4.1 Aesthetics and Visual Resources

This section addresses issues involving aesthetics and visual resources resulting from the proposed Rail Spur Project. The environmental setting provides information on the aesthetics and visual resources in the vicinity of the Project Site. The impacts evaluation focuses on the potential effects of the Rail Spur Project including cumulative aesthetics and visual impacts, and identifies potential mitigation measures. The visual analysis is focused on the area in the vicinity of the SMR. All of the mainline rail routes are existing track and therefore are part of the existing visual quality. Additional trains on the existing tracks would not affect the visual quality since trains are expected to be seen along these tracks. As such, train travel on the existing mainline tracks would not impact aesthetic or visual resources.

4.1.1 Environmental Setting

4.1.1.1 Regional Visual Setting

The project is located within the southwestern region of San Luis Obispo County, approximately 2.5 miles from the Pacific Ocean. The regional landscape can be broadly defined as an old marine terrace between the coast and the Temattate Hills to the east. Much of the region is made of sand dune complexes along the beach which transition to wide mesas inland. Creeks and drainages in the region generally have an east-west orientation on their way to the ocean. The native landscape of the inland portions of the region include coast live oak woodland, chaparral and grasslands, with healthy riparian corridors along the creeks and drainage ways. Specialized plant communities are found along the immediate coastline and into the dune complex. Eucalyptus trees were introduced into the area as a forest crop and have since become established over much of the Nipomo Mesa (see Figure 4.1-1).

Figure 4.1-1 Regional Visual Character – Looking north from State Route 1 (north of the City of Guadalupe) toward the Nipomo Mesa

Source: Carr 2013

The large stature of eucalyptus groves creates a dominant visual element throughout much of the inland area. The coastal dune complex which extends from the shoreline to as far as approximately 2 miles inland, is among the largest of its type in California. The region also includes portions of the Santa Maria Valley to the south, consisting of broad, flat agricultural croplands which meet the dunes as they approach the coastline.

The region has a generally rural visual character. Agriculture, open space and recreation, larger-lot residences and light industry making up much of the land use (refer to Figure 4.1-1). In the past decade, the Nipomo region has been recognized as one of the faster growing areas of San Luis Obispo County. Several planned residential subdivisions and golf resorts have been constructed and are continuing to be developed, which have an incremental effect on the rural appearance of the region. Although the region is becoming more suburbanized, the area still maintains much of its rural character, due in large part to the abundant cropland, open space and dunes. These attributes contribute to a moderately high visual quality for the region (refer to Figure 4.1-2). Throughout the mesa area, scattered stands of mature eucalyptus and oak trees contribute to an overall vegetated visual character and a somewhat forested appearance.

Figure 4.1-2 Regional Visual Character – Looking west from State Route 1 on the Nipomo Mesa

Source: Carr 2013

The project site is part of an approximately 1,650 acre parcel owned by Phillips 66 situated between the coastal dunes and the Nipomo Mesa to the northeast. Land use surrounding the property includes golf course development and residential to the northeast, the Oceano Dunes State Vehicular Recreation Area to the west, and agricultural cropland to the south. Several commercial and light industrial uses such as auto-dismantlers and storage yards are found immediately north of existing refinery activities on the property. State Highways 1 and 101 are the primary transportation routes through the region, with State Route 1 passing immediately to the north and east of the property. The Union Pacific Railroad tracks bisect the Phillips 66 property and pass immediately west of the refinery facility. The unincorporated community of Nipomo is located east of the project site along State Highway 101 and serves as the commercial center of the mesa. The small, agriculture-based City of Guadalupe is situated on State Route 1

in the Santa Maria Valley south of the project site. Arroyo Grande to the north and Santa Maria to the southeast are the largest cities serving the region.

4.1.1.2 The Project Site

The project site consists mostly of the vegetated back-dune area inland from the more active Pismo dune complex (see Figure 4.1-3). The landscape of the project site is defined by undulating topography covered predominately by coastal scrub and sparse grasses. A few low ridgelines cross the project site in an east-west orientation, and the overall landform gradually decreases in elevation to the south, toward Little Oso Flaco Creek. Because of the undulating topography, views through and across the project site are often limited. A few scattered trees can be seen throughout the project site, although most of the larger native vegetation is concentrated at the creek along the project site's southern perimeter.

Figure 4.1-3 Project Site Visual Character – The refinery as seen from Oso Flaco Road

Source: Carr 2013

The Santa Maria Refinery (SMR) occupies the approximate center of the project site. Because of its tall chimney stacks and towers, portions of the SMR can be seen from much of the surrounding area. Because of topography and intervening vegetation, the refinery's buildings and ground-floor activities are largely blocked from viewing locations to the north and east. Because the landform generally flattens-out southwest of the project site, viewpoints in that area have the greatest visual exposure to the SMR itself (refer to Figure 4.1-3). The visual character of the SMR and the related coke processing facility is one of heavy-industrial use. Some of the on-site elements include the large stacks, storage tanks, the processing plant itself, above-ground pipes, material storage, large-scale equipment and trucks, railroad tracks and train cars. Most of the SMR land area has been leveled, and a large employee parking area is located along its western side. Paved and unpaved service and access roads are seen throughout and surrounding the SMR. The coke processing area is recognized by its noticeably black ground-plane and large

stockpiles of materials and processing byproducts. The SMR facilities are surrounded by chain link and barbed-wire perimeter fencing.

The project site is located in the southern half of the property, southeast of the refinery plant. The rail spur project would continue southeast from the existing rail spur located in the coke processing area. The coke processing area is highly disturbed and shows an intense industrial use. As the area of the rail spur project continues east, the landscape becomes more natural in appearance (refer to Figures 4.1-2 and 4.1-3). In this eastern area the undulating back dunes are mostly stabilized with scattered low vegetation; and the surrounding topography somewhat limits views to the project site, particularly as seen from the north and northeast (see Figure 4.1-4).

Figure 4.1-4 Project Site Visual Character – The eastern area of the project site looking west from State Route 1

Source: Carr 2013

4.1.2 Regulatory Setting

Visual impacts resulting from the Rail Spur Project are within the jurisdiction of the County of San Luis Obispo. The regulatory setting pertaining to visual resources includes the County's review of the proposed development's consistency with various elements of the County of San Luis Obispo General Plan and the San Luis Obispo County Coastal Zone Land Use Ordinance, in addition to the provisions in the California Environmental Quality Act (CEQA) Guidelines relating to visual resources.

4.1.3 Significance Criteria

The determinations of significance of Rail Spur Project impacts are based on applicable policies, regulations, goals, and guidelines defined by CEQA and the County of San Luis Obispo. In addition to comparing the project to relevant policies and standards, the aesthetic resources assessment identified which specific criteria contribute most to the existing quality of each view, and if change would occur to that criteria as a result of the project. If a change in visual

condition was identified, this change was analyzed for its potential effect on the existing scenic character. This analysis was combined with the potential number of viewers from public vantage points, their sensitivities and viewing duration in order to determine the overall level of impacts. Specifically, the project would be considered to have a significant effect on the environment if the effects exceed the significance criteria described below.

For the purpose of this study, short-term visual impacts were considered to be those changes that would be visible for duration of five years or less. Long-term impacts would be those alterations to the visual environment that would be in effect for a period greater than five years.

4.1.3.1 California Environmental Quality Act Guidelines

The significance of potential aesthetic resources impacts are based on thresholds identified within the County's Initial Study and Appendix G of the CEQA Guidelines. According to the Guidelines, aesthetic impacts would be considered significant if the proposed project would:

Have a substantial adverse effect on a scenic vista.
A substantial adverse impact to a scenic vista would occur if the proposed project would significantly degrade the scenic landscape as viewed from public roads or from other public areas. The degree of potential impact on scenic vistas varies with factors such as viewing distance, duration, viewer sensitivity, and the visual context of the surrounding area.

The aesthetics section analyzes the extent that the project would alter the visual quality of the project site and its surroundings. The specific characteristics that define important vistas are identified, and the project's effect on those characteristics is assessed. If the fundamental quality of the vistas are substantially reduced, significant impacts would result.

Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within an officially designated state scenic highway.
This CEQA threshold does not apply because the project is not within the view corridor of any officially designated state scenic highway.

Substantially degrade the existing visual character or quality of the site and its surroundings.
Project related actions would be considered to have a significant impact on the visual character of the site if they altered the area in a way that significantly changed, detracted from, or degraded the visual quality of the site or was inconsistent with community policies regarding visual character. The degree to which that change reflects documented community values and meets viewers' aesthetic expectations is the basis for determining levels of significance. Visual contrast may be used as a measure of the potential impact that the project may have on the visual quality of the site. If a strong contrast occurred where project features or activities attract attention and dominate the landscape setting, this would be considered a potentially significant impact on visual character or quality of the site.

Project components that are not subordinate to the landscape setting could result in a significant change in the composition of the landscape. Consideration of potential significance includes

analysis of visual character elements such as land use and intensity, visual integrity of the landscape type, and other factors.

Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.
The project would result in a significant impact if it subjected viewers from public roads or residences to a substantial amount of point-source lighting visibility at night, or if the collective lumination of the project resulted in a noticeable spill-over effect into the nighttime sky, increasing the ambient light over the region. The placement of lighting, source of illumination, and fixture types combined with viewer locations, adjacent reflective elements, and atmospheric conditions can affect the degree of change to nighttime views. The degree of impact caused by night lighting would consider the type of lighting proposed by the project along with the lighting reasonably expected to be generated by future project build-out.

4.1.3.2 Consistency with County of San Luis Obispo Plans and Policies

County of San Luis Obispo planning documents do not contain specific criteria for determining thresholds of significance regarding aesthetic resources. However, in comparing the project to the above CEQA Guideline thresholds, substantial consideration was given to the project's consistency with public policies, plans, goals and regulations concerning scenic vistas, scenic roadways, visual character, and night lighting. The following goals, policies and guidelines provide a basis for determining levels of potential impact as well as an indication of aesthetic values and sensitivity to visual change.

County of San Luis Obispo Initial Study Checklist
Will the project:

a. Create an aesthetically incompatible site open to public view?
b. Introduce a use within a scenic view open to public view?
c. Change the visual character of an area?
d. Create glare or night lighting which may affect surrounding areas?
e. Impact unique geological or physical features?

Coastal Zone Framework for Planning (Coastal Zone Land Use Element)
Strategic Growth Goal 1: Preserve open space, scenic natural beauty and natural resources. Conserve energy resources. Protect agricultural land and resources.

San Luis Obispo County Coastal Plan Policies
<u>Chapter 4: Energy and Industrial Development</u>
<u>Policy 1: New Facilities and Expansion of Existing Sites</u>
When new sites are needed for industrial or energy-related development, expansion of facilities on existing sites or on land adjacent to existing sites shall take priority over opening up additional areas or the construction of new facilities unless it can be shown that 1) alternative locations are infeasible and that the environmental impacts of opening up a new site are less than the impacts of expansion on or adjacent to existing sites; 2) to do otherwise would adversely affect the public welfare; and 3) adverse environmental impacts are mitigated to the maximum extent feasible. Priority shall be given to coastal-dependent industrial uses. When appropriate,

coastal-related developments should be accommodated within reasonable proximity to the coastal-dependent uses they support.

Chapter 10: Visual and Scenic Resources
The Coastal Zone Land Use Element references the California Coastal Act as follows:

3025l. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

30253. ... new development shall:

(5) Where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses. The Coastal Act defines these special communities and neighborhoods as follows:

l. Areas characterized by a particular cultural, historical or architectural heritage that is distinctive in the coastal zone;

2. Areas presently recognized as important visitor destination centers on the coastline;

3. Areas with limited automobile traffic that provide opportunities for pedestrian and bicycle access for visitors to the coast;

4. Areas that add to the visual attractiveness of the coast.

Policy 1: Protection of Visual and Scenic Resources
Unique and attractive features of the landscape, including but not limited to unusual landforms, scenic vistas and sensitive habitats are to be preserved protected, and in visually degraded areas restored where feasible.

Policy 2: Site Selection for New Development
Permitted development shall be sited so as to protect views to and along the ocean and scenic coastal areas. Wherever possible, site selection for new development is to emphasize locations not visible from major public view corridors. In particular, new development should utilize slope created "pockets" to shield development and minimize visual intrusion.

Policy 4: New Development in Rural Areas
New development shall be sited to minimize its visibility from public view corridors. Structures shall be designed (height, bulk, style) to be subordinate to, and blend with, the rural character of the area. New development which cannot be sited outside of public view corridors is to be screened utilizing native vegetation; however, such vegetation, when mature, must also be

selected and sited in such a manner as to not obstruct major public views. New land divisions whose only building site would be on a highly visible slope or ridge top shall be prohibited.

Policy 5: Landform Alterations Grading, earthmoving, major vegetation removal and other landform alterations within public view corridors are to be minimized. Where feasible, contours of the finished surface are to blend with adjacent natural terrain to achieve a consistent grade and natural appearance.

Policy 7: Preservation of Trees and Native Vegetation
The location and design of new development shall minimize the need for tree removal. When trees must be removed to accommodate new development or because they are determined to be a safety hazard, the site is to be replanted with similar species or other species which are reflective of the community character.

Conservation and Open Space Element
Policy E 7.1 Non-Renewable Energy Facility Siting
Energy, fossil fuel, and related facilities will be sited, constructed, and operated in a manner to protect the public from potential hazards and significant environmental impacts.

General

1) Locate new or expanded facilities outside sensitive view corridors, scenic, or recreational areas.
2) If the proposed location visually impacts views of the site from public roads or lands, prepare a screening plan to minimize visual impacts.
3) All exterior lighting shall be energy efficient and shielded to not extend beyond the site.

Goal VR 1: The natural and agricultural landscape will continue to be the dominant view in rural parts of the county.

Through review of the proposed development and as part of the EIR prepared for the project, consideration will be given to siting in unobtrusive locations, height of structures, visually effective setbacks, lighting, and other project specific visual concerns. Goal VR 2: The natural and historical character and identity of rural areas will be protected.

Policy VR 2.1 Develop in a manner compatible with Historical and Visual Resources
Through the review of proposed development, encourage designs that are compatible with the natural landscape and with recognized historical character, and discourage designs that are clearly out of place within rural areas.

Policy VR 2.2 Site Development and Landscaping Sensitivity
Through the review of proposed development, encourage designs that emphasize native vegetation and conform grading to existing natural forms. Encourage abundant native and/or drought-tolerant landscaping that screens buildings and parking lots and blends development with the natural landscape. Consider fire safety in the selection and placement of plant material, consistent with Biological Resources Policy BR 2.7 regarding fire suppression and sensitive plants and habitats.

Goal VR 7: Views of the night sky and its constellations of stars will be maintained.

Policy VR 7.1 Nighttime Light Pollution
Protect the clarity and visibility of the night sky within communities and rural areas, by ensuring that exterior lighting, including streetlight projects, is designed to minimize nighttime light pollution.

Title 23 Coastal Zone Land Use Ordinance (CZLUO)

23.04.210 - Visual Resources

e. General Visual Standards for Coastal Development. Notwithstanding subsections (a)-(d) above, all development requiring a coastal development permit must be consistent with the requirements of Coastal Plan Visual and Scenic Resource Policies 1-11 as applicable.

23.04.320 - Outdoor Lights
The standards of this section are applicable to all outdoor night-lighting sources installed after the effective date of this Title, except for street lights located within public rights-of-way and all uses established in the Agriculture land use category. No land use permit is required for lighting facilities, though an electrical permit may be required by Title 19 of this code.

a. Illumination only: Outdoor lighting is to be used for the purpose of illumination only, and is not to be designed for or used as an advertising display, except as provided by Sections 23.04.300 et. seq. (Signing).

b. Light directed onto lot: Light sources are to be designed and adjusted to direct light away from any road or street, and away from any dwelling outside the ownership of the applicant.

c. Minimization of light intensity: No light or glare shall be transmitted or reflected in such concentration or intensity as to be detrimental or harmful to persons, or to interfere with the use of surrounding properties or streets.

d. Light sources to be shielded:

1) Ground illuminating lights: Any light source used for ground area illumination except incandescent lamps of 150 watts or less and light produced directly by the combustion of natural gas or other fuels shall be shielded from above in such a manner that the edge of the shield is level with or below the lowest edge of the light source. Where any light source intended for ground illumination is located at a height greater than eight feet, the required shielding is to extend below the lowest edge of the light source a distance sufficient to block the light source from the view of any residential use within 1,000 feet of the light fixture.

2) Elevated feature illumination: Where lights are used for the purpose of illuminating or accenting building walls, signs, flags, architectural features, or landscaping, the light source is to be shielded so as not to be directly visible from off-site.

e. Height of light fixtures: Free-standing outdoor lighting fixtures are not to exceed the height of the tallest building on the site.

Chapter 5: Site Development Standards

23.05.034 - Grading Standards

d. Landform alterations within public view corridors. Grading, vegetation removal and other landform alterations shall be minimized on sites located within areas determined by the Planning Director to be a public view corridors from collector or arterial roads. Where feasible, contours of finished grading are to blend with adjacent natural terrain to achieve a consistent grade and appearance.

g. Revegetation: Where natural vegetation has been removed through grading in areas not affected by the landscape requirements (Section 23.04.180 et seq. - Landscape, Screening and Fencing), and that are not to be occupied by structures, such areas are to be replanted as set forth in this subsection to prevent erosion after construction activities are completed. [Amended 1993, Ord. 2649]

Land Use Circulation Element Planning Area Standards - South County Coastal Area Plan

Combining Designations:

Industrial: Union Oil

The following standards apply to the large industrial area west and south of State Route 1 currently occupied by the Santa Maria Oil Refinery and the Santa Maria chemical plant. (LCP)

l. Permit Requirements. Any proposed modification or expansion of the existing refinery or coke oven or the construction of partial oil and gas processing facilities to service off-shore derived oil and gas that involves land area beyond that presently developed requires Development Plan approval and shall be subject to the following: (LCP)

c. Screening of the facilities from public view through height limitations, careful site design, artificial contoured banks and mounding, extensive landscaping, and decorative walls and fences. (LCP)

d. Any part of the facilities that cannot effectively be screened by the above methods shall be painted with non-reflective paint of colors that blend with the surrounding natural landscape. (LCP)

San Luis Obispo County General Plan Agriculture Element

Open Space Goal (OSG1) states as an objective to "Identify, protect, sustain, and where necessary restore and reclaim areas with (scenic) characteristics." Agricultural Policy (AGP30b.3) says that “development should use natural landforms and vegetation to screen development whenever possible.” Agricultural Policy (AGP30b.4) states that “in prominent locations, to encourage structures that blend with the natural landscape or are traditional for agriculture.”

The San Luis Obispo County Design Guidelines

This document prepared by the San Luis Obispo County Department of Planning and Building consists of “design objectives, guidelines and examples that will help retain and enhance the unique character of the unincorporated communities and rural areas of San Luis Obispo County”.

The following design objective applies to the project site: **RC-7e-**Artificial slopes that are visible to the public should match the natural contours in the immediate vicinity.

4.1.4 Assessment Methodology

The findings of this study are based on multiple field visits conducted over several weeks, including review of the entire site as well as the surrounding area. Resource inventories were conducted both on foot and from moving vehicles, during the day and nighttime. Existing visual resources and site conditions were photographed and recorded. Assessment of Rail Spur Project elements and programs were based on plans and descriptions provided by the project applicant, including photo-simulations. County planning documents and previous studies relevant to the project and surrounding area were referred to for gaining an understanding of community aesthetic values.

Locations of critical structure and design elements were identified based on site plan information and engineering drawings provided by the project applicant. Critical project features such as the alignment of the proposed tracks and limits of disturbance were surveyed and staked in the field. These stakes, along with the known heights of existing landscape and built elements were used as visual scale references for confirming accuracy of photo-simulations, and for determining overall project visibility.

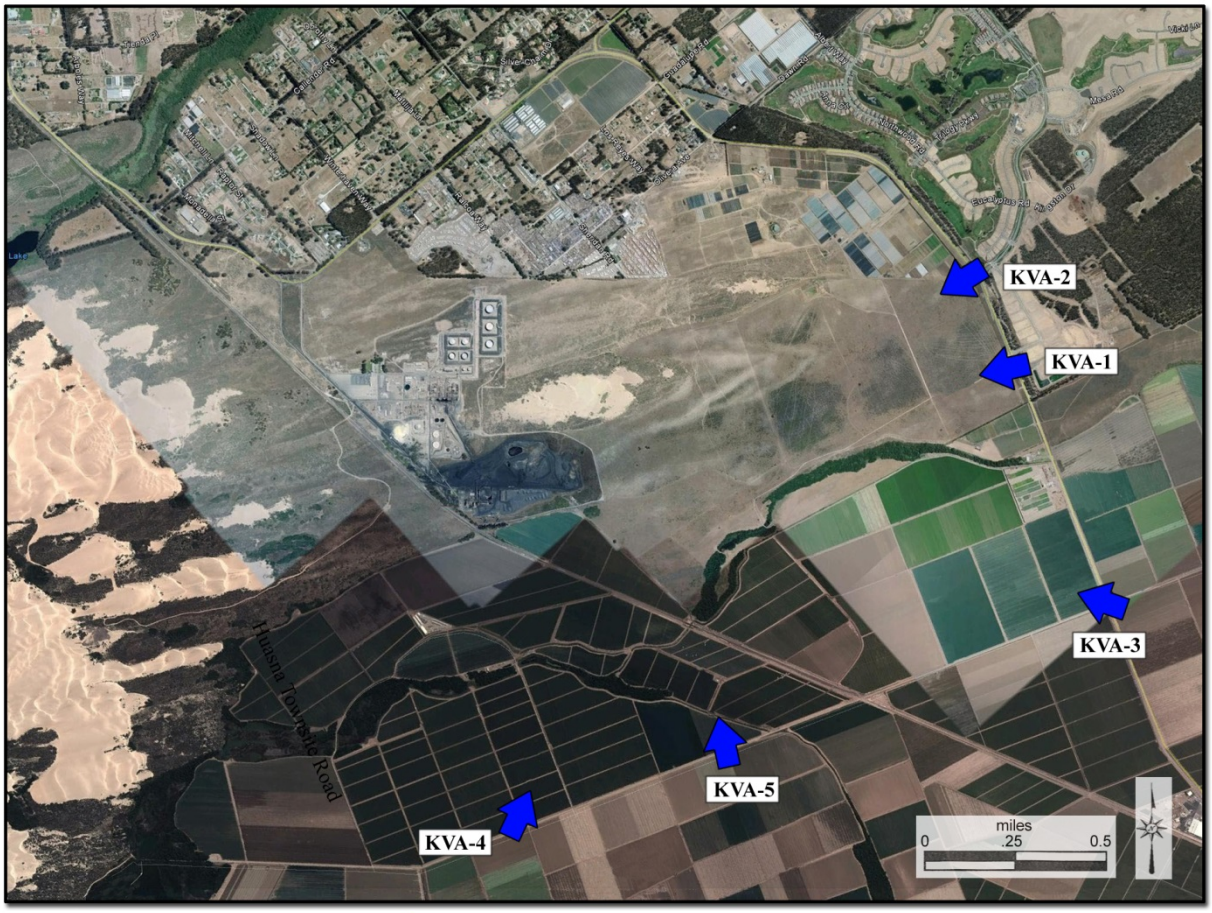
The project site was then viewed from all potential public viewer group locations on State Route 1, Oso Flaco Road, and all other roads and public viewpoints in the vicinity. Resulting from this initial review, representative viewpoints were determined for further analysis, based on dominance of the site within the view, duration of views, and expected sensitivity of the viewer group. Of those representative viewpoints, Key Viewing Areas (KVAs) were selected which would best illustrate the visual changes proposed by the project. Photo-simulation viewpoint locations were compared to the Key Viewing Areas identified by the analysis. Once verified for accuracy and appropriateness of location, the simulations were used to quantify potential project visibility and to assess related impacts. The project site was then field-reviewed to assist in determining possible mitigation measures. Images of the existing views, along with photo-simulations of the Rail Spur Project can be seen in Figures 4.1-6 through 4.1-10 (these figures are under impact AV.1). The five KVAs listed in Table 4.1.1 were selected to represent the extent and quality of views to the project from the surrounding area. A corresponding map of the KVA locations is shown in Figure 4.1-5.

Table 4.1.1 Key Viewing Areas (KVAs)

KVA	Location	Figure Nos.
KVA-1	From State Route 1 near Via Entrada Road.	4.1-6
KVA-2	From State Route 1 near Via Concha Road.	4.1-7
KVA-3	From State Route 1 at Oso Flaco Road.	4.1-8
KVA-4	From Oso Flaco Road approximately 0.8 mile west of State Route 1.	4.1-9
KVA-5	From Oso Flaco Road approximately 0.3 mile west of State Route 1.	4.1-10

KVA-Key Viewing Areas
Source: Carr 2013

Figure 4.1-5 Key Viewing Area (KVA) Map



KEY: Location and direction of Key Viewing Area (KVA) and photo-simulation.

Source: Carr – Google Maps 2013

Photo-Simulations

Photo-simulations were prepared by the project applicant illustrating the estimated appearance of the project as proposed by the applicant (refer to Figures 4.1-6 through 4.1-10 in Section 4.1.6.1). Photographs were taken from key public viewpoints and registered on a GPS unit. The GPS coordinates of the photographed viewpoint locations were imported to Google Earth for reference. The proposed facility was then modeled based on real-world coordinates and rendered according to the GPS viewing positions, using the same focal length and field-of-view as the camera. The rendered images were merged with the baseline photographs, and the view/scale of the rendered images were checked against existing landmarks (tanks, towers, dunes, etc.) to ensure proper representation.

The photo-simulations were then analyzed by the EIR consultant, and along with the results of the field studies conducted by the EIR consultant, the potential visual effects of the project were determined. The project site was then reviewed again in order to develop recommendations for reducing any identified adverse effects.

Photographic images and simulations are a valuable tool for understanding and disclosing the estimated visual effect of the proposed Rail Spur Project. It is important to note however that photographs do not represent the same level of visual acuity and sensitivity to detail as the human eye. As a result, photo-simulations tend to understate the anticipated perception of impacts.

4.1.5 Project Visibility

4.1.5.1 From State Route 1

The Rail Spur Project would be visible along an approximately 0.5 mile segment of State Route 1. Travelling in the southbound direction, intervening topography and development generally precludes views to the project until a point along the highway approximately 300 feet north of the Via Concha Road intersection. From that point continuing south, the easternmost portion of the rail spur tracks and trains would be seen to the west at a viewing distance of approximately 0.5 mile. From State Route 1, the unloading area would be approximately 1.4 miles away. Because of this viewing distance the proposed unloading area canopy and other structures would not be readily discernible among the other existing refinery and coke processing area development. The alignment of the proposed rail spur track extension would be oriented nearly perpendicular to State Route 1, and as a result views of the tracks and trains would generally be looking down the tracks rather than seeing them from the side. This viewing orientation would lessen the visible area of the project relative to the overall viewshed as seen from key viewpoints along State Route 1.

The project would also be potentially visible from a portion of northbound State Route 1 near Guadalupe. However because of the viewing distance, noticeability of the Rail Spur Project from this area would be substantially reduced.

4.1.5.2 From Oso Flaco Road

Portions of the Rail Spur Project would be seen intermittently from locations on Oso Flaco Road at viewing distances ranging from approximately 1 mile to 1.3 miles away. The project would also be partially visible from the Oso Flaco Lake public parking area. Since the proposed tracks would run approximately parallel to Oso Flaco Road, views of the project from this area would include side-views of the trains. The unloading area and associated canopy would be seen from the western segments of Oso Flaco Road. From these viewpoints the proposed unloading facility would be viewed in the context of the existing coke processing area. This industrial context, along with the viewing distance would lessen noticeability of the unloading area when viewed from Oso Flaco Road. From certain eastern segments of Oso Flaco Road, the riparian vegetation along Little Oso Flaco Creek would block views of the project. Where visible, the rail spur and trains would be seen extending to the east from the existing coke processing area. Views of the unloading facility would be seen but would be largely obscured by intervening vegetation and landform. From these southern viewpoints the proposed grading would be most visible. The existing undulating topography surrounding the project site would somewhat reduce visibility of

the project, however in certain areas the fill slopes along the southern side of the rail spur and the cut slopes along the northern side would be noticeable.

4.1.5.3 From Other Roadways and Viewing Areas

From Amtrak Passenger Trains
The Union Pacific Railroad tracks pass immediately west of the refinery and the project site. Amtrak passenger trains using the tracks offer close viewing opportunities of the existing refinery as well as portions of the project site. Much of the proposed unloading facility would be seen in the foreground as part of the existing industrial setting, and the new tracks would angle away toward the eastern open space. Existing topography in the area of the coke processing facility partially blocks views of the project site along this segment of the Union Pacific Railroad tracks.

From Residential Areas East of State Route 1
Portions of the project would be seen from public roadways and paths within the Trilogy residential development east of State Route 1. Westbound Via Concha Road would provide limited views to the easternmost portion of the rail spur, similar to those from along State Route 1 in this area. Portions of Louise Lane would also allow for views of the rail spur to the southwest. From these residential streets the unloading facility would not be easily noticed due to topography and viewing distance. The proposed rail road tracks would be visible from some of the residential homes in the Monarch Ridge Townhome development, which is located just east of the of the development area across Highway 1.

From the California Coastal Trail
The California Coastal Trail parallels State Route 1 along the Trilogy development frontage. The Coastal Trail in this area is separated from the highway at most locations by mature trees. Views to the project site are available however though gaps in the vegetation. Similar to the views from State Route 1, the easternmost portion of the tracks would be seen at a viewing distance of approximately 0.5 mile. The unloading facility would not be readily seen from the Coastal Trail.

From the De Anza Trail
The Historic Juan Bautista de Anza Trail corridor passes through the eastern portion of the project site. This somewhat wide swath is considered to be the general route the explorer and his party traversed through the area. This historic route is commemorated in part by the establishment of the Juan Bautista de Anza recreational trail. In the project vicinity, this recreational trail follows the alignment of the California Coastal Trail just east of State Route 1. As such, views to the project site are the same as those described from the Coastal Trail.

From the Industrial-Zoned Area to the North
The project would not be visible from public roadways north of refinery. Although Sheridan Road, Gasoline Alley Way and other roadways in this area are relatively close to the existing refinery, the adjacent landform blocks views to the south. The upper portions of the refinery can be seen from much of this area, but the Rail Spur Project would not be visible.

From the Pismo Dunes State Vehicular Recreation Area
The upper portions of the refinery facility are visible from the eastern portion of the Oceano Dunes State Vehicular Recreation Area, however the Rail Spur Project would not be seen because of intervening topography, vegetation and viewing distance.

4.1.6 Project Impacts and Mitigation Measures

This section discussed the impacts and any mitigation measures associated with the Rail Spur Project related to aesthetics and visual resources.

Impact #	Impact Description	Phase	Impact Classification
AV.1	The eastern extension of the proposed rail spur and its associated trains would reduce quality views of the open space as seen from portions of State Route 1, the California Coastal Trail, the De Anza Trail, and other public areas east of State Route 1, resulting in a potentially significant impact.	Construction and Operations	Class II

The project site is within two distinct landscape types in terms of visual sensitivity. Although the entire parcel is zoned industrial, the eastern portion of the project site serves as scenic open space for viewpoints along State Route 1, the California Coastal Trail, the De Anza Trail, and from streets within the Trilogy development. The westernmost portion of the project is in an area of heavy industrial use and as a result has little visual sensitivity.

Viewpoints from the East
Figures 4.1-6 through 4.1-8 provide photo simulations from the three key viewing areas that are to the east of the project site (KVA-1 through KVA-3). As seen from viewpoints east of the project such as State Route 1 and portions of residential streets in the Trilogy and Monarch Ridge Townhome developments, the eastern end of the project site is currently part of the mid-ground landscape, and is seen in the context of surrounding agricultural fields, dunes, riparian corridors and the Pacific Ocean. From these viewpoints the existing refinery can also be seen, although intervening topography and distance limit views of much of the ground-level operations. Where visible, the existing refinery dominates views to the northwest and creates a strong industrial visual identity.

The view looking west and southwest from State Route 1 is considered a scenic vista because of the panoramic composition of natural and agricultural land use patterns, sweeping views of the dunes and the coastline, and the Pacific Ocean beyond. The Rail Spur Project elements, where visible, would not block views of coastal visual resources such as the dunes, the ocean, riparian areas, or agriculture. The eastern extension of the rail spur and its associated trains would however reduce views of the open space seen in the mid-ground, an important visual contributor to the overall scenic vista, which has the potential to be a significant impact. The proposed unpaved access road from the rail spur to State Route 1 would appear as a typical farm road and would not affect scenic views.

Figure 4.1-6 Existing and Proposed Views from KVA 1 (State Route 1 at Via Concha Road).

Note: Proposed view is with a simulation of the rail unloading facility.
Source: Arcadis 2013

Figure 4.1-7 Existing and Proposed Views from KVA 2 (State Route 1 at Via Entrada Road).

Note: Proposed view is with a simulation of the rail unloading facility.
Source: Arcadis 2013

Figure 4.1-8 Existing and Proposed Views from KVA 3 (State Route 1 at Oso Flaco Road).

Note: Proposed view is with a simulation of the rail unloading facility.
Source: Arcadis 2013

Figure 4.1-9 Existing and Proposed Views from KVA 4 (Oso Flaco Road 0.8 mile west of State Route 1).

Note: Proposed view is with a simulation of the rail unloading facility.
Source; Arcadis 2013

Figure 4.1-10 Existing and Proposed Views from KVA 5 (Oso Flaco Road 0.3 mile west of State Route 1).

Note: Proposed view is with a simulation of the rail unloading facility.
Source: Arcadis 2013

Viewpoints from the South

Figures 4.1-9 and 4.1-10 provide photo simulations from the two key viewing areas that are to the south of the project site (KVA-4 and KVA-5). As seen from viewpoints south of the project such as Oso Flaco Road, views toward the project site are more dominated by agriculture in the foreground, with the Nipomo Mesa and inland hills rising up as a backdrop.

From these southern vantage points views of the project site include the mid-ground open space as well as the industrial refinery and coke processing area to the west. The Union Pacific Railroad tracks also cross through this area, adding to the working character of this landscape view.

Scenic vistas from these viewpoints are defined by the agricultural and natural land uses in the foreground, with the hills framing the background to the northeast. Because of the viewing distance and orientation, the Rail Spur Project elements would not block views of any of these coastal resources, and as a result would not have an adverse effect of scenic vistas as seen from Oso Flaco Road.

Viewpoints from Amtrak Passenger Trains

Amtrak passenger trains would also have direct views of the project site, passing immediately adjacent to the existing refinery and coke processing facility. From these elevated viewpoints, scenic vistas include the varied natural and man-made land use patterns, the dunes, agriculture, open space and the surrounding hillsides. The proposed unloading facility would be seen as part of the existing industrial area and would have no effect on scenic vistas. The rail spur extension to the east and the associated trains would not block views of coastal resources such as the dunes, hills, coastline, or riparian areas. As seen from Amtrak, the Rail Spur would slightly reduce the amount of open space seen in the mid-ground. However, considering the extent of high-quality open space views afforded travelers on the coastal route, this slight reduction in open space for a short viewing period would be insignificant, particularly when seen in the general context of the adjacent refinery.

Mitigation Measures

AV-1a *Prior to issuance of grading and construction permits, the applicant shall submit a revised site-grading plan to the Department of Planning and Building for review and approval showing the following:*

a. An earthen berm shall be constructed around the eastern perimeter of the rail spur. The berm shall be a minimum of 10 feet tall and a maximum of 20 feet tall above the existing grade and as shown on the Berm Location Concept Map shown below (Figure 4.1-11) for the purpose of reducing views of the rail spur and trains from State Route 1 and the California Coastal Trail / De Anza Trail.

b. The berm shall be designed and constructed to appear as a natural dune landform and shall have gradually undulated horizontal and vertical dimensions (consistent with Policy 5: Landform Alterations).

c. No other existing landforms which would provide visual screening of the facility shall be used as source of borrow material for the required berm.

d. The berm shall be revegetated with native grasses and shrubs to match the surrounding natural landcover and plant community.

No disturbance shall occur outside of the identified area of disturbance shown on the site-grading plan.

AV-1b Prior to issuance of grading and construction permits, the applicant shall submit a revised site-grading plan to the Department of Planning and Building for review and approval showing the following:

a. All new cut and fill slopes shall include slope-rounding and landform grading techniques to avoid an engineered appearance (consistent with Policy 5: Landform Alterations).

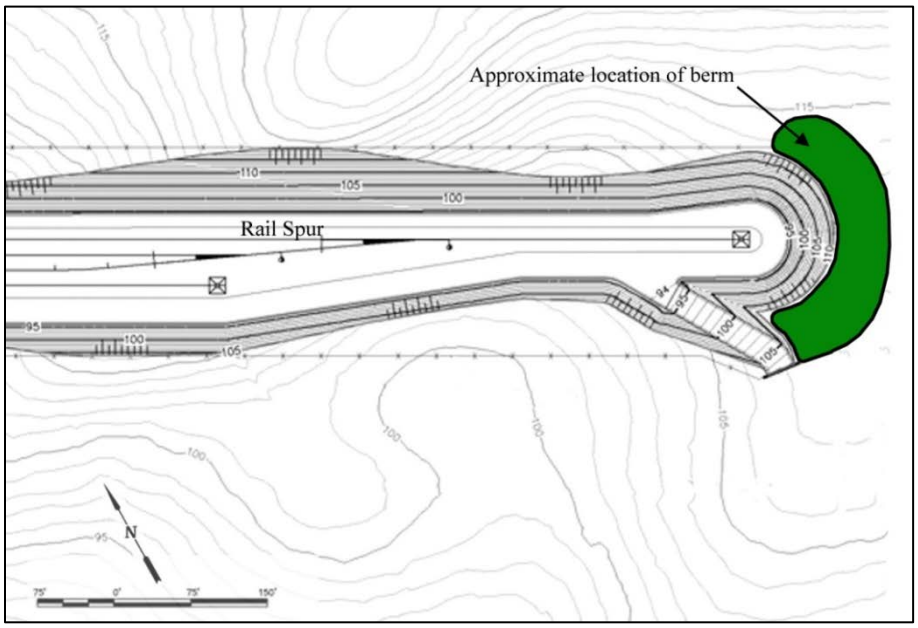
AV-1c Prior to issuance of grading and construction permits, the applicant shall submit a Habitat / Landscape Revegetation Plan to the Department of Planning and Building for review and approval showing the following:

a. All new slopes shall be revegetated with native grasses and shrubs to match the surrounding natural landcover and plant community.

Residual Impacts

By reducing visibility of the rail spur and associated trains in the current open space area, mitigation measures AV-1a through AV-1c would lessen the project's adverse effects on scenic vistas as seen from key public viewpoints on State Route 1, the California Coastal Trail, the De Anza Trail, and other public areas east of State Route 1. As a result, these measures would result in visual impacts considered to be *less than significant with mitigation (Class II).*

Figure 4.1-11 Berm Location Concept Map



Source: Carr 2013

Impact #	Impact Description	Phase	Impact Classification
AV.2	The expanded industrial use and visibility of the rail spur and associated trains on the existing open space would cause the project to be more noticeable as seen from public viewpoints on State Route 1, the California Coastal Trail, the De Anza Trail, and other public areas east of State Route 1. This effect on the existing visual character would be inconsistent with the County of San Luis Obispo visual policy goals, resulting in a potentially significant impact.	Construction and Operations	Class II

As previously mentioned, the Project Site crosses two distinct landscape character zones; the heavily industrial area to the west, and the natural open space toward the east. This context differentiation is a fundamental factor in determining the project's potential effect on the existing visual character of the site and its surroundings.

Viewpoints from the East

As seen from viewpoints such as State Route 1, the California Coastal Trail, the De Anza Trail, and portions of residential streets in the Trilogy and Monarch Ridge Townhome developments, the visual identity of the project site and vicinity is mostly defined by working agriculture, rural lands, natural open space, and residential. The refinery complex and other industrial uses are also visible and influence the existing visual character. North of the project the industrial uses are more evident, however as seen from eastern viewpoints the agricultural and natural landscape character to the south become more visually dominant. The proposed unloading area would be within the existing industrial part of the coke processing facility, and would be consistent with the visual character of that area. The rail spur which would extend approximately 0.9 mile east, would add an industrial element into land which currently serves as visual open space. As seen from State Route 1, the Coastal Trail, the De Anza Trail and other eastern viewpoints, the rail spur and associated rail cars would represent a visual expansion of the adjacent industrial refinery use. This expansion of industrial elements would not be entirely unexpected at this location, however the current balance of visual character elements would be altered. The visual encroachment of the industrial refinery-related activities onto the adjacent visual open space would have an adverse effect on the existing character of the site, and would represent a potentially significant impact. The proposed unpaved access road connecting the rail spur to State Route 1 would look like an agricultural road typical of the setting.

Viewpoints from the South

Viewpoints to the project from Oso Flaco Road and points south would see portions of the rail spur as well as the unloading facility. Views from these areas are largely defined by the working agricultural operations visible in the fore and mid-ground. The industrial character of the refinery and coke processing area are more noticeable from these viewing locations. Because of that, the proposed unloading facility would not be inconsistent with the visual character at that location. Views of the overall landscape from this area include several strong horizontal lines created by black field fencing, access roads, crop boundaries, the existing railroad tracks, and the riparian corridors. As a result, combined with the viewing distance, the linear form of the rail

spur and associated trains would be somewhat less noticeable in the viewshed. When seen, the project would not be out of character with the working landscape view from Oso Flaco Road.

Viewpoints from Amtrak Passenger Trains

The Amtrak passenger train passes immediately alongside the refinery and coke processing facility. Because of this visual setting, the proposed unloading facility would be visually appropriate for its surrounding. To the east, the proposed rail spur would somewhat reduce views of the existing open space. However, a strong existing industrial visual impression exists for Amtrak passengers as they pass directly adjacent to the refinery facility. As a result viewers would likely see the proposed rail spur as a logical part of the industrial use. In addition, Amtrak travelers may be less sensitive to seeing a railroad use in the surrounding landscape since their viewing experience would be inherently railroad-based. Because of these factors the Rail Spur Project would not have an adverse effect on the visual character of the site and surroundings as seen from Amtrak passenger trains.

Mitigation Measures

AV-2 *Implementation of mitigation measures AV-1a through AV-1c required for Impact AV.1 would also reduce potential impacts to existing visual character and quality of the site and its surroundings.*

Residual Impacts

By implementing mitigation measures AV-1a through AV-1c the impacts to the visual character and quality of the site and surroundings would be considered *less than significant with mitigation (Class II).* The required mitigation measures would cause the project to be less noticeable in the landscape, and as a result the perceived encroachment of industrial character into the current open space would be less evident.

Impact #	Impact Description	Phase	Impact Classification
AV.3	The project would create a new source of substantial light and glare which would adversely affect nighttime views in the area.	Operations	Class II

New outdoor lighting is proposed throughout the project. As evaluated in the 2014 RDEIR, the unloading area would have 70 floodlights placed or mounted under the canopy. Forty of these lights would be directed toward the railcars and placed 60 feet apart, with 8,238 Lumens each. Thirty of these canopy lights would be directed to the walkway area and would be placed 20 feet apart, with 5,856 Lumens each. Two additional lights on 20-foot poles would be focused on the Meter area and Drain Tanks. The lights associated with the unloading area would be used on an as-needed basis, when trains are being unloaded. This could occur at night between dusk and dawn, since trains could arrive at any hour. Trains would be on site approximately 10 to 12 hours, and unloading would last approximately 8 hours per train.

Additional lighting is proposed along the perimeter fencing around the rail spur, which would extend approximately 0.9 mile east of the unloading area. This lighting would be placed on 15-foot tall poles, at 500 feet apart around the entire perimeter of the spur. Two floodlights would

be placed on each pole, at 18,955 Lumens each. These security lights are proposed to remain on only when a train is at the refinery.

The preliminary lighting plans describe that Dark Skies Compliant light fixtures would be used, however no additional information is provided regarding the specific design, orientation and connection angles of project lighting as they relate to Dark Sky practices. The preliminary lighting plans are provided in Appendix A (pages A-24 through A-28).

The current light levels in the area vary greatly. The refinery facility is a substantial source of light, and security and operational lighting is highly visible every night of the year. Coastal fog, which occurs often, increases visibility of the lighting by creating a noticeable atmospheric glow surrounding the facility. The other sources of night light are the auto-related industrial area to the north, and the residential areas to the north and east. State Route 1 creates nighttime lights in terms of headlights and streetlights at intersections. The lights of Guadalupe can be seen in the distance to the south. The surrounding agricultural areas show very few lights. Looking southwest from State Route 1, the eastern portion of the project site currently emits no nighttime lights. Nighttime views to the northwest show a significant amount of light associated with the refinery and coke processing facility.

The lighting proposed at the unloading facility would appear to be part of the existing coke processing area and would likely go unnoticed to the casual observer. Although the unloading facility lights would introduce light into a new area, they would not appear out of place given the relatively close proximity to the refinery and coke processing facility. The closest residence to the unloading area lights would be approximately 0.5 mile away east and south. The Trilogy and Monarch Ridge Townhome developments would be more than one-mile from the unloading area lights. The unloading area lights would be used during the unloading operations, which would be a maximum of five times per week for about 10 to 12 hours per unloading. It is also unlikely that all of the unloading operations would occur at night when the lights would be needed.

The security lighting proposed for the rail spur perimeter would be seen from viewpoints along State Route 1 and portions of the Trilogy and Monarch Ridge Townhome developments. The security lighting would extend to just beyond the east terminus of the Rail Spur. The closest residence to the unloading area lights would be approximately 0.5 mile away.

The project proposes shielded light fixtures, which if installed correctly and included as part of a comprehensive Dark Skies compliant plan, would help reduce noticeable light. However since the final lighting plan is not complete at this time, the potential exists for visible glare and light trespass into the surrounding area due to improper design, and therefore the impact is considered potentially significant.

Mitigation Measures

AV-3a *Prior to issuance of grading and construction permits, the applicant shall submit a comprehensive lighting plan to the Department of Planning and Building for review and approval showing the following:*

a. *The Lighting Plan shall be based on a photometric study prepared by a qualified engineer who is an active member of the Illuminating Engineering Society of North America (IESNA).*

b. *The Lighting Plan shall be prepared by a qualified engineer who is an active member of the IESNA using guidance and best practices endorsed by the International Dark Sky Association.*

c. *The applicant shall provide the specific technical data and performance criteria required by the applicable safety policy used as the basis for the Lighting Plan.*

d. *As part of the Lighting Plan, illumination levels shall be the minimum required by the specifically defined public safety policy and ordinances.*

e. *As part of the Lighting Plan, direct views of all lighting sources shall be directed downward and shielded from view from public roads.*

f. *As part of the Lighting Plan, lights shall be designed and constructed to reduce illumination of the adjacent slopes and dunes where applicable.*

g. *As part of the Lighting Plan, no lights shall be placed east of any portion of the screening berm required in mitigation measure AV-1a.*

h. *As part of the Lighting Plan, lighting for all rail spur perimeter fencing shall be equipped with motion sensors for activation rather than left on continuously.*

AV-3b *Within six months following completion of construction, a Lighting Evaluation Report shall be submitted to the Department of Planning and Building for review and approval. The purpose of the Lighting Evaluation Report shall be to assess and correct any unexpected or residual lighting impacts following project completion. The report shall be prepared by a by a qualified engineer who is an active member of the IESNA who was not associated with the preparation of the Lighting Plan described in mitigation measure AV-3a. Preparation of the Lighting Evaluation Report shall be by a qualified engineer retained by the County of San Luis Obispo and funded by the project applicant. The Lighting Evaluation Report shall include the following at a minimum:*

a. *A comprehensive assessment of the lighting resulting from the rail spur project and project operations as seen from State Route 1, Oso Flaco Road, the California Coastal Trail, De Anza Trail and public viewing areas to the east. The Lighting Evaluation Report shall assess the completed project during a variety of operational conditions including all typical procedures such as unloading, moving of trains, multiple trains present, etc. The Report shall evaluate and identify where, if any unexpected light impacts occur, such as but not limited to reflection off trains, adjacent landforms, buildings, unexpected sources, etc.*

b. *The Lighting Evaluation Report shall make specific recommendations to reduce the effects of any unexpected or excessive residual lighting impacts identified in*

the report. Recommendations may include but not be limited to: repositioning lights, lowering heights, increasing sizes of cut-off shields, reducing types of luminaires, reducing wattage, and modifying operational procedures.

AV-3c ***Existing Facility and Operations Lighting Evaluation****. Prior to issuance of grading and construction permits, the applicant shall submit a comprehensive evaluation of the existing refinery facility and operations lighting to the Department of Planning and Building for review and approval showing the following:*

a. The Existing Facility and Operations Lighting Evaluation shall be prepared by a qualified engineer who is an active member of the Illuminating Engineering Society of North America (IESNA).

b. The Existing Facility and Operations Lighting Evaluation shall assess the sources and levels of all existing lighting associated with the refinery operations, and shall determine if any lighting levels exceeds the minimum required by applicable County of San Luis Obispo, state and federal safety regulations.

c. If lighting levels exceed the applicable regulations, the Existing Facility and Operations Lighting Evaluation shall make specific recommendations to reduce the lighting levels to the minimum required.

The Existing Facility and Operations Lighting Evaluation shall also identify and make recommendations to eliminate visibility of all point source lighting as seen from public roadways. The project applicant shall implement all recommendations made by the Lighting Evaluation Report and required by the Department of Planning and Building.

Residual Impacts

By implementing mitigation measures AV-3a and AV-3b the impacts to nighttime lighting and glare would be considered *less than significant with mitigation (Class II).* The required mitigation measures would limit the amount of light that would spill over from the lighting fixtures.

The air quality mitigation measure AQ-4c would limit the unloading of trains at the SMR from between 7 A.M. and 7 P.M. This would serve to eliminate most of the nighttime lighting associated with the rail unloading operations. There could still be some nighttime lighting that would be needed when a train arrived at the SMR. Trains that arrived at night would need to pull on to the SMR property and then would shutdown. Some lighting for workers in the unloading area would likely be needed, but would only last for about an hour.

Impact #	Impact Description	Phase	Impact Classification
AV.4	Visibility of headlights and other operational and safety lights from trains on the rail spur would create a new source of light and glare which would adversely affect nighttime views in the area.	Operations	Class II

Due to safety requirements, train engines and other equipment operating at nighttime on the rail spur would have headlights and other lights turned on for an undetermined length of time. Because of the generally east-west orientation of the rail spur tracks, lights from train engines moving the tanker cars around would potentially be a highly visible new source of light and glare as seen from public viewpoints to the east.

Mitigation Measures

AV-4 *Implementation of mitigation measures AV-1a through AV-1c required for Impact AV.1 and mitigation measure AV-3b required for Impact AV.3 would also reduce potential impacts caused by trains operating on the rail spur.*

Residual Impacts

Implementation of mitigation measures AV-3a and AV-3b and AV-4 would reduce the project's adverse night lighting effects as seen from key public viewpoints on State Route 1, the California Coastal Trail, the De Anza Trail, and other public areas surrounding the Project Site by minimizing glare and light spillover into the surrounding area. As a result, the project impacts would be considered to be *less than significant with mitigation (Class II).*

4.1.7 Cumulative Analysis

The cumulative section addresses how this project may contribute to a change in visual quality when viewed along with other existing and reasonable future development in the area (per CEQA Guidelines, Section 15130).

Portions of the Nipomo Mesa have experienced moderate amounts of new development in the last several years. That development has been mostly residential, with golf resort developments the most prevalent. Few new or expanded industrial uses have appeared in the local landscape. Cumulative visual and aesthetic impacts would be limited to the cumulative project in the same viewshed as the Rail Spur Project. The cumulative projects listed in Chapter 3, which are in the vicinity of the SMR, are more non industrial uses and would fit the existing visual character of the area. Although the Rail Spur Project would have an adverse effect on the open space scenic vista and character of the site, it would be part of an existing industrial facility, and would not be out of context with the existing visual character of the area. As a result, the cumulative visual impacts would be considered less than significant.

4.1.8 Mitigation Monitoring Plan

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
AV-1a	Prior to issuance of grading and construction permits, the applicant shall submit a revised site-grading plan to the Department of Planning and Building for review and approval showing the following: a. An earthen berm shall be constructed around the eastern perimeter of the rail spur. The berm shall be a minimum of 10 feet tall and a maximum of 20 feet tall above the existing grade and as shown on the Berm Location Concept Map shown below (Figure 4.1-11) for the purpose of reducing views of the rail spur and trains from State Route 1 and the California Coastal Trail / De Anza Trail. b. The berm shall be designed and constructed to appear as a natural dune landform and shall have gradually undulated horizontal and vertical dimensions (consistent with Policy 5: Landform Alterations). c. No other existing landforms which would provide visual screening of the facility shall be used as source of borrow material for the required berm. d. The berm shall be revegetated with native grasses and shrubs to match the surrounding natural landcover and plant community. No disturbance shall occur outside of the identified area of disturbance shown on the site-grading plan.	Review of Site Plans	Prior to Issuance of Grading and Construction Permits	County Department of Planning and Building
AV-1b	Prior to issuance of grading and construction permits, the applicant shall submit a revised site-grading plan to the Department of Planning and Building for review and approval showing the following: a. All new cut and fill slopes shall include slope-rounding and landform grading techniques to avoid an engineered appearance (consistent with Policy 5: Landform Alterations).	Review of Site Plans	Prior to Issuance of Grading and Construction Permits	County Department of Planning and Building
AV-1c	Prior to issuance of grading and construction permits, the applicant shall submit a Habitat / Landscape Revegetation Plan to the Department of Planning and Building for review and approval showing the following: a. All new slopes shall be revegetated with native grasses and shrubs to match the surrounding natural landcover and plant community.	Review of Site Plans	Prior to Issuance of Grading and Construction Permits	County Department of Planning and Building
AV-3a	Prior to issuance of grading and construction permits, the applicant shall submit a comprehensive lighting plan to the Department of Planning and Building for review and approval showing the following: a. The Lighting Plan shall be based on a photometric study prepared by a qualified engineer who is an active member of the Illuminating Engineering Society of North America (IESNA).	Review of Lighting Plan	Prior to Issuance of Grading and Construction Permits	County Department of Planning and Building

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
	b. The Lighting Plan shall be prepared by a qualified engineer who is an active member of the IESNA using guidance and best practices endorsed by the International Dark Sky Association. c. The applicant shall provide the specific technical data and performance criteria required by the applicable safety policy used as the basis for the Lighting Plan. d. As part of the Lighting Plan, illumination levels shall be the minimum required by the specifically defined public safety policy and ordinances. e. As part of the Lighting Plan, direct views of all lighting sources shall be directed downward and shielded from view from public roads. f. As part of the Lighting Plan, lights shall be designed and constructed to reduce illumination of the adjacent slopes and dunes where applicable. g. As part of the Lighting Plan, no lights shall be placed east of any portion of the screening berm required in mitigation measure AV-1a. h. As part of the Lighting Plan, lighting for all rail spur perimeter fencing shall be equipped with motion sensors for activation rather than left on continuously.			
AV-3b	Within six months following completion of construction, a Lighting Evaluation Report shall be submitted to the Department of Planning and Building for review and approval. The purpose of the Lighting Evaluation Report shall be to assess and correct any unexpected or residual lighting impacts following project completion. The report shall be prepared by a by a qualified engineer who is an active member of the IESNA who was not associated with the preparation of the Lighting Plan described in mitigation measure AV-3a. Preparation of the Lighting Evaluation Report shall be by a qualified engineer retained by the County of San Luis Obispo and funded by the project applicant. The Lighting Evaluation Report shall include the following at a minimum: a. A comprehensive assessment of the lighting resulting from the rail spur project and project operations as seen from State Route 1, Oso Flaco Road, the California Coastal Trail, De Anza Trail and public viewing areas to the east. The Lighting Evaluation Report shall assess the completed project during a variety of operational conditions including all typical procedures such as unloading, moving of trains, multiple trains present, etc. The Report shall evaluate and identify where, if any unexpected light impacts occur, such as but not limited to reflection off trains, adjacent landforms, buildings, unexpected sources, etc. b. The Lighting Evaluation Report shall make specific	Review of project post-construction and review of Lighting Plan.	Within six months following completion of construction	County Department of Planning and Building

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
	recommendations to reduce the effects of any unexpected or excessive residual lighting impacts identified in the report. Recommendations may include but not be limited to: repositioning lights, lowering heights, increasing sizes of cut-off shields, reducing types of luminaires, reducing wattage, and modifying operational procedures.			
AV-3c	**Existing Facility and Operations Lighting Evaluation.** Prior to issuance of grading and construction permits, the applicant shall submit a comprehensive evaluation of the existing refinery facility and operations lighting to the Department of Planning and Building for review and approval showing the following: a. The Existing Facility and Operations Lighting Evaluation shall be prepared by a qualified engineer who is an active member of the Illuminating Engineering Society of North America (IESNA). b. The Existing Facility and Operations Lighting Evaluation shall assess the sources and levels of all existing lighting associated with the refinery operations, and shall determine if any lighting levels exceeds the minimum required by applicable County of San Luis Obispo, state and federal safety regulations. c. If lighting levels exceed the applicable regulations, the Existing Facility and Operations Lighting Evaluation shall make specific recommendations to reduce the lighting levels to the minimum required. The Existing Facility and Operations Lighting Evaluation shall also identify and make recommendations to eliminate visibility of all point source lighting as seen from public roadways. The project applicant shall implement all recommendations made by the Lighting Evaluation Report and required by the Department of Planning and Building.	Review of existing lighting evaluation report.	Prior to Issuance of Grading and Construction Permits	County Department of Planning and Building

4.1.9 References

California Scenic Highways Program website, California Department of Transportation website, 2013: http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm

Coastal Access Program: the California Coastal Trail. California Coastal Commission website, 2012: http://www.coastal.ca.gov/access/ctrail-access.html

Illuminating Engineering Society of North America (IESNA) website, 2013: http://www.iesna.org/

International Dark-Sky Association website. 2013. http://www.darksky.org/

John D'Allesandro, Division Manager/ Process Systems, SPEC Services, Inc., Pers. Comm. September 18, 2013.

Juan Bautista de Anza National Historic Trail, National Park Service website, 2013: http://www.nps.gov/juba/index.htm

Oceano Dunes State Vehicular Recreation Area, California State Parks website, 2013: http://ohv.parks.ca.gov/?page_id=1207