

5.0 OTHER REQUIRED CEQA SECTIONS

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

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

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

19 **5.1 SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF** 20 **THE PROJECT IS IMPLEMENTED**

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

- 26 • **Large spills at the Amorco Terminal during transfer operations.** Although the
27 chance of an oil spill is low, if an accidental spill occurs, unavoidable significant
28 impacts can result. A spill larger than 1 gallon would be expected approximately
29 every 7.9 years. The probability of a spill larger than 1,000 gallons from the Amorco
30 Terminal is 0.01, or one spill every 73 years. Tesoro Refining and Marketing
31 Company, LLC (Tesoro) is compliant with U.S. Coast Guard regulations for spill
32 response for responding to a small (50 barrels) spill, and impacts are less than
33 significant. The consequences of a spill would depend on the size of the spill; the
34 effectiveness of the response effort; and the biological, commercial fishery,
35 shoreline, and other resources affected by the spill. A spill of 1 gallon or less would

1 result in an adverse impact that can be mitigated, while a large spill of 1,000 barrels
2 (42,000 gallons) most likely would result in significant, adverse impacts that would
3 have residual effects after mitigation. The impacts of spills between 1 gallon and
4 1,000 barrels (42,000 gallons) depend on the effectiveness of response efforts and
5 the resources impacted.

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

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

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

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

- 1 • **Introduce invasive nonindigenous species from biofouling.** The risk of
2 species introductions from biofouling by commercial ships has not been quantified,
3 but is assumed to be high, and is one of the primary routes through which
4 nonindigenous aquatic species are introduced to the estuary. Tesoro has no
5 control over, ownership of, or authority to direct vessels that would dock at its
6 Amorco Terminal. The vessels would be governed by the applicable CSLC
7 standards for biofouling management, which would reduce the potential impact of
8 aquatic species invasion from biofouling. However, the impact of introducing new
9 non-native and invasive species via ballast water and biofouling in the San
10 Francisco Bay and Sacramento-San Joaquin River Delta could potentially be so
11 devastating that even a reduced risk has the potential to cause a significant and
12 unavoidable adverse impact to special-status species and habitats.
- 13 • **Spill effects on biological resources.** Impacts from spills would depend on the
14 material and quantity spilled. An oil spill of 1,000 barrels or greater has the potential
15 to have significant, adverse impacts on biological resources. A spill between 50
16 and 1,000 barrels would also probably have significant biological impacts that
17 might not be avoidable. Short-term, direct impacts to marine biota from an
18 accidental oil spill include physical oiling, which may cause injury or death; toxic
19 exposure to volatile gas; disturbance from clean-up activities; and loss of habitat.
20 Indirect impacts include disruption of predator-prey relationships; introduced toxins
21 in the food web, which may cause low-level health impacts to prey species that
22 bioaccumulate in predator species; possible toxic effects on embryos; and
23 interruption or degradation of reproduction potential.
- 24 • **Spill effects on water quality.** The severity of impact from larger leaks or spills at
25 the Amorco Terminal or from vessels in transit that cannot be easily contained
26 would depend on spill size, oil composition, spill characteristics (instantaneous vs.
27 prolonged discharge), effect of environmental conditions on spill properties due to
28 weathering, and the effectiveness of clean-up operations. In the event of an oil
29 spill, the initial impacts would be to the quality of surface waters and the water
30 column, followed by potential impacts to sedimentary and shoreline environments.
31 Following a spill, hydrocarbon fractions would be partitioned into different regimes
32 and each fraction would have a potential to affect water quality. Large spills at the
33 Amorco Terminal have the potential to result in significant, adverse impacts on
34 water quality. Also, most tanker spills/accidents and larger spills that cannot be
35 quickly contained either in San Francisco Bay or along the outer coast would result
36 in significant, adverse impacts.

- 1 • **Spill effects on shoreline and recreation amenities.** An accidental spill of oil at
2 or near the Amorco Terminal could cause residual impacts on sensitive shoreline
3 lands and recreation, including Martinez Regional Shoreline, Martinez Waterfront
4 Park, and Carquinez Strait Regional Shoreline, and to recreational boats. The
5 degree of impact is influenced by factors such as location, spill size, type of
6 material spilled, prevailing wind and current conditions, the vulnerability and
7 sensitivity of the shoreline, and effectiveness of early containment and cleanup
8 efforts. Impacts from spills are considered to be significant and unavoidable if first-
9 response efforts would not contain or clean up the spill, resulting in residual
10 impacts that would affect the general public's use of shoreline or water areas.
- 11 • **Spill Effects on Visual Environment.** The Amorco Terminal is in an area of
12 rapidly moving current. If a spill is not detected immediately, the spread of a larger
13 spill over a large portion of the Carquinez Strait (Strait) could occur, and potentially
14 impact shoreline areas on both sides of the Strait. The presence of oil on the water
15 would change the color and, in heavier oiling, textural appearance of the water
16 surface. Oil on shoreline surfaces or nearshore marsh areas would cover these
17 surfaces with a brownish-blackish, gooey substance. Such oiling would result in a
18 negative impression of the viewshed. The public, becoming aware of a spill, may
19 react negatively to its visual effects. Without rapid containment by immediate
20 booming and cleanup, the visual effects of even a small spill of 50 barrels can
21 leave residual impacts, and they can be significant.
- 22 • **Spill effects on commercial fisheries.** Shrimp, herring, and sport fisheries in the
23 Central Bay, North Bay, San Pablo Bay, Carquinez Strait, Napa River, and Honker
24 Bay are at highest risk of spill contamination. The Strait and Suisun Bay is a
25 migratory corridor and feeding/rearing area for many sport fish species, including
26 striped bass, sturgeon, and salmon. Fishing activities would be further impacted
27 by closures of piers for recreational fishing and marinas for both commercial and
28 recreational fishing. In addition, loss or damage to fisheries and fishing gear would
29 increase the impacts on commercial fishing operations and angling activities.
30 Significant, adverse impacts to commercial and sports fisheries would result from
31 oil spill accidents originating at the Amorco Terminal or from transiting tankers
32 going to the Amorco Terminal.

33 **5.2 SIGNIFICANT IRREVERSIBLE CHANGES THAT WOULD BE CAUSED BY THE**
34 **PROJECT SHOULD IT BE IMPLEMENTED**

35 Per State CEQA Guidelines section 15126.2, subdivision (c), this Section presents the
36 irreversible changes related to the use of, or long-term commitment of, nonrenewable
37 resources. Irreversible changes represent long-term environmental damages that could
38 result from the Project.

- 1 • Of the impacts presented in Section 5.1, even the impacts of oil spills over a long
2 period of time are reversible. However, if a large spill were to cause enough
3 damage to water quality or biological resources so as to result in the elimination of
4 a species, an irreversible impact would result.
- 5 • Operation of the Amorco Terminal indirectly acts as a stimulus for the extraction of
6 oil reserves, adding to the eventual depletion of a non-renewable resource.

7 **5.3 GROWTH-INDUCING IMPACT OF THE PROPOSED PROJECT**

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

25 **5.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

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

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

35 The determination of an environmentally superior alternative is difficult because of the
36 many factors that must be balanced. The No Project Alternative eliminates operational
37 impacts associated with the Amorco Terminal and thus appears to be environmentally
38 superior; however, implementation of this alternative, at least for the short term, does not

1 meet the Project objective of supplying the crude oil required to maintain Refinery
2 operational viability. In the long term, it would potentially shift similar levels of impact to
3 other San Francisco Bay Area (Bay Area) marine oil terminals in order to make up the
4 differential for crude oil and product transport throughout San Francisco Bay. The
5 capacity of other Bay Area terminals may be taxed, potentially increasing vessel
6 congestion, collisions, and costs while vessels wait to berth and offload/load.

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

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

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