4.11 VISUAL RESOURCES, LIGHT AND GLARE

Section 4.11 provides a detailed description of the existing visual resources of the Tesoro Avon Marine Oil Terminal (Avon Terminal) Lease Consideration Project (Project) study area, regional visual character, views of the Project area from important vantage points, and the changes in these views that would occur with continued use of the Avon Terminal for an additional 30-year period and Marine Oil Terminal Engineering Maintenance Standards (MOTEMS) compliance-related renovation. It also describes impacts on visual resources from renovation and continued use of the Avon Terminal, accidental spill releases, and identifies mitigation measures (MMs) to reduce impacts to less-than-significant levels.

4.11.1 ENVIRONMENTAL SETTING

4.11.1.1 Regional Character of Carquinez Strait and Suisun Bay

The Carquinez Strait forms a visually distinct, yet relatively narrow channel that connects San Pablo Bay to Suisun Bay. The approximately 6-mile strait lies between two major bridges: the Carquinez Bridge, from Crockett to Vallejo; and the Benicia-Martinez Bridge, from Benicia to Martinez. Both bridges are visually distinct features in a landscape characterized by gently rolling terrain. To the east, Suisun Bay widens until it reaches the city of Pittsburg, where the shoreline narrows again before the waters enter from both the Sacramento and San Joaquin Rivers. The landscape in the area is a combination of gently rolling hills and flat expanses of land. The Carquinez Strait and Suisun Bay are characterized by a visual mix of industrial uses, small towns, and open areas of undeveloped land.

The 1,294-acre Carquinez Strait Regional Shoreline includes several parcels of land along the southern shoreline of the Carquinez Strait. The area is characterized by coastal scrub and grasslands, bay laurels, and oak woodlands. The shoreline's bluffs rise approximately 750 feet to summits and ridges of the rolling terrain.

The 84,000-acre Suisun Bay marsh is the largest estuary marsh in the United States. The California Department of Fish and Wildlife (CDFW) manages several Wildlife Areas in the Suisun Bay region, including the Point Edith, Grizzly Island, and Hill Slough wildlife areas. The 760-acre Point Edith Wildlife Area is located on the eastern border of the approachway on the shoreline of Suisun Bay, and is characterized as marshland, consisting of numerous water channels and tiny ponds (CDFW 2014d). Grizzly Island occupies approximately 15,300 discontinuous acres in a patchwork of 10 distinct parcels around Suisun Bay, which are characterized as natural tidal wetlands and artificially diked marshes (CDFW 2014c). The nearest of these 10 parcels is located approximately 1.75 miles northwest of the Avon Terminal, across Suisun Bay; the

remaining parcels are located further north and east across the bay. The bay also has a patchwork of marsh islands that are accessible by boat.

Characteristic views of the Carquinez Strait and Suisun Bay show tugboats pushing barges, directing ships, or moving from job to job in the area. Oil tankers are a common sight in the area, with four active terminals located between Crockett and the Avon Terminal. Also located in Suisun Bay, north of the Project area, is the National Defense Reserve Fleet (also known as the mothball fleet) of retired vessels that serve as reserve ships for national defense and national emergency purposes (U.S. Department of Transportation Maritime Administration).

Regional, county, and city policies address aesthetic issues in the area. These policies include the general plans (GPs) of both Contra Costa and Solano counties, and of the cities of Martinez and Benicia. While no designated State Scenic Highways are located in the Project vicinity (Caltrans 2011), the city of Benicia has identified Interstate 680 (I-680) north of the bridge as a scenic route. And although it is not a State Scenic Highway, the San Francisco Bay Conservation and Development Commission's (BCDC) *San Francisco Bay Plan Map 2* (amended 2006) designates the Benicia-Martinez Bridge as a scenic drive (BCDC 2006).

4.11.1.2 Visual Character of the Avon Terminal and Adjacent Area

The Avon Terminal is located in lower Suisun Bay, approximately 1.75 miles east of the Benicia-Martinez Bridge and I-680. The Plains All American Marine Oil Terminal (Plains Terminal) is located approximately 0.40 mile west of the Avon Terminal. The area is characterized primarily by open space and marshland, as well as industry. Heading north on I-680, as motorists approach the Benicia-Martinez Bridge, the Avon Terminal and surrounding marshland are not initially visible as the foreground is dominated by an industrial facility at the base of the bridge. Once the Avon Terminal is visible from the bridge, motorists have already passed the Avon Terminal, and views are in their background as they look southeast; only brief and limited views at a distance are available. The Plains Terminal is located between the bridge and the Avon Terminal, and is more prominently visible in motorists' views. While on the bridge, foreground views consist primarily of the bridge and industrial uses beyond, with gently rolling hills in the background.

From the Avon Terminal to either side between I-680 to the west and the Point Edith Wildlife Area to the east, the visual setting is characterized by views of the marsh and shoreline. The marshland includes wetland grasses, low-level shrubs, and numerous small ponds, providing a visual "softscape." Focal points that can be defined as the predominant "hardscape" landscape features along the shoreline include the Benicia-Martinez Bridge, Avon Terminal, and Plains Terminal.

The Avon Terminal is located approximately 1.30 miles from Waterfront Road, and is separated from the road by marshland and the northern portion of the Golden Eagle Refinery (Refinery) and water discharge pond. The Refinery storage tanks block views of the facility from Waterfront Road in both directions. The Avon Terminal is visible from other sections of Waterfront Road; however, because most traffic on Waterfront Road turns on Waterbird Way headed to the Acme Landfill/Transfer Station, the residual traffic on Waterfront Road east of Waterbird Way is minimal and consists primarily of traffic bound for the Plains and Avon Terminals (refer to Section 4.8, Land Transportation). No residential receptors are located in the area within views of the Avon Terminal. Only water users, users of the Point Edith Wildlife Area, and travelers across the Benicia-Martinez Bridge have views of the Avon Terminal.

The northern shore of Suisun Bay is characterized by a mix of undeveloped land and industrial uses, including the Valero Refinery. Primarily undeveloped land is located along the shoreline, and includes a mix of privately owned parcels and portions of the Grizzly Island Wildlife Area. However, recreational use of the wildlife area requires a CDFW Lands Pass, and thus, access is limited. Industrial uses are located beyond the undeveloped areas. The Avon Terminal is visible from these areas of open land along the northern shore of the bay; however, the National Defense Reserve Fleet, which is located on the northern shore of Suisun Bay, is prominent in foreground views from across the bay. Thus, views from the north of the Avon Terminal are also limited.

Other environmentally sensitive areas in the vicinity of the Avon Terminal are identified in Section 4.2, Biological Resources, and Section 4.9, Land Use and Recreation.

Existing exterior lighting is provided along the approachway and at the Avon Terminal to allow for night operations and provide safety for employees.

4.11.1.3 Visual Character of the San Francisco Bay Area

The shoreline of the San Francisco and San Pablo Bays contains a range of visual stimulation consisting mainly of urbanized and industrial areas, with occasional rural and open space areas, coastal wetlands, and salt evaporation ponds. The landform throughout most of the area is hilly terrain. Where no development exists, the open area is generally covered with low vegetation.

The greatest area of urbanization is within the central and south-central portions of San Francisco Bay. From San Francisco south to Palo Alto, urban development is prevalent on the western shoreline. On the eastern shoreline, urban development is continuous from San Leandro to Pinole Point, but from there eastward is fairly undeveloped.

San Francisco and San Pablo Bays contain approximately 90 percent of California's remaining coastal wetlands. Major preserves and shoreline parks include Suisun Bay Marsh, with numerous duck hunting preserves; San Pablo Bay National Wildlife Refuge

off of Tubbs Island, which is accessible by boat; and Point Pinole Regional Shoreline. China Camp State Park, along the southwestern shore of San Pablo Bay, preserves a historic Chinese shrimp fishing village. Coyote Hills Regional Park and San Francisco Bay National Wildlife Refuge protect important wetland acreage in the south bay for wintering waterfowl. Many other small parks, piers, and recreational marinas also provide access to the shoreline.

The southern portion of the San Francisco Bay Area (Bay Area) contains several large areas of salt evaporation ponds. One is located north of the San Francisco Bay National Wildlife Refuge on the eastern shoreline, and another across the San Francisco Bay on the western shoreline. Several others are also located along the far southern end.

Numerous ports, harbors, marine terminals, and naval terminals lie within the Bay Area. A description of these facilities is presented in Section 2.0, Project Description. Marine vessel traffic is a common sight throughout the Bay Area.

4.11.1.4 Outer Coast

Outside of the Golden Gate Bridge, one of the more pristine areas is the Farallon Islands, located 27 nautical miles west of Point Bonita in Marin County. The islands rise from the edge of the continental shelf forming jagged, rocky outcroppings, and remain the most important seabird nesting site on the coast. The Gulf of Farallones and Monterey Bay are marine sanctuaries that contain protected resources and are located off the coast.

A large portion of the northern California coast remains representative of the shoreline of years past. Little development has occurred, and areas along the northern California coast remain unspoiled. From the Golden Gate Bridge north, the shoreline consists of dramatic coastline features, including rolling hilly coastal landforms dropping to sandy beaches; jagged rock outcroppings forming hazards to marine vessels in the nearshore; cliffs that drop to the sea; and large, flat beach areas with dunes. Small shoreline communities and picturesque harbor areas also dot the shoreline in some areas. A large number of rivers and creeks cut the coastline, adding visual interest. Established preserve areas are also located along the coastline. Vegetation is diverse, ranging from salt marsh vegetation to Douglas fir and redwood forests.

The southern California coastline, from Santa Barbara south, ranges from undeveloped stretches (southern Orange County/northern San Diego County) to intense development (San Diego, Orange, and Los Angeles counties), to less intense development, but still much urbanization, toward Santa Barbara.

4.11.2 REGULATORY SETTING

Federal and State laws that may be relevant to the Project are identified in Table 4-1. Regional and local laws, regulations, and policies are discussed in the following paragraphs.

The County of Contra Costa GP is a comprehensive, long-range planning document that states the County's development and preservation goals and policies. The GP includes policies related to aesthetic quality, recognizing both the natural and developed composition of the environment. The following Open Space Element goals and policies in the GP pertaining to visual resources could be applicable to the Project:

- Goal 9-A: To preserve and protect the ecological scenic and cultural/historic, and recreational resource lands in the County.
- Policy 9-2: Historic and scenic features, watersheds, natural waterways, and areas important for the maintenance of natural vegetation and wildlife populations shall be preserved and enhanced.
- Goal 9-10: To preserve and protect areas of identified high scenic value, where practical, and in accordance with the Land Use Element map.
- Goal 9-12: To preserve the scenic qualities of the San Francisco Bay/Delta estuary system and the Sacramento-San Joaquin River/Delta shoreline.

The GP identifies two main scenic resources in its Open Space Element: (1) scenic ridges, hillsides, and rock outcroppings; and (2) the San Francisco Bay/Delta estuary system. Of these two types of scenic resources, only the San Francisco Bay/Delta estuary system occurs in the Project area. The waterway in which the Avon Terminal is located is designated as a Scenic Waterway system, as defined in the Open Space Element.

4.11.3 SIGNIFICANCE CRITERIA

Visual impacts are considered adverse and significant if one or a combination of the following apply:

- Cause adverse impacts on a scenic vista or scenic highway
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area (including views from land and water)
- Continued routine operations and maintenance visually contrast with or degrade the character of the viewshed (from adjacent roadways, waterways, or other public or private spaces), or otherwise change the expectations of viewers, resulting in a negative impression of the viewshed

Because of the time factor involved in oil dispersion, visual impacts from spills are considered to be significant and unavoidable impacts if first-response efforts would not contain or clean up the spill, resulting in residual impacts that would be visible to the general public on shoreline or water areas. If a spill occurs that would be contained and cleaned up during the first response, the impact on visual resources would be considered less than significant with mitigation.

4.11.4 IMPACT ANALYSIS AND MITIGATION

The following subsections describe the Project's potential impacts on aesthetic and visual resources; where impacts are determined to be significant, feasible MMs are described that would reduce or avoid the impact.

4.11.4.1 Proposed Project

Impact Visual Resources (VR)-1: Create visual effects from continued routine operations over the 30-year lease period. (Less than significant.)

Project operations involve tanker activity at the existing Avon Terminal and vessel transit through established shipping lanes in Suisun Bay, Carquinez Strait, and San Pablo and San Francisco Bays. The Avon Terminal has been in use since the 1920s at its current location. Berthing vessels at the Avon Terminal can be seen from the Point Edith Wildlife Area, portions of Waterfront Road, limited sections of the Benicia-Martinez Bridge, and areas of the northern shoreline of Suisun Bay, consistent with existing conditions. However, viewers from boats have more direct views of the vessels.

The installation of Berth 1A would not substantially change the level of shipment activity during the proposed 30-year lease agreement period. It is expected that the annual ship and barge traffic would be approximately 70 to 120 vessels (anticipated maximum). Due to capacity, only one vessel at a time would continue to be berthed at the Avon Terminal. From the water, ships berthed at the Avon Terminal would appear as a use consistent with the existing operations. Therefore, continued Project operations would not significantly change the visual character of the area, and impacts are considered adverse, but less than significant.

Vessels currently pass near the Avon Terminal in the shipping lane. Therefore, continued transit operations would result in adverse, but less-than-significant, impacts on the visual environment.

Vessels arriving at the Avon Terminal via the San Francisco Bay transit lanes and along the outer coast would continue to blend in with other accepted tankering operations. No new visual elements would be added, and public sensitivity toward views would not change. Impacts are adverse, but less than significant.

Mitigation Measure: No mitigation required.

Impact VR-2: Create visual effects from accidental releases of oil at or near the Avon Terminal. (Significant and unavoidable.)

This analysis considers the occurrence of accidental spills separate from continued routine operations. In general, the potential impacts resulting from such an occurrence could degrade the visual quality of the water and shoreline if oiling occurs over a widespread area, and where first-response containment and cleanup efforts are not effective, leaving residual effects of oiling. The degree of impact is influenced by factors not limited to 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.

The greatest probability of a spill is from small accidents at the Avon Terminal during normal operations. While there is less risk of spill during tankering, the size of a spill that could result is much greater, as discussed in Section 4.1, Operational Safety/Risk of Accidents. The following paragraphs describe the potential visual impacts that could occur in the event of a spill.

The use and refueling of derrick barges, tug boats, and MOTEMS renovation equipment over water during the installation of Berth 1A and the removal of Berth 5 could also create the potential for accidental releases of oil that could have potentially significant visual effects if not contained. Best Management Practices would be implemented to reduce the risk of potential releases, and vessels would be refueled at nearby fuel docks, rather than on site, to the extent possible. Refer to Section 2.5.9, Equipment Refueling, for a more detailed description of equipment refueling.

Generally, small leaks and spills (50 to 100 barrels) would be contained with contingency measures employed at the Avon Terminal. However, the Avon Terminal is located in an area of rapidly moving current. Thus, if a spill is not detected immediately, or if a moderate- or large-sized spill at or near the Avon Terminal occurred at a rate unable to be quickly contained due to the rapid current, the spill could spread over a large area. Based on modeling conducted for the nearby Tesoro Amorco Marine Oil Terminal (Amorco Terminal), during the summer, an oil spill would travel downstream past the Carquinez Bridge and into San Pablo Bay. In winter, spills would primarily travel upstream into Suisun Bay, with increased impact to the northern reaches of Honker, Suisun, and Grizzly Bays and further propagation downstream through Carquinez Strait and into San Pablo Bay. See Appendix B for the oil spill modeling results and Section 4.1, Operational Safety/Risk of Accidents for a detailed evaluation of modeling at various locations.

Visually, conditions could range from light oiling, which appears as a surface sheen, to heavy oiling, including floating lumps of tar. Light product spills generally volatilize relatively rapidly, and little remains within 24 to 48 hours after a spill. Heavy crude oil may disappear over a period of several days, with remaining heavy fractions lasting from several weeks to several months, floating at or near the surface in the form of mousse, tarballs, or mats. Therefore, 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 physical effort involved in spill cleanup, including the equipment used, could also contribute to a negative impression of the environment that would be an adverse visual impact as the public, becoming aware of a spill, may react negatively to the event. Sensitivity heightens and awareness of the negative change in the environment increases. Without rapid containment by immediate booming and cleanup, the visual effects of even a small spill of 50 barrels can leave residual visual impacts.

Tesoro Refining and Marketing Company, LLC (Tesoro) has contracted with Bay Area Ship Services to assist with initial oil spill response services, including the immediate execution of approximately 600 feet of harbor boom in approximately 30 minutes. In addition, Tesoro contracts with Marine Spill Response Corporation to serve as the primary Oil Spill Response Organization contractor in its Oil Spill Response Plan for offshore, onshore, and shallow-water response services. Refer to Section 2.4.16, Emergency Response, for a more detailed description of the Avon Terminal oil spill response capabilities and equipment.

The visual impact of a spill on a sensitive area, such as the Suisun Bay estuary marsh, could last for a long period of time, depending on the level of physical impact and cleanup ability. In events where light oiling would disperse rapidly, significant adverse visual impacts are not expected. In events where moderate-to-heavy oiling occurs over a widespread area and where first-response containment and cleanup efforts are not effective, leaving residual effects of oiling, significant adverse impacts would be expected. It is impossible to predict with any certainty the extent of consequences of spills; for large spills, visual impacts would be adverse and could be significant, depending on the effectiveness of first-response containment and cleanup.

MMs OS-1a, OS-1b, OS-1c, OS-2, OS-4a, and OS-4b, presented in Section 4.1, Operational Safety/Risk of Accidents, provide improved oil spill prevention measures.

Mitigation Measure: MMs OS-1a, Remote Release Systems; OS-1b, Tension Monitoring Systems; OS-1c, Allision Avoidance Systems; OS-2, Pipeline Purging and

Removal Plan; OS-4a, USCG Ports and Waterways Safety Assessment Workshops; and OS-4b, Spill Response to Vessel Spills apply to this impact.

Rationale for Mitigation The MMs identified previously provide improved oil spill capabilities, spill containment measures, and protection of sensitive resources. However, even with implementation of these measures, the impact on the visual environment may be significant.

Residual Impacts With implementation of these measures, the impact on visual resources could be reduced to less than significant for small spills; however, impacts would remain significant for large spills.

Impact VR-3: Create visual effects from oil spills from vessels in transit. (Significant and unavoidable.)

Vessels transiting the shipping lanes also pose a risk of spills from accidents. A moderate-to-large spill has the potential to spread within a large area, with floating oil and oil contacting sensitive shoreline resources given the right wind and current conditions, and the size and origin of the spill. Spills from vessels en route to the Avon Terminal would be the responsibility of the ship's operators/owners, and not Tesoro, as Tesoro does not own any vessels. Response capability is analyzed in Section 4.1, Operational Safety/Risk of Accidents.

Spills along the outer coast could result in significant adverse impacts where spills would be visible in the nearshore zone or at the shoreline. Spills would change the color and texture of water and shoreline conditions. The level of public sensitivity and expectations of views along the outer coast are more varied than within San Francisco Bay since public usage is lower along many portions of the outer coast. However, visual sensitivity would be high wherever spills, cleanup efforts and residual effects occur.

It is impossible to predict with any certainty the extent of consequences of spills; for large spills, visual impacts would be adverse and could be significant, depending on the effectiveness of first-response containment and cleanup. Tesoro contracts with Marine Spill Response Corporation to serve as the primary Oil Spill Response Organization contractor for any spills in transit.

MMs OS-1a, OS-1b, OS-1c, OS-2, OS-4a, and OS-4b, presented in Section 4.1, Operational Safety/Risk of Accidents, provide improved oil spill prevention measures. With implementation of these measures, the risk to shoreline and recreational resources can be reduced to less than significant for small spills; however, impacts would remain significant for large spills.

Mitigation Measure: MMs OS-1a, Remote Release Systems; OS-1b, Tension Monitoring Systems; OS-1c, Allision Avoidance Systems; OS-2, Pipeline Purging and

Removal Plan; OS-4a, USCG Ports and Waterways Safety Assessment Workshops; and OS-4b, Spill Response to Vessel Spills apply to this impact.

Rationale for Mitigation The MMs identified previously provide improved oil spill capabilities, spill containment measures, and protection of sensitive resources. However, even with implementation of these measures the impact on the visual environment may be significant.

Residual Impacts With implementation of these measures, the risk to visual resources could be reduced to less than significant for small spills; however, impacts would remain significant for large spills.

Impact VR-4: Cause adverse impacts on a scenic vista or scenic highway. (Less than significant.)

A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. A scenic resource may also represent a landmark or area that has been noted for its outstanding scenic qualities and is thereby protected by State or local plans because of those qualities. As discussed in Section 4.11.2.2, the Avon Terminal is located in a designated Scenic Waterway, as defined by the Contra Costa County GP. Nearby public views of the Scenic Waterway are generally limited to the shoreline of the adjacent Point Edith Wildlife Area, the shoreline of the Grizzly Island Wildlife Area, north across Suisun Bay, and the Benicia-Martinez Bridge. While the Avon Terminal is visible from the shoreline of the Point Edith Wildlife Area, the Avon Terminal currently does not obstruct views of the waterway, and MOTEMS renovation would not create substantial visual changes or increase the visual extent of the Avon Terminal. Furthermore, access to the shoreline of the Point Edith Wildlife Area is only available by boat, and thus, use of the area is limited. Views of the Avon Terminal from the Grizzly Wildlife Area are from across Suisun Bay and do not obstruct views of the waterway, and views from the bridge are peripheral and limited. Therefore, impacts on a scenic vista would be less than significant.

As discussed previously, although not a State Scenic Highway, the BCDC *San Francisco Bay Plan Map 2* (amended 2006) designates the Benicia-Martinez Bridge as a scenic drive, and the city of Benicia has identified I-680 north of the Benicia-Martinez Bridge as a scenic route (BCDC 2006). However, as discussed in Section 4.11.1.2, only brief and obscured views of the Avon Terminal can be seen at a distance from the bridge, and views of the Avon Terminal from I-680 north of the bridge are also obscured by industrial buildings, leaving only sporadic views. Moreover, because there are no State-listed Scenic Highways in the Project vicinity (Caltrans 2011), and visual changes to the Project area resulting from renovation activities would not be substantial; no adverse impacts on a scenic highway would occur.

Mitigation Measure: No mitigation required.

Impact VR-5: Cause adverse impacts by contrasting with or degrading the character of the viewshed from MOTEMS renovation. (Less than significant.)

Short-term renovation impacts on visual resources would result from the temporary presence of barges and heavy equipment, facility components, and workers who would be visible during construction of Berth 1A, removal of Berth 5, and rebuilding of the approachway. However, Berth 1A would be constructed adjacent to the existing Berth 1, and would not significantly alter the visual extent of the structures. Furthermore, removal of Berth 5 would eliminate the western portion of the Avon Terminal, and thus, no overall net increase to the visual extent of the Avon Terminal would occur. MOTEMS renovation activities would constitute an adverse, but not significant, impact on the viewshed, because renovation would be short-term and would not result in a long-term landscape change following renovation.

Approximately six barges would be used for a duration of approximately 19 months for various purposes, including transportation of renovation equipment and prefabricated pieces of infrastructure to the Avon Terminal. While an increase in vessel activity in the region would be adverse, vessel traffic in the area is a normal and acceptable visual action along established routes, and this increase would be short-term and temporary. Therefore, while impacts on the viewshed due to renovation at the Avon Terminal would be considered adverse, they would not be significant, due to the short-term and temporary nature of the Project.

Mitigation Measure: No mitigation required.

Impact VR-6: Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area (including views from land or water). (Less than significant.)

The Avon Terminal currently operates 24 hours per day, with exterior lighting provided along the approachway and at the Avon Terminal to allow for continued night operations and provide safety for employees. Tanker movements throughout Suisun Bay are part of an established pattern of activity in the area, and ships docked at the Avon Terminal would generate light at any time of day or night. However, lighting from the Avon Terminal and visiting ships is part of the existing setting.

With the demolition of Berth 5, a total of 18 metal halide bulbs (100 Watts [W]) would be removed from the Avon Terminal. However, new lighting would be required at Berth 1A to allow for continued night operations and provide safety for employees in compliance with the Refinery Facility Security Plan. A total of 33 new light-emitting diode (LED) light bulbs (23 47W, 5 64W, and 5 94W) would be installed at Berth 1A. Lighting fixtures

would be mounted on facility structures and/or free-standing light poles, and would be located and designed to avoid casting light or glare toward off-site locations, and would be fully shielded in compliance with 33 Code of Federal Regulations 154.570(d) lighting requirements. All of the Berth 1A lights were modeled in a lighting photometric study program and have been designed to meet American Petroleum Institute lighting standards. The fixtures are all energy-efficient International Dark-Sky Association-compliant LED light fixtures, meaning the fixtures do not emit any luminous output above 90 degrees in the vertical plane.

The additional lighting installed with the construction of Berth 1A would create a slight net increase of light; however, this increase would not constitute a noticeable amount, as the removal of lighting from Berth 5 would generally offset new lighting installed at Berth 1A. Furthermore, no sensitive receptors are located in the vicinity of the Avon Terminal, and views potentially impacted by an increase in light are generally distant to the north across Suisun Bay. Therefore, this minimal increase in light at the new Berth 1A would not change the expectations of viewers beyond the current extent.

New structures at the Avon Terminal would be made primarily of steel and concrete, and thus, would have the potential to reflect light and create glare. However, structures and equipment that generate glare from the new Berth 1A would be similar to those already in operation at the existing Berth 1, and in some cases, would be relocated from the existing berth and would not contribute a substantial amount of new glare beyond baseline conditions. Through the decommissioning of Berth 1 and the removal of Berth 5, removal of equipment and structures that create glare from the existing berths would also lessen the amount of glare generated at the Avon Terminal. Continued operation of the Project would not result in impacts on glare to nearby land uses, as the new Berth 1A would not create substantial amounts of glare beyond current conditions.

MOTEMS renovation would temporarily create new sources of light and glare at the Avon Terminal, as use of construction equipment and an increase in barges have the potential to reflect light and create glare. While renovations would generally occur between the hours of 7 a.m. and 6 p.m., some work may be completed outside of typical work hours and necessitate the use of exterior lighting. MOTEMS renovation would be short-term and temporary, and temporary lighting would be located to avoid casting light or glare toward off-site locations, including habitat and open space adjacent to the Project site; therefore, MOTEMS renovation would not result in significant impacts related to light and glare.

Mitigation Measure: No mitigation required.

4.11.4.2 Alternative 1: No Project

Impact VR-7: Effects on visual resources with no new Avon Terminal lease. (Beneficial.)

The No Project Alternative involves lease denial and cessation of Avon Terminal operations. The Avon Terminal would eventually be decommissioned, with its components abandoned in place, removed, or a combination thereof. If the Avon Terminal was dismantled, heavy equipment, including a barge or crane, would likely be used temporarily. While the removal effort would cause adverse effects due to the heavy equipment, impacts would be short-term and less than significant. With the removal of the Avon Terminal from the shoreline, a slight long-term beneficial change in visual conditions in the immediate area may occur.

After decommissioning, the No Project alternative assumes that the number of tankers servicing the area would remain essentially the same due to regional demands, and that without the Avon Terminal, tankers would instead go to the Amorco Terminal or to another terminal located in the region. Therefore, the risks associated with the transport of oil would not be removed from the region, but simply shifted to a nearby facility. The localized risk of a spill (i.e., risks associated with the specific location and access route to the Avon Terminal) impacting visual resources would shift. Impacts at the Avon Terminal would not occur, as it would not be in use. With no potential for spills in the immediate area, a slight beneficial impact may occur. However, an incremental increase in risk associated with increases in vessel activity at the Amorco Terminal or other terminal would result.

Under the No Project Alternative, Tesoro would have to pursue other means of export to continue to meet existing regional demands and the current throughput from the Avon Terminal. Options that Tesoro might pursue include: (1) transitioning the Amorco Terminal (currently an import-only facility) to absorb export operations from the Avon Terminal; (2) land-based alternatives such as pipeline, rail, or truck transportation; or (3) some combination of these alternatives. All of these alternatives would require the construction or modification of facilities and infrastructure, as well as lengthy and complex regulatory processes, and subsequent environmental review.

Mitigation Measure: No mitigation required.

4.11.4.3 Alternative 2: Restricted Lease Taking Avon Terminal Out of Service for Oil Transport

Impact VR-8: Effects on visual resources by taking Avon Terminal out of service for oil transport. (Less than significant.)

The Avon Terminal is an existing facility on land designated for water-related industry, and no visual changes to the Project area are anticipated as a result of a restricted lease. Should this alternative be selected, MMs would be determined during a separate environmental review under the California Environmental Quality Act.

Mitigation Measure: No mitigation required.

4.11.5 CUMULATIVE IMPACT ANALYSIS

Oil spills from multiple sources that would overlap in time would cause visual impacts associated with both the spill events and the cleanup operations. A spill can begin as a localized incident, but has the potential to spread over a very large area. If more than one spill occurred within a short timeframe in Suisun Bay, Carquinez Strait, San Pablo Bay, or along the outer coast, and first-response cleanup efforts were unsuccessful, impacts on visual resources would be significant and unavoidable.

4.11.6 SUMMARY OF FINDINGS

Table 4.11-1 summarizes anticipated impacts on visual resources and associated MMs.

Table 4.11-1: Summary of Visual Resources Impacts and Mitigation Measures

Impact	Mitigation Measure(s)
Proposed Project	
VR-1: Create visual effects from continued routine operations over the 30-year lease period.	No mitigation required
VR-2: Create visual effects from accidental releases of oil at or near the Avon Terminal.	Refer to MMs OS-1a, OS-1b, OS-1c, OS-2, OS-4a, and OS-4b
VR-3: Create visual effects from oil spills from vessels in transit.	Refer to MMs OS-1a, OS-1b, OS-1c, OS-2, OS-4a, and OS-4b
VR-4: Cause adverse impacts on a scenic vista or scenic highway.	No mitigation required
VR-5: Cause adverse impacts by contrasting with or degrading the character of the viewshed from MOTEMS renovation.	No mitigation required
VR-6: Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area (including views from land or water).	No mitigation required
Alternative 1: No Project	
VR-7: Effects on visual resources with no new Avon Terminal lease.	No mitigation required
Alternative 2: Restricted Lease Taking Avon Terminal Out of Service for Oil Transport	
VR-8: Effects on visual resources by taking Avon Terminal out of service for oil transport.	No mitigation required