

## **6.0 CUMULATIVE IMPACTS**

### **6.1 Introduction**

This assessment of cumulative impacts in the proposed project areas includes a discussion of the potential cumulative effects of past, present, and probable future projects that may produce related or cumulative impacts. The cumulative impact analyses in this section have addressed the following:

- Do the impacts of individual projects, when considered together, compound or increase other environmental impacts?
- Will cumulative impacts result from individually minor but collectively significant projects taking place over a period of time?

According to §15130 (b) of the CEQA Guidelines, “The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone.”

The environmental disciplines evaluated in this EIR are included in this section together with proposed appropriate mitigation measures for potential cumulative impacts.

### **6.2 Proposed Projects**

Based upon information received from local planning agencies and individual contacted to compile data for this section, projects with the potential to have cumulative impacts with the proposed project are discussed in this section. Currently, there are no significant projects planned or currently underway at LAR which would create cumulative impacts when considered with the proposed project.

#### **6.2.1 Projects Proposed Near LAR and the Carson Terminal**

The following projects are in various stages of planning, permitting, and construction within the City of Carson.

- The Scottsdale Townhouse Association is proposing to construct 600 semi-detached townhomes on 44 acres near the intersection of East Sepulveda Boulevard and Avalon Boulevard. The project is currently in the negotiation phase and no construction schedule has been made available.
- Westrux International is proposing to expand its existing truck sales and service facility. The expansion would include the acquisition of three acres of adjacent property and the upgrade of its existing complex. The facility is located on 223<sup>rd</sup> Street, just west of the intersection of Wilmington Avenue and 223<sup>rd</sup> Street. The

project is currently in the proposal phase and no construction schedule has been made available.

- The Carson Redevelopment Agency is in the process of negotiating the sale of a seven-acre site west of Wilmington Avenue on 223<sup>rd</sup> Street to Carson Toyota. The sale would enable Carson Toyota to construct a new 40,000 square foot automobile dealership at this location. No construction schedule has been made available.
- A hydrogen gas plant has been recently constructed on Alameda Street, east of LAR and northwest of the Carson Terminal. The facility recently received final occupancy clearance from the City of Carson. The facility utilizes pipelines to provide hydrogen to local refineries.
- The Watson Land Company is in the process of constructing two large industrial buildings north of Interstate 405 and west of Alameda Street. Grading permits have been issued and building plans have been submitted for plan check.
- Development plans have been approved to renovate and redevelop the Scottsdale Shopping Center property located at the northeast corner of Avalon Boulevard and Sepulveda Boulevard. A portion of the commercial center is completed and is occupied. Construction of new retail space is nearing completion and construction of 119 residential townhomes is complete.

### **6.2.2 Projects Proposed Near the Vinvale Terminal**

The following projects are in various stages of planning, permitting, and construction within the City of South Gate.

- A 300,000 square foot retail center with a movie theater and several department stores is currently under construction on Garfield Avenue, across the street from the terminal site. New signalized driveways are being added on Garfield Avenue.
- Blue Diamond has submitted an application to upgrade and remodel their existing asphalt and concrete processing facility located at Southern Avenue and the 710 freeway. The City of South Gate is requiring traffic and air quality analyses for this project.
- A 550 MW power plant development project located at the southwest corner of Southern Avenue and Garfield Avenue is currently under review at the California Energy Commission. The power plant licensing process is expected to take a minimum of one year. Construction of the power plant would occur in the spring of 2003.

### **6.2.3 Proposed Projects Near Marine Terminal 2**

The following projects are in various stages of planning, permitting, and construction within the Port of Long Beach.

- ARCO's Berth T121 facility is located on the west side of the Back Channel in the Port of Long Beach, over one mile southwest of the terminal site. ARCO is proposing to modify its Permit to Construct and Permit to Operate to allow flexibility in the number and size of vessels that call at the terminal. The EIR for the Berth T121 project identified significant air quality impacts, however, they will be mitigated by the installation of shoreside pumps and a new electrical substation to reduce emissions while at berth. The project is currently in progress and projected completion date is the end of 2001.
- California United Terminals Expansion involves the filling of Slip 2 at California United Terminals on Pier E, approximately one mile south of the terminal site. The slip-fill will create approximately 30 acres of land. The project will eliminate approximately 3,045 linear feet of underutilized berth and create approximately 1,100 linear feet of new berth at a wharf along the southern end of the reconfigured Pier E.

### **6.2.4 Proposed Projects Near the East Hynes Terminal**

The following projects are in various stages of planning, permitting, and construction within the City of Long Beach.

- An application has been submitted to the City of Long Beach for the acquisition and redevelopment of a property located on East Artesia Boulevard east of Cherry Avenue, approximately ¼-mile northwest of the terminal site. The applicant has proposed to construct a 74,000 square-foot warehouse/distribution facility at this location. An EIR is currently being prepared for this project (Krupka, 2000).
- A Conceptual Site Plan Review Application for a self storage facility on South Street east of the Union Pacific Railroad tracks, approximately ¼-mile south of the terminal site, has been submitted and reviewed by the City of Long Beach. The 1.6-acre site is proposed to be developed with a 54,000 square-foot self-storage building and office, as well as perimeter storage buildings. Based on review of the Conceptual Site Plan, the City determined that the site would have to be rezoned and a Negative Declaration would need to be filed (Krupka, 2000).

### **6.2.5 Proposed Projects Near the Hathaway Terminal**

The following project is currently under construction near the Hathaway Terminal in the City of Signal Hill.

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- The Bixby Ridge housing development is currently under construction across the street from the Hathaway Terminal. The development consists of 188 single-family homes on approximately 40 acres of land on the eastern flank of Bixby Ridge.

### **6.2.6 Proposed Projects Near the Colton Terminal**

The following projects are currently planned or under construction in the City of Rialto.

- A five-acre truck terminal facility is proposed at the southeast corner of Willow and Santa Ana Avenues approximately  $\frac{1}{4}$ -mile southwest of the Colton Terminal site. The building plans are currently in plan check (Montag, 2000).
- An unattended commercial fueling facility is proposed at the southeast corner of Riverside and Slover Avenue approximately  $\frac{1}{4}$ - mile north of the terminal. The facility is currently under construction (Creet, 2000).
- An 18-acre truck freight terminal is currently under construction and the southwest corner of Willow and Slover Avenues, approximately  $\frac{1}{4}$ -mile west of the terminal.

Other refineries in the Los Angeles Basin are required to meet the CARB Phase 3 requirements by December 31, 2002. No cumulative impacts due to projects at these other refineries are expected as emissions are expected to be reduced due to the lower vapor pressure of ethanol and the reduction of fugitives components due to BACT controls. In addition, project construction is expected to be relatively small compared to the earlier Reformulated Fuel Projects. Due to the locations and assumed schedules, the ARCO project is not expected to interact with the other refinery projects and create significant cumulative impacts.

## **6.3 Cumulative Effects**

The cumulative effects of the projects discussed in Section 6.2 and the proposed project are assessed in the following subsections.

### **6.3.1 Air Quality**

The majority of the projects described in Section 6.2 are beginning construction, currently under construction, or close to the end of construction. Therefore, these projects are unlikely to create cumulative construction impacts in combination with the proposed project. However, construction schedules have not been determined for the following projects, creating the potential for construction of these projects to overlap with the proposed project:

- Scottsdale Townhouse Association residential development in Carson
- Westrux International truck sales and service facility in Carson
- Carson Toyota automobile dealership in Carson
- Blue Diamond asphalt/concrete facility remodel in South Gate
- Warehouse/distribution facility in Long Beach

- Self storage facility in Long Beach

Significant cumulative impacts may occur due to construction of these projects, if they were to overlap with project construction of the proposed project. However, the impacts are expected to be localized and temporary in nature and within the normal amount of construction activity that occurs daily in these highly industrial areas.

Other identified projects, such as the hydrogen gas plant near LAR or the proposed power plant in South Gate, would generate long-term emissions from operations. Since these projects will be subject to SCAQMD permitting and/or other State permitting requirements, it is expected that emissions will be adequately controlled and offset in order to minimize significant long-term adverse cumulative impacts to air quality. Therefore, no significant unmitigable cumulative impacts related to long-term emissions are expected.

### **6.3.2 Hydrology/Water Quality**

The demands for water from the proposed project at the terminal sites are considered insignificant. Therefore, it is expected that there will be no significant cumulative impacts on water resources from the proposed project when considered with other projects.

Water usage from the proposed project is expected to increase at LAR. However, with the exception of the Scottsdale Townhouse development, none of the projects identified in the vicinity of LAR are anticipated to have substantial water demands. As discussed in Section 4.2, the local water provider has sufficient capacity to meet the incremental increase in water demand. Therefore, the combined operation of the proposed project and the Scottsdale Townhouse development is not expected to produce significant adverse cumulative impacts to water quality.

This conclusion is consistent with CEQA Guidelines §15130(a), which state in part, “Where a lead agency is examining a project with an incremental effect that is not ‘cumulatively considerable,’ a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.” Therefore, since the project-related hydrology/water quality impacts do not exceed the SCAQMD’s significance criteria, cumulative hydrology/water quality impacts are not expected from the implementation of the proposed project.

### **6.3.3 Noise**

Increased noise levels as a result of the proposed project are expected to be minimal and mostly attributable to construction vehicles. Construction of the individual projects in combination with the proposed project will contribute to increased noise on a short-term basis. Considering the existing noise levels in the mostly industrialized areas where LAR and the terminals are located, the cumulative impacts from noise are not expected to be significant.

This conclusion is consistent with CEQA Guidelines §15130(a), which state in part, “Where a lead agency is examining a project with an incremental effect that is not ‘cumulatively considerable,’ a

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lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.” Therefore, since the project-related noise impacts do not exceed the SCAQMD’s significance criteria, cumulative noise impacts are not expected from the implementation of the proposed project.

### **6.3.4 Land Use and Planning**

The proposed project and other projects discussed in Section 6.2 generally involve modifications to existing commercial facilities or new developments in areas zoned for the proposed uses. For example, the proposed power plant in South Gate will be located in an area zoned for heavy manufacturing and the proposed Scottsdale Townhouse development in Carson will be located in an area zoned for residential purposes. Additionally, many of the related projects in the vicinity of LAR and the terminals are in various stages of construction and have gone through the approval process at the local agency level. Therefore, no change to land use patterns is expected to result from the individual projects or from the projects considered together. Land use impacts on a regional scale are not expected to occur.

This conclusion is consistent with CEQA Guidelines §15130(a), which state in part, “Where a lead agency is examining a project with an incremental effect that is not ‘cumulatively considerable,’ a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.” Therefore, since the project-related land use impacts do not exceed the SCAQMD’s significance criteria, cumulative land use impacts are not expected from the implementation of the proposed project.

### **6.3.5 Hazards and Hazardous Materials**

Most of the cumulative projects discussed in Section 6.2 pose no substantial hazards or risk of upset because they do not utilize hazardous materials to a significant degree. For example, the proposed residential developments in Carson and Signal Hill or the retail and warehouse developments in Long Beach and South Gate do not utilize hazardous materials.

There are a number of other refineries and terminals in the vicinity of the ARCO refinery and terminals. These refineries are also engaged in conversion to California Reformulated Gasoline Phase 3 production and the terminals will also blend the reformulated gasoline. It is assumed, for purpose of this analysis, that each refinery and terminal will have similar process modifications and similar risk of upset as the proposed project. Refineries and terminals located near ARCO facilities include the following:

#### **Equilon**

Equilon Refinery	2100 E. Pacific Coast Highway	Wilmington
Wilmington Terminal	1926 E. Pacific Coast Hwy.	Wilmington
Signal Hill Terminal	2457 Redondo Ave.	Signal Hill
Carson Terminal	20945 S. Wilmington Ave	Carson

Van Nuys Terminal	8100 Haskell Ave.	Van Nuys
Colton and Rialto Terminals		Bloomington
Tosco		
Tosco Refinery	20945 S. Wilmington Ave.	Wilmington
Ultramar		
Ultramar Refinery	2402 Anaheim St.	Wilmington

The major risk impact from the proposed project is due to 100,000 BBL pentane storage in Marine Terminal 2. The worst case impact zone for this storage is about 3.7 kilometers (2.3 miles). This is based on the highly unlikely USEPA worst case assumption that 100,000 BBL of pentane would be vaporized and mixed with air so that the entire amount was between the upper and lower explosive limit. This mass would then explode at 10 percent of the efficiency of TNT. This impact is about 1,500 meters greater than the current situation. A more likely accident scenario at Marine Terminal 2 would be a spill to a containment dike followed by a fire. This would have an impact distance of less than 500 meters and assuming a simultaneous release of an identical chemical with a resulting fire from the nearest refinery, the Impact Zones would overlap. Also, fire suppression systems are in place to mitigate fires. A simultaneous explosion at Marine Terminal 2 and Ultramar would overlap.

Ultramar is approximately one-half mile from the Marine Terminal. Equilon is north of Ultramar. Tosco and ARCO are in the same general vicinity.

The major impact from this project at the ARCO refinery itself would be a pipeline failure. This would produce an impact of a few hundred meters, which is smaller than the impact distance that exists now. Cumulative impacts from and between the on-site operation of refineries is not expected to be significant because it is extremely unlikely that upset conditions would occur at more than one refinery at the same time and ethanol has lower impact than the chemical it replaces.

With regard to the terminals, ARCO has proposed modifications at terminals in East Hynes, Vinvale, Hathaway, Colton and Carson. The major new risk created by the project at terminals is due to ethanol truck accidents. A major truck fire has a projected impact of about 130 meters and spill and fire has an impact of about 21 meters. Neither scenario is likely to impact other terminals in the local area and simultaneous accidents at other terminals are unlikely to have impact zones that overlap.

There is a new hydrogen plant east of LAR and northwest of the Carson Terminal. The proposed project does not introduce risks to the hydrogen plant that are significantly different from other processes that currently exist at LAR and other surrounding refineries. Risks due to the proposed project are commensurate with refinery risks in general.

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Based on the above considerations, there would be significant cumulative impacts related to an increased risk from catastrophic failure of storage tanks, pipeline, and barge fires at Marine Terminal 2, no significant cumulative impacts from catastrophic failure of storage tanks and pipelines at LAR, and no significant cumulative impacts from catastrophic failure of delivery trucks at the Carson, Vinvale, Colton, East Hynes, and Hathaway terminals.

### **6.3.5 Transportation/Traffic**

As discussed in Section 4.6, the proposed project is not expected to create long-term impacts to traffic in the area of LAR or the terminal sites. Additionally, the short-term construction impacts at the terminals is considered insignificant and is not expected to affect traffic patterns in these areas, even if related projects in these areas were to overlap with the proposed project construction.

Insignificant short-term construction impacts are expected to occur at LAR during the PM peak hour (5:00 to 6:00 PM). Cumulative effects on traffic and circulation in the vicinity of LAR will be transitory due to the temporary nature of the construction. ARCO will voluntarily encourage carpooling and implement other mitigations outlined in Section 4.6 to minimize the use of impacted intersections.

This conclusion is consistent with CEQA Guidelines §15130(a), which state in part, "Where a lead agency is examining a project with an incremental effect that is not 'cumulatively considerable,' a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable." Therefore, since the project-related traffic impacts do not exceed the SCAQMD's significance criteria, cumulative traffic impacts are not expected from the implementation of the proposed project.

### **6.3.6 Energy**

No significant cumulative impact on energy sources is expected to occur from construction, as the construction demand for energy at LAR and the terminals will be negligible.

Additionally, no significant cumulative impact on energy sources is expected to occur from operation of the proposed project in combination with other projects, as the existing southern California distribution system is capable of meeting the demands for electricity. Future increases in the need for electricity in southern California are expected to be fulfilled with the construction of several power plant projects currently being permitted by the California Energy Commission.

This conclusion is consistent with CEQA Guidelines §15130(a), which state in part, "Where a lead agency is examining a project with an incremental effect that is not 'cumulatively considerable,' a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable." Therefore, since the project-related energy impacts do not exceed the SCAQMD's significance criteria, cumulative energy impacts are not expected from the implementation of the proposed project.

### **6.3.7 Solid/Hazardous Waste**

Both non-hazardous and hazardous waste landfills used by ARCO generally have expected life capacities ranging from 20 to 30 years. Although ARCO will implement waste minimization techniques to ensure that waste impacts from the proposed project remain insignificant, landfills in the region have finite capacities. The incremental waste that will be generated by the proposed project over the life span of the disposal facilities is negligible compared to the capacity; therefore, no significant cumulative impacts are anticipated to result.

This conclusion is consistent with CEQA Guidelines §15130(a), which state in part, “Where a lead agency is examining a project with an incremental effect that is not ‘cumulatively considerable,’ a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.” Therefore, since the project-related solid/hazardous waste impacts do not exceed the SCAQMD’s significance criteria, cumulative solid/hazardous waste impacts are not expected from the implementation of the proposed project.

As discussed in Section 4.8, the potential for exposure to uncovered ACM in the soils at the Northeast Property at LAR is a significant impact before mitigation. While there are no known other offsite ACM-containing soils in the vicinity of the project sites, because the impacts at LAR are considered significant before mitigation, the cumulative impacts related to exposure to ACM are also considered significant. However, with the implementation of the mitigation measures discussed in Section 4.8, the significant impacts will be reduced to insignificance.

### **6.3.8 Public Services**

As discussed in Section 4.9, no significant impact to public services, including fire, police, schools, or medical services, is likely to occur as a result of the proposed project additions/modifications at the LAR or the terminals as it is primarily a continuation of existing operations. No significant cumulative impact to police or fire services is expected because the region is already heavily developed and urbanized with a large number of resources.

It is unlikely that the proposed project in combination with other projects would create a demand for workers that could not be met by the existing population in the region. Therefore, no significant adverse impact on schools or medical facilities is expected as a result of the combined construction or operation of the projects discussed in Section 6.2.

This conclusion is consistent with CEQA Guidelines §15130(a), which state in part, “Where a lead agency is examining a project with an incremental effect that is not ‘cumulatively considerable,’ a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.” Therefore, since the project-related public service impacts do not exceed the SCAQMD’s significance criteria,

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cumulative public service impacts are not expected from the implementation of the proposed project.

### **6.3.9 Geology/Soils**

The proposed project is not expected to create significant impacts to geology or soils. No unique geologic resources are located at LAR or the terminal sites. Seismic hazards will be minimized at the project sites using proper design and construction standards. No cumulative impacts to geologic structures or processes are expected to occur from the combined construction or operation of the projects discussed in Section 6.2.

This conclusion is consistent with CEQA Guidelines §15130(a), which state in part, "Where a lead agency is examining a project with an incremental effect that is not 'cumulatively considerable,' a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable." Therefore, since the project-related geology/soils impacts do not exceed the SCAQMD's significance criteria, cumulative geology/soils impacts are not expected from the implementation of the proposed project.

### **6.3.10 Cultural Resources**

No cumulative impacts to cultural resources are expected to occur as a result of the proposed project as it will be located on existing developed sites and there are no known cultural resources that extend on and beyond the project sites.

This conclusion is consistent with CEQA Guidelines §15130(a), which state in part, "Where a lead agency is examining a project with an incremental effect that is not 'cumulatively considerable,' a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable." Therefore, since the project-related cultural resources impacts do not exceed the SCAQMD's significance criteria, cumulative cultural resources impacts are not expected from the implementation of the proposed project.

## **6.4 Mitigation Measures**

Cumulative impacts from individual projects considered together may affect air quality, hazards, transportation/traffic, and solid/hazardous waste. Mitigation measures for these environmental topics are provided in Section 4.

Implementation of the mitigation measures proposed for air quality in Section 4.1 will assist in mitigating cumulative air quality impacts.

The construction of a pentane tank at Marine Terminal 2 would necessitate the removal of some existing tanks, which would partially mitigate the presence of the pentane tank. The incremental impact relative to all other functions in the area is not significant particularly with regard to the worst case. The probability of a vapor cloud explosion of 50,000 BBLs is remote, if not

impossible. Safety measures to reduce the probability of fires are part of ARCO's normal operating procedures. Fire suppression systems and trained emergency personnel are available to respond to upset conditions.

The mitigation measures proposed to minimize construction traffic impacts in Section 4.6 will assist in mitigating cumulative short-term traffic impacts.

The volumes of non-hazardous and hazardous waste to be disposed by the individual projects can be minimized by implementing recycling and waste minimization programs as proposed in Section 4.8.