EXECUTIVE SUMMARY

ES-1 Introduction

This Environmental Impact Report (EIR) is an informational document that discloses to the public and to decision-makers the environmental effects of the proposed Valero Benicia Refinery's Crude by Rail project (Project). This Executive Summary includes the following sections:

- Introduction (ES-1)
- Project Objectives (ES-2)
- Project Setting and Location (ES-3)
- Project Description (ES-4)
- Alternatives (ES-5)
- Environmentally Superior Alternative (ES-6)
- Areas of Controversy and Issues to be Resolved (ES-7)
- Summary of Impacts (ES-8)

A comparative summary of the impacts of the Project and the alternatives to the Project is provided in Table 2-1, in Chapter 2. The EIR assesses the direct, indirect, and cumulative environmental impacts that could occur as a result of constructing, operating, and maintaining the Project. These analyses are based upon information submitted by Valero in its application for a Use Permit to the City of Benicia for the Project. This EIR is an informational document that, in itself, does not determine whether the Project should be approved, but informs local officials in the planning and decision-making process.

ES-2 Project Objectives

The Valero Benicia Refinery (Refinery) converts crude oil into finished products, including gasoline, jet fuel, liquefied petroleum gas, heating oil, fuel oil, asphalt, petroleum coke, and sulfur. The Project would provide an alternate means of delivering crude oil feedstock to the Refinery. The Project has the following objectives:

1. Allow for the delivery of up to 70,000 barrels per day of North American-sourced crude oil by rail.

2. Replace marine vessel delivery with rail delivery of up to 70,000 barrels per day of crude oil.

3. Mitigate project-related impacts.

4. Implement the Project without changing existing Refinery process equipment or Refinery process operations, other than operation of the Project components.

5. Continue to meet requirements of existing rules and regulations pertaining to oil refining including the State of California Global Warming Solutions Act of 2006 (AB 32).

ES-3 Project Setting and Location

The Refinery is located at 3400 East Second Street, an industrial area in the eastern portion of the City of Benicia, in Solano County. The Refinery lies in a general north-south orientation near and west of Interstate 680. The Refinery is located along the northern edge of the Suisun Bay below a low range of coastal hills. To the west of East Second Street is open space, and the closest residential areas are approximately 3,000 feet to the south and west of the Refinery, and approximately 2,100 feet to the northwest of the Project site. Refinery operations occupy approximately 330 acres of the 880 acre Valero property.

The Refinery dock is located on the Carquinez Strait between the Benicia-Martinez Bridge and the Port of Benicia wharf. The Refinery's marine terminal and pipeline to the Refinery provide access for receiving and shipping bulk cargoes by marine vessel. The existing Union Pacific Railroad (UPRR) rail line provides rail access for the Refinery and for the Benicia Industrial Park. The Benicia Industrial Park is located east and north of the Refinery. Presently, the Refinery uses tank cars to receive chemicals used in refining and to ship refined products from the Refinery.

A new tank car unloading rack capable of unloading two parallel rows of tank cars (one on each side) and transferring crude oil to the Refinery would be installed as part of the Project in the northeastern portion of the main Refinery property, between the eastern side of the lower tank farm and the fence adjacent to Sulphur Springs Creek.

The new tank car unloading facilities would include a liquid spill containment sump with the capacity to contain the contents of at least one tank car. In addition, the existing liquid spill containment for tanks abutting the tank car unloading facilities would be modified to allow installation of the unloading facilities. Part of the existing containment berm for the tank field would be removed and a new concrete berm would be constructed approximately 12 feet west of the existing earthen berm.

The Project would install approximately 8,880 track-feet of new track on Refinery property. Three new track turnouts and one crossover would be installed. The Project would also realign approximately 3,560 track-feet located on Refinery property.

New rail spurs and parallel storage and departure spur would be constructed between the eastern side of the lower tank farm and the western side of the fence along Sulphur Springs Creek.

Ancillary facilities affected by the Project would include crude oil offloading pumps and pipeline and associated infrastructure, spill containment structures, a firewater pipeline, groundwater wells, and a service road.

ES-4 Project Description

Overview

The purpose of the Project is to install new equipment, pipelines, and infrastructure to allow the Refinery to receive a portion of its crude oil feedstock deliveries by tank car.

The Project would allow Valero to accept up to 100 tank cars of crude oil a day in two 50-car trains. The trains would enter the Refinery on an existing rail spur that crosses Park Road. The crude oil unloaded from the tank cars would be pumped to the existing crude oil storage tanks in the Refinery via a new crude offloading pipeline, connected to existing piping located within the Refinery. Valero would ask UPRR to schedule Valero's trains so that none of them cross Park Road during the commute hours of 6:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. Valero would operate the Project components 24 hours per day, 7 days per week, and 365 days per year.

Based on Valero's plans, the crude oil delivered by rail would displace up to 70,000 barrels per day of the crude oil that is presently delivered by marine vessels. Crude oil delivered to the Refinery by tank car would not displace crude oil delivered to the Refinery by pipeline.

The crude oil to arrive by tank car would originate at sites in North America and be shipped by UPRR. UPRR would transport tank cars on existing rail lines from sources in North America to Roseville, California, where the cars would be assembled into a train for shipment into the Refinery. Valero would own or lease the tank cars that would be used to transport crude oil from Roseville to Benicia. Under regulations adopted by the Pipeline and Hazardous Materials Safety Administration (PHMSA), crude oil shipped by rail must be shipped in tank cars built to the "DOT-111" specification. In 2011, the Association of American Railroads voluntarily imposed more stringent standards on the design of DOT-111 tank cars. Tank cars that meet these new standards are generally known by the number "1232," and are referred to herein as "1232 Tank cars." All DOT-111 tank cars ordered after October 1, 2011 must meet the standards for 1232 Tank cars. DOT-111 tank cars ordered before 2011 that do not meet the standards for 1232 Tank cars are commonly known as "legacy" DOT-111 tank cars. Valero has committed that, when the PHMSA regulations call for use of a DOT-111 car, Valero would use 1232 Tank cars rather than legacy DOT-111 cars. See Section 3.4.1.3, in the *Project Description* for further discussion of tank cars. UPRR owns and operates the locomotives that would be used to transport the tank cars from Roseville to Benicia.

The Project would not involve any changes to the existing Refinery operations or process equipment, other than the construction and operation of the Project components. The Project would not increase the amount of crude oil that can be processed at the refinery, or the amounts of petroleum products that can be produced. The Project does not propose any change to the Bay

Area Air Quality Management District (BAAQMD) operating permit regarding the Refinery's crude oil processing rate. The Project does not propose changes to the emissions limits in the current BAAQMD permits, although the Project does require approval of an Authority to Construct from the BAAQMD.

Project Components

The Project would consist of the following primary components:

- Installation of a single tank car unloading rack capable of offloading two parallel rows of 25 crude oil railcars.
- Construction of two parallel, offloading rail spurs to access the tank car unloading rack along with a parallel departure track to store tank cars in preparation for departure, for a total of 8,880 track-feet of new track on Refinery property.
- Installation of approximately 4,000 feet of 16-inch diameter crude oil pipeline and associated components and infrastructure between the offloading rack to the existing crude supply piping.
- Replacement and relocation of approximately 1,800 feet of tank farm dikes.
- Relocation of an existing firewater pipeline, compressor station, and underground infrastructure.
- Relocation of groundwater wells along Avenue "A."
- Construction of a service road adjacent to the proposed unloading rack.

The Refinery proposes to begin construction in 2014 and to commence operations in late-2014 or early 2015. Construction is expected to take approximately 25 weeks. The Project would require twenty additional employees or contractors.

ES-5 Alternatives

No Project Alternative

Under the No Project alternative, the Project would not be constructed, which would prevent crude oil from being transported to the Refinery via tank car. The Refinery's existing facilities at the site of the proposed unloading racks and spurs would remain and the Refinery would continue to use marine vessels to import crude oil. The amount of California crude oil delivered to the Refinery by pipeline would remain unchanged. Air emissions (both criteria pollutants and greenhouse gases) from marine vessels that transport crude oil would remain unchanged, because there would be no reduction in marine vessel trips.

Compared to the Project, the No Project alternative would result in higher emissions of criteria pollutants and greenhouse gases within California. Global greenhouse gas emissions would be higher with the No Project alternative than with the Project. The No Project alternative would have no impact to the Sacramento Air Quality Management District or the Yolo-Solano Air Quality Management District. Valero would not be able to achieve most of its Project objectives.

Reduced-Project Alternatives

A reduced-project alternative considers components of the Project that could potentially be eliminated or reduced from the full Project scope. Two reduced-project alternatives are analyzed in the EIR:

Alternative 1: Limiting Project to One 50-Car Train Delivery per Day

Under this alternative the Project would operate with a 50% reduction in the proposed number of train deliveries to the Refinery per day. Deliveries would be limited to a maximum of one[1] 50-car train each day, containing a daily total of 35,000 barrels. This single train would be delivered during nighttime hours (between 8:00 p.m. and 5:00 a.m.) and once emptied, would depart the Refinery during nighttime hours and be returned to its origination point. All other aspects of this alternative would be the same as the Project.

For most of the environmental topics, this alternative would have essentially the same impacts as the Project. For Air Quality and Greenhouse Gas emissions, this alternative would reduce air emissions from trains but would result in smaller reductions in air emissions from marine vessels. Although most emissions from both the Project and this alternative would not exceed any levels of significance, both would still result in a significant offsite impact for NOx, while overall emissions reductions for this alternative would be less than for the Project. This alternative may lessen the likelihood of potential impacts to local traffic at Park Road in Benicia's Industrial Park area during peak traffic times. There is a larger window for achieving a scheduled Park Road train crossing within the longer off-peak nighttime hours. This alternative would not allow Valero to fully achieve the primary Project objectives 1 and 2, but would still fulfill Project objectives 3 through 5.

UPRR has taken the position that any limitation on the volume of product shipped or the frequency, route, or configuration of such shipments is clearly preempted under federal law. UPRR has summarized its position in a statement set forth in Appendix L.Thus, Alternative 1 may be legally infeasible.

Alternative 2: Two 50-Car Trains Delivered during Nighttime Hours

Under this alternative the Project would be required to schedule all Park Road train crossings during nighttime hours only (between 8:00 p.m. and 6:00 a.m.). This could be accomplished

[1] This means that one 50-car train would be delivered for unloading each day and after unloading the 50-car train would return to its origination point.

through either a single 100-car train or sequencing two 50-car trains such that they are delivered and subsequently depart only during nighttime hours. All other aspects of this alternative would be the same as the Project.

As with the single 50-car alternative describe above, for most environmental topics, this alternative would have essentially the same impacts as the Project.

The exception to this would be the increased potential for local noise effects. The Project's nighttime noise impacts at the Refinery would be less than significant. Under this alternative, while the noise levels from train movements would be the same, if all trains were brought in and depart during nighttime the potential noise duration would be greater than that of the Project. As under the 50-car reduced-project alternative, this alternative would lessen potential impacts to local traffic by restricting the time of day when the trains are scheduled to arrive and depart. However, some tank car deliveries could extend beyond its scheduled delivery window into peak traffic times as compared to one nighttime and one day time delivery. This alternative would still allow Valero to achieve most of its Project objectives.

Alternative 3: Offsite Unloading Terminal

This alternative would consist of a separate, offsite facility where crude oil could be shipped by either marine vessel or rail, and then transferred to the Refinery presumably by a new pipeline. There are two variations to this alternative: 1) offsite terminal would be developed and operated by Valero, and 2) offsite terminal would be independently developed and operated by a third party. Most of the impacts identified for the Project would occur at a Valero-owned offsite terminal, although through thoughtful siting, potential impacts to local traffic flow could likely be reduced. Locating the unloading racks at a new facility outside the Refinery would involve greater construction impacts for the facility itself than would occur if the unloading racks were within the Valero Refinery.

Under the third-party operator variant, new or existing infrastructure could be developed to receive crude oil and transfer it to Valero via new pipeline. In this case it is likely that new CEQA review would be required for the offsite facility, and the pipeline to Valero would have to be considered within this analysis as a direct impact of the project.

There are many unknowns under this alternative, including whether this would be a new facility or an existing one, and how far away this facility would be from the Refinery. The requirement for a new pipeline from this offsite facility alone would include substantive environmental impacts from all construction activities (e.g., air quality, greenhouse gas emissions, noise, biological and cultural resources), which could exceed those of construction of the Project. Either variant of this alternative would simply add the impacts of the new pipeline construction and operation to the impacts of a tank car unloading facility, but at a different location. Thus, this alternative's overall impacts would be at least somewhat greater than those of the Project. Although this alternative would meet all objectives of the Project and could reduce the impacts to

the local Refinery / Benicia area, many of these same impacts would be simply transferred to another location.

ES-6 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) requires an EIR to identify an environmentally superior alternative. If the environmentally superior alternative is the No Project Alternative, the EIR also must identify an environmentally superior alternative from among the other alternatives. In general, the environmentally superior alternative is defined as that alternative with the least adverse impacts to the Project area and its surrounding environment.

As explained in Section 6.4.2, Alternative 1 (reducing the Project to single 50-car train per day) is environmentally superior to the Project in a few respects. Alternative 1 would reduce the emission of criteria pollutants, toxic air emissions, and greenhouse gases from trains as compared with the Project, and avoid the Project's significant NOx impact in the Sacramento Metro AQMD. However, for the reasons described above, this alternative may be legally infeasible because of federal preemption. Alternative 1 would also reduce the impacts of train crossings on traffic. Since the Project would not have a significant effect on traffic, however, Alternative 1 would not avoid any significant traffic effect.

The Project, however, is environmentally superior to Alternative 1 with respect to overall air quality. Alternative 1 would result in greater emissions of criteria pollutants, toxic air emissions, and greenhouse gases than the Project overall, because Alternative 1 involves 50% more emissions of these same pollutants from marine vessels.

ES-7 Areas of Controversy and Issues to be Resolved

Areas of controversy known to lead agencies, including issues raised by agencies and the public, must be identified in the Executive Summary of an EIR (CEQA Guidelines Section15123). The scoping phase of the EIR, conducted between August 9, 2013 and September 13, 2013, identified the following key areas of concern for consideration in the EIR:

- Properties and parameters of crude oil to be transported and refined;
- Relationship of the Project to the Valero Improvement Project;
- Effects of train operations on local streets and I-680;
- Construction, operation, and transportation-related effects on air quality;
- Potential effects on biological resources in Sulphur Springs Creek and the Suisun Marsh;
- Potential hazardous materials releases resulting from an accident;
- Emergency response procedures and responsibility during an accident;
- Range of potential effects from extraction of crude oil at its source through its transportation to the Refinery.

Issues to be resolved, including a choice among alternatives, and whether and how to mitigate potential significant impacts, also must be identified in an Executive Summary (CEQA Guidelines Section15123). The main issue to be resolved in this EIR is which among the alternatives would meet most of the basic Project objectives with the least environmental impact. Balancing sometimes competing environmental values can be challenging because it rests on assumptions of relative value.

Decision-makers may elect to balance relative values of environmental resources and, thereby, resolve the issues considered in this EIR with a different conclusion than the one summarized in Section ES-6 and discussed in Section 6.4.4, *Environmentally Superior Alternative*.

ES-8 Summary of Impacts

Resource Areas Evaluated

This section summarizes the potential impacts resulting from implementation of the Project or alternatives. The affected environment and the potential direct and indirect effects of the Project are described and evaluated in Chapter 4 of this EIR for the resource areas listed below. Other CEQA considerations, including the cumulative impact analysis, are in Chapter 5, and the alternatives analysis is in Chapter 6. Chapter 4 is organized into the following 11 environmental resource or issue areas:

- 4.1 Air Quality
- 4.2 Biological Resources
- 4.3 Cultural Resources
- 4.4 Energy Conservation
- 4.5 Geology and Soils
- 4.6 Greenhouse Gas Emissions
- 4.7 Hazards and Hazardous Materials
- 4.8 Hydrology and Water Quality
- 4.9 Land Use and Planning
- 4.10 Noise
- 4.11 Transportation and Traffic

A detailed analysis of each environmental topic, each potential impact and the mitigation measure(s) needed, if any, is contained in Chapter 4.

Summary of Impacts

Implementing the Project could result in the potential for impacts to occur to the resources listed above. The Project would result in no impact or less-than-significant impacts to 10 of these 11 environmental resource or issue areas. The Project would result in significant and unavoidable impacts to Air Quality. Where significant impacts are identified, feasible mitigation measures are proposed that would reduce each of these potential impacts to a less-than-significant level.

A summary table (Table 2-1 in Chapter 2) provides an overview of each impact of the Project and the mitigation measure needed, if any, to reduce the impact to a less-than-significant level, for each of the resource areas assessed in this EIR.