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**BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CA 94109**

CEQA INTIAL STUDY

March 26, 2001

BACKGROUND

Project Title

Valero Refining's (BAAQMD Plant #12626 and Plant #12611) request for Authorities to Construct and Permits to Operate from the Bay Area Air Quality Management District (BAAQMD) for the proposed MTBE (methyl tert-butyl ether) Phase-Out Project

CEQA Background

This project is subject to CEQA. The BAAQMD has determined that completion of a CEQA Initial Study is therefore required.

As described in the November 23, 1999 report titled "Environmental Impact Report - Exxon MTBE Phase-Out Project - Administrative Draft" submitted to the City of Benicia Planning Department, the City of Benicia was originally identified as the CEQA Lead Agency for the project. The City of Benicia prepared a Notice of Preparation and an Initial Study for the project dated August 2, 1999.

Since that time, Valero has scaled-back the proposed project. Per the February 26, 2001 letter from Valero, the project changes that have occurred are:

1. The original project scope included several new processing steps to improve gasoline component qualities. The current project scope has no new processing steps.
2. The original project included a new hot oil furnace, combusting up to 365 MMBtu/hr of fuel gas. The current scope has no new combustion sources and results in a decrease in fuel gas firing.
3. The construction manning of the original project was expected to peak at about 700 workers. The current project scope will require a construction peak manning of 100 workers.
4. The Initial Study was prepared prior to the State's completion of its analysis and acceptance of the use of ethanol in gasoline blends.

Per the January 22, 2001 letter from the City of Benicia, the Planning Department and the City Attorney have concluded that the revised MTBE Phase-Out Project does not require a use permit from the city. The project is not an expansion or alteration of the existing refinery use as defined in Sec. 17.98.070 of the Zoning Ordinance and, in particular, it does not meet the monetary threshold for a use permit established in that section of the ordinance. Therefore, since the City of Benicia is not issuing permits for the project, the BAAQMD has become the Lead Agency for this project.

The findings of this Initial Study for non-air quality environmental impacts are mainly based on the larger-scope project proposed in the City of Benicia's 1999 Initial Study. The current proposed project represents a substantial reduction in scope.

Project Description

The BAAQMD's review and approval of an application for an Authority to Construct and Permit to Operate for the facilities required to eliminate MTBE from gasoline blends. The proposed project would be integrated into the existing refinery, which is located on a 331-acre site in the City of Benicia in Solano County.

The proposed project will enable the Valero Benicia Refinery to produce gasoline that meets the expected California Air Resources Board Phase 3 specifications without using MTBE. This project was initiated in response to a March 25, 1999 Executive Order by the Governor of California, which prohibits the use of MTBE in gasoline in California by no later than December 31, 2002 (Executive Order D-5-99). MTBE, which is an oxygenating agent added to gasoline to reduce air pollution from automobiles, has been determined to pose an environmental threat to groundwater and drinking water. Ethanol is the only alternate oxygenate that is allowed for use in gasoline blends to replace MTBE.

The proposed project will require minor modifications to existing processing facilities. New facilities will include pumps, instrumentation, vessel internal hardware, and piping, all of which will be integrated into existing refinery units. Additionally, a substantial amount of processing equipment at the existing MTBE Production Unit will be removed from service, emptied, and preserved for potential future use.

Hydrofining Process Modifications:

Some modifications are proposed for the existing Light Cat Naphtha Hydrofiner (LCNHF) to ensure that there is adequate capacity to process additional/recycled fuel components that may require sulfur removal prior to blending into gasoline. Specifically, the internal trays in stripper tower on the LCNHF will be modified, and an additional recycle pump will be added. These modifications will increase the throughput capacity of the LCNHF from 21,000 barrels/day to 24,000 barrels/day.

The refinery has several hydrofining processes that are intended to reduce sulfur in fuel components. Though more than 99% of the sulfur is currently removed from the refinery's processed feed, there are periodic shutdowns of several days when a hydrofiner's catalyst is replaced. Currently, the fuel component produced during the catalyst replacement has a higher sulfur content than that produced during non-shutdown periods. With the proposed facility modifications, quantities of the hydrofiner component will be stored, in advance, to use in gasoline blends throughout the shutdown period. The higher sulfur component will be then segregated into existing tanks and will be recycled through the hydrofiner after the catalyst is changed.

The facilities, which return additional/recycled naphtha from tanks to the LCNHF, will also allow naphtha to be routed to the Virgin Naphtha Hydrofiner (VNHF). However, any material routed to the VNHF will meet the existing design capacity of the equipment and therefore no new facilities will be installed.

Also proposed are some modifications to the connections and trays in the existing Cat Naphtha Splitter tower to ensure that the sulfur component is properly routed to the LCNHF.

Vapor Pressure Minimization:

The proposed project removes butane from gasoline blending components in two steps. First, the saturated pentane stream will go through an additional fractionation step to remove butane prior to being sent to its storage tank. This will occur in an existing tower that currently is used to separate butane from alkylate in the Alkylation Unit. Second, the displaced operation that removes butane from alkylate will be relocated to use the existing tower in the MTBE Production Unit, which is being shut down. With internal tray modifications, this larger tower will allow the removal of additional butane from the alkylate produced in the Alkylation Unit, before it is routed to its storage tank.

MTBE Unit Shut Down and Dimersol Reliability:

The Dimersol Unit will be required to operate at its normal design rate, rather than at the reduced rates that have typified operation since the MTBE Unit was started up in 1994. To optimize the Dimersol Unit's operation, the cooling water heat exchanger tubes will be replaced to prevent fouling. Also, pump reliability will be improved.

Ethanol Blending:

With shutdown of the MTBE Unit, the existing tank and truck unloading rack at the refinery will be converted to ethanol service. Pumps, piping, and instrumentation will be installed to transfer and blend the ethanol at the truck racks of the marketing terminal.

Permit Application Numbers: 2035 and 2391

Name, Address, Contact and Phone Number of Proponent

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Valero Refining Company - California
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Benicia, California 94510-1097

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Project Location

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ENVIRONMENTAL IMPACTS

(Note: All answers are explained on attached sheets.)

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporat ed	Less Than Significant Impact	No Impact
1. Land Use and Planning. Would the proposal:				
a. Conflict with general plan designation or zoning?	_____	_____	_____	_____X_____
b. Conflict with applicable environmental plans or policies adopted by agencies with jurisdiction over the project?	_____	_____	_____	_____X_____
c. Be incompatible with existing land use in the vicinity?	_____	_____	_____	_____X_____
d. Affect agricultural resources or operations (e.g. impacts to soils or farmlands, or impacts from incompatible land uses)?	_____	_____	_____	_____X_____
e. Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?	_____	_____	_____	_____X_____
2. Population and Housing. Would the proposal:				
a. Cumulatively exceed official regional or local population projections?	_____	_____	_____X_____	_____
b. Induce substantial growth in an area either directly or indirectly (e.g. through projects in an undeveloped area or extension of major infrastructure)?	_____	_____	_____	_____X_____
c. Displace existing housing, especially affordable housing?	_____	_____	_____	_____X_____
3. Geologic Problems. Would the proposal result in or expose people to potential impacts involving:				
a. Fault rupture?	_____	_____	_____X_____	_____
b. Seismic ground shaking?	_____	_____	_____X_____	_____

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Seismic ground failure, including liquefaction?	_____	_____	<u> X </u>	_____
d. Seiche, tsunami, or volcanic hazard?	_____	_____	_____	<u> X </u>
e. Landslides or mud flows?	_____	_____	_____	<u> X </u>
f. Erosion, changes in topography or unstable soil conditions from excavation, grading, or fill?	_____	_____	_____	<u> X </u>
g. Subsidence of the land?	_____	_____	_____	<u> X </u>
h. Expansive soils?	_____	_____	_____	<u> X </u>
i. Unique geologic or physical features?	_____	_____	_____	<u> X </u>
4. Water. Would the proposal result in:				
a. Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?	_____	_____	_____	<u> X </u>
b. Exposure of people or property to water related hazards such as flooding?	_____	_____	_____	<u> X </u>
c. Discharge into surface waters, or in any alteration of surface water quality (e.g. temperature, dissolved oxygen, or turbidity)?	_____	_____	_____	<u> X </u>
d. Changes in the amount of surface water in any water body?	_____	_____	_____	<u> X </u>
e. Changes in currents, or the course or direction of water movements?	_____	_____	_____	<u> X </u>
f. Change in the quantity of ground waters through direct additions or withdrawals, through interception of an aquifer by cuts or excavations, or through substantial loss of groundwater recharge capability?	_____	_____	_____	<u> X </u>
g. Altered direction or rate of flow of groundwater?	_____	_____	_____	<u> X </u>

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
h. Impacts to groundwater quality?	_____	_____	<u> X </u>	_____
i. Substantial reduction in the amount of groundwater otherwise available for public water supplies?	_____	_____	_____	<u> X </u>
5. Air Quality. Would the proposal:				
a. Violate any air quality standard or contribute to an existing or projected air quality violation?	_____	_____	<u> X </u>	_____
b. Expose sensitive receptors to pollutants?	_____	_____	_____	<u> X </u>
c. Alter air movement, moisture, or temperature, or cause any change in climate?	_____	_____	_____	<u> X </u>
d. Create objectionable odors?	_____	_____	_____	<u> X </u>
6. Transportation/Circulation. Would the proposal result in:				
a. Increased vehicle trips or traffic congestion?	_____	_____	<u> X </u>	_____
b. Hazards from design features (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	_____	_____	_____	<u> X </u>
c. Inadequate emergency access or access to nearby uses?	_____	<u> X </u>	_____	_____
d. Insufficient parking capacity on-site or off-site?	_____	_____	_____	<u> X </u>
e. Hazards or barriers for pedestrians or bicyclists?	_____	<u> X </u>	_____	_____
f. Conflicts with adopted policies supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	_____	_____	<u> X </u>	_____
g. Rail, waterborne, or air traffic impacts?	_____	_____	_____	<u> X </u>
7. Biological Resources. Would the proposal result in impacts to:				

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Endangered, threatened, or rare species or their habitats (including, but not limited to, plants, fish, insects, animals, and birds)?	_____	_____	_____	<u> X </u>
b. Locally designated species (e.g. heritage trees)?	_____	_____	_____	<u> X </u>
c. Locally designated natural communities (e.g. oak forest, coastal habitat, etc.)?	_____	_____	_____	<u> X </u>
d. Wetland habitat (e.g. marsh, riparian and vernal pool)?	_____	_____	_____	<u> X </u>
e. Wildlife dispersal or migration corridors?	_____	_____	_____	<u> X </u>
8. Energy and Mineral Resources. Would the proposal:				
a. Conflict with adopted energy conservation plans?	_____	_____	_____	<u> X </u>
b. Use non-renewable resources in a wasteful and inefficient manner?	_____	_____	_____	<u> X </u>
c. Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?	_____	_____	_____	<u> X </u>
9. Hazards. Would the proposal involve:				
a. A risk of accidental explosion or release of hazardous substances (including, but not limited to, oil, pesticides, chemicals, or radiation)?	_____	_____	_____	<u> X </u>
b. Possible interference with an emergency response plan or an emergency evacuation plan?	_____	_____	_____	<u> X </u>
c. The creation of any health hazard or potential health hazard?	_____	_____	<u> X </u>	_____
d. Exposure of people to existing sources of potential health hazards?	_____	_____	<u> X </u>	_____
10. Noise. Would the proposal result in:				

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Increases in existing noise levels?	_____	_____	<u> X </u>	_____
b. Exposure of people to severe noise levels?	_____	_____	_____	<u> X </u>
11. Public Services. Would the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:				
a. Fire protection?	_____	_____	_____	<u> X </u>
b. Police protection?	_____	_____	_____	<u> X </u>
c. Schools?	_____	_____	_____	<u> X </u>
d. Maintenance of public facilities, including roads?	_____	_____	_____	<u> X </u>
e. Other governmental services?	_____	_____	_____	<u> X </u>
12. Utilities. Would the proposal result in a need for new systems or supplies, or substantial alterations to the following utilities:				
a. Power or natural gas?	_____	_____	_____	<u> X </u>
b. Communications systems?	_____	_____	_____	<u> X </u>
c. Local or regional water treatment or distribution facilities?	_____	_____	_____	<u> X </u>
d. Sewer or septic tanks?	_____	_____	_____	<u> X </u>
e. Storm water drainage?	_____	_____	_____	<u> X </u>
f. Solid waste disposal?	_____	_____	_____	<u> X </u>
g. Local or regional water supplies?	_____	_____	_____	<u> X </u>
13. Aesthetics. Would the proposal:				

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Affect a scenic vista or scenic highway?	_____	_____	_____	<u> X </u>
b. Have a demonstrable negative aesthetic effect?	_____	_____	_____	<u> X </u>
c. Create light or glare?	_____	_____	_____	<u> X </u>
14. Cultural Resources. Would the proposal:				
a. Disturb paleontological resources?	_____	_____	_____	<u> X </u>
b. Disturb archaeological resources?	_____	_____	_____	<u> X </u>
c. Affect historical resources?	_____	_____	_____	<u> X </u>
d. Have the potential to cause a physical change which would affect unique ethnic cultural values	_____	_____	_____	<u> X </u>
e. Restrict existing religious or sacred uses within the potential impact area?	_____	_____	_____	<u> X </u>
15. Recreation. Would the proposal:				
a. Increase the demand for neighborhood or regional parks or other recreational facilities?	_____	_____	_____	<u> X </u>
b. Affect existing recreational opportunities?	_____	_____	_____	<u> X </u>

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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16. Mandatory Findings of Significance.

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|---|-------|-------|-------|--------------|
| a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? | _____ | _____ | _____ | <u> X </u> |
| b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? | _____ | _____ | _____ | <u> X </u> |
| c. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.) | _____ | _____ | _____ | <u> X </u> |
| d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | _____ | _____ | _____ | <u> X </u> |

DISCUSSION OF ENVIRONMENTAL IMPACTS

Project

This project has been assigned Bay Area Air Quality Management District Application Numbers 2035 and 2391.

Introduction

This section of the Initial Study explains the reasons that particular items in the checklist were checked. Explanations are provided both for those items involving some potential impact and for those which no impact is anticipated.

The City of Benicia prepared a Notice of Preparation and an Initial Study for the project dated August 2, 1999 (1999 Initial Study). Since that time, Valero has scaled-back the proposed project.

The findings of this Initial Study for non-air quality environmental impacts are based primarily on the original project as described in the 1999 Initial Study. The current project is expected to require fewer new permanent employees and construction workers than included in the 1999 Initial Study of the original project.

Note: A ratio of 1/7 (100 construction workers now versus 700 originally) will be used for construction worker projections based on item 3 above. As a worst-case assumption, the number of new permanent employees for the current project will be taken to be the same as that projected for the original project.

1. Land Use and Planning

Per the 1/22/01 letter from the City of Benicia, the Planning Department and the City Attorney have concluded that the MTBE Phase-Out Project does not require a use permit from the city. The project is not an expansion or alteration of the existing refinery use as it does not meet the minimum monetary threshold for a use permit.

No potential impacts on land use and planning are expected from this project since this site's existing zoning is "General Industrial" and is not expected to change due to the project. The project is consistent with the General Industrial land use designation and zoning and is expected to have little or no noticeable impact on adjacent uses. The proposed project would be integrated into the existing refinery, which is located on a 331-acre site in the City of Benicia in Solano County.

Per the 8/2/99 Initial Study submitted to the City of Benicia Planning Department, some residential areas, especially those south and west of the refinery, could potentially notice a small increase in frequency or magnitude of flaring. Similarly, a small increase in noise might be noticeable. The project will be constructed within the existing refinery and could not impact agricultural lands or disrupt or divide the physical arrangement of the established community.

2. Population and Housing

Per the 8/2/99 Initial Study, the project may require up to 15 new permanent employees at the refinery, which could result in up to 41 new residents. That would be less than significant growth impact and would not cause an exceedance of population projections.

Per a 2/26/01 letter from Valero Refining Company, the construction manning of the proposed project will be 100 workers during the six-month peak construction period. During construction of the Clean Fuels Project in 1994-96, almost all workers (97%) commuted from outside Benicia with only 3% driving from within the City. Similar percentages are expected for this project, which would indicate that approximately 3 construction workers would live in Benicia. Some percentage of those 3 workers may be temporarily relocating in Benicia, which would be a less than significant growth impact.

The project will be constructed entirely within the existing refinery and will not displace any existing housing.

Therefore, the project is not expected to affect local or regional population or residential housing patterns because no major relocation or growth inducement is anticipated.

3. Geologic Problems

Per the 8/2/99 Initial Study, the project site is most vulnerable to seismic activity on the nearby Green Valley-Concord fault, but it could also be subject to shaking from an earthquake on the Hayward fault and a number of other San Francisco Bay Area faults. Any structures will be required to conform to Uniform Building Code requirements for Seismic Zone 4, which are intended to prevent serious damage from earthquakes. Any impacts are expected to be less than significant.

No grading or constructing of berms will be necessary to prepare the construction site, since no new tanks or process units are proposed.

Soils at the project site are primarily fill underlain by approximately 10 feet of clay and sandy clay colluvium which is moderately to highly expansive. The soils will need to be evaluated for strength and surcharged if necessary to prevent future subsidence. Similarly, the engineering design will need to take into account any potential effects of soil expansion and contraction. Any related impacts are expected to be less than significant.

The project site is not subject to seiche, tsunami, volcanic hazard, landslides, or mudflows. The site does not have unique geologic or physical features, which could be impacted by the project. No impact related to the preceding factors is anticipated.

4. Water

Per the 8/2/99 Initial Study, all surface runoff is collected and routed to the refinery's wastewater treatment plant before release to Suisun Bay. Since the overall project will result in a net reduction in wastewater flow, there is no potential for surface water in Suisun Bay to be adversely affected by the project. Similarly, since the refinery collects and treats surface runoff, there is no potential for flooding due to the project.

The project will not interfere with any watercourse or surface water body and will not intercept or disrupt flow to groundwater. Therefore, the project could not affect the amount, direction, or flow rate of groundwater or surface water.

The project is expected to have a potentially beneficial effect on surface water and groundwater quality resulting from the removal of MTBE from gasoline and elimination of its use at the refinery.

Per the 1/18/00 Resolution by the State of California, California Environmental Protection Agency's Environmental Policy Council (EPC), ethanol is the oxygenate that refiners would most likely use as a substitute for MTBE in meeting federal or state minimum oxygen content requirements for California gasoline. The State Water Resources Control Board analysis of the environmental fate and transport of ethanol in Phase 3 California

Reformulated Gasoline (CaRFG3) showed that it may extend the length of the plume of hydrocarbon contaminants from leaking underground storage tanks an average of 25%, but decreases the contamination from MTBE in both groundwater and surface water with a corresponding decrease in health risks.

It was further resolved by the EPC that, based on the EPC Report and comments received, the Council determines that there will not be a significant adverse environmental impact on public health or the environment, including any impact on air, water, soil, that is likely to result from the change in gasoline that is expected to be implemented to meet the CaRFG3 regulations approved by the California Air Resources Board.

Per the 2/26/01 letter from Valero, the State has completed its analysis and acceptance of the use of ethanol in gasoline blends.

5. Air Quality

Per the BAAQMD Engineering Evaluation Report, the project will cause an increase in refinery emissions of precursor organic compounds (POC). Emissions of nitrogen oxides (NO_x), carbon monoxide (CO), sulfur oxides (SO_x), and particulate matter (PM₁₀) are not expected to increase.

Pursuant to BAAQMD Regulation 2, Rule 2 increases in POC emissions must be offset by providing emission credits from within the air district at a ratio of 1.15 to 1.0. This project will increase emissions by 0.903 ton/yr POC (4.95 lb/day) and the offset credits that will be provided by Valero will be 1.04 tons/yr. This project will comply with the Best Available Control Technology (BACT) requirements of Rule 2-2.

The benzene emissions associated with the new sources (6.61 lb/yr) are projected to be less than the level requiring a screening analysis (6.70 lb/yr). Accordingly, no analysis of health risk has been prepared.

Per the 8/2/99 Initial Study, the project is not expected to affect air movement, moisture, temperature, or climate. Odor emissions are expected to be negligible and not noticeable beyond the refinery boundary. Sensitive receptors are not expected to be impacted because of the distance between the project and populated areas and because pollutant emissions disperse rapidly in the air as they move away from the source.

Per the 1/18/00 Resolution by the State of California, California Environmental Protection Agency's Environmental Policy Council (EPC), ethanol is the oxygenate that refiners would most likely use as a substitute for MTBE in meeting federal or state minimum oxygen content requirements for California gasoline. The Air Resources Board analysis of the fate and transport of evaporative emissions, combustion byproducts, and transformation products that result from using non-oxygenated fuel or ethanol in CaRFG3 gasoline showed no net decreases in emissions benefits compared to CaRFG3 in 1998.

It was further resolved by the EPC that, based on the EPC Report and comments received, the Council determines that there will not be a significant adverse environmental impact on public health or the environment, including any impact on air, water, soil, that is likely to result from the change in gasoline that is expected to be implemented to meet the CaRFG3 regulations approved by the California Air Resources Board. Per the 2/26/01 letter from Valero, the State has completed its analysis and acceptance of the use of ethanol in gasoline blends.

Based on the above discussion and because the expected worst-case POC emission increase is well below the BAAQMD CEQA significance level of 80 lb/day, the air quality impacts of this project are less than significant.

6. Transportation/Circulation

During the six-month peak construction period, as many as 100 workers per day will be needed. Per the 8/2/99 Initial Study, only 3% of the workers are anticipated to be Benicia residents. The rest will commute from the north (17%) and south (60%) on I-680 and from the west (20%) on I-780. During shift changes, construction worker traffic impacts may occur at freeway on- and off- ramps, and on Park Road, Bayshore Road and East Second Street. The most significant impacts are likely to occur at the entrances to the Valero gates. If severe traffic backups occur they could potentially impede emergency vehicle access or interfere with access to nearby businesses. These impacts need to be mitigated; experience with construction of the Exxon Clean Fuels Project, which required as many as 900 workers per day during peak periods, has shown that effective mitigation is feasible and, if mitigated, would be expected to be less than significant. With current projections of 100 workers, impacts will not be significant.

Valero has ample onsite parking for construction workers. No conflict with policies relating to alternative transportation or conflicts with pedestrians is anticipated.

Per the 8/2/99 Initial Study, the potential for any conflict with bicyclists on East Second Street will need to be evaluated by the City of Benicia, but is expected to be less than significant. Because the scope of the project has been reduced since that time, we expect that the impacts will be less than significant. District staff has spoken with John Bunch, Planning Director of the City of Benicia about the potential for conflict with bicyclists on East Second Street. He did not expect the project's impact on bicyclists on East Second Street to be a major issue, however, he recommended that we talk to Dan Schiata, Assistant Public Works Director with the City of Benicia, to discuss how important an issue this is. At this time, this impact will be categorized as potentially significant unless mitigation incorporated. We are soliciting comments from the City of Benicia on the draft Initial Study and draft Negative Declaration. If they determine that bicycling will be significantly impacted by this project, we will incorporate in our permit any recommended mitigation measures from the City of Benicia to address this potential impact.

Truck traffic related to construction could average 10 to 20 trips per day with approximately 40 trips per day during the six-month peak period. Construction truck traffic is not expected to cause a significant impact.

The project will not involve new roadways and thus could not create design features, which would be hazardous to traffic. Neither will the project involve types of traffic, which would be incompatible with existing traffic.

Project operation may result in up to 15 new workers added to an existing work force of 400. No noticeable impact is anticipated from the additional worker traffic. A slight reduction in daily truck traffic is anticipated and rail traffic will not change as a result of project operation.

7. Biological Resources

Per the 8/2/99 Initial Study by the City of Benicia, the project will be constructed within the existing refinery area. There are no important or endangered plant or animal species within the project site, which could be impacted. Valero's wastewater treatment plant discharges to Suisun Bay near the Suisan Marsh. The project will result in a reduction in wastewater discharge from Valero's wastewater treatment plant and, therefore, no impact on the Marsh is anticipated.

8. Energy and Mineral Resources

Per the 8/2/99 Initial Study, the project is designed to operate efficiently and will not conflict with any energy conservation plans. There will be no change in the amount of oil (a non-renewable resource) used by the refinery.

In certain federal initiatives, ethanol's use as a fuel source is advocated to promote renewable biomass fuels. Ex-President Clinton signed an Executive Order in 2000 to accelerate the development and use of biomass fuels, products, and chemicals.

9. Hazards

The potential impacts of ethanol used in gasoline on human health and the environment have been evaluated by the State. The effects were found to not be significant.

This project will not change the use of sulfuric acid at the refinery.

Valero has its own fire brigade, which is trained to respond to emergencies and it conducts joint training exercises with City of Benicia emergency personnel. Valero's procedures are consistent with and complimentary to the City's emergency response and evacuation plans.

There is no flammable vegetation in the project area, which could result in an increased fire hazard.

10. Noise

Per the 8/2/99 Initial Study, Valero requires all new equipment to meet its in-plant noise criterion of 85 dBA at the worker exposure point. This is expected to result in attenuation to acceptable noise levels at the nearest residences, which are approximately 3,000 feet south of the refinery. Operating noise from the MTBE Phase-Out Project is expected to be less than that from the Clean Fuels Project. The EIR for the Clean Fuels Project concluded that the project's noise impacts would be insignificant based on an analysis, which estimated the increase in the (24-hour) CNEL to be 1 dBA. The recently adopted General Plan contains new noise significance criteria, which are based on hourly noise levels rather than 24-hour levels; therefore the Clean Fuels analysis is not entirely comparable to that required for the MTBE Phase-out Project. Nevertheless, because both projects will operate 24 hours a day, the change in the hourly average should not be very different from the change in CNEL. Since the current General Plan considers changes in the hourly average of less than 3 dBA to be less than significant, the noise impacts from operation of the MTBE Phase-Out Project are expected to be less than significant.

Valero states that project operation may result in slight increases in frequency and magnitude of flaring. This is not expected to be noticeable and is, therefore, considered an insignificant impact.

Valero states that construction activity will occur primarily between 7:00 am and 6:00 pm and will generate noise levels below 60 dBA in residential areas. Valero expects noise levels to be comparable to those generated by the Clean Fuels Project. The EIR for the Clean Fuels Project concluded that worst-case hourly average construction noise levels would be about 52 dBA. That noise level is considered to be less than significant impact under the current General Plan.

11. Public Services

No new process units are proposed in this project. The project is not expected to create any additional need for fire protection, nor will it change the refinery's existing emergency response arrangements with the City of Benicia. The project is not expected to result in a need for additional road maintenance nor will it affect maintenance of other public facilities or create a demand for other governmental services.

Per the 8/2/99 Initial Study, the project may result in the hiring of up to 15 new permanent workers. In addition, an estimated 21 construction workers may commute within Benicia. It is unknown how many of those workers may move to Benicia on a permanent or temporary basis because of their employment at the refinery. Nevertheless, based upon school capacities reported in the General Plan, the children of 35 new residents would be expected to create a less than significant impact on local schools.

12. Utilities

Per the 8/2/99 Initial Study, the project will use approximately 3000 kw of additional electricity or about a 5% increase in Valero's existing usage. The current project includes approximately 100 kw additional load. This power is available from PG&E and no significant impact is anticipated. The project will have no effect on communications systems or City storm water drainage facilities. As noted earlier, storm water drainage from the refinery is routed to Valero's wastewater treatment plant. Flow to that plant will be reduced as a result of the project. The possible 15 new employees would create a negligible increase in demand for treated water and sewage treatment service.

The project will result in an annual increase of up to 151,000 pounds of solid waste generated by the refinery. No increase is expected with the current project.

The project was originally expected to result in a net increase in water usage of 175 gallons per minute. No increase is expected with the current project.

13. Aesthetics

The project would involve demolition of some existing of some existing process equipment. No new process equipment would be visible from residential areas or from I-680, which is designated as a scenic highway in the Benicia General Plan. The changes are expected to blend with the existing refinery to an extent where the change would not be noticeable to residents or to travelers on the highway. No significant visual impact is anticipated.

14. Cultural Resources

Per the 8/2/99 Initial Study, the project is located within the existing developed refinery, which has been substantially disturbed during refinery construction. The refinery is not located within a historic conservation area. There is not potential for impact on any cultural resources.

15. Recreation

Per the 8/2/99 Initial Study, the project may result in hiring of up to 15 new permanent workers, at least some of whom may move to Benicia with their families. The current project has no increase in permanent workers is expected.