Act (CAA) conditionally required States to implement programs in Federal CO non-attainment areas to require gasoline to contain a minimum oxygen content in the winter beginning in November 1992. In response to the Federal CAA requirements to reduce CO emissions, California established a wintertime oxygenate gasoline program requiring between 1.8 and 2.2 weight percent oxygen content in gasoline.

In addition, the CAA directed the U.S. Environmental Protection Agency (U.S. EPA) to adopt Federal reformulated fuel gasoline (RFG Phase I) regulations applicable starting January 1995 in the nine major metropolitan areas of the country with the worst ozone pollution, including the South Coast Air Basin. The Federal CAA required that Federal RFG contain at least 2.0 weight percent oxygen year-round. In addition to the Federal RFG requirements, California adopted regulations for reformulated gasoline in 1991 (RFG Phase 2). Because of the Federal requirements for oxygen content in Federal RFG, an oxygen content specification was incorporated into the California reformulated gasoline regulations. The California reformulated gasoline program was implemented in March 1996. The RFG Phase 2 requirements reduced the mobile source emissions of hydrocarbons (17 percent), nitrogen oxides (11 percent), carbon monoxide (11 percent), sulfur oxides (80 percent), and certain toxic air contaminants, including benzene (CARB, 1999).

Federal and State regulations do not specify the type of oxygenate required. While there are several oxygenates that can be used to meet the oxygenate requirement for gasoline, methyl tertiary butyl ether (MTBE) and ethanol are used most frequently. In 1996, over 95 percent of the gasoline used in California was blended with MTBE (CARB, 1999). The Tosco Los Angeles Refinery has used MTBE to meet the oxygenate requirements for gasoline.

In California and other parts of the U.S., there have been increased environmental and health concerns about the use of MTBE and other ether-based oxygenates in gasoline. Recent legislation in California (SB 521, The MTBE Public Health and Environmental Protection Act of 1997) directed the University of California to conduct a study of the health and environmental risks and benefits of MTBE in gasoline compared to other oxygenates. SB 521 also required the Governor to take appropriate action based on the findings of the report and information from public hearings.

In consideration of this report, public testimony, and other relevant information, Governor Davis found that, "on balance, there is significant risk to the environment from using MTBE in gasoline in California." In response to this finding, on March 25, 1999, the Governor issued Executive

Order D-5-99 which directed, among other things, that California phase out the use of MTBE in gasoline by December 31, 2002.

Tosco Refining Company (Tosco) has supported the Governor's decision to eliminate MTBE. Tosco has made a commitment to eliminate MTBE and is proposing to phase out the use of MTBE by October 2000. This date is over two years earlier than required by the Governor's Executive Order, permitting Tosco to achieve the environmental benefits related to the removal of MTBE over two years earlier as well. Tosco has made a commitment to eliminate MTBE at the earliest possible date in order to achieve the environmental benefits of this program. (Note that the facilities currently owned by Tosco were previously owned by Unocal. Tosco now owns and continues to supply gasoline to Union 76 gasoline stations).

To expedite the removal of MTBE as the oxygenate in gasoline and comply with State and Federal clean fuels requirements, Tosco is replacing MTBE with ethanol and proposing modifications to its existing Los Angeles Refinery, Torrance Tank Farm, Marine Terminal, and interconnecting pipelines to allow the importation, storage and distribution of ethanol. Tosco also is proposing modifications to its Los Angeles and Colton Terminals. Ethanol is the only oxygenate that can be used to replace MTBE at the current time.

1.2 LEAD AGENCY

The California Environmental Quality Act (CEQA), Public Resources Code Section 21000 *et seq.*, requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate significant adverse impacts of these projects be identified and implemented. To fulfill the purpose and intent of CEQA, the South Coast Air Quality Management District (SCAQMD) is the lead agency for this project and has prepared this Negative Declaration to address the potential environmental impacts associated with the Tosco Ethanol Import and Distribution Project.

The lead agency is the public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect upon the environment (Public Resources Code Section 21067). Although the proposed project will involve modifications at Tosco facilities located in several jurisdictions (see next section), it was determined that the SCAQMD has the primary responsibility for supervising or approving the entire project as a whole and is the most appropriate public agency to act as lead agency (CEQA Guidelines Section 15051(b)). The proposed project requires discretionary approval from the SCAQMD.

1.3 PROJECT LOCATION

The equipment associated with the Tosco Los Angeles Refinery is operated at two locations (Wilmington and Carson) approximately three miles apart. Both locations are in the South Coast Air Basin and are shown on the attached map (see Figure 1). Tosco operates a Marine Terminal to support refinery operations. The Marine Terminal, located in the Port of Los Angeles, is also shown on Figure 1. All three sites are integrated and raw, intermediate, and finished materials are

transferred between sites primarily by pipelines. Finished products are transferred from the Los Angeles Refinery via the Torrance Tank Farm pipeline to distribution terminals in the Southern California area.

The Tosco Los Angeles Refinery Carson Plant (Carson Plant) consists of approximately 224 acres and is located at 1520 East Sepulveda Boulevard, Carson, California. The facility is located in a heavily industrialized area in the southern portion of Los Angeles County. The eastern part of the Carson Plant borders a Pacific Electric Railway Company right of way and Alameda Street. The northern portion of the site borders Sepulveda Boulevard, and the ARCO Refinery. The western part of the site borders Shell Oil Company's "Ethyl Property" and property owned by ARCO. The southern portion of the Refinery borders property owned by the Santa Fe and Los Angeles Railway Companies.

The Tosco Los Angeles Refinery Wilmington Plant (Wilmington Plant) consists of approximately 400 acres and is located at 1660 West Anaheim Street, Wilmington, California, which is within the jurisdiction of the City of Los Angeles. The facility is located in the southern portion of Los Angeles County near the Port of Los Angeles. The eastern part of the Wilmington Plant borders a residential area, a Genstar roofing materials plant, and a portion of the Harbor 110 Freeway. The northern portion of the site borders Harbor Lake Park, Harbor College, Harbor Golf Course, and a small residential area. The western part of the site borders Gaffey Street including a firing range, vacant fields, recreational fields, and a U.S. Navy fuel storage facility. Finally, the southern portion of the site shares a border with a vacant property formerly a fuel blending facility belonging to Western Fuels.

The Tosco Marine Terminal consists of approximately 18 ~~43.5~~ acres and is located at Berths 148 through 151, Port of Los Angeles, Los Angeles, California. The facility is located in the southern portion of Los Angeles County within the jurisdiction of the City of Los Angeles in an industrialized area and involves shipping, transfer, and storage activities consistent with other Port activities. The Marine Terminal is located on a peninsula bounded by the Los Angeles Harbor West Basin and Slip No. 1 on the west and east, respectively. Warehouses, parking lots, and ship berths are located along the northern property line of the Marine Terminal.

The Los Angeles Terminal is located at 13500 South Broadway in Los Angeles, California. The Terminal is located south of downtown Los Angeles, in the south central portion of Los Angeles County, near the Harbor 110 and 91 Freeway interchange. The area surrounding the terminal contains commercial and industrial land uses. A residential area is located about 600 feet from the facility.

The Tosco Torrance Tank Farm is located at 2650 West Lomita Boulevard, Torrance, California. The tank farm is located in the southern portion of Los Angeles County, towards the Palos Verdes peninsula and near the Torrance airport. The tank farm is located in a mixed industrial, commercial, and residential area.

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The Colton Terminal East is located at 271 East Slover Avenue, Rialto, California. The Colton Terminal West is located at 2301 South Riverside Avenue, Bloomington, California. Although the addresses differ, the two facilities are located next to each other and both facilities will be referred to as the Colton Terminal in this document. The Colton Terminal is located in the southwestern portion of San Bernardino County near the southern border with Riverside County. The terminal is located in an industrial area.

1.4 PROPOSED PROJECT

To produce gasoline without MTBE as required by the Governor's Executive Order and to remain compliant with State and Federal reformulated fuel standards, Tosco will replace MTBE with ethanol. The proposed project is comprised of modifying existing facilities to permit ethanol to be received into the Marine Terminal for transshipment through the Wilmington Plant for ultimate blending into gasoline at existing, offsite marketing terminals. The primary objective of the proposed project is to phase out the use of MTBE in gasoline and replace it with ethanol, which will allow ethanol to be received by marine vessel at the Marine Terminal and transported by pipeline to blending locations.

Tosco will substitute ethanol for MTBE in all "76" branded gasoline in California prior to the statewide phase out of MTBE required by December 31, 2002. "Branded" gasoline is gasoline that is sold through Tosco-owned Union 76 gasoline stations. "Unbranded" gasoline is gasoline produced by Tosco but sold through retail facilities owned and operated by other entities. Most unbranded gasoline will continue to be blended with MTBE at the Refinery because the unbranded gasoline is distributed through common pipeline systems, and used by customers, where it will be mixed with gasoline from other refiners that continue to use MTBE. Gasoline blended with ethanol is not compatible with gasoline blended with MTBE. MTBE can only be phased out of all of Tosco's unbranded gasoline in the future on a schedule that is consistent with other refiners. To provide a "worst-case" analysis, the impacts in this Negative Declaration are based on the assumption that all gasoline produced at Tosco's Los Angeles Refinery, and distributed through Tosco's facilities will contain ethanol. No additional changes will occur at Tosco's Los Angeles Refinery or the related terminals when the additional unbranded volume of gasoline is switched to ethanol. The environmental analysis in this document assumes that all of the gasoline throughput at Tosco's Los Angeles and Colton Terminals will be switched to ethanol.

The proposed project is expected to result in a reduction of about ~~14~~ 18 marine vessel trips per year. Tosco currently receives MTBE by marine vessel. Upon completion of the proposed project, ethanol will be received by marine vessel and will completely replace the MTBE shipments. Fewer ethanol shipments will be required than those required for MTBE. Ethanol has an octane rating of 115 (as compared to MTBE which is 110) and contains 34.8 percent oxygen by weight, almost twice as much as MTBE. When combined with gasoline at 5.7 percent by volume, the ethanol blend will contain 2.0 weight percent oxygen (when MTBE is combined with gasoline at 11 percent by volume, the blend contains 2.0 weight percent oxygen). Ethanol also has a blending Reid Vapor Pressure (RVP) of 18 which is significantly higher than MTBE, making ethanol more difficult to use in meeting RVP limits during the summer months (CARB, 1999). Therefore, less

ethanol (almost half as much) can be used as an oxygenate versus MTBE to comply with the State and Federal reformulated fuels requirements such as RVP.

The manner in which oxygenate will be blended will be changed as part of the proposed project. MTBE is currently brought into the Marine Terminal via marine vessel and transported via pipeline to the Tosco Wilmington Plant. MTBE is then blended into gasoline at the Wilmington Plant and transported to various distribution facilities for sale at local gasoline stations. Due to its hygroscopic properties, ethanol will not be blended into gasoline at the Refinery (either the Wilmington or Carson Plant). (Note that hygroscopic means that the materials have an affinity for water so managing ethanol in dedicated facilities and minimizing the handling of ethanol is desirable). Instead, ethanol will be delivered to the Marine Terminal via marine vessel and transported via pipeline into storage tanks at the Wilmington Plant. From the Wilmington Plant, ethanol will be pumped through interconnecting pipelines to the Tosco Los Angeles Terminal via the Tosco Torrance Tank Farm. A portion of the ethanol received at the Los Angeles Terminal will be transported via trucks to the Colton Terminal. Tosco is proposing to blend ethanol into gasoline at the Los Angeles Terminal and the Colton Terminal. Pipeline modifications will be required at the Marine Terminal, within the Wilmington Plant, at the Torrance Tank Farm, and at the Los Angeles Terminal to link the interconnecting pipelines. Modifications also will be required at the Tosco Colton Terminal to store ethanol. The proposed project only includes modification to existing stationary sources (e.g., storage tanks, loading racks, and pipelines). New equipment is limited to new electric pumps and meters. Specific modifications at each affected Tosco facility are described in the following subsections. No modifications are currently planned at the Carson Plant.

1.4.1 Tosco Los Angeles Refinery Wilmington Plant

Modifications to the Wilmington Plant will include conversion of existing MTBE storage tanks and transfer systems to ethanol and other services. Modifications include storage tank service changes (i.e., ethanol is proposed to be stored in tanks that currently store MTBE), new pump service changes (i.e., existing pumps that are currently used to transfer MTBE are instead proposed to be used to transfer ethanol), and piping modifications. Piping modifications will consist of some new piping and upgrades of existing piping by removing redundant valves and unnecessary flanges to generate a dedicated ethanol pipeline from existing pipelines. The Wilmington Plant modifications will allow ethanol to be stored and pumped to the Los Angeles Terminal via the Torrance Tank Farm.

1.4.2 Tosco Marine Terminal

Modifications to the Marine Terminal will include conversion of the existing MTBE storage tank and transfer system to ethanol service. The storage tank is currently equipped with a double-bottom and a leak detection system. Modifications include storage tank service changes, pump service changes, and piping modifications. Piping modifications will consist of some new piping and upgrades of existing piping by removing redundant valves and unnecessary flanges to generate a dedicated ethanol pipeline from existing pipelines. The Marine Terminal modifications will

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allow ethanol to be received from marine vessels and be stored and pumped to Wilmington Plant storage tanks.

1.4.3 Torrance Tank Farm

Modifications to the Torrance Tank Farm will include conversion of the existing transfer systems to ethanol service. Modifications will be made to tie an existing idle pipeline connecting the Wilmington Plant and the Torrance Tank Farm into an existing diesel pipeline connecting the Torrance Tank Farm and the Los Angeles Terminal. Existing pipelines currently connect the Tosco Marine Terminal to the Wilmington Plant. Therefore, the proposed piping modifications will allow ethanol to be transported from the Marine Terminal, to the Wilmington Plant and ultimately to the Los Angeles Terminal via the Torrance Tank Farm by pipeline. No ethanol will be stored at the Torrance Tank Farm.

1.4.4 Los Angeles Terminal

Ethanol will be received from the Torrance Tank Farm pipeline and stored in an existing aboveground storage tank. Ethanol will be blended into gasoline at the existing loading rack and will also be loaded directly onto trucks for limited distribution to other terminals. The average number of trucks per day leaving the facility with ethanol is estimated to be about eight. The total number of trucks leaving the facility with gasoline and the throughput of the terminal are not expected to change as a result of the proposed project.

Modifications to the Los Angeles Terminal will include conversion of one existing aboveground storage tank and related transfer systems to allow ethanol storage and blending. The loading rack will be modified to allow blending of ethanol into gasoline at the rack and to facilitate loading ethanol. New electric pumps will be installed to pump ethanol from the storage tank to the loading rack. Two loading arms currently permitted for gasoline service will be modified for loading trucks with ethanol (note there is no increase in loading arms at the rack).

The area currently used for offloading gasoline and/or diesel from trucks will be modified to allow for offloading ethanol. Two new electric pumps for ethanol offloading will be added to the existing pumpoff area and approximately 150 feet of above ground and underground piping will be installed from this area to the tank farm and pipeline manifold.

One aboveground storage tank will be converted from a fixed roof diesel storage tank to an internal floating roof tank for ethanol storage.

1.4.5 Colton Terminal

Ethanol will be trucked from the Los Angeles Terminal to the Colton Terminal – East, where it will be stored. The ethanol will be blended into gasoline at the Colton Terminal – West facility rack prior to transport to service stations for sale and distribution. Ethanol will not be transported from the Colton Terminal to other terminals.

Modifications to the Colton Terminal will include conversion of one aboveground storage tank (previously used for ethanol storage prior to 1995) and related transfer systems (including the loading rack) to allow ethanol storage and blending. The existing loading rack will be modified to allow blending of ethanol into gasoline at the rack. Blend load arms will be installed in place of the current gasoline loading arms which will decrease the number of loading arms at the loading rack. New meters will be installed on each load arm. Two new electric pumps will be installed to pump ethanol from the storage tank to the load rack. Two existing pumps not currently in use will be relocated and put into service (one for diesel and one for gasoline).

The area of the Terminal currently used to offload gasoline and/or diesel from trucks will be modified to allow for the offloading of ethanol. One pump for ethanol offloading will be added to the existing pump area.

1.5 REQUIRED PERMITS

The proposed project will require discretionary Permits to Construct/Operate from the SCAQMD and will require building permits from local cities, including the Cities of Torrance, and Rialto. Building permits also are expected to be required from the County of Los Angeles. No permits are expected to be required from the Port or Los Angeles of the City of Los Angeles.

1.6 ADDITIONAL REFORMULATED GASOLINE MODIFICATIONS

In the near future, the Tosco Los Angeles Refinery will likely make changes to comply with the California Reformulated Fuels Phase 3 (RFG Phase 3) requirements. The RFG Phase 3 requirements prohibit the use of MTBE, while establishing more stringent standards for sulfur and benzene and relaxing two standards for distillation temperatures (T50 and T90). In addition, the RFG Phase 3 requirements provide flexibility in meeting the RVP standard.

Although Tosco is still evaluating the engineering requirements and potential Refinery modifications to comply with RFG Phase 3 specifications which become effective December 31, 2002, it has elected to expedite phasing out MTBE from its gasoline because of the environmental benefits that will follow, which include eliminating a known ground water contaminant from gasoline, eliminating marine vessel trips to the Port of Los Angeles, and a substantial reduction in marine vessel emissions from eliminating marine vessel trips. Upon completion of the engineering requirements to comply with RFG Phase 3 specifications, Tosco may propose Refinery modifications, which will be evaluated for CEQA applicability and, if necessary, an additional CEQA analysis will be prepared.

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As described in Chapter 3.0 herein, the only areas where the proposed Ethanol Import and Distribution Project is expected to have potential environmental impacts are construction and transportation. Since construction of this project will be completed prior to the beginning of the RFG Phase 3 project, there would be no overlapping impacts with another project. Additionally, the only operational impacts, which are not significant, are for transportation of ethanol to the Colton facility. There will be no additional transportation to the Colton facility due to the RFG Phase 3 project, therefore, there are no cumulative impacts pursuant to CEQA Guidelines Section 15130(a)(2).

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