5.0 OTHER REQUIRED CEQA SECTIONS

The potential significant environmental effects associated with the proposed Amorco Marine Oil Terminal (Amorco Terminal) Lease Consideration Project (Project) have been addressed in Sections 4.0 through 4.12 of this Environmental Impact Report (EIR). The Guidelines for the California Environmental Quality Act (State CEQA Guidelines) state in part that an EIR shall also:

- identify and focus on the significant environmental effects of a proposed project (Guidelines § 15126.2, subd. (a));
- describe any significant impacts, including those that can be mitigated but not reduced to a level of insignificance (Guidelines § 15126.2, subd. (b));
- identify significant irreversible environmental changes that would be caused by a proposed project should it be implemented (Guidelines § 15126.2, subd. (c));
- identify any growth-inducing impacts of a proposed project such as the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment (Guidelines § 15126.2, subd. (d)); and
- identify the environmentally superior alternative (Guidelines § 15126.2, subd. (e)(2)).

These elements are discussed in Sections 5.1 through 5.4, below.

5.1 SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

Pursuant to the State CEQA Guidelines section 15126.2, subdivision (b), this Section presents those significant environmental impacts that cannot be avoided should the California State Lands Commission (CSLSC) grant a new 30-year lease for the Amorco Terminal. These impacts would remain significant and unavoidable, even after incorporation of available and feasible mitigation measures.

- **Large spills at the Amorco Terminal during transfer operations.** Although the chance of an oil spill is low, if an accidental spill occurs, unavoidable significant impacts can result. A spill larger than 1 gallon would be expected approximately every 7.9 years. The probability of a spill larger than 1,000 gallons from the Amorco Terminal is 0.01, or one spill every 73 years. Tesoro Refining and Marketing Company, LLC (Tesoro) is compliant with U.S. Coast Guard regulations for spill response for responding to a small (50 barrels) spill, and impacts are less than significant. The consequences of a spill would depend on the size of the spill; the effectiveness of the response effort; and the biological, commercial fishery, shoreline, and other resources affected by the spill. A spill of 1 gallon or less would
result in an adverse impact that can be mitigated, while a large spill of 1,000 barrels (42,000 gallons) most likely would result in significant, adverse impacts that would have residual effects after mitigation. The impacts of spills between 1 gallon and 1,000 barrels (42,000 gallons) depend on the effectiveness of response efforts and the resources impacted.

- **Spills from pipelines during non-transfer periods.** The Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS) have set requirements for preventative maintenance that include periodic inspection of all terminal components. Tesoro has an extensive pipeline inspection and maintenance program in place, and fully complies with MOTEMS requirements. Nevertheless, leaks or spills are possible and considering the Amorco Terminal pipeline volume of 757 barrels, a substantial spill is possible. Even with response measures in place, depending on the size of the spill and the environmental resources affected, impacts of a spill could be significant.

- **Large spills from vessels in transit.** The potential for a spill from the Amorco Terminal, including the tank vessel while it is at the Amorco Terminal, was found to be much greater than the potential of a spill from a tank vessel transiting within the San Francisco Bay. However, while the probability of a large spill from vessels in transit is small, the consequences of such a spill would be a significant, adverse impact.

- **Potential for fires and explosions:** The closest populated public areas are residential areas, parks, and marinas that are all located too far away to be impacted by heat from a potential fire or flying debris from a potential explosion at the Amorco Terminal. Therefore, the risk to the public from such an event at the Amorco Terminal is less than significant. If an oil spill were to occur from the Amorco Terminal and become ignited it could drift toward residential, park, or marina areas and present a hazard to the public or property. The intervening distance would provide time to respond and evacuate public areas if needed for safety so the risk to persons from a potential ignited oil spill is low. However, a major fire at the Amorco Terminal could result in an oil spill with significant impacts.

- **Introduce invasive nonindigenous species to the San Francisco Bay Estuary.** Introduction of invasive organisms in segregated ballast water released in San Francisco Bay could have significant impacts to plankton, benthos, fishes, and birds. The discharge of segregated ballast water that contains harmful microorganisms could impair several of the Project area’s beneficial uses, including commercial and sport fishing, estuarine, habitat, fish migration, preservation of rare and endangered species, water contact recreation, non-contact water recreation, fish spawning, and wildlife habitat. Tesoro would ensure that vessels seeking to call at the Amorco Terminal are advised of California’s Marine Invasive Species Act and are submitting forms as required by the CSLC.
5.0 Other Required CEQA Sections

- **Introduce invasive nonindigenous species from biofouling.** The risk of species introductions from biofouling by commercial ships has not been quantified, but is assumed to be high, and is one of the primary routes through which nonindigenous aquatic species are introduced to the estuary. Tesoro has no control over, ownership of, or authority to direct vessels that would dock at its Amorco Terminal. The vessels would be governed by the applicable CSLC standards for biofouling management, which would reduce the potential impact of aquatic species invasion from biofouling. However, the impact of introducing new non-native and invasive species via ballast water and biofouling in the San Francisco Bay and Sacramento-San Joaquin River Delta could potentially be so devastating that even a reduced risk has the potential to cause a significant and unavoidable adverse impact to special-status species and habitats.

- **Spill effects on biological resources.** Impacts from spills would depend on the material and quantity spilled. An oil spill of 1,000 barrels or greater has the potential to have significant, adverse impacts on biological resources. A spill between 50 and 1,000 barrels would also probably have significant biological impacts that might not be avoidable. Short-term, direct impacts to marine biota from an accidental oil spill include physical oiling, which may cause injury or death; toxic exposure to volatile gas; disturbance from clean-up activities; and loss of habitat. Indirect impacts include disruption of predator-prey relationships; introduced toxins in the food web, which may cause low-level health impacts to prey species that bioaccumulate in predator species; possible toxic effects on embryos; and interruption or degradation of reproduction potential.

- **Spill effects on water quality.** The severity of impact from larger leaks or spills at the Amorco Terminal or from vessels in transit that cannot be easily contained would depend on spill size, oil composition, spill characteristics (instantaneous vs. prolonged discharge), effect of environmental conditions on spill properties due to weathering, and the effectiveness of clean-up operations. In the event of an oil spill, the initial impacts would be to the quality of surface waters and the water column, followed by potential impacts to sedimentary and shoreline environments. Following a spill, hydrocarbon fractions would be partitioned into different regimes and each fraction would have a potential to affect water quality. Large spills at the Amorco Terminal have the potential to result in significant, adverse impacts on water quality. Also, most tanker spills/accidents and larger spills that cannot be quickly contained either in San Francisco Bay or along the outer coast would result in significant, adverse impacts.
• **Spill effects on shoreline and recreation amenities.** An accidental spill of oil at or near the Amorco Terminal could cause residual impacts on sensitive shoreline lands and recreation, including Martinez Regional Shoreline, Martinez Waterfront Park, and Carquinez Strait Regional Shoreline, and to recreational boats. The degree of impact is influenced by factors such as location, spill size, type of material spilled, prevailing wind and current conditions, the vulnerability and sensitivity of the shoreline, and effectiveness of early containment and cleanup efforts. Impacts from spills are considered to be significant and unavoidable if first-response efforts would not contain or clean up the spill, resulting in residual impacts that would affect the general public’s use of shoreline or water areas.

• **Spill Effects on Visual Environment.** The Amorco Terminal is in an area of rapidly moving current. If a spill is not detected immediately, the spread of a larger spill over a large portion of the Carquinez Strait (Strait) could occur, and potentially impact shoreline areas on both sides of the Strait. The presence of oil on the water would change the color and, in heavier oiling, textural appearance of the water surface. Oil on shoreline surfaces or nearshore marsh areas would cover these surfaces with a brownish-blackish, gooey substance. Such oiling would result in a negative impression of the viewshed. The public, becoming aware of a spill, may react negatively to its visual effects. Without rapid containment by immediate booming and cleanup, the visual effects of even a small spill of 50 barrels can leave residual impacts, and they can be significant.

• **Spill effects on commercial fisheries.** Shrimp, herring, and sport fisheries in the Central Bay, North Bay, San Pablo Bay, Carquinez Strait, Napa River, and Honker Bay are at highest risk of spill contamination. The Strait and Suisun Bay is a migratory corridor and feeding/rearing area for many sport fish species, including striped bass, sturgeon, and salmon. Fishing activities would be further impacted by closures of piers for recreational fishing and marinas for both commercial and recreational fishing. In addition, loss or damage to fisheries and fishing gear would increase the impacts on commercial fishing operations and angling activities. Significant, adverse impacts to commercial and sports fisheries would result from oil spill accidents originating at the Amorco Terminal or from transiting tankers going to the Amorco Terminal.

5.2 **SIGNIFICANT IRREVERSIBLE CHANGES THAT WOULD BE CAUSED BY THE PROJECT SHOULD IT BE IMPLEMENTED**

Per State CEQA Guidelines section 15126.2, subdivision (c), this Section presents the irreversible changes related to the use of, or long-term commitment of, nonrenewable resources. Irreversible changes represent long-term environmental damages that could result from the Project.
• Of the impacts presented in Section 5.1, even the impacts of oil spills over a long period of time are reversible. However, if a large spill were to cause enough damage to water quality or biological resources so as to result in the elimination of a species, an irreversible impact would result.

• Operation of the Amorco Terminal indirectly acts as a stimulus for the extraction of oil reserves, adding to the eventual depletion of a non-renewable resource.

5.3 GROWTH-INDUCING IMPACT OF THE PROPOSED PROJECT

The Project involves a new lease for operation of the Amorco Terminal. If granted, the new lease would allow Tesoro to continue to operate the Amorco Terminal, which has operated at its current location, facilitating the transfer of crude oil feedstocks from tanker vessels to Tesoro’s Amorco Tank Farm immediately upland, which are later transferred via pipelines from the Tank Farm to the Golden Eagle Refinery (Refinery), since 1923. The Amorco Terminal operates on an approximately 14.9-acre section of sovereign public land on the Carquinez Strait leased from the CSLC. The Amorco Terminal is capable of operating 365 days per year, 24 hours per day, although actual operation depends on shipping demands. Over the last 5 years, annual vessel calls at the Amorco Terminal have ranged from 53 to 85, averaging 69 calls per year (between 2008 and 2012). The level of shipment activity and throughput is not expected to change substantially during the proposed 30-year lease agreement period. No changes to the Amorco Terminal wharf are proposed. The Amorco Terminal is currently existing and operating, and any increase in operations would be market driven to keep up with the demands within the region. These demands are considered growth accommodating and not growth inducing, and would not directly or indirectly foster economic growth, population growth, or the need for housing.

5.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The State CEQA Guidelines section 15126.6, subdivision (e)(2) states:

The "no project" analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.”

The determination of an environmentally superior alternative is difficult because of the many factors that must be balanced. The No Project Alternative eliminates operational impacts associated with the Amorco Terminal and thus appears to be environmentally superior; however, implementation of this alternative, at least for the short term, does not
meet the Project objective of supplying the crude oil required to maintain Refinery operational viability. In the long term, it would potentially shift similar levels of impact to other San Francisco Bay Area (Bay Area) marine oil terminals in order to make up the differential for crude oil and product transport throughout San Francisco Bay. The capacity of other Bay Area terminals may be taxed, potentially increasing vessel congestion, collisions, and costs while vessels wait to berth and offload/load.

This alternative could also shift Tesoro's sources for crude oil to land-based means of traditional crude oil transportation such as a pipeline and/or rail to absorb import operations from the Amorco Terminal, resulting in potentially significant land-based impacts to operational safety/risk of accidents, water quality, land use/recreation, and visual resources due to the risk of spills, fire, or explosion. In addition, construction of pipelines and/or rail lines would potentially impact biological resources, cultural resources, land-based transportation, and noise.

The Restricted Lease Taking Amorco Out of Service for Oil Transport Alternative would also potentially shift similar levels of impact to other Bay Area marine oil terminals, and/or to land-based means of traditional crude oil transportation such as a pipeline and/or rail in order to make up the differential for crude oil and product transport throughout San Francisco Bay. All potential impacts remain the same as for the No Project Alternative.

For the reasons mentioned above, both the No Project Alternative and the Restricted Lease Taking Amorco Out of Service for Oil Transport Alternative are considered to represent a greater potential adverse environmental impact than the proposed Project. Therefore, the proposed Project is selected as the environmentally superior alternative.