ARCADIS

# Applicant's Reference CEQA IS

**Submitted by:**

**Phillips 66 Company**
**2555 Willow Road**
**Arroyo Grande, CA**

**Project Contact:**

**Mr. Jim Anderson**
**(805)343-3224**

**Project Name:**

**Santa Maria Refinery Rail Project**

**June 2013**

## Santa Maria Refinery Rail Project

**Environmental Setting** **17**

**1. Environmental Factors Potentially Affected** **18**

**2. Evaluation of Environmental Impacts** **20**

**3. Environmental Impacts Checklist** **25**

Aesthetics 25

Agriculture and Forest Resources 28

Air Quality 31

Geology and Soils 44

Greenhouse Gas Emissions 50

Hazards and Hazardous Materials 52

Hydrology and Water Quality 59

Land Use and Planning 64

Mineral Resources 67

Population and Housing 80

Public Services 83

Recreation 85

Transportation and Traffic 87

Utilities and Service Systems 90

Mandatory Findings of Significance 94

**FIGURES**

Figure 1 – Project Area

Figure 2 – Proposed Project Site on Phillips 66 Property

Figure 3 – Track Layout Alternatives (3 figures)

Figure 4 – US Refineries, Oil Production Regions, and Railroad Routes

View Simulation – Train from Northeast at Highway 1

View Simulation – Train from South at Oso Flaco Road

View Simulation – Train from East at Highway 1

## APPENDICES

Appendix A – Air Quality and Project Emissions Report

## LIST OF ACRONYMS

| | |
|---|---|
| AB | Assembly Bill |
| AQMD | Air Quality Management District |
| BACT | Best Available Control Technology |
| BMP | Best Management Practice |
| CAAQS | California Ambient Air Quality Standards |
| Cadna A | Computer Aided Noise Abatement Ver. 4.0 |
| CalARP | California Accidental Release Prevention Program |
| CalOSHA | California Occupational Safety and Health Administration |
| Caltrans | California Department of Transportation |
| CARB | California Air Resources Board |
| CCR | California Code of Regulations |
| CDFW | California Department of Fish and Wildlife |
| CDP | Census Designated Place |
| CDWR | California Department of Water Resources |
| CEQA | California Environmental Quality Act |
| CFR | Code of Federal Regulations |
| CGS | California Geological Survey |
| CNDDB | California Natural Diversity Database |
| CMMP | Construction Mitigation and Monitoring Program |
| $CO_2$ | carbon dioxide |
| $CO_2e$ | $CO_2$-equivalent |
| CUPA | Certified Unified Program Agency |
| cy | cubic yard(s) |
| dBA | decibel, A-weighted, same as dB with A-weighting applied |
| DPM | Diesel Particulate Matter |
| EIR | Environmental Impact Report |
| EPA | U.S. Environmental Protection Agency |
| FTA | U.S. Department of Transportation, Federal Transit Administration |
| GHG | greenhouse gas |
| gpd | gallons per day |
| HCP | Habitat Conservation Plan |
| HMBP | Hazardous Materials Business Plan |
| HVAC | heating, ventilation and air conditioning |
| keV | thousand electron volts |
| kV | kilovolts |
| kVA | kilovolt ampere |
| Ldn | day-night average sound level |
| Leq | equivalent noise energy as the total amount of the time-varying noise levels over a set period |

| | |
|---|---|
| LOS | Level of Service |
| MOC | Management of Change |
| $MTCO_2e$ | $CO_2$-equivalent metric tons |
| $N_2O$ | nitrous oxide |
| NAAQS | National Ambient Air Quality Standards |
| NCCP | Natural Community Conservation Plan |
| NHMLCA | Natural History Museum of Los Angeles County |
| NHPA | National Historic Preservation Act |
| NOAA Fisheries | National Oceanic and Atmospheric Administration National Marine Fisheries Service |
| $NO_x$ | nitrogen oxides |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resource Conservation Service |
| PGA | Peak Ground Acceleration |
| $PM_{10}$ | particulate matter less than 10 microns in size |
| $PM_{2.5}$ | particulate matter less than 2.5 micron in size |
| RMP | Risk Management Program |
| ROG | Reactive Organic Gases |
| SAAQS | State Ambient Air Quality Standards |
| SHPO | State Historic Preservation Office |
| SMR | Santa Maria Refinery |
| SO | Sulfur Oxides |
| SPCC | Spill Prevention, Control and Countermeasure |
| SWPPP | Storm Water Pollution Prevention Plan |
| TAC | Toxic Air Contaminant |
| UPRR | Union Pacific Railroad |
| USDA | U.S. Department of Agriculture |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| WEAP | Worker Environmental Awareness Program |

## Introduction

Phillips 66 Company (Phillips 66) proposes to modify the existing rail spur currently on the southwest side of the Santa Maria Refinery (SMR) located in unincorporated San Luis Obispo County California (see Figures 1 and 2). The project would include an eastward extension of the existing rail spur as well as a railcar unloading facility. The trains would deliver crude oil to the SMR for processing. The unloaded material would be transferred from the new unloading facility to existing crude-oil storage tanks via a new on-site above-ground pipeline. The unloading area would also include employee facilities such as a restroom.

The proposed tracks and unloading facilities are designed to accommodate unit trains and manifest trains. Unit trains consist of approximately 80 tank cars and associated locomotives and other supporting cars that stay together as one assembly. Manifest trains may have a variety of car types and cargos and are not fully dedicated as are unit trains. Manifest trains may deliver one or more cars to the refinery and then continue to other destinations to deliver other cargo.

### Project Purpose and Objectives

The purpose of the project is to allow SMR to access a full range of competitively priced crude oil. The facility currently processes San Joaquin crude oil, one of the heaviest crude oils available. The project does not allow for an increase in the processing capacity or throughput. The project would extend the existing rail spur within the refinery and install the necessary infrastructure to safely and efficiently transfer crude oil from rail cars to the existing refinery storage tanks for processing. As defined by the International Energy Agency, the term crude oil comprises crude oil, natural gas liquids, refinery feedstocks, and additives as well as other hydrocarbons (including emulsified oils, synthetic crude oil, mineral oils extracted from bituminous minerals such as oil shale, bituminous sand, etc., and oils from coal liquefaction). Crude oil is a mineral oil consisting of a mixture of hydrocarbons of natural origin and associated impurities, such as sulphur.

### Project Location

The refinery has been operating since 1955 and is located in unincorporated San Luis Obispo County, near the City of Arroyo Grande on the Nipomo Mesa. The project would occur entirely within the existing Phillips 66 boundary. In the project description and impact assessment presented below, the term ‘site’ is used to refer to the area directly affected by construction, including grading, excavation, rail construction and

fencing. The larger grounds of SMR are referred to as the Phillips 66 property and the adjacent and surrounding lands within San Luis Obispo County and nearby incorporated municipalities are referred to as the project area.

**Proposed Facilities**

Phillips 66 proposes to modify the existing rail spur on the southwest side of the refinery to include an eastward extension as well as an unloading facility, new, on-site transfer conveyance (pipelines), and a restroom (see Figures). Additionally, CalFire has requested an unpaved eastern Emergency Vehicle Access route between the eastern end of the rail spur and Highway 1. The tracks and unloading facilities have been designed to accommodate trains of approximately 80 tank cars and associated locomotives in unit train or manifest train configurations. These trains would deliver crude oil to the facility for processing. The unloaded material would be transferred to the existing storage tanks via a new pipeline that would be constructed across the existing coke storage area and along an existing internal refinery road.

The project would also include work within the existing refinery connecting and upgrading existing infrastructure. This includes adding a new electricity cable to an existing pipeway and adding a new fire water pipeline to an existing pipe rack. The rails on the existing rail spur would also be replaced.

The new rail spur lines would extend approximately 2600 yards from the terminus of the current spur. The unloading facility would be located at the end of the existing coke storage area and along an existing internal refinery road to and provide an efficient route for the new, above-ground pipeline to convey the crude oil to existing tanks.

The approximate construction areas are summarized below and shown on Figure 2:

- 2305 yards (2110 m) – Length of spur extension (including approximately 815 yards within the existing industrial coke plant area)
- 270-feet (82m) – Approximate width of construction area for rail extension (note that much of the area would only be affected temporarily).
- 775-yards (710 m) – Length of new pipeline from the unloading facility to the internal refinery (note that an additional 400 yards will be constructed within the existing refinery connecting to the existing storage tanks).
- 25-feet (7.5 m) – Approximate width of temporary construction area for pipeline installation

Acreage Breakdown (temporary + permanent):

- 38.6 acres – Rail Spur and Unloading Facility
- 4.1 acres – New Pipeline (mostly temporary impacts)
- 1.7 acres – Secondary Emergency Vehicle Access
- 4.5 acres – Internal Refinery Piping and Existing Track Upgrade

Collectively, the entire project, including temporary and permanent impacts, would affect approximately 48.9 acres. Of this area, a significant portion occurs within the existing refinery:

- 21.9 acres (45% of total) occurs within the existing industrial refinery area
- 27 acres occur in undeveloped areas and include portions of the rail extension, the new pipeline, and the secondary emergency vehicle access road (Figure 2).

As noted above, a significant portion of the impacts would be temporary during construction and affected plant communities would be returned to pre-project conditions following completion of construction.

Phillips 66 has designed all facilities based on geotechnical investigations and to minimize the potential for geological effects such as lateral spreading, subsidence, liquefaction, or soil collapse, and would incorporate design features such as stabilization fills, retaining walls, and removal of unstable materials if necessary.

<u>Alternatives</u>

Before selecting the proposed track configuration, Phillips 66 evaluated several alternatives, including 'teardrop' looped track configurations as well as a northern access track (see Figure 3 and supporting figures). The summary below compares these alternatives in terms of their areal extent, visibility from surrounding areas, amount of excavation and fill required, and potential ecological resource impacts.

Phillips 66 selected the straight track based its reduced effect on the environment compared to the other alternatives. The considered northern access would not accommodate the number of cars associated with the unit trains and was therefore technically infeasible, but also would have the highest impact on sensitive biological resources as it would need to cross the most dense population of the endangered Nipomo Mesa lupine. Both of the considered loop track configurations are challenged by the natural grade change at the southern end of the property where the Nipomo

Mesa drops to the Santa Maria Valley floor. To maintain the required turn radius for the trains and to meet the grade requirements for a flat track, both loop configurations would require substantial fill along the southern portions. The small loop would require import of approximately 448,000 cubic yards of fill to raise the southern portion of the property, resulting in substantial truck trips and construction-related dust, visual impacts (e.g., from Oso Flaco Road), and other issues. The large loop was extended in an effort to avoid the grade issue, but would also require substantial fill (though less than the small loop), would have the largest construction footprint, and would encroach on the sensitive open dune habitat directly east of the refinery. The straight track requires the least excavation/fill and maximizes avoidance of sensitive natural resources.

The table below describes some of the key considerations in comparing the alternatives.

| | **Northern Access Track** | **Small Loop Track** | **Large Loop Track** | **Straight Track (Proposed Project)** |
|---|---|---|---|---|
| **Approximate Affected Area** | Not quantified | 44.23-acre footprint + 44.34 acre area enclosed by track and fencing | 51.26-acre footprint + 66.27 acre area enclosed by track and fencing | 48.9-acre footprint |
| **Visibility** | Medium | Highly visible fill area – 44’ | Visible fill area – 25’ | Low |
| **Cut (excavation required)** | Not quantified | 154,000 cy | 349,000 cy | 120,000 cy |
| **Fill** | Not quantified | 448,000 cy | 218,000 cy | 117,000 cy |
| **Biological impacts** | Direct impacts on endangered Nipomo Mesa lupine | Close to dune sheet habitat (70 feet) | Direct impact on dune sheet habitat | No impacts to sensitive habitat or listed species |

The new facilities for the proposed project are described below.

Rail Spur Modification

Modification of the existing rail spur would include constructing up to five parallel ladder tracks, each long enough to hold an entire train (as the tracks extend east, some sets would merge reducing the affected area and the number of parallel tracks). The existing rail spur on the southern portion of the property currently provides rail access to the coke storage area and would provide a common entry point for the new tracks. Two tracks would surround an unloading rack and then would come together to form a common tail track at the east end. The tail track would allow the road locomotives to return to the common entry and leave the facility, if required, and would also allow switching the tank car strings onto and off of the unloading rack. The tail track would be long enough to accommodate two locomotives (and buffer cars) and the lead track would be long enough for 10 tank cars and the switching locomotives. A third track (the "runaround track") would allow locomotives to return to the front of the facility after dropping off an 80-car train on Track(s) 1 and (or) 2. A fourth track (Track A) would be constructed to receive a full unit train should Tracks 1 and 2 be occupied by unloading trains. The fifth track (Track B) would be used for queuing up empty cars after the unloading process is complete.

Mainline Turnout

Unit train service would not require substantial changes to the turnout from the Union Pacific mainline running north-south adjacent to the refinery. The turnout guides trains off the mainline onto the refinery's rail spur. Union Pacific may require a small change in the angle of the turnout (e.g., change from a turnout #10 to #11); however, if required, the construction of the new turnout would be a minor change from the current configuration and the construction would occur entirely within the existing disturbed track area. Because other trains continually pass through the Arroyo Grande/Santa Maria area on the Union Pacific mainline, the turnout must allow a unit train to clear the mainline without stopping. The existing rails would be replaced as part of the project.

Unloading Facility

The unloading facility would include an access platform and a system of pumps and meters, suction lines from the railcars, steam lines, and a common pipeline leading to the refinery's existing tank farm. Figure 4 provides plan and cross-section views of the proposed facility. View simulations of the facilities are provided with the figures supporting this document. The access platform would run parallel to the track, with an individual gangway and safety cage at each unloading station. The access platform

and tracks would be supported by reinforced concrete construction. This area would provide structural support, spill containment (see description below), and a clear, solid work surface for the operators.

The unloading facility would be designed around “train slots” (a track that can contain an entire unit train). Union Pacific bases the number of slots on the number of trains arriving per day and/or the yearly tonnage, and the ‘dwell period’ (the hours that the train would be at the facility.) Phillips 66 would unload up to five trains per week. Phillips 66 estimates that a complete 80-car train would be unloaded within 12 hours. The proposed two-slot facility would allow adequate capacity unloading.

Unloading System

The unloading facility would be equipped with a 24-car unloading system with individual positive displacement pumps. The unloading rack would be configured to unload two 12-car strings simultaneously. The 600-foot-long center platform would provide access to the tops of the railcars.

The system used to unload each car would consist of an adapter unit to connect the rail car to couplings, hoses, valves, flow meters and piping connecting to a 400 gallon-per-minute (gpm) positive displacement pump. The system may employ articulated loading arms as an alternative to flexible hoses. The loading rack would be the length of 12 cars; the four additional spots would allow unloading 20 cars of either 55 or 60 feet long.

Each car’s unloading system would be equipped with an air eliminator to remove vapors (mostly air) potentially mixed in with the product. Air is typically present at the beginning and end of unloading when liquid levels are low. Air removal protects the system’s flow meters and ensures accurate flow measurement. This air/vapor flow would be passed through two carbon beds piped in series. The filter medium would be regenerated as needed during operations. In addition, a small volume ‘prover’ would be installed to allow frequent proving of flow meters. Because of high planned flow rates, a truck-mounted prover would also be available.

A computer system would be used to control and monitor the unloading system’s pumps, air compressors, meters and its interface with the refinery’s tank system. A new 4160V-480V power distribution center would run the pumps, ventilation system, lighting, telephones, fire alarm and fire suppression systems. Power would be supplied initially from the Carbon Plant and subsequently by extending a line from the main substation in 2015.

Fire Protection and Safety System

A new fire protection and safety system would be installed for the unloading rack, consisting of fire detection equipment, safety showers, eyewash stations, pumps, hydrants, controls and piping. The unloading rack would be equipped with a foam sprinkler deluge system and firewater monitors with foam generators at the unloading rack periphery. The foam spray system would require a foam concentrate storage tank. The system specifications are provided below. The project would also include a secondary Emergency Vehicle Access route from the eastern end of the rail spur to Highway 1.

Foam/Water Deluge System

- Square footage under canopy: 32,860 $ft^2$
- Divide under canopy area into 5 zones of 6,572 $ft^2$ each
- Assume two adjacent zones will be activated in a fire
- Design density = 0.16 GPM/$ft^2$
- Flow rate required = 2 x 6572 x 0.16 = 2,104 GPM
- Provide additional flow of 2 x 500 GPM monitors = 1,000 GPM
- Total fire water flow required = 3,104 GPM
- Activation of deluge valves via manual pull stations (valves) or pilot sprinkler line
- Pilot sprinkler line shall have fusible heads rated at 175$^o$F
- Bladder tank for foam concentrate storage sized for two consecutive activations of two adjacent zones.
- Pressurizing of line downstream of deluge valve activates pressure switch for remote alarm and pressurizes hydraulic valve that opens to allow foam concentrate flow to ratio proportioner
- Assumed foam concentrate is 1% type

Foam/Water Monitors

- Monitors shall be self-educting nozzles with foam totes
- North side monitors will be mounted at grade approximately 50’ away from unloading cars
- South side monitors will be provided based on final road clearance dimensions (minimum clearance from empty cars on Track B).

Water Supply System

- Install approximately 2300 feet of 8-inch pipe from the existing water line at the Coke Control Room to the unloading rack area. The supply for this pipe comes

from incorporating the existing 6-inch water line and another 6-inch pipe in the area. The two lines will come together to supply the lower portion of the loop.

- Install approximately 2300 feet of 8inch pipe from the existing water line near the flare to the unloading rack area. The source of this line will either be at the 8-inch portion of the line or the 6-inch portion and will be replaced with 8-inch line to provide the adequate flow rate.
- Provide 8-inch fire water loop around the unloading rack.
- Provide two FDC's with check valve between for boosting of pressure in fire water loop at unloading rack (if necessary).
- Two new lines will tie together for a short run to allow for repumping by refinery fire truck pump into looped system around rack.

Pipeline

Downstream of the meter assembly, a new 24-inch above ground pipeline would be routed along an existing internal dirt road on the Phillips 66 property between the unloading facility and the refinery to connect with the existing crude oil storage tanks. This dirt road accommodates periodic on-site traffic only associated with refinery personnel traveling at low-speeds. The line would be approximately 1100-yards (1005 m) in length.

Access Roads

Paved access roads would be constructed near the unloading rack and around the rail spur for access by operations, safety, and maintenance crews. The access road surrounding the rail spur would be 24 feet in width along the southern side of the spur and 12 feet in width along the northern side. Appropriately sized turn-around areas meeting County and CalFire standards and a mid-way track crossing are also included to maximize efficiency in the event of an emergency. Additionally, an eastern Emergency Vehicle Access route would be constructed from the eastern end of the rail spur to Highway 1 following existing agricultural roads. The secondary access road would be improved with decomposed granite or comparable surfacing to support emergency vehicles as prescribed by CalFire but would not be paved.

Security Fence

As required by the U.S. Department of Homeland Security, an extension of the existing chain link fencing topped with barbed wire would be required around the periphery of the new tracks. Additional lighting would also be required, though light would be shielded down to minimize glare in adjacent areas.

Spill Containment and Response Facilities

Drain boxes would feed below-grade 16-inch-diameter drain lines routed to two parallel rectangular storage tanks (approximately 40,000 gallons total volume) located in a vault for containment. Two pumps would transfer any contained oil/water through a new pipeline into the existing refinery's oily water system. The system would be sized to contain the contents of one rail car as well as the foam and water that would be released from the fire suppression system.

Phillips 66 has a number of existing process safety policies and procedures that would apply to the rail project, including the equipment and operating procedures. These programs are designed to prevent releases of hazardous materials, minimize risk, and ensure the refinery's ability to process crude without increasing risk of releases. For example, the Mechanical Integrity Program covers equipment used to process, control, and store hazardous chemicals and assigns responsibility for equipment inspection and testing as well as maintenance. This program meets the requirements of CCR Title 8 Sec 5189, "Process Safety Management of Acutely Hazardous Materials" (f), (j) and 29 CFR 1910.119, "Process Safety Management of Highly Hazardous Chemicals" (j)

The refinery uses a Positive Material Identification (PMI) program to ensure the integrity of all mechanical and pressurized systems. This program is overseen by the refinery's Inspection Supervisor.

Any new feedstock coming to the refinery undergoes a complete Management of Change (MOC) analysis to ensure that all hazards, as well as the refinery's systems are safe and operable. The MOC program is part of the refinery's Process Safety Management program and tracks equipment modification, addition of new systems and process changes. MOC covers all changes that involve specific chemicals at or above threshold limits as defined in California Code of Regulation, Section 5189, Appendix A or flammable liquids or gasses as defined by California Code of Regulations, Section 5194(c) including new construction, modifications, changes in chemicals or materials, changes in feedstock, and changes in concentrations, temperatures, pressures, or flow rates outside of established Safe Process Limits.

The refinery is also covered by the California Accidental Release Prevention (CalARP) program, which is designed to prevent accidental releases potentially harming the public and the environment and to satisfy community right-to-know laws. Phillips 66 has prepared the required Risk Management Plan (RMP) to analyze the potential for accidents and development of operating procedures, training and maintenance

requirements, compliance audits and incident investigation. The refinery additionally has an approved Spill Prevention, Control and Countermeasure Plan (SPCC).

Support Buildings

The unloading facility would include a small parking area and restroom facilities. Both men's and women's restroom facilities would be served by potable water and a septic system for wastewater disposal. All septic system components would be constructed in accordance with applicable State and County regulations and State Regional Water Quality Control Board standards.

**Construction**

Construction would require contractor mobilization, construction site preparation, establishment of a staging and equipment laydown area, clearing and grading, removal of the existing rail turnout, laying new track, and assembling the unloading facility and pipeline. The last stage of construction would include demobilization, soil stabilization, restoring vegetation, and removal and disposal of construction wastes (e.g., demolition materials, packaging, and other solid waste).

After contractor mobilization, the site would be prepared, the limits of disturbance would be clearly marked, and initial clearing and grubbing would occur within the construction area. The site would be graded and any remaining soil would be managed on-site. If specified by Union Pacific, the existing rail turnout would be modified to accommodate the planned unit trains, including demolition/removal of approximately 1,300 feet of existing track and placement of a new turnout track and signal, if needed. This work would occur within the existing track corridor and would not require impacts outside the existing disturbed area.

The primary facilities, including the rail extension, unloading station and pipeline, would be constructed by Phillips 66 construction contractors. The number of construction workers would peak at approximately 200. Trucks would import construction materials and components (e.g., track segments, pipe), which would be stored on site in a laydown area. Track construction would include grading, soil compaction and stabilization, placement of sub-ballast and installation of rail, ties and ballast. Track ballast is used to form the rail track bed to allow drainage and to bear the weight of the rail cars. Delivery of construction materials would avoid peak traffic hours.

The unloading facility and system would be assembled adjacent to the completed tracks with connections to the refinery pipeline, stormwater collection system, and oily water treatment system.

Construction Schedule

The overall construction is anticipated to occur over a period of 9 – 10 months. In some cases, portions of the individual tasks below would occur concurrently.

- Turnout track replacement (if needed) – 2 months
- Grading/Soil Transport – 4 months
- Construction of Pipeline – 1 month
- Construction of Tracks – 4 months
- Construction of Unloading System – 2 months

**Project Operations**

Project operations would include unloading of up to five trains per week. Trains would arrive from different oilfields and/or crude oil loading points depending on market availability. In a unit train configuration, each train would consist of two locomotives, two buffer cars, and eighty railcars carrying 23,500 gallons each or seventy-three railcars carrying 30,000 gallons each depending on the car size, for a total of approximately 2,190,000 gallons (52,142 bbls) or 2,400,000 (57,143 bbls) of crude oil. In a manifest train configuration, varying number of railcars would be dropped off at SMR by a passing train. A dedicated locomotive would remain on-site to move cars.

Because trains would arrive at different times throughout the week, the number of workers would vary depending on the number of trains and worker arrival and departure time would vary throughout the day and night.

Unloading Sequence

The tracks and unloading rack would be designed to allow for the safe and efficient movement of multiple trains and cars in and out of the facility while minimizing the required space. Union Pacific locomotives would arrive on Union Pacific's mainline track heading south to the SMR. Locomotives would move tank cars into the unloading facility with 10 cars positioned at the unloading rack. Phillips 66 crews would manage movement of the rail cars on-site, unloading 10 cars at a time. Emptied cars would be moved to a storage track. After unloading all cars, train crews would attach locomotives

to the empty cars and depart to the west and then to the north and off the Phillips 66 property. Sufficient track would be available to store a second train should one arrive.

Workers would unload incoming unit trains and then disconnect the unloading pumps and prepare the railcars for departure. Phillips 66 would also refuel locomotives when the locomotives were used as switch engines to move the tank cars on and off the track. Locomotive refueling would be completed using a tank truck or a permanent refueling station with a fixed tank and fuel metering system. This process includes repressurizing the brakes using an air compressor system and replenishing the sand used by the locomotives for traction.

**Coastal Access Route**

As part of a separate Development Plan/Coastal Development Permit initiated in 2008 ("Throughput Project"; Permit DRC2008-00146) and approved by the San Luis Obispo County Board of Supervisors on February 26, 2013, Phillips may be required to construct vertical public access from Highway 1 to their western property line consistent with the County requirement in Section 23.04.420 – Coastal Access Required, as part of the Rail Spur Project. The access would lead into the Oceano Dunes State Vehicular Recreation Area. The size and alignment of such access, as well as the appropriateness of the access, considering the existing environmental setting, public safety concerns, and the current land uses in the area is currently under consideration by the California Coastal Commission and the County.

The County has requested that a feasibility study be prepared to consider coastal access across the SMR. That document is currently in preparation. For purposes of the current project description for the rail spur project, a representative coastal access route has been developed in accordance with the alignment proposed in the County Conditions of Approval for the Throughput Project generally following existing roads on the SMR property. One alternative route has also been proposed to avoid areas previously mapped to support the endangered Nipomo Mesa lupine (Figure 8 and Figure 9).

The conceptual routes considered are approximately 1.5 miles in length and 30-feet in width. The routes would require users to cross the active main railroad lines. It is assumed that the route would include a paved pedestrian and bicycle path. The access would not be intended to provide a new vehicle access route to the Oceano Dunes State Recreational Vehicles Area.

**Environmental Setting**

The Project is located on the coast of the Pacific Ocean just north of Santa Maria in unincorporated San Luis Obispo County near the City of Arroyo Grande, California. The Phillips 66 property is located near Highway 1, approximately five miles (8.05 km) south of the intersection of Highway 1 and Halcyon Road on the Nipomo Mesa in Arroyo Grande, San Luis Obispo County, California on Phillips 66 property just south of the existing refinery. The Phillips 66 Santa Maria Refinery is located within the governing jurisdiction of the County of San Luis Obispo, California. The approximately 1,650 acre (668 ha) property consists of three assessor's parcels within the South County Planning Area of San Luis Obispo County (Phillips 66, Applicant; APN #092-401-011, #092-401-013, #092-411-005, and #092-401-005).

The Phillips 66 property is bordered to the north by agriculture fields, industrial facilities and residential housing. It is bordered to the south by agriculture, by residential development to the east, and by undeveloped coastal dunes to the west. The proposed rail line spur originates in the refinery area and extends east. The Phillips 66 property supports the existing refinery and cattle grazing, with central dune scrub habitat that has experienced moderate to heavy disturbance from various agricultural land uses. Five sensitive wildlife species (western burrowing owl, loggerhead shrike, Bell's sage sparrow, northern harrier, and Cooper's hawk) were observed during biological surveys. Two sensitive wildlife species (coast horned lizard and silvery legless lizard) are assumed present. Ecological resources are discussed in detail in the submitted botanical and wildlife reports.

## 1. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

| | | |
|---|---|---|
| ☐ Aesthetics | ☐ Agriculture and Forestry Resources | ☐ Air Quality |
| ☐ Biological Resources | ☐ Cultural Resources | ☐ Geology /Soils |
| ☐ Greenhouse Gas Emissions | ☐ Hazards & Hazardous Materials | ☐ Hydrology / Water Quality |
| ☐ Land Use / Planning | ☐ Mineral Resources | ☐ Noise |
| ☐ Population / Housing | ☐ Public Services | ☐ Recreation |
| ☐ Transportation/Traffic | ☐ Utilities / Service Systems | ☐ Mandatory Findings of Significance |

Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the

earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

| | |
|---|---|
| Signature | Date |
| Signature | Date |

## 2. Evaluation of Environmental Impacts

The following impact assessment evaluates the potential environmental effects of the proposed project. Pursuant to CEQA, evaluation of the effects must take account of the whole action involved, including direct, indirect and cumulative impacts of construction and operations. The terms used to describe potential impacts is described below.

- A "Potentially Significant Impact" is designated if a project-related effect exceeds the thresholds of significance for the impact area, or if the lead agency lacks information to make a finding of insignificance. The thresholds of significance for each technical discipline (e.g. air quality, biology, cultural resources, etc.) are provided in the specific discussions that follow.

- An impact that is "Less Than Significant with Mitigation Incorporation" when mitigation measures effectively reduce an otherwise potentially significant impact to less than significant.

- A "Less Than Significant Impact" is used when an environmental effect is present, but is minor in nature and/or not adverse, or is less than significant with application and enforcement of regulations and standards.

- "No Impact" indicates that the project does not affect the resource.

### Indirect Effects and Scope of Analysis

CEQA requires analysis of the significant effects of a proposed project, including both direct and indirect effects [CEQA Guidelines § 15126.2(a)]. Direct or primary effects are physical changes in the environment that are caused by the project and occur at the same time and location as the project. Indirect or secondary effects are physical changes in the environment caused by the project that may occur later in time or farther removed in distance, but that are still reasonably foreseeable [CEQA Guidelines § 15358(a)]. A change that is speculative is not reasonably foreseeable [CEQA Guidelines § 15064(d)(3)]. While preparation of an EIR necessarily involves a degree of forecasting, and an agency must use its best efforts to find out and disclose all that it reasonably can, CEQA acknowledges that some impacts may be too remote or speculative to forecast and analyze [CEQA Guidelines § 15144.] Where a particular impact is too speculative, the lead agency should note its conclusion and terminate the

discussion [CEQA Guidelines § 15145]. The analysis need not be exhaustive, but must reflect the degree of analysis that is reasonably feasible [CEQA Guidelines § 15151].

The proposed project consists of constructing certain physical components at the existing SMR, including modification and extension of the existing rail spur, a new unloading facility, new pipelines and access roads, and a restroom. As described in the Project Purpose and Objectives, the project will allow the refinery to safely and efficiently transfer crude oil from rail cars to the existing refinery storage tanks for processing, which also increases Phillips 66's flexibility to procure and process a greater range of crude oil at SMR. This increased flexibility has two inherent uncertainties including the oil source and the route over which the oil is transported to the refinery.

1. **Oil Source**. Crude oil procurement is highly competitive and often involves a mixture of short and long term contracts to provide steady and economically balanced supply of feedstocks to a refinery. Crude prices are extremely volatile and prices can vary by region and quality of grade. As the crude market becomes more global with competition for feedstocks coming from Asia and other developing nations it is becoming more important than ever for refineries to be able to source crudes from various markets. US refineries are increasingly looking to replace expensive foreign imports with domestic crudes. These domestic sources are not only changing the landscape of crude oil supply, but of the supply system itself. Given these market dynamics it is not feasible to accurately project what crude will be economical to process in the future, where that economically-viable crude will be produced, or what supply route it will take to the refinery, as it is changing on a continual basis in response to market conditions.

2. **Conveyance Route**. The route the trains would take in transporting the crude oil from the oilfield to the refinery is uncertain, even if the point of origin were known. Although the frequency and routes of additional trains (and the associated indirect environmental effects) can be estimated close to the refinery, forecasting transportation routes and the associated impacts becomes increasingly uncertain and speculative once the analysis attempts to predict routes outside the UPRR corridor leading to SMR from the north and south. Trains visiting the refinery may enter San Luis Obispo County from the north or the south on Union Pacific's Coast Line. However, beyond the County boundary (in the Bay Area to the north and near Ventura to the south), the

Coast Line connects to a complex web of rail route options branching across North America.[1]

For example, there are at least nine points of rail entry into the State of California, and many routes and subroutes that might be followed from the State border to the refinery. Beyond the California border, the options are even greater. The specific route that might be taken by a unit train would not be determined by Phillips 66 and would depend upon the point of origin (which, as described, is not known and would not be fixed or permanent), the shipper, the carrier, the volume of traffic scheduled for possible route alternatives, and the priority placed on the cargo. Even season and weather across the country can play a role. In addition to these factors, even more variables will affect the route of a manifest train that delivers only a few cars to the refinery. For example, the routing of a manifest train will be influenced by the dominant cargo, its point of origin and its destination, and the location of rail yards or other transshipment points convenient to the crude producing regions or along the route.

To illustrate the complications inherent in analyzing potential crude oil distribution routes to SMR, Figure 4 overlays the major oil production regions in the US, the major rail lines in the US, and the US refineries.

Moreover, the project is not expected to affect the quantity of crude oil produced or transported by rail throughout North America. The volume of crude that will be transported to the refinery as a result of this project is a very small fraction of North American crude production. The project is expected to result in delivery of up to 13.5 million barrels per year of crude to the refinery, compared to the nearly 2.4 billion barrels of crude oil produced in the United States in 2012[2].

Crude production is part of a highly integrated, global crude and liquid fuels market affected by many factors independent of the proposed project. EIA (2013) projects that U.S. crude production will continue to increase in at least the near term years. These

---

[1] Association of American Railroads, *Moving Crude Oil By Rail*, May 2013, available at https://www.aar.org/keyissues/Documents/Background-Papers/Crude-oil-by-rail.pdf

[2] U.S. Energy Information Administration (EIA), available at http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=mcrfpus1&f=a .

data and projections demonstrate that the proposed project will have little if any influence on North American crude production.

Similarly, recent data and projections demonstrate that crude transportation by rail will occur independent of the proposed project. Given the lack of existing refineries in many crude producing regions, and the inadequate capacity of current pipeline infrastructure connecting them to refining regions, a considerable and increasing quantity of crude oil production will be moving to refineries by rail[3]. This would occur with or without the proposed project. Therefore, while the project will affect the rail transport of crude oil near the refinery, it will have little effect on the quantity of crude oil moving by rail across North America, or associated environmental impacts.

For these reasons, the environmental evaluations presented in this document address potential environmental effects in the project area and in the State of California; Quantification of impacts outside this region are too uncertain and speculative to warrant detailed evaluation, but are addressed qualitatively wherever feasible to facilitate informed decision-making.

The direct and indirect impacts of the proposed project can be compared with other industries that transport a commodity for processing and distribution of the resulting project (e.g, the impacts associated with the transport of logs from forests for production and distribution of lumber are not typically considered in the environmental assessment for a construction project that will rely on the lumber). Similarly major public destination attractions (e.g, theme parks, stadiums) may generate traffic at great distances, however, while the effects of these facilities can be quantified locally, the impacts become increasingly speculative with increasing distance from the site. Therefore, where reasonable assumptions can be made regarding project impacts associated with rail shipments to and from the Site, they are described and quantified in this Initial Study. However, potential impacts that may occur beyond the defined affected area are considered too speculative and/or diffuse for feasible analysis. Even so, it is reasonable to conclude that they would be less frequent and less intense with distance, as the rail network branches out. Finally, neither the production of crude oil nor the rail transportation farther from the refinery are considered to be consequences of the proposed project.

---

[3] Association of American Railroads, Moving Crude Oil By Rail, May 2013, available at https://www.aar.org/keyissues/Documents/Background-Papers/Crude-oil-by-rail.pdf .

## 3. Environmental Impacts Checklist

### Aesthetics

| 1. | Aesthetics | | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|---|
| | Would the project: | | | | | |
| | a) | Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ☒ | ☐ |
| | b) | Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | ☐ | ☐ | ☐ | ☒ |
| | c) | Substantially degrade the existing visual character or quality of the site and its surroundings? | ☐ | ☐ | ☒ | ☐ |
| | d) | Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | ☐ | ☐ | ☐ | ☒ |
| | e) | Impact unique geological or physical features? | ☐ | ☐ | ☐ | ☒ |

**Conclusion:**

**a) Less than Significant Impact.** The proposed project is located in unincorporated San Luis Obispo County generally west of the community of Nipomo. Land to the north is zoned for industrial and residential land use and supports mobile home storage and residential homes. Industrial, agriculture, and recreation classifications are to the east consisting of vacant land, farmland, and a golf course with homes. Farmland lies to the south with an agriculture classification. Immediately west is the Southern Pacific Railroad. Beyond that area is a mix of recreation and open space classifications including the Pismo Dunes State Vehicular Recreation Area and a sensitive resource area.

There are few public vantage points from which the project would be visible; the upper portions of existing refinery structures may be viewed in the middle ground (at a range of 0.5 miles to 2 miles) from Highway 1 by motorists and others on the roadway. Shorter and smaller structures are shielded from view by the local topography and vegetation. A public road runs to the refinery; this road dead-ends at the refinery and primarily carries refinery-related traffic.

The Phillips 66 property is open to public view from locations along Highway 1 and local roads, though the existing topography limits views of the SMR property. The most common viewer group would likely be motorists, with agricultural workers comprising an additional viewer group. The new infrastructure and rail cars, when present, would not be visible from any existing residence.

The project would introduce a new industrial feature (rail cars and rail tracks) on a property currently characterized by the infrastructure of the existing refinery and grazed open space. Existing infrastructure is visible in the background from Highway 1 and local roads. Surrounding lands are used for intensive agriculture, for the storage of recreational vehicles, and for vehicle recycling.

Along Highway 1, topography, existing roadside vegetation, and existing structures effectively shield views of the project from much of the length of adjacent stretches of Highway 1. As a result, the project would be visible from only a few locations along Highway 1. The attached view simulations provide a visual representation showing that the physical rail infrastructure and associated facilities would not be visible from the segment of Highway 1 to the northeast. However, the tank cars on the new tracks would be visible. The tank cars represent a new use of this portion of the property, which is currently grazed. The existing view from this location is dominated by open space in the foreground, with existing vertical refinery facilities, dunes, and the Pacific Ocean visible in the background; colors are muted. The tank cars, when present on the Phillips 66 property, would represent a new, horizontal linear form of a discordant coloration. Motorists traveling this stretch of Highway 1 would have only a brief time to view the tank cars; southbound drivers could view the tank cars while traveling over a distance of less than 0.5 miles from the viewing location, and the project would be visible to northbound drivers for an even shorter time because of the location and alignment of the rail tracks and area topography. At a speed of 55 miles per hour, motorists would be able to view the tank cars for less than one minute each. As such, the tank cars would be visible, but would not dominate the viewshed.

Included with the view simulations is a view of the tank cars at the unloading facility from the perspective of motorists from the south on Oso Flaco Lake Road and agricultural workers working in adjacent fields. Additionally, a perspective from the east along Highway 1 is provided. The foreground and middleground views along Oso Flaco Road are dominated by long rows of agricultural crops aligned both parallel and perpendicular to the road; vegetated and bare dunes are visible in the middle and background, as is the existing refinery. The rail tracks and associated infrastructure would not be visible from the road or adjoining fields, but the tank cars would be visible at a distance of more than 1 mile. Given the distance from Oso Flaco Road and Highway 1 and the expansive views from these areas and the surrounding topography, the tank cars would be visible, but would not dominate the viewshed.

The project represents a new industrial activity on a portion of the Phillips 66 property that is designated for industrial use but is undeveloped to date; as such, the project would represent an aesthetic change to that portion of the property. However, the current aesthetic of the Phillips 66 property includes heavy industry and given that the existing refinery infrastructure is visible from Highway 1 and local roads, the additional related infrastructure is in context with the current conditions. Additionally, the presence of other horizontal linear features in the area reduces the significance of the proposed horizontal linear construction. Other linear features include Highway 1 and other roadways, substantial row crops acreage, existing railroad tracks and infrastructure, planted hedges, and other agricultural features (e.g., field boundaries). In

addition, the affected environment includes industrial and agricultural areas to the south and north; and the light industrial aesthetic of adjacent lands to the north. Combined with the fact that public view of the project infrastructure is limited, visual effects would be less than significant.

**b) No Impact.** There are no known unique geological or physical features on the site, and thus there would be no impacts under this criterion.

**c) Less than Significant Impact.** The visual character of the Phillips 66 property is industrial in nature; the visual character of the surrounding area is defined by light industrial, agricultural, and residential uses, and transportation infrastructure (roads and railroad infrastructure). Bare and vegetated dunes and riparian areas are visible in the background. As presented in (a) above, the development of additional low-profile rail transport infrastructure and associated facilities, which are currently present in the existing environment, would result in a less than significant aesthetic change; similarly, and for the same reasons, the proposed project would result in a less than significant change in the visual character of the area.

**d) No Impact.** It is anticipated that all construction activities would occur during daytime hours, and thus construction equipment and activities would not be a source of night lighting. The typical construction equipment used to construct the rail and associated infrastructure would not be a source of glare.

The unloading facility roof would be low-profile and painted to blend in with colors in the surrounding environment and with the existing refinery infrastructure, and the rail cars would generally be a matte, dark color as shown in the accompanying visual simulations. As such, the new physical infrastructure and rail cars would not be a source of glare that could affect surrounding areas.

During operation, the unloading facilities and other new structures would be illuminated for safety and security. Lights would be shielded and directed to minimize the emission of light, would be located at a considerable distance from any viewing location, and would be few in number compared with those on existing refinery facilities. Therefore, lighting effects from the illumination of the new facilities would be less than significant.

**e) No Impact.** There are no identified scenic views in the vicinity of the proposed project. Therefore, neither construction nor operation would introduce a use within a scenic view open to the public and there would be no impact.

**Agriculture and Forest Resources**

| 2. | **Agriculture and Forest Resources** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|---|
| | Would the project: | | | | | |
| | a) | Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | ☐ | ☐ | ☐ | ☒ |
| | b) | Conflict with existing zoning for agricultural use, or a Williamson Act contract? | ☐ | ☐ | ☐ | ☒ |
| | c) | Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | ☐ | ☐ | ☐ | ☒ |
| | d) | Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |
| | e) | Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | ☐ | ☐ | ☒ | ☐ |

**Conclusion:**

**a) No impact.** California Public Resources Code Section 21060.1 defines agricultural land as "prime farmland, farmland of statewide importance, or unique farmland, as defined by the United States Department of Agriculture land inventory and monitoring criteria, as modified for California." The State of California has modified the farmland classifications such that no farmland would be designated as Prime Farmland or Farmland of Statewide Importance unless it is irrigated.

The project would not be located on lands categorized as prime farmland, farmland of statewide importance, or unique farmland. Portions of the Phillips 66 property are classified as farmland of local potential, a designation applied to lands having the potential for farmland due to characteristics similar to prime farmlands or farmlands of statewide importance, but which are not cultivated. This designation is reflected in the categorization of lands between Phillips 66 and State Highway 1 as farmlands of statewide importance, and lands between the coke pile and Oso Flaco Creek as prime farmlands (California

Department of Conservation 2010a).

The project would not affect prime farmland, unique farmland, or farmland of statewide importance; therefore, no such lands would be converted to nonagricultural use. Therefore, no impacts due to project construction or operation would occur under this criterion.

**b) No impact.** Chapter 22.112—South County Planning area, provides standards which apply within the rural portion of the South County planning area outside of urban and village reserve lines and outside the coastal zone, including the Phillips 66 property and the site. These standards include standards for the Agricultural (Ag) land use category. Agricultural land uses are common in the vicinity. The majority of agricultural land (approximately 1.1 million acres) in San Luis Obispo County is utilized as rangeland for cattle (San Luis Obispo County Department of Agriculture 2011). The Phillips 66 property is not zoned for agricultural land uses, but is partially utilized for grazing, which is an allowable land use on parcels zoned as Industrial (IND) (San Luis Obispo County Code – Title 22).

**c) No impact.** Forest lands are defined in California Public Resources Code Section 12220(g) as being capable of supporting "10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." California Department of Forestry and Fire Protection (CalFire) has categorized lands within San Luis Obispo County that have greater than 10 percent tree density. Although portions of the project area have tree densities greater than 10 percent (CalFire 2002), field observations and mapping indicate that the CalFire dataset does not accurately represent site vegetation and the vegetation present does not meet the above definition of forest lands; therefore, no areas within or surrounding the project site or Phillips 66 property are considered forest lands.

Timberland production zones are defined in California Public Resources Code Section 51104(g) as land that is "zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses." Although forestry is an allowable land use on agricultural-zoned land, such as the project site (as stated in Chapter 22.112-South County Planning area), no lands meeting the criteria of forest land as defined in Public Resources Code section 12220(g) are present. No timberland or lands zoned Timberland Production as defined above are present. Therefore, construction and operation would have no impacts.

**d) No impact.** Forest lands are defined in California Public Resources Code Section 12220(g) as being capable of supporting "10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." California Department of Forestry and Fire Protection (CalFire) has categorized lands within San Luis Obispo County that have

greater than 10 percent tree density. Although portions of the project area have tree densities greater than 10 percent (CalFire 2002), field observations and mapping indicate that the CalFire dataset does not accurately represent site vegetation and the vegetation present does not meet the above definition of forest lands; therefore, no areas within or surrounding the site are considered forest lands.

No lands meeting the criteria of forest land as defined in Public Resources Code section 12220(g) are present. No timberland or lands zoned Timberland Production as defined above are present. Therefore, construction and operation would have no impacts.

**e) Less than Significant Impact.** Grazing activities would likely be prohibited during construction and the total available grazing area on the Phillips 66 property would be reduced due to the project. Existing agreements would not prohibit a reduction in availability of grazing on the Phillips 66 property. The project site (30 acres) represents a small portion of the available and currently used grazing area. In a regional context, the excluded fenced area would represent an inconsequential portion of the 1.1 million acres of utilized rangeland in San Luis Obispo County, and impacts under this criterion would be less than significant. No other conversion of farmland or forest land would occur.

**References:**

California Department of Conservation. 2010a. San Luis Obispo County Important Farmlan 2008. Available at: ftp://ftp.consrv.ca.gov/pub/dlrp/fmmp/pdf/2008/slo08.pdf. Accessed: October 11, 2012.

California Department of Conservation. 2010b. San Luis Obispo County Williamson Act Lands 2009. Available at: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/San_Luis_Obispo_WA_08_09.pdf. Accessed: October 11, 2012.

California Department of Forestry and Fire Protection (CalFire). 2002. Multi-source Land Coveer Data. Version v02_2. Available at: http://frap.cdf.ca.gov/data/frapgisdata/select.asp?htmlid=496&camefrom=http://frap.cdf.ca.gov/projects/frap_veg/index.html&cameFromStr=FRAP%20Multi-Source%20Vegetation%20Data. Accessed: October 2, 2012.

San Luis County Department of Agriculture. 2011. 2011 Annual Report. Division of Weights & Measures. 16 pages. Available at: www.slocounty.ca.gov/Assets/AG/croprep/2011CropReport.pdf. Accessed: October 11, 2012.

**Air Quality**

| 3. | **Air Quality** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|---|
| | Would the project: | | | | | |
| | a) | Conflict with or obstruct implementation of the applicable air quality plan? | ☐ | ☐ | ☒ | ☐ |
| | b) | Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | ☐ | ☐ | ☒ | ☐ |
| | c) | Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | ☐ | ☐ | ☒ | ☐ |
| | d) | Expose sensitive receptors to substantial pollutant concentrations | ☐ | ☐ | ☒ | ☐ |
| | e) | Create objectionable odors affecting a substantial number of people? | ☐ | ☐ | ☒ | ☐ |
| | f) | Violate any state or federal ambient air quality standards, or exceed air quality emission thresholds as established by County Air Pollution Control District? | ☐ | ☐ | ☒ | ☐ |

**Conclusion:**

**a) Less Than Significant Impact.** The San Luis Obispo Air Pollution Control District (SLO APCD)'s primary means of implementing air quality plans is by adopting and enforcing rules and regulations. Project construction would not conflict with or obstruct implementation of any SLO APCD air quality plans, rules, or regulations that outline the long-term strategies designed to have regional air quality comply with National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS).

The emission inventory, as part of the plan, includes emissions from off-road equipment, such as construction equipment and fugitive dust. The emissions associated with project construction would be temporary and would only represent a very small fraction of the regional emission inventory included in the plan. Thus, project construction emissions are not expected to substantially contribute to regional emissions. Project construction and operational equipment would also be operated in compliance with applicable local, state, and federal regulations.

The project would not emit significant levels of pollutants after the application of project design features

during construction and operation. Therefore, no conflicts with the SLO APCD plans would result from construction and operation of the project.

**b) Less Than Significant Impact.** Emissions generated from construction would result in temporary increases in ambient air pollutant concentrations. The SLO APCD has developed threshold criteria to determine the significance and appropriate mitigation for short-term construction emissions. The project would apply the required measures to reduce construction emissions to a less than significant level. These measures include :

Implementation of the Standard Mitigation Measures for Construction Equipment for Reducing nitrogen oxide (NOx), reactive organic gases (ROG), and diesel particulate matter (DPM) emissions as listed in Section 2.3.1 of the SLO APCD's 2012 CEQA Handbook

Implementation of Best Available Control Technology (BACT) for Construction Equipment (Section 2.3.2 of the SLO APCD's 2012 CEQA Handbook)

Implementation of Fugitive Dust Mitigation Measures for areas greater than 4-acres (Section 2.4 of the SLO APCD's 2012 CEQA Handbook)

With the inclusion of these measures, construction emissions would have a less than significant impact.

The project would generate an increase in operational air emissions from locomotives transporting crude oil in rail tankers along the new rail spur, unloading of crude oil from rail tankers at the facility, and use of facility equipment, including new pumps, compressors, and tank trucks[4]. Operational emissions would exceed SLO APCD significance thresholds. However, the project proponent would utilize emission offsets to reduce the project emissions below significance thresholds. With offsets applied to the project, operational emissions would result in a less than significant impact

**c) Less Than Significant Impact**. The project would occur in areas designated as nonattainment for ozone precursors (NOx and ROG), and $PM_{10}$. As indicated above, the short-term and long-term impacts would be less than significant

**d) Less Than Significant Impact**. Potential toxic air contaminant (TAC) emissions would result from mobile sources (trains) and equipment. Health impacts associated with the incremental increase in TACs

[4] Tank trucks will be used to refuel the on-site locomotives used as switch engines, which move the tank cars on and off the tracks.

are unlikely to result in a significant impact. Before the equipment is permitted, the SLO APCD would require a health risk assessment to ensure the cancer risk is below the threshold of 10 in a million and a chronic non-cancer hazard index of 1.0. Therefore, the total health impact would be less than the SLO ACPD significance thresholds and would result in a less than significant impact.

**e) Less Than Significant Impact.** Potential odors associated with the project would be from diesel exhaust during the construction period and at limited times during operation from equipment and mobile sources. These odors, if perceptible, are common in the environment associated with existing traffic and construction projects throughout the air basin, and would dissipate rapidly as they mix with the surrounding air. The site occurs in an area of frequent high winds; however, odors are managed by implementing the existing Odor Control Plan for the site. Therefore, any potential odor impacts would be less than significant.

**f) Less Than Significant Impact.** Emissions generated from construction would result in temporary increases in ambient air pollutant concentrations. The SLO APCD has developed threshold criteria to determine the significance and appropriate mitigation for short-term construction emissions. The project would apply the required measures to reduce construction emissions to a less than significant level.

The project would generate an increase in operational air emissions due to locomotives transporting crude oil in rail tankers along new rail spur, unloading of crude oil from rail tankers at the facility, and use of facility equipment, including the new pumps, compressors, and tank trucks. With the application of offsets, operational emissions would result in a less than significant impact.

Air pollutant emissions were estimated using the CalEEMod model for both on-road and off-road sources. CalEEMod calculates air pollutant emissions from land use sources and incorporates CARB's EMFAC2007 model for on-road vehicle emissions and CARB's OFFROAD2007 model for off-road vehicle emissions. The model also incorporates factors specific to the project region, such as vehicle fleet mixes. The emission estimates reflect a conservative calculation based on estimated total use of each type of equipment anticipated for construction. Construction and operations emissions within SLO County boundaries are shown in Tables 3-3.1 and 3-3.2.

**Table 3-3.1**

**Summary of Construction Emissions**

| Pollutant | Daily (pounds) | | Quarterly (tons) | | |
|---|---|---|---|---|---|
| | Threshold | Project | Threshold Tier 1 | Threshold Tier 2 | Project |
| ROG + NOx (combined) | 137 | **263** | 2.5 | 6.3 | **5** |
| Diesel Particulate Matter (DPM) | 7 | **10** | 0.13 | 0.32 | **0.18** |
| Fugitive Particulate Matter ($PM_{10}$) Dust | NT | NT | 2.5 | NT | 0.5 |

**Notes:**
Full calculations, a detailed analysis, and assumptions are included in Appendix A.
NT = No Threshold
Bold indicates pollutants requiring measures to reduce to a less than significant threshold

**Table 3-3.2**

**Summary of Operational Emissions within SLO County Boundaries**

| Pollutant | Daily (pounds) | | | Annual (tons) | | |
|---|---|---|---|---|---|---|
| | Threshold | Project without Offsets | Projects with Offsets | Threshold | Project without Offsets | Projects with Offsets |
| ROG + NOx (combined) | 25 | 230 | 24 | 25 | 41 | 24 |
| Diesel Particulate Matter (DPM) | 1.25 | 6 | 1.0 | NT | | |
| Fugitive Particulate Matter ($PM_{10}$) Dust | 25 | 3 | 3 | 25 | 0.05 | 0.05 |
| CO | 550 | 48 | 48 | NT | | |

**Notes:**
Full calculations, a detailed analysis, and assumptions are included in Appendix A.
NT = No Threshold

**References:**

California Air Pollution Control Officers Association. California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities. February 1999.

California Air Resources Board, EMFAC 2007 Emission Factors Model. v2.3. 2006.

California Air Resources Board, OFFROAD2007 Mobile Source Emissions Inventory Program. 2007.

ENVIRON. California Emissions Estimator Model (CalEEMod). Version 2011.1. February 2011.

San Luis Obispo County Air Pollution Control District, CEQA Air Quality Handbook. A Guide for Assessing the Air Quality Impacts for Projects Subject to CEQA Review. April 2012.

United States Environmental Protection Agency. Emission Factors for Locomotives. Office of Transportation and Air Quality. EPA-420-F-09-025.April 2009.

**Biological Resources**

| 4. | **Biological Resources** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|---|
| | Would the project: | | | | | |
| | a) | Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ |
| | b) | Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? | ☐ | ☐ | ☐ | ☒ |
| | c) | Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | ☐ | ☐ | ☐ | ☒ |
| | d) | Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | ☐ | ☐ | ☒ | ☐ |
| | e) | Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☐ | ☐ | ☒ |
| | f) | Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | ☐ | ☐ | ☐ | ☒ |

**Conclusion:**

**a) Less Than Significant With Mitigation Incorporation.** No state or federally listed threatened or endangered species were observed during focused biological surveys of the Site, however one state and federally listed endangered plant species, Nipomo Mesa lupine (*Lupinus nipomoensis*), is known to occur on the Phillips 66 property outside of the project footprint. Four sensitive plant species and four sensitive wildlife species were observed; two other sensitive wildlife species were not observed but are assumed to occur (see description below). One sensitive plant association occurs on the proposed site outside of the project footprint.

No impacts on state or federally listed or candidate species are anticipated. The project would likely result in impacts on coast horned lizards (*Phrynosoma coronatum*) and silvery legless lizards (*Anniella purlchra*), both CDFW special concern species. These species are often difficult to detect during preconstruction surveys and are likely to occur within the project footprint. Both are vulnerable to clearing activity and grading.

Because the project would involve grading of only a small portion of the Phillips 66 property and would limit surface grading to the maximum extent feasible, both coast horned lizards and silvery legless lizards would persist in adjacent open areas such that the community level impacts on these species would be less than significant.

The project may also adversely impact other special status wildlife species. Appropriate habitat characteristics for certain sensitive wildlife and direct observation of five sensitive wildlife species are present. The loggerhead shrike (*Lanius ludovicianus*), western burrowing owl (*Athene cunicularia*), northern harrier (*Circus cyaneus*) and Cooper's hawk (*Accipiter cooperii*) were each observed. However, of these, only the loggerhead shrike would be likely to nest on the site. Nesting raptors are protected under state and federal law during active breeding (CA Fish and Game Code, Migratory Bird Treaty Act). The American badger (*Taxidea taxus*), also a CDFW special concern species, may occur periodically though no individuals or direct evidence of their presence was observed.

One endangered plant species, Nipomo Mesa lupine (*Lupinus nipomoensis*) is known to occur on the Phillips 66 property outside of the project footprint. Four sensitive plant species (California spineflower [*Mucronea californica*], Blochman's groundsel [*Senecio blochmaniae*], Blochman's leafy daisy [*Erigeron blochmaniae*], and sand almond [*Prunus fasciculata* var*. punctata*]) were observed on the site during the 2012 survey. Blochman's leafy daisy is listed by the California Native Plant Society (CNPS) on List 1B.2 for plants fairly endangered in California and the remaining species occur on List 4 (a 'Watch List').

Implementation of the proposed impact avoidance and minimization measures described in the sensitive species reports and assumed to be consistent with the project description would reduce impacts on biological resources and ecological functions to a less than significant level.

**b) No Impact**. A portion of Oso Flaco Creek occurs near the southern property line of the Phillips 66 property. The creek supports riparian habitat. However, work associated with extension of the rail line is separated from the riparian area by at least 1000 feet except where the secondary Emergency Vehicle Access follows the existing road closer to the creek (see Biological Reports). There are no drainages, ditches, culverts or other surficial hydrologic pathways that connect Oso Flaco Creek to the Site, though the creek occurs at the base of the mesa below the project that occurs up on the mesa. Activities associated with the project would not directly impact or have a significant effect on the riparian corridor

represented by Oso Flaco Creek.

**c) No Impact**. The project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act. The U.S. Fish and Wildlife Service National Wetlands Inventory maps show Oso Flaco Creek as a wetland supporting freshwater forested/ shrub and freshwater marsh habitat. However, as mentioned above (b), there are no drainages, ditches, culverts or other surficial hydrologic pathways that connect Oso Flaco Creek to the site. No impacts on jurisdictional wetland habitat, non-jurisdictional wetland habitat, or other Waters of the US are anticipated.

**d) Less than Significant**. The project involves extending the existing rail spur into currently undeveloped remnant central dune scrub habitat. The tracks would not pose a barrier or interfere substantially with the movement of wildlife species moving through the larger Phillips 66 property or region. Silvery legless lizards and possibly coast horned lizards occurring on one side of the tracks or the other are unlikely to cross the tracks but would use other open areas such that the impact on these species would be less than significant.

**e) No Impact.** Chapter 3 of the San Luis Obispo General Plan-Conservation and Open Space Element discusses protection of biological resources. San Luis Obispo County has also established a Southern Planning Area Land Use Ordinance. No conflicts between the proposed project and local policies or ordinances were identified.

**f) No Impact**. There are no applicable adopted Habitat Conservation Plans (HCP), Natural Community Conservation Plans (NCCP), or other approved local, regional, or state habitat conservation plans. Therefore, the project would not conflict with any HCP, NCCP, or other approved conservation plan and no impacts would result.

**References:**

California Department of Fish and Wildlife (CDFW). 2013. Natural Diversity Data Base RareFind 4. Sacramento, California.

California Native Plant Society (CNPS). 2013. Inventory of Rare and Endangered Plants (online edition). Rare Plant Scientific Advisory Committee. California Native Plant Society. Sacramento, California. www.cnps.org/inventory.

County of San Luis Obispo General Plan Conservation and Open Space Element. 2010. San Luis Obispo Department of Planning and Building. San Luis Obispo, California.

County of San Luis Obispo – San Luis Obispo County Code – Title 22, Land Use Ordinance. 2012.

Chapter 22.112-South County Planning Area. http://www.slocounty.ca.gov/Assets/PL/Land

U.S. Fish and Wildlife Service – National Wetlands Inventory. 2012. http://www.fws.gov/wetlands/Data/Mapper.htm

**Cultural Resources**

| 5. | **Cultural Resources** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|---|
| | Would the project: | | | | | |
| | a) | Cause a substantial adverse change in the significance of an historical resource as defined in Section 15064.5? | ☐ | ☒ | ☐ | ☐ |
| | b) | Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? | ☐ | ☒ | ☐ | ☐ |
| | c) | Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature of paleontological or cultural value? | ☐ | ☒ | ☐ | ☐ |
| | d) | Disturb any human remains, including those interred outside of formal cemeteries? | ☐ | ☒ | ☐ | ☐ |
| | e) | Disturb unique architectural features or the character of surrounding buildings? | ☐ | ☐ | ☐ | ☒ |
| | f) | Disturb pre-historic resources? | ☐ | ☒ | ☐ | ☐ |
| | g) | Disturb historic resources? | ☐ | ☒ | ☐ | ☐ |

**Conclusion:**

**a) Less Than Significant With Mitigation Incorporation**. The CCIC (2012) records search indicated one previously recorded historical resource is present within the project area with additional archaeological resources identified within a one mile radius. A pedestrian survey of the project site confirmed the location of site CA-SLO-1190 within the proposed Emergency Vehicle Access road; no other historical resources were identified (Glenn, 2013). The potential for buried historical resources to be present and obscured by accumulated sediment is moderate to high. Mitigation measures CULT-1 and CULT 2 would reduce this potential impact on historical resources to less than significant.

**b) Less Than Significant With Mitigation Incorporation**. The CCIC (2012) records search indicated one previously recorded archaeological siteis present on the site with additional archaeological resources identified within a one mile radius. Pedestrian survey of the project site confirmed the location of site CA-SLO-1190 within the proposed Emergency Vehicle Access road; no other archaeological resources were identifieid (Glenn, 2013). The potential for buried archaeological sites to be present and obscured by accumulated sediment is moderate to high. Mitigation measures CULT-1 and CULT-2 would reduce this

potential impact on historical resources to less than significant.

**c) Less Than Significant With Mitigation Incorporation**. A records search was conducted of the Natural History Museum of Los Angeles County paleontology (NHMLAC) database (McLeod 2012). The entire project area has surficial deposits composed of older Quaternary dune sands. The NHMLAC had no records of previously recorded fossil vertebrate localities nearby from such Aeolian deposits, but concluded that fine grained deposits have the potential to produce significant vertebrate fossils. Older Quaternary or even Pliocene deposits probably underlie the Quaternary dune sands at relatively shallow depth. The project site is not known to contain vertebrate paleontological resources; however, the NHMLAC noted a nearby specimen of Columbian mammoth (*Mammuthus columbi*) in similar deposits. The NHMLAC further concluded that "Any substantial excavations in the older Quaternary dune sands in the proposed project area may well encounter significant remains of vertebrate fossils." CULT-3 provides mitigation for this potential impact on paleontological resources.

**d) Less Than Significant With Mitigation Incorporation.** A records search and sacred lands review was conducted through the Native American Heritage Commission (NAHC 2012). The results of the NAHC search indicate the absence of recorded cultural resource sites and sacred lands in the project area. The area does not contain any known cemeteries or burial features. The potential for encountering Native American human remains exists throughout California, and it is not always possible to predict where Native American human remains might occur outside of formal cemeteries. Therefore, construction activities such as grading and excavation could affect human remains, including those interred outside of formal cemeteries. CULT-4 provides mitigation of this potentially significant impact on human remains.

**e) No Impact.** There are no previously recorded unique architectural features on or near the Phillips 66 property. The project would not affect the character of surrounding buildings. The presence of tracks and trains may represent a change in the landscape viewable from buildings in the surrounding region, but the impact is less than significant on the buildings themselves. Potential impacts on aesthetic resources are addressed in a separate section of this document.

**f) Less Than Significant With Mitigation Incorporation**. The CCIC (2012) records search indicated one previously recorded prehistoric cultural resource (CA-SLO-1190)within the proposed construction area; additional prehistoric cultural resources were identified within a one mile radius. Pedestrian survey of the project area confirmed the presence of the previously identified prehistoric cultural resource(CA-SLO-1190) on the surface in the area of the Emergency Vehicle Access road (Glenn, 2013). In addition, the potential for buried prehistoric cultural sites to be present and obscured by accumulated sediment is moderate to high. Mitigation measures CULT-1 and CULT-2 would reduce this potential impact on prehistoric cultural resources to less than significant.

**g) Less Than Significant With Mitigation Incorporation.** The CCIC (2012) records search indicated one

previously recorded historic cultural resources (representing historic era archaeological resources) present within the project area (CA-SLO-1190) with additional resources identified within a one mile radius. A pedestrian survey confirmed the presence of historic cultural resources on the surface (ARCADIS, 2013). In addition, the potential for buried historic cultural sites to be present and obscured by accumulated sediment is low to moderate. No built environment resources were identified within the project area or a one mile radius. Mitigation measures CULT-1 and CULT-2 would reduce this potential impact to less than significant.

**Mitigation Measures:**

CULT 1: Portions of archaeological site CA-SLO-1190 are present within the Emergency Vehicle Access road and require evaluation to determine if this portion of the resource meets CRHR eligibility criteria. Impacts to sites not CRHR eligible will be monitored during construction to insure the identification of previously unidentified significant resources (see CULT 2). CRHR-eligible resources will require mitigation of impacts through either avoidance or data recovery excavations.

CULT-2: A qualified monitor will be present during grading and excavation activity, including, but not limited to, initial clearing, grubbing and excavation that could reveal buried cultural resource deposits. Implementation of a Worker's Environmental Awareness Plan (WEAP) and Construction Mitigation and Monitoring Plan (CMMP) will reduce potential adverse impacts on cultural resources to a less than significant level. A County certified cultural resources manager (archaeologist/historian) will attend the pre-grading meeting with the contractors to explain and coordinate the requirements of the WEAP. The project monitor will have authority to temporarily halt or redirect work to protect discoveries until such time as the WEAP and CMMP protocols can be implemented. Any cultural resource discoveries would be documented and assessed for their ability to meet California Register of Historical Resources (CRHR) eligibility criteria. Appropriate County staff will be notified and provided with recommendations for treatment of the discovery.

CULT-3: A qualified monitor would be present during grading and excavation activity that may reveal buried paleontological resources of scientific interest. Implementation of a WEAP and CMMP would reduce potential adverse impacts on paleontological resources to less than significant. The qualified monitor would attend the pre-grading meeting with the contractors to explain and coordinate the requirements of the WEAP. The monitor would have authority to temporarily halt or redirect work to protect discoveries until such time as the WEAP and CMMP protocols can be implemented. Any discoveries would be documented and assessed for their scientific value. Appropriate County staff would be notified and provided with recommendations for treatment of the discovery.

CULT-4: Implementation of the WEAP and CMMP (including relevant elements of Health and Safety Section 7050.5(b) and Public Resources Code Section 5097.98) will reduce potential adverse impacts on

human remains to level of less than significant. Implementation of the WEAP and CMMP will provide sensitivity training to workers and establish procedures for stopping work and notifying the assigned monitor and construction supervisors should human remains be detected.

Section 7050.5(b) of the California Health and Safety code will be implemented in the event that human remains, or possible human remains, are located during project-related construction excavation. Section 7050.5(b) states - "In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code" Section 5097.98.

**References:**

Central Coastal Information Center (CCIC). 2012. Cultural Resources Records Search of the Phillips 66, Nipomo Facility Rail Expansion Project Area, Nipomo, San Luis Obispo County, California. Report on file with ARCADIS-US, Carlsbad, California office.

Glenn, Brian K. 2013. Cultural Resources Assessment Report for the Phillips 66, Phillips 66 Santa Maria Refinery Rail Project, Nipomo, San Luis Obispo County, California. Report on file with ARCADIS-US, Carlsbad, California office.

McLeod, Samuel. 2012. Paleontological Records Search of the Phillips 66, Nipomo Facility Rail Expansion Project Area, Nipomo, San Luis Obispo County, California. Report on file with ARCADIS-US, Carlsbad, California office.

Native American Heritage Commission (NAHC). 2012. Sacred Lands Database Review for the Phillips 66, Nipomo Facility Rail Expansion Project Area, Nipomo, San Luis Obispo County, California. Report on file with ARCADIS-US, Carlsbad, California office.

**Geology and Soils**

| 6. | **Geology and Soils** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|---|
| | Would the project: | | | | | |
| | a) | Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| | | i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | ☐ | ☐ | ☐ | ☒ |
| | | ii) Strong seismic ground shaking | ☐ | ☐ | ☒ | ☐ |
| | | iii) Seismic-related ground failure, including liquefaction? | ☐ | ☒ | ☐ | ☐ |
| | | iv) Landslides? | ☐ | ☐ | ☐ | ☒ |
| | b) | Result in substantial soil erosion or the loss of topsoil? Or topographic changes, unstable soil conditions from project-related improvement, such as vegetation removal, grading, excavation, or fill? | ☐ | ☐ | ☒ | ☐ |
| | c) | Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | ☐ | ☐ | ☒ | ☐ |
| | d) | Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | ☐ | ☐ | ☐ | ☒ |
| | e) | Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | ☐ | ☐ | ☒ | ☐ |
| | f) | Change rates of soil absorption, or amount or direction of surface runoff?) | ☐ | ☐ | ☒ | ☐ |
| | g) | Be in consistent with the goals and policies of the County's Safety Element relating to Geologic and Seismic Hazards? | ☐ | ☐ | ☒ | ☐ |

**Conclusion:**

**a)**

**i) No Impact.** Surface rupture along a fault occurs when surficial earth materials on opposite sides of a fault are displaced during fault movement. Alquist-Priolo Earthquake Fault Zones (A-P Zones) are designated areas within 500 feet of a known active fault trace as demonstrated by Holocene (11,000 years or younger) surface displacement. The closest A-P Zone is the Las Osos Fault Zone, located near the City of San Luis Obispo, approximately 17 miles north-northwest (CDMG 1990; CGS 2007). The nearest known Quaternary (2.6 million years or younger; also classified as "potentially active") fault is the Oceano Fault, located approximately 1.5 miles to the northeast (USGS and CGS 2006). Because there are no A-P Zones in the project area, and no mapped fault traces within 1 mile of the site, no impacts resulting from surface rupture of a known fault are anticipated.

**ii) Less than Significant.** Earthquake-generated ground shaking is typically the greatest cause of loss, injury, or death during an earthquake. Geologists use earthquake statistics to assess seismic hazards from ground motion. Earthquake risks are assessed in terms of peak ground acceleration (PGA), the peak ground velocity, or peak spectral acceleration.

In 2008, USGS produced updated seismic hazard maps for the conterminous United States, including PGA and spectral accelerations for a range of return periods and exceedance probabilities (Peterson et al. 2008). Multiple seismogenic source zones and ground motion prediction equations were used to develop the maps and hazard values. Predicted PGA values for the site based on USGS data are provided in Table 3-6.1 (USGS 2012). PGA depends largely on the ability of the surficial geologic unit to transmit seismic energy. These values were calculated using shear wave velocities representative of deep alluvial or eolian deposits observed in the area (CDWR 2002).

The highest predicted PGA value for a seismic event in the project area with a return period of 144 years or less would be 0.15g. The predicted PGA would create strong ground shaking corresponding to a Modified Mercalli Intensity of VI, which could potentially cause light infrastructure damage (Wald et al. 1999).

The project does not involve construction of facilities that would be occupied, such as residences, offices, or other work spaces that would be prone to collapse and potential injury or death. Railway infrastructure would be constructed in accordance with the Uniform Building Code and San Luis Obispo County and State of California building codes as applicable, and would be designed to withstand ground shaking.

**iii) Less than Significant.** Liquefaction describes a condition that occurs when saturated sandy soil loses strength and cohesion due to ground shaking during an earthquake. Lateral spreading occurs when liquefaction of a subsurface layer causes the mass to flow down slope, moving blocks of ground at the surface. Areas at risk of lateral spreading are generally coincident with potential liquefaction areas.

Seismic settling is a reduction of volume within a saturated or unsaturated soil due to ground shaking that may occur simultaneously or independent of liquefaction.

State of California Liquefaction Hazard Zones have not been established for San Luis Obispo County. However, the San Luis Obispo County General Plan Safety Element includes the site within areas of moderate potential for liquefaction or seismic settlement (San Luis Obispo County 1999). As stated in the Safety Element, liquefaction potential and potential associated hazards can only be assessed through site-specific studies and subsurface investigation. The site's proximity to the Oso Flaco Creek floodplain indicates that groundwater levels may be high seasonally, or under other high water table conditions and portions of the Phillips 66 property south of the site may be susceptible to liquefaction. However, to minimize the potential for lateral spreading, subsidence, liquefaction, or collapse, the applicant would conduct geotechnical investigations and design the project with measures such as stabilization fills, retaining walls, removal of unstable materials, avoidance of highly unstable areas, construction of pile foundations, and ground improvements of liquefiable zones. With these measures incorporated as needed, the potential for liquefaction and other types of seismically-inducted ground failure and would be less than significant.

**iv) No impact.** The project site and surrounding areas are nearly level; therefore, there is no potential for a landslide. State of California Seismically-Induced Landslide Hazard Zones have not been established for San Luis Obispo County.

**Table 3-6.1**

**Project Peak Ground Acceleration Values**

| Return Period (Years) | PGA (%g) | Mean Magnitude | Mean Distance (km) |
|---|---|---|---|
| 30 | 10.72 | 6.52 | 65.7 |
| 72 | 10.73 | 6.65 | 51.4 |
| 144 | 15.22 | 6.69 | 41.7 |
| 475 | 26.04 | 6.67 | 28.2 |
| 1485 | 40.49 | 6.62 | 19.1 |
| 2475 | 48.27 | 6.61 | 16.3 |
| 4950 | 59.57 | 6.60 | 13.6 |
| 9900 | 71.84 | 6.59 | 11.7 |

**Notes:**
PGA values calculated for latitude 35.032117°N, longitude 120.584918°W.
Values calculated using USGS 2008 Interactive Deaggregations (Beta) Tool (USGS 2012).
Average shear wave velocity in the upper 30 meters ($Vs_{30}$) value of 287 meters per second used to calculate PGA values based on Kalkan et al. (2010).

**b) Less than Significant Impact.** Soils data are provided in the U.S. Department of Agriculture (USDA) Soil Survey of San Luis Obispo County, California, Coastal Part (Ernstrom 1984). The Natural Resources

Conservation Service (NRCS) also compiles soils data from multiple soil surveys into an online application and provides interpretations of soil management suitabilities and limitations based on soil properties (SSS 2012).

The Phillips 66 property and project site are dominated by soils mapped as dune land, with lesser amounts of Oceano sand, 0 to 9 percent slopes occurring in the western portion of the site. Areas mapped as dune land typically have very poor soil development. The Oceano sand unit has thin natural topsoils that also formed on dune deposits but have established vegetation or have been historically modified by human activity such as plowing (SSS 2012). Because the parent material was originally deposited by wind, there is high potential for wind erosion to occur, especially where existing vegetation is disturbed. Erosion by water is a moderate risk where slopes allow for entrainment of sand particles; elsewhere, flat slopes prevent significant risk of erosion. Disruption of existing vegetation or soil crusts would likely lead to local displacement of those materials by wind or water; however, because the topsoil is poorly-developed, erosion impacts would be less than significant.

**c) Less than Significant.** As stated above, the site is located in an area with a moderate potential for liquefaction, seismic ground settling, and soil collapse. Areas of soil collapse are often coincident with areas of potential liquefaction or seismic settlement and the potential for significant impacts from these processes exists. As stated above, there is no risk of landslides to occur on, or adjacent to, the site. To minimize the potential for soil collapse, the applicant would conduct geotechnical investigations and design the project with measures such as stabilization fills, retaining walls, removal of unstable materials, avoidance of highly unstable areas, construction of pile foundations, and ground improvements of liquefiable zones. With these measures incorporated as needed, the potential for soil collapse and other types of seismically-inducted ground failure to be less than significant.

Subsidence typically occurs as a result of fluid (e.g., oil, gas, water) that supports the load of overlying materials. In San Luis Obispo County, subsidence has been documented along Los Osos Valley Road in the southern part of the City of San Luis Obispo. Subsidence in that area has been attributed to withdrawal of groundwater. Subsidence has not been observed in the nearby City of Arroyo Grande, but subsidence could occur because much of the city is underlain by compressible clay alluvium (San Luis Obispo County 1999). The site is underlain by dune sands that could settle if water within the unit was withdrawn; however, most water wells on the Nipomo Mesa area withdraw water from the Paso Robles Formation and no substantial subsidence has resulted . Therefore, potential impacts from subsidence would be less than significant.

**d) No impact.** The presence of certain clay minerals may cause some soils to swell when moist and shrink as the soil dries. Soils subject to shrink-swell processes are termed “expansive soils.” Linear extensibility is a measurement of the shrink-swell process and can be used to classify the expansive hazard of soils. Because the soils are dominantly composed of sand and have little clay content, linear extensibility for

mapped soils indicates low potential for expansive soils (SSS 2012) and therefore, no impacts would result.

**e) Less than Significant.** Soils within and adjacent to the site are sand-dominated and have high permeability (greater than 6 inches per hour); therefore, these soils have limitations on filtering capacity for septic tank effluent due to potential for seepage (SSS 2012). However, the applicant would conduct geotechnical analyses and assessment of soil permeability to determine the potential for septic effluent to reach groundwater or Oso Flaco Creek. Based on the geotechnical analysis, the septic system would be designed (e.g., relocation of leachfields, decreased effective depth of leachfield trenches) to reduce the depth of effluent infiltration. All septic system components would be constructed in accordance with applicable State and County regulations and State Regional Water Quality Control Board standards. With these design measures, including testing and regulatory permitting, any impacts from the use of septic systems would be less than significant.

**f) Less than Significant Impact.** Site soils are dominantly composed of sand with very minor (less than 5 percent) amounts of clay (SSS 2012). This textural composition indicates that soil compaction is not likely to occur and that impacts from soil infiltration, absorption, and runoff would be less than significant.

**g) Less than Significant Impact with Mitigation Incorporation.** As described above under items a.i through a.iv, geologic and seismic hazards exist at the site; however, the potential environmental impacts of these conditions would be addressed by design measures. The applicant would conduct geotechnical investigations and design the project to minimize the potential for lateral spreading, subsidence, liquefaction, or collapse as described above. As such, the project would be consistent with San Luis Obispo County Safety Element Goal S-5 and Policies S-18 (Fault Rupture Hazards), S-19 (Reduce Seismic Hazards), and S-20 (Liquefaction and Seismic Settlement). The project would not be inconsistent with policies regarding slope instability (S-21) and coastal bluff erosion because the project would be located in a generally flat area that is well removed from any coastal bluffs. Therefore, impacts resulting from geologic and seismic hazards would be less than significant with mitigation.

**References:**

California Department of Mines and Geology (CDMG). 1990. State of California Special Studies Zones – San Luis Obispo Quadrangle – Official Map. Effective: January 1, 1990.

California Geological Survey (CGS). 2007. Fault-rupture hazard zones in California. CGS Special Publication 42. Interim Revision 2007. 46 pages.

California Department of Water Resources (CDWR). 2002. Water Resources of the Arroyo Grande-

Nipomo Mesa Area. Department of Water Resources Southern District. Available at: http://www.dpla.water.ca.gov/sd/water_quality/arroyo_grande/arroyo_grande-nipomo_mesa.html. Accessed: October 11, 2012.

Ernstrom, D.J. 1984. Soil Survey of San Luis Obispo County, Coastal Part. United States Department of Agriculture, Soil Conservation Service in cooperation with University of California Agricultural Experiment Station. 161 pages.

Kalkan, E., C.J. Wills, and D.M. Branum. 2010. Seismic Hazard Mapping of California Considering Site Effects. Earthquake Spectra. Vol. 26(4). pp. 1039-1055.

Peterson, M.D., A.D. Frankel, S.C. Harmesen, C.S. Mueller, K.M. Haller, R.L. Wheeler, R.L. Wesson, Y. Zeng, O.S. Boyd, D.M. Perkins, N. Luco, E.H. Field, C.J. Wills, and K.S. Rukstales. 2008. Documentation for the 2008 Update of the United States National Seismic Hazard Maps. USGS Open File Report 2008-1128.

San Luis Obispo County. 1999. San Luis Obispo County General Plan – Safety Element. December 1999. 170 pages.

Soil Survey Staff (SSS). 2012. Web Soil Survey. United States Department of Agriculture Natural Resources Conservation Service. [Online Resource] Available at: http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm. Accessed: October 29, 2012.

USGS. 2012. 2008 Interactive Deaggregations (Beta). [Online Resource]. Available at: https://geohazards.usgs.gov/deaggint/2008/. Accessed on: October 29, 2012.

United States Geological Survey (USGS) and California Geological Survey (CGS). 2006. Fault and Fold Database for the United States. [Online Resource] Available at: http://earthquakes.usgs.gov/regional/qfaults. Accessed on: October 29, 2012

Wald, D.J., V. Quitoriano, T.H. Heaton, H. Kanamori, C.W. Scrivner, and C.B. Worden. 1999. TriNet "ShakeMaps": Rapid generation of peak ground motion and intensity maps for earthquakes in southern California. Earthquake Spectra. Vol. 15(3). pp. 537-555.

**Greenhouse Gas Emissions**

| 7. | **Greenhouse Gas Emissions** | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| | Would the project: | | | | |
| a) | Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | ☐ | ☐ | ☒ | ☐ |
| b) | Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | ☐ | ☐ | ☐ | ☒ |

**Conclusion:**

**a) Less Than Significant Impact.** In March 2012, the SLO APCD approved thresholds for GHG emission impacts, and these thresholds have been incorporated in the SLO APCD's CEQA Air Quality Handbook. For stationary source industrial projects, a numerical value threshold of 10,000 MT $CO_2e$ per year was adopted. This threshold was compared to annual project emissions within the California state boundaries.

**Table 3-7.1**

**Summary of Project Greenhouse Gas Emissions**

| Source | Annual Emissions (MT $CO_2e$) Within California State Boundaries |
|---|---|
| Locomotive | 8,249 |
| Equipment | 371 |
| Construction | 45 |
| TOTAL PROJECT | 8,665 |
| SLO APCD Significance Threshold | 10,000 |

**Notes:**
MT CO2e – Metric tons carbon dioxide equivalent
Full calculations, a detailed analysis, and assumptions are included in Appendix A

The project would emit approximately 8,663 MT $CO_2e$ per year (see Table 3-7.1) within the California state boundaries. The majority of the GHG emissions result from the combustion of fossil fuels during locomotive travel. GHG emissions would be less than the significance threshold of 10,000 MT $CO_2e$ per year and impacts would be less than significant.

**b) No Impact.** As part of California's Global Solutions Act of 2006 (AB32), the Climate Change Scoping Plan, approved by the California Air Resources Board (CARB) December 12, 2008, provides the outline for

| |
|---|
| actions to reduce California's GHG emissions (CARB 2010). The scoping plan now requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. At this time, no mandatory GHG regulations or finalized agency guidelines would apply to the project. |
| |
| **References:**<br>California Air Resources Board, California's Climate Plan Fact Sheet, January 27, 2010.<br><br>ENVIRON. California Emissions Estimator Model (CalEEMod). Version 2011.1. February 2011.<br><br>San Luis Obispo County Air Pollution Control District, CEQA Air Quality Handbook. A Guide for Assessing the Air Quality Impacts for Projects Subject to CEQA Review. April 2012.<br><br>United States Environmental Protection Agency. Emission Factors for Locomotives. Office of Transportation and Air Quality. EPA-420-F-09-025.April 2009.<br><br>United States Environmental Protection Agency. Title 40: Protection Environment, Part 98 – Mandatory Greenhouse Gas Reporting. Table C-1 and C-2 to Subpart C. April 2012. |

**Hazards and Hazardous Materials**

| 8. | **Hazards and Hazardous Materials** | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| | Would the project: | | | | |
| a) | Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | ☐ | ☐ | ☒ | ☐ |
| b) | Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | ☐ | ☐ | ☒ | ☐ |
| c) | Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | ☐ | ☐ | ☒ | ☐ |
| d) | Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | ☐ | ☐ | ☒ | ☐ |
| e) | For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ |
| f) | For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ |
| g) | Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☐ | ☒ |
| h) | Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | ☐ | ☐ | ☒ | ☐ |
| i) | Result in a risk of explosion or release of hazardous substances (e.g. oil, pesticides, chemicals, radiation) or exposure of people to hazardous substances? | ☐ | ☐ | ☒ | ☐ |
| j) | Expose people to safety risk associated with airport flight pattern? | ☐ | ☐ | ☐ | ☒ |

| | | | | | | |
|---|---|---|---|---|---|---|
| | k) | Increase fire hazard risk or expose people or structures to high fire hazard conditions? | ☐ | ☒ | ☐ | ☐ |
| | l) | Create any other health hazard or potential hazard? | ☐ | ☐ | ☒ | ☐ |

**Conclusion:**

**a) Less Than Significant Impact.**: Construction of the rail and unloading facilities would involve the use of oil, fuel, and other potentially hazardous materials required for the operation of construction equipment. Hazardous materials could include fuels, lubricants, asphalt, paints, and solvents. Transport, storage and use of hazardous materials at the construction site and staging areas could result in accidental release of hazardous materials which could degrade soil, groundwater, and surface water quality in nearby creeks and downstream water bodies. Phillips 66 would require the construction contractor to comply with all laws and regulations related to the transport, use and disposal of hazardous materials, which would minimize the potential for spills and releases, including a construction Storm Water Pollution Prevention Plan (SWPPP). Standard equipment and design measures, such as flanges would minimize the potential for leaks. Under the SWPPP, all equipment, such as valves in the unloading system, would be routinely inspected for leaks and records maintained to document compliance with hazardous materials storage and disposal regulation. Therefore, construction impacts associated handling, storage and transport of hazardous materials would be less than significant.

Project operation would involve transportation and unloading of crude oil but would not include an increase in refinery throughput and would therefore not increase the amount of crude oil processed or products generated. Operation of the project would include the use of equipment that uses potentially hazardous materials which could include fuels, lubricants, and solvents. Storage of these materials could result in accidental release.

Phillips 66 has a number of existing process safety policies and procedures that would apply to the rail project, including the equipment and operating procedures. These programs are designed to prevent releases of hazardous materials, minimize risk, and ensure the refinery's ability to process crude without increasing risk of releases. For example, the Mechanical Integrity Program covers equipment used to process, control, and store hazardous chemicals and assigns responsibility for equipment inspection and testing as well as maintenance. This program meets the requirements of CCR Title 8 Sec 5189, "Process Safety Management of Acutely Hazardous Materials" (f), (j) and 29 CFR 1910.119, "Process Safety Management of Highly Hazardous Chemicals" (j)

The refinery uses a Positive Material Identification (PMI) program to ensure the integrity of all mechanical and pressurized systems. This program is overseen by the refinery's Maintenance Supervisor.

Any new crude coming to the refinery undergoes a complete Management of Change (MOC) analysis to

ensure that all hazards, as well as the refinery's systems are safe and operable. The MOC program is part of the refinery's Process Safety Management program and tracks equipment modification, addition of new systems and process changes. MOC covers all changes that involve specific chemicals at or above threshold limits as defined in California Code of Regulation, Section 5189, Appendix A or flammable liquids or gasses as defined by California Code of Regulations, Section 5194(c) including new construction, modifications, changes in chemicals or materials, changes in feedstock, and changes in concentrations, temperatures, pressures, or flow rates outside of established Safe Process Limits.

The refinery is also covered by the California Accidental Release Prevention (CalARP) program, which is designed to prevent accidental releases potentially harming the public and the environment and to satisfy community right-to-know laws. The program requires preparing a Risk Management Plan (RMP) to analyze the potential for accidents and development of operating procedures, training and maintenance requirements, compliance audits and incident investigation. The refinery has an approved Spill Prevention, Control and Countermeasure Plan (SPCC).

The potential for collisions between trains or between trains and vehicles would be reduced by train signals and mandatory local, state, and federal rail and traffic safety programs and infrastructure (off-site), and the required low travel speeds and the use of shuttles and turnaround tracks to move cars (on-site). The potential for derailment on-site is extremely low given the low speed movements of trains, the flat topography and the short distances traveled.

The project would have the potential for accidental releases from the unloading system and the new pipeline. The pipeline, however, would be in an area of low traffic and required low vehicle speeds. In addition, Phillips 66 would implement the design and prevention measures described above, on-site safety requirements as well as comply with existing laws and regulations regarding storage and disposal of hazardous materials to minimize the potential for spills and releases. Additionally, the project includes an engineered spill containment system and emergency operations infrastructure. All equipment would be routinely inspected for leaks and records maintained. Therefore, operational impacts associated with hazardous materials would be less than significant.

The transport of crude oil to the proposed facility would also result in a risk of accidents such as collisions or derailment. Derailments may result from a number of causes; however, the largest reported cause of derailments is track quality, followed by equipment failure. Track quality issues may include broken rails or welds, buckled tracks, switch defects, roadbed defects, and turnout defects. Equipment issues resulting in derailment primarily include bearing failures, broken wheels, and brake defects. To minimize risk, rail transport is overseen by industry and government and these risks are addressed through maintenance and infrastructure upgrade programs. Train accident rates in the U.S. have declined substantially since the early 1980s following investments in infrastructure and equipment, employee training, and implementation

of new technologies (Xiang 2011).

The potential risk of a derailment would depend on a variety of factors including train traffic volume, track type, train speed, train length, track geometry, and the train control system. Because these data are not publicly available, the risk of derailment was not quantified. However, derailment is correlated with track quality, and given the significant investments in track upgrades and mandatory maintenance, this risk would be less than significant along the Coast Line where UPRR has implemented recent track upgrades. For example, UPRR recently upgraded tracks between Watsonville and San Lucas (UPRR 2013).

Beyond the Coast Line, as discussed above, effects from risk of upset such as collisions or derailment would be too remote and speculative to evaluate under CEQA. The source of crude oil is unknown and the route freight trains would use, even if the source were known, cannot be forecasted. Furthermore, as described above, the proposed project would not affect the quantity of crude oil produced or transported by rail in the United States. While the project will affect the rail transport of crude oil near the refinery, it will have little effect on the quantity of crude oil moving by rail across North America.

**b) Less Than Significant Impact.** As described above, construction may require the use of small amounts of hazardous materials. If transport, storage, and disposal of hazardous materials were not conducted in accordance with laws and policies regulating hazardous materials, an accidental upset or release of hazardous materials could occur.

However, Phillips 66 and its construction contractor would comply with all laws and regulations regarding hazardous materials during construction and operations. Phillips 66 is prepared to respond to accidents under their Emergency Response Plan, which describes procedures and equipment to be used in the event of an emergency. The plan addresses responses to on-site emergencies and is coordinated with community emergency response planning. The plan requires rehearsals and training and complies with 29 CFR 1910.120, "Hazardous Waste Operations and Emergency Response". The refinery's Emergency Response Plan has been provided to San Luis Obispo County as required by Chapter 6.95, "Hazardous Materials Release Response Plans and Inventory" of the California Health and Safety Code. Therefore, impacts related to foreseeable upset of hazardous materials would be less than significant.

**c) Less Than Significant Impact.** There are no schools within ¼ mile of the refinery. Therefore, the construction of the Project would have no impact related to hazardous materials handling or emissions related to schools.

**d) Less Than Significant Impact.** The Phillips 66 property is listed on the California State Water Quality Control Board Geotracker database as a cleanup site containing hazardous materials. The listing indicates ongoing monitoring to determine if metals and other constituents from coke piles are leaching into groundwater and the nearby aquifer. Neither construction nor operation would affect cleanup status, nor

would it introduce new hazardous materials or require additional groundwater monitoring. Therefore, there would be no impact related to hazardous materials sites pursuant to Section 6592.5

**e) No Impact.** The nearest airport is the Oceano County Airport located approximately 6 miles to the north of the project site. San Luis Obispo Regional Airport is located approximately 16 miles to the north of the refinery. Because the project site is located more than 2 miles from an airport and would not involve construction of above ground facilities that would interfere with air traffic, impacts related to safety hazards in the vicinity of an airport are not applicable and there would be no impact.

**f) No Impact.** There are no private airstrips within the project vicinity. Because the project site is located more than 2 miles from a private airstrip and would not involve construction of above ground facilities that would interfere with air traffic, impacts related to safety hazards in the vicinity of an airport are not applicable and there would be no impact.

**g) No Impact**. San Luis Obispo County has prepared an Emergency Operations Plan that is compliant with the State Emergency Plan and National Incident Management System. The plan covers response and recovery operations for a variety of situations including earthquakes, hazardous materials, transportation emergencies, and flooding as well as other emergencies. The County also have a Dam and Levee Failure Evacuation Plan. Because the project is located in an isolated rural area and would not affect access or any highways or local streets, the project would have no impact on implementation of and would not physically interfere with the plans.

**h) Less Than Significant Impact.** Cal Fire identifies the project area as a high fire danger area (Cal Fire 2007). The use of construction equipment and temporary on-site storage of fuel and oil for construction equipment could pose a fire risk during construction. This risk would increase when vegetation is cleared and stored on site creating an additional source of fuel for fires. Construction equipment, including hand tools, are potential sources of ignition. Smoking by construction workers could be an additional source of ignition. Regulations governing the use of construction equipment in fire-prone areas, such as regulations within the Public Resources Code, are designed to minimize the risk of wildland fires during construction activity. These regulations restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that have internal combustion engines; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided for various types of work in fire-prone areas. Compliance with existing fire safety regulations would reduce this impact to less than significant.

Operation of the project includes the transport and unloading of crude oil and equipment that uses fuel and could also serve as a source of ignition. Project design features including fire alarms and a fire suppression system as well as full-time on site responders and response procedures would reduce the risk

of fire during operations to less than significant.

**i) Less than Significant Impact**. The project's risk of an explosion or release of hazardous substances would be less than significant. As described above, Phillips 66 has existing process safety policies and procedures that would apply to the rail project, including the equipment and operating procedures. These programs are designed to prevent releases of hazardous materials, minimize risk, and ensure the refinery's ability to process crude without increasing risk of releases. These programs meet the requirements of CCR Title 8 Sec 5189, "Process Safety Management of Acutely Hazardous Materials" (f), (j) and 29 CFR 1910.119, "Process Safety Management of Highly Hazardous Chemicals" (j), and other regulations and programs including the California Accidental Release Prevention (CalARP) program, which is designed to prevent accidental releases. Implementation of these programs would reduce the risk of explosion or release of hazardous substances to less than significant.

**j) No impact.** The project would not result in impacts from exposing people to safety risk associated with airport flight patterns. Please see discussions in related items e and f above. The nearest airport is the Oceano County Airport located approximately 6 miles to the north of the project site. San Luis Obispo Regional Airport is located approximately 16 miles to the north of the refinery. Because the project site is located more than 2 miles from an airport and would not involve construction of above ground facilities that would interfere with air traffic, impacts related to safety hazards in the vicinity of an airport are not applicable and there would be no impact.

**k) Less Than Significant Impact.** The project would not substantially increase fire hazard risk or expose people or structures to high fire hazard conditions. Construction fire risks would be covered by the refinery's Process Safety Management Plan, which requires permitting for "hot work." This plan also addresses emergency response. The facility would be equipped with a fire suppression system and coordination with on-site fire response. Given the existing plans in place to address emergencies, including fires, any risk of fire hazards or high fire conditions would be less than significant.

l) The project would not create other potential hazards. The project would be covered by the refinery's existing safety programs addressing health and safety, hazardous material safety/training, emergency response and other safety programs. The refinery's Process Safety Management Plan, as required by OSHA, covers process safety, hazard analysis employee training, and Management of Change. The plan involves active employee involvement, hazard information, coordination, reporting, training, field reviews, and emergency response.

**References**

UPRR 2013. Union Pacific Railroad Invests $12.9 Million for Track Improvements to Its Line from Watsonville to San Lucas.

http://www.uprr.com/newsinfo/releases/capital_investment/2011/0308_watsonville.shtml

Xiang Liu, Christopher P. L. Barkan, and M. Rapik Saat 2011. Analysis of Derailments by Accident Cause, Evaluating Railroad Track Upgrades to Reduce Transportation Risk. Transportation Research Record 2261. http://ict.illinois.edu/railroad/CEE/pdf/Journal%20Papers/2011/Liu%20et%20all%202011.pdf

**Hydrology and Water Quality**

| 9. | **Hydrology and Water Quality** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|---|
| | Would the project: | | | | | |
| | a) | Violate any water quality standards or waste discharge requirements? | ☐ | ☐ | ☒ | ☐ |
| | b) | Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | ☐ | ☐ | ☒ | ☐ |
| | c) | Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | ☐ | ☐ | ☒ | ☐ |
| | d) | Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | ☐ | ☐ | ☒ | ☐ |
| | e) | Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | ☐ | ☐ | ☒ | ☐ |
| | f) | Otherwise substantially degrade water quality? Discharge into surface waters or otherwise alter surface water quality (e.g., turbidity, temperature, dissolved oxygen, etc.)? | ☐ | ☐ | ☒ | ☐ |
| | g) | Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | ☐ | ☐ | ☐ | ☒ |
| | h) | Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | ☐ | ☐ | ☐ | ☒ |
| | i) | Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | ☐ | ☐ | ☒ | ☐ |

| | | | | | | |
|---|---|---|---|---|---|---|
| | j) | Inundation by seiche, tsunami, or mudflow? | ☐ | ☐ | ☐ | ☒ |
| | k) | Change the quantity or movement of available surface ground water? | ☐ | ☐ | ☐ | ☒ |
| | l) | Adversely affect community water service provider? | ☐ | ☐ | ☒ | ☐ |

**Conclusion:**

**a) Less Than Significant Impact.** The project would result in temporary ground alteration, which could potentially increase rates of soil erosion and sedimentation in nearby water bodies such as Oso Flaco Creek. However, because thetopography is relatively flat and contains sandy soils with high infiltration rates, runoff escaping the site would be minimal. Furthermore, use of construction best management practices (BMPs) by Phillips 66 and its contractor(s) would minimize the potential for, and effect of, spills of hazardous or non-hazardous contaminants during construction. In addition, a Storm Water Pollution Prevention Plan (SWPPP) that describes design and implementation of site-specific erosion and sediment control measures would be prepared and implemented under the storm water permitting process. Negligible off-site transport of sediment or other materials is anticipated during the construction and operational phases. No water quality standards or waste discharge requirements would be violated and the project, including the unloading facility would be addressed in the refinery's NPDES permit; therefore, impacts under this criterion would be less than significant.

**b) Less Than Significant Impact.** The refinery currently uses groundwater wells as a water supply and the project would increase groundwater withdrawals. However, project water use would be limited to that needed for on-site workers and make-up water for the heating system. Infiltration of precipitation to groundwater aquifers would not be affected substantially by construction or operation. The project would not introduce substantial pavement or rooftops that would prevent direct infiltration of groundwater. The unloading area cover would drain to a stormwater infiltrantion basin. Because no substantial changes to groundwater withdrawal or recharge would occur, groundwater supplies would not be affected; therefore, any impacts under this criterion would be less than significant.

**c) Less Than Significant Impact.** The project site is relatively flat and no existing through-flowing water bodies (i.e., perennial, intermittent, or ephemeral drainages, irrigation ditches) are present at the site. Oso Flaco Creek is approximately 1000 feet south at the closest point. No ponds or reservoirs exist on the site. During heavy precipitation events, site drainage is by sheet flow and some ponding may occur in swales. More commonly, precipitation infiltrates rapidly through sandy soils to groundwater or evaporates (CDWR 2002). The project would not create large impermeable surfaces that would substantially increase the amount or rate of runoff. Construction would not significantly alter the topography and would not affect surface runoff characteristics. The majority of precipitation would continue to infiltrate to the local aquifer or evaporate. As described above, construction BMPs and the SWPPP would minimize the potential for project to significantly alter existing drainage patterns and would effectively prevent the off-site transport of

stormwater. No significant increases in erosion, siltation, flooding, or runoff patterns or volumes would result on-site or off-site, and impacts on drainage would be less than significant.

**d) Less Than Significant Impact.** The project site is relatively flat and no existing through-flowing water bodies (i.e., perennial, intermittent, or ephemeral drainages, irrigation ditches) are present. Oso Flaco Creek is approximately 1000 feet south of the project site at the closest point. No ponds or reservoirs exist on the Phillips 66 property. During heavy precipitation events, drainage is by sheetflow and some ponding occurs in swales. More commonly, precipitation infiltrates rapidly through sandy soils to groundwater or evaporates (CDWR 2002). The project would not create large impermeable surfaces that would substantially increase the amount or rate of runoff. Construction would not significantly alter the topography and would not affect surface runoff characteristics. The majority of precipitation would continue to infiltrate to the local aquifer or evaporate. As described above, construction BMPs and the SWPPP would minimize the potential for alteration of drainage patterns and would effectively prevent the off-site transport of stormwater. No significant increases in runoff or drainage patterns would result and this impact would be less than significant.

**e) Less Than Significant Impact.** The project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. There is no existing stormwater collection system on the project site. Stormwater from the unloading area roof would be collected and routed to a stormwater infiltration basin. Any oily water would be collected and conveyed to the site's oily water treatment system for treatment. The project would not introduce substantial impermeable surfaces and would comply with existing stormwater regulations. Therefore, this impact would be less than significant.

**f) Less Than Significant Impact.** As described above, construction activities would require grading and excavation of approximately 40 acres, potentially increasing soil erosion rates. In addition, construction, operation, and maintenance activities would potentially introduce hydrocarbons and other contaminants into the surrounding environment. Implementation of the construction SWPPP and amending the refinery's operational SWPPP would reduce potential impacts of the project associated with erosion, sedimentation, and hazardous and non-hazardous substances to less than significant.

**g) No impact.** No housing would be constructed as part of the proposed project. Therefore, neither construction nor operation would place housing within a 100-year flood hazard area; thus there would be no impacts.

**h) No Impact.** The project site would be located parallel to, but outside of the 100-year floodplain of Oso Flaco Creek (FEMA 2008). The site would be approximately 500 feet north of the 100-year floodplain and would not place any structures within the flood hazard area. Therefore, there would be no impact from

construction or operation on a 100-year floodplain.

**i) Less Than Significant Impact.** No levees are known to exist along Oso Flaco Creek or Santa Maria River that could affect the project site in the event of failure. Flooding of portions of southern and western Nipomo Mesa could result from dam failure. Failure of the Lopez Reservoir Dam would release up to 51,000 acre-feet of water that would reach the Arroyo Grande Basin approximately one mile north of the project site. Failure of the Twitchell Reservoir Dam would release up to 240,000 acre-feet of water, portions of which would flow through the Santa Maria River floodplain. Some of the southern-most portions of the Phillips 66 property are within approximately 500 feet of the 100-year floodplain of Oso Flaco Creek and could be affected by a sudden failure of the Twitchell Reservoir Dam. However, most of the water from the Twitchell Reservoir would flow into Santa Barbara County (San Luis Obispo County 1999). Because the project site is located on the northern margin of the Oso Flaco Creek floodplain, failure of the Twitchell Reservoir Dam would result in only minor volumes of water at low flow rates to reach the project area; therefore, the risk of property loss would be less than significant. Because the project would not involve any housing or permanent stationing of employees, the risk of injury or death would be less than significant.

**j) No Impact.** The project site is not located in a Tsunami Inundation Area (CEMA, et al. 2009). It is also not located in an area susceptible to seiche inundation as it is not located near a lake or river capable of seiche events. Likewise, because the site is not located near a mountain range or hill capable of mass wasting, it is not susceptible to mudflows. Because the project site is outside areas potentially affected by seiche, tsunami, or mudflow, there would be no impacts under this criterion.

**k) No impact.** The project would not use, discharge to or divert any surface water. Therefore, there would be no impacts on the quantity or movement of surface water. As described above, refinery uses on-site groundwater, and the project would increase the use of groundwater for up to six on-site workers and make-up water for the heating system. However, the project would not introduce substantial impervious surfaces and stormwater from the unloading area cover would be directed to an infiltration basin. Therefore, the project would not substantially affect the quantity or movement of groundwater and any impacts would be less than significant.

**l) Less than Significant Impact.** Neither the quality nor availability of surface waters or groundwaters that could be potentially utilized for domestic, agricultural, or industrial purposes would be affected. Therefore, any impacts on community water service providers would be less than significant.

**References:**

California Department of Water Resources (CDWR). 2002. Water Resources of the Arroyo Grande-Nipomo Mesa Area. Department of Water Resources Southern District. Available at: http://www.dpla.water.ca.gov/sd/water_quality/arroyo_grande/arroyo_grande-nipomo_mesa.html.

Accessed: October 11, 2012.

California Emergency Management Agency (CEMA), California Geological Survey, and University of Southern California. 2009. Tsunami Inundation Map for Emergency Planning – State of California – County of San Luis Obispo – Oceano Quadrangle. July 1, 2009. Available at: http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/Pages/Statewide_Maps.aspx. Accessed: October 29, 2012.

Federal Emergency Management Agency (FEMA). 2008. Flood Insurance Rate Map – San Luis Obispo County, California and Incorporated Areas. Map Number 06079C1615F. Panel 1615 of 2050. Effective Date: August 28, 2008.

San Luis Obispo County. 1999. San Luis Obispo County General Plan – Safety Element. December 1999. 170 pages.

**Land Use and Planning**

| 10. | **Land Use and Planning** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|---|
| | Would the project: | | | | | |
| | a) | Physically divide an established community? | ☐ | ☐ | ☐ | ☒ |
| | b) | Be potentially inconsistent with land use, policy/regulation (e.g., general plan [county land use element and ordinance], local coastal plan, specific plan, Clean Air Plan, etc.) adopted to avoid or mitigate for environmental effects? | ☐ | ☐ | ☐ | ☒ |
| | c) | Be potentially inconsistent with any habitat or community conservation plan? | ☐ | ☐ | ☐ | ☒ |
| | d) | Be potentially incompatible with surrounding land uses? | ☐ | ☐ | ☐ | ☒ |
| | e) | Be potentially inconsistent with adopted agency environmental plans or policies with jurisdiction over the project? | ☐ | ☐ | ☐ | ☒ |

**Conclusion:**

**a) No Impact.** The proposed project would be conducted on property owned by Phillips 66, which is zoned industrial and bounded by lands designated Open Space to the west, by lands designated Agriculture to the south and northeast, and by lands designated Industrial to the north. Non-adjacent lands to the east are designated Agriculture and Rural Residential, and in the Woodlands Village Reserve Line are designated as Recreation, Commercial Service, and Commercial Retail. An established community is located only on non-adjacent lands to the east, and thus the proposed project would not physically divide an established community.

**b) No Impact.** The proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. The proposed project would be constructed and operated on lands designated Industrial (I). This includes Vehicle and freight terminals ("Vehicle and Freight Terminals [J8]), which is described as transportation establishments furnishing services incidental to transportation including freight forwarding services; transportation arrangement services; packing, crating, inspection and weighing services; freight terminal facilities; joint terminal and service facilities; trucking facilities, including transfer and storage; and postal service bulk mailing distribution centers. This definition does not include storage or transfer of hazardous waste materials. (SIC: Groups 40, 42)" as defined in the San Luis Obispo County Coastal Allowable Use Table & Definitions are an allowed use in the Industrial land use designation.

Additionally, the applicant would apply for and receive all necessary permits and approvals for the project. Constructing and operating the project in compliance with the requirements of these permits and approvals would ensure the project does not conflict with any applicable land use plan, policy, or regulation.

**c) No Impact.** As described under Section 3, Biological Resources, there are no applicable adopted HCPs, NCCPs or other approved local, regional, or state habitat conservation plans for the project area. Therefore, the project would not be inconsistent with any habitat or community conservation plan.

**d) No Impact.** The Phillips 66 property and proposed construction site is designated Industrial. Per the County of San Luis Obispo's Framework for Planning: Coastal Zone, the purposes of this land use category are, in part: "To identify areas suited to industrial activities that will not adversely affect adjacent areas of other uses."; "To protect adjacent land uses from harmful influences, as well as to prevent the intrusion of incompatible uses into industrial areas."; and "Where the Industrial category is located outside of urban or village reserve lines, it is intended to reserve appropriately located areas for industrial uses requiring large areas of land, nearby transportation or energy facilities, or related activities compatible with agricultural and other rural uses."

Among the allowed and principally permitted uses of lands designated Industrial are "Petroleum Refining and Related Industries" and "Vehicles and Freight Terminals".

Lands to the south, east, and northeast of the project site are designated Agriculture in the County General Plan. The Agriculture Element of the General Plan lists four high-level goals:

AG1: Support County Agricultural Production.
AG2: Conserve Agricultural Resources.
AG3: Protect Agricultural Lands.
AG4: Encourage Public Education and Participation.

The project would be consistent with these goals and their related policies. It would be located in an area where agricultural production and refinery operations have coexisted on adjoining lands since at least 1955. The proposed project would not reduce agricultural production, would not repurpose agricultural lands, and would not introduce a new use in an agricultural area that could lead to the loss of agricultural resources or lands. The project would result in a minor reduction in lands available for grazing (30 acres); however, existing agreements do not prohibit a reduction in grazing.

The proposed project would be compatible with surrounding land uses and would be constructed and operated entirely within the existing Phillips 66 property. The project site is zoned Industrial and bounded by lands designated Open Space to the west, by lands designated Agriculture to the south and northeast, and by lands designated Industrial to the north. Non-adjacent lands to the east are designated Agriculture

and Rural Residential, and in the Woodlands Village Reserve Line are designated as Recreation, Commercial Service, and Commercial Retail.

**e) No Impact.** The County of San Luis Obispo guides development in the County through its General Plan, which includes the local coastal program policy document for the County. The proposed project is located in the South County Coastal Planning Area; the South County—Coastal Area Plan describes county land use policies for the coastal zone portion of the South County Planning Area, including regulations which are also adopted as part of the Land Use Ordinance and Local Coastal Program. This plan allocates land use throughout the planning area by land use categories that determine permitted land uses, as well as defining their allowable density and intensity.

The South County—Coastal Area Plan divides lands into three sections: rural, urban, and village areas. The project would be located in a rural area, located outside of urban and village reserve lines. It would be constructed and operated on property designated and zoned Industrial (I). Adjacent and nearby lands to the west are designated and zoned Open Space (OS); to the south as Agriculture (A); to the north as Industrial (I) and Residential Suburban (RS) (Callender-Garrett Village Reserve Line Land Use Categories); and to the east as Commercial Services, Recreation and Public Facilities (Woodlands Village Reserve Line Land Use Categories). Lands to the west and south of the Phillips 66 property are uninhabited; lands to the north and east contain residences and host other land uses.

Construction and operation would be subject to the jurisdiction of a number of state and federal agencies. The proposed project would apply for and receive all necessary permits and authorizations from agencies with jurisdiction over the project, and would comply with the terms and conditions attached to permits and authorizations. Agency permits and authorizations would require consistency with adopted environmental plans and policies of the issuing agency. For this reason, the proposed project would be consistent with adopted agency environmental plans and policies.

**Mineral Resources**

| 11. | **Mineral Resources** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|---|
| | Would the project: | | | | | |
| | a) | Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | ☐ | ☐ | ☒ | ☐ |
| | b) | Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | ☐ | ☐ | ☐ | ☒ |

**Conclusion:**

**a) Less than Significant Impact.** The project site is located near the southern edge of Nipomo Mesa, near the base of the San Luis Range and Temettate Ridge. Earth materials in the area generally consist of poorly consolidated to unconsolidated Quaternary dune sands overlying highly folded and faulted Quaternary to Jurassic sedimentary rocks. The thickness of dune sand deposits typically decreases inland and uphill from the coastal piedmont to the Santa Ynez Mountains as well as from Nipomo Mesa to the Pacific Ocean

Oil exploration and production in the area has occurred in the Santa Maria Valley field of northern Santa Barbara County and the Guadalupe, Arroyo Grande, and Huasna fields of southern San Luis Obispo County (CGS 2001). Approximately 1,000 wells have been drilled on-shore within 10 miles of the refinery and 2 wells have been drilled within one mile. The closest abandoned oil and gas well (American Petroleum Institute [API] Number 08300638) is located 0.4 miles to the east and the closest currently producing well (API Number 08 is located 5.1 miles to the south. There are no producing or abandoned oil or gas wells on the project site (DOGGR 2012).

Sand, gravel, and aggregate (crushed stone or sand and gravel mixture used for construction) resources are present and are mined throughout the region (CGS 2006; USGS 2012). Approximately 75 million tons of currently permitted construction aggregate reserves are present within the San Luis Obispo-Santa Barbara Production-Consumption Region and a total of 10,700 million tons of concrete aggregate reserves are identified in the PRC on approximately 39,000 acres (CDC 1989; CGS 2011). Most sand pits exploit coastal sands near Oceano and most gravel pits are located along the base of the Santa Ynez Mountains. A prospect pit for jasper (a form of the mineral chalcedony) was explored approximately 0.75 miles south of the project site in the 1960s. Deposits of diatomite and limestone are also present in the nearby mountains and were likely partially used to process sugar beets at the Betteravia Plant, located west of Santa Maria, until it closed in the 1990s. Uranium-bearing deposits have been identified approximately 7 miles to the northeast (USGS 2012).

The project site in its entirety is classified as MRZ-3 for mineral resources and aggregate (areas containing

mineral deposits of undetermined significance, which cannot be evaluated from available data) (CDC 1989). There are no existing mining permits authorizing mining activities within the Phillips 66 property. The USGS "Mineral Resource Data System" indicates the nearest mineral resources are aggregate resources currently mined at the Oceano Sand Pit approximately 4 miles to the northwest (USGS 2012).

Construction and operation of the project could render aggregate and other mineral resources within portions of the site inaccessible. However, the proposed construction would not significantly reduce access to the 10.7 billion tons of known concrete aggregate resources in the PRC. As indicated by previous area oil and gas exploration, these resources are likely present in the subsurface. Although drilling within the rail project site may be hindered by rail infrastructure, horizontal drilling techniques would allow for extraction of these resources with no loss of overall availability. Because construction activities related to the Project would not result in an appreciable reduction in availability of any known mineral resources that would be of value to the region or residents of the State, impacts on availability of mineral resources would be less than significant.

**b) No Impact.** Sections 22.14.040 and 22.14.050 of the San Luis Obispo County Land Use Ordinance designate Energy and Extractive Resource Areas (EX) and Extractive Resource Areas (EX1), respectively. The EX designation is applied to areas where mineral or petroleum extraction occurs or is likely to occur, where the state geologist has designated a mineral resource area of statewide or regional significance pursuant to SMARA, or where major public utility electric generation facilities exist or are proposed. The EX1 designation is applied to areas classified by the CDC's Division of Mines and Geology as containing or being highly likely to contain significant mineral deposits.

The project site is not located on lands with EX or EX1 designations and is not an important mineral resource recovery site. Therefore, the project would have no impact.

**References:**

California Department of Conservation (CDC). 1989. Mineral Land Classification: Portland Cement Concrete Aggregate and Active Mines of All Other Mineral Commodities in the San Luis-Obispo-Santa Barbara Production-Consumption Region. Special Report 162. 114 pages.

California Geological Survey (CGS). 2001. Oil, Gas, and Geothermal Fields in California 2001. Available at: ftp://ftp.consrv.ca.gov/pub/oil/maps/Map_S-1.pdf. Accessed: October 31, 2012.

California Geological Survey (CGS). 2006. Aggregate Availability in California. CGS Map Sheet 52.

California Geological Survey (CGS). 2011. Special Report 215 Release. Press Notice. December 2011. Available at: http://www.conservation.ca.gov/cgs/information/publications/release_statements/Documents/SR_215.pdf.

Accessed: October 12, 2012.

California Department of Oil, Gas, and Geothermal Resources (DOGGR). 2012. DOGGR Online Mapping System (DOMS). [Online Resource] Available at: http://maps.conservation.ca.gov/doms/index.html. Accessed: October 11, 2012.

United States Geological Survey (USGS). 2012. Mineral Resource Data System. Mineral Resource Data System: Conterminous US. [Online Resource] Available at: http://mrdata.usgs.gov/mineral-resources/mrds-us.html. Accessed on: October 19, 2012.

**Noise**

| 12. | **Noise** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|---|
| | Would the project: | | | | | |
| | a) | Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies or expose people to noise levels that exceed the County Noise Element thresholds? | ☐ | ☐ | ☒ | ☐ |
| | b) | Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | ☐ | ☐ | ☒ | ☐ |
| | c) | A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☒ | ☐ |
| | d) | Substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☒ | ☐ |
| | e) | For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☐ | ☒ |
| | f) | For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☐ | ☒ |

**Conclusion:**

**a) Less Than Significant Impact.** The project would be located entirely on Phillips 66 property within San Luis Obispo County. The Phillips 66 property is zoned Industrial. The County of San Luis Obispo limits daytime (7:00 a.m. to 10:00 p.m.) noise impacts to 50 decibels A-weighted (dBA Leq) at residential property lines. County noise regulations exempt noise sources associated with construction, provided such activities do not take place before seven (7) a.m. or after ten (10) p.m. or any day except Saturday or Sunday or before eight (8) a.m. or after five (5) p.m.

Noise sensitive receptors potentially affected by the project are single-family residences located to the east of Highway 1 and to the north along Olivera Avenue. The nearest sensitive residential receptors potentially affected by the project are single-family residences along Highway 1 located approximately 3,300 feet east of the proposed Project and on Olivera Avenue located approximately 4,200 feet north of the proposed Project area.

Construction would require a variety of heavy equipment. Typical maximum noise levels for construction equipment at 50 feet from the source are shown in Table 3-12.1.

**Table 3-12.1**

**Typical Construction Equipment Noise Levels**

| Equipment | Noise Level (dBA) at 50 feet |
|---|---|
| Backhoe | 80 |
| Concrete mixer | 85 |
| Pump truck | 82 |
| Crane, Mobile | 85 |
| Dozer | 85 |
| Excavator | 85 |
| Generator | 82 |
| Grader | 85 |
| Man lift | 85 |
| Loader | 80 |
| Paver | 85 |
| Roller | 85 |
| Scraper | 85 |
| Trucks | 80-85 |
| Compactor | 80 |
| Crane | 85 |
| Grinder | 85 |
| Air Compressor | 80 |

Source: FHWA 2009

The noise prediction calculations for construction equipment assume that construction would occur for 12 hours per day. The calculated noise impacts range from 27.1 dBA at the eastern residential community to 44.2 dBA at the northern residential community. The calculated noise impacts at the sensitive receptor

locations for each phase are provided in Table 3-12.2.

**Table 3-12.2**

**Phillips 66 Santa Maria Refinery Rail Project Construction Noise Impacts**

| Receptor | Receptor Location | Construction Operations Noise Impacts (dBA Leq) | | |
|---|---|---|---|---|
| | | Demolition | Grading and Soil Transport | Site Preparation for Pipeline and Rail |
| 2 | Eastern Residential Community (Short-term Measurement Location 1) | 27.1 | 42.7 | 40.5 |
| 3 | Northeastern Residential Community (Short-term Measurement Location 2) | 29.7 | 38.8 | 38.2 |
| 4 | Northern Residential Community (Short-term Measurement Location 3) | 35.7 | 42.8 | 44.2 |

These modeling results demonstrate that noise impacts from construction would not exceed the County of San Luis Obispo noise threshold limit of 50 dBA Leq at residential receptors. Therefore, construction noise impacts would be less than significant.

The estimated noise sources associated with operations would be rail operations, as well as with the supplementary pumps, electrical substation, alarm system, and ventilation equipment. The noise analysis considers the arrival, unloading, and departure of a single train during a 24 period. This evaluation incorporated a train consisting of 87 cars including 3 diesel engines. The analysis assumes that all other related stationary mechanical equipment would operate at 100 percent utilization during the 24 hour period.

Computer model calculations indicate that the worst-case noise impacts from project operations would range from 36.9 dBA Leq at the eastern residential community to 44.2 dBA at the northern residential community. The calculated noise impacts at the sensitive residential receptor locations are provided in Table 3-12.3.

**Table 3-12.3**

**Phillips 66 Santa Maria Refinery Rail Project Operational Noise Impacts**

| Receptor | Receptor Location | Noise Threshold Limit (dBA) | Unmitigated Noise Level (dBA Leq) |
|---|---|---|---|
| 2 | Eastern Residential Community (Short-term Measurement Location 1) | 45 | 36.9 |
| 3 | Northeastern Residential Community (Short-term Measurement Location 2) | 45 | 38.7 |
| 4 | Northern Residential Community (Short-term Measurement Location 3) | 45 | 44.2 |

The noise impacts from project operations would not exceed the County of San Luis Obispo worst-case nighttime noise threshold limit of 45 dBA Leq or the daytime noise threshold limit of 50 dBA Leq at the sensitive residential receptors.

**b) Less Than Significant Impact.** Construction would include the use of heavy equipment that would generate ground-borne vibrations. Possible sources of vibration may include excavators, dump trucks, backhoes, and other grading and earth moving equipment.

According to the Federal Transit Administration (FTA) guidelines, a vibration level of 65 VdB is the threshold of perceptibility for humans. For a significant impact to occur, vibration levels must exceed 80 VdB during infrequent events (FTA 1995). The vibration calculations are based on the FTA published vibration levels provided in Table 3-12.4.

**Table 3-12.4**

**Vibration Source Levels for Construction Equipment**

| Equipment | Vibration Level (VdB) at 25 feet |
|---|---|
| Large bulldozer | 87 |
| Caisson drilling | 87 |
| Loaded trucks | 86 |

| | |
|---|---|
| Jackhammer | 79 |
| Small bulldozer | 58 |
| Pile Driver (Impact) | 112 |

Source: FTA 2006

Construction activities may occur within 3,300 feet of the eastern residential community and within 4,200 feet of the northern residential community. Calculations show that the distance to each residential receptor would attenuate the vibration impact levels to approximately 48.8 VdB at the eastern residential community and 47.6 VdB at the northern residential community. This analysis shows that vibration levels at all identified sensitive receptors would be far below the threshold of of 80 VdB. Therefore, vibration impacts would be less than significant.

The FTA has further established criteria for assessing vibration impacts specifically related to railway operations. This criterion is based on a vibration assessment accounting for train speed, type of track, type of wheels, ground-borne propagation, and structures. The FTA uses a criterion of 72 VdB or greater for residential structures.

This analysis evaluates reasonable worst-case vibration impacts associated with operations. It shows that vibration impacts at the nearest residential receptor (3,200 feet) would be attenuated to 18.8 VdB, which is below the perception threshold for humans and damage to structures. This analysis indicates that vibration levels at all identified sensitive receptors would be below the threshold level of 72 VdB. Therefore, these impacts would be less than significant.

**c) Less Than Significant Impact.** To document the existing ambient noise conditions within the project area, environmental noise monitoring equipment was placed at a location northeast of the existing refinery facility. The long-term noise monitor was programmed to record continuously in order to document the daytime and nighttime noise ambient environment of a typical week during refinery operations between Wednesday, October 10$^{th}$, 2012 and Thursday, October 18$^{th}$, 2012. The results of the field noise monitoring are shown in Table 3-12.5.

The long-term noise monitoring data show that the average daytime noise levels range from 40.9 to 50.9 dBA Leq and the average nighttime noise levels range from 37.5 to 42.8 dBA Leq. The average Leq over the week long noise monitoring period during the daytime was 44.9 dBA and during the nighttime was 41.0 dBA.

To further document the existing daytime and nighttime ambient noise levels, a series of short-term 30-minute equivalent sound level measurements (dBA Leq) were conducted at four potential noise sensitive receptor locations on Thursday, October 18$^{th}$, 2012 and Friday, October 19$^{th}$, 2012. Measurement

locations include single-family residences located on Olivera Avenue as well as locations along Highway 1. Additionally, data were collected north of the refinery at the salvage yard at the intersection of Alley Oop Way and Gasoline Alley Place to document the noise from the existing refinery operations. . The results of these measurements are shown in Table 3-12.6.

**Table 3-12.5**

**Long-term Noise Monitor – October 2012 Noise Monitor Data Summary**

| Date | Daytime Leq (dBA) 7:00 a.m. to 10:00 p.m. | Nighttime Leq (dBA) 10:00 p.m. to 7:00 a.m. |
|---|---|---|
| October 10, 2012 | 40.9 | 37.5 |
| October 11, 2012 | 44.5 | 42.7 |
| October 12, 2012 | 42.6 | 42.7 |
| October 13, 2012 | 45.3 | 40.2 |
| October 14, 2012 | 43.1 | 38.5 |
| October 15, 2012 | 44.9 | 42.8 |
| October 16, 2012 | 50.9 | 41.7 |
| October 17, 2012 | 45.7 | 41.0 |
| October 18, 2012 | 46.2 | 42.0 |

**Table 3-12.6**

**Short-term Noise Measurements Levels on October 18th, 2012 and October 19th, 2012**

| Receptor | Noise Measurement Location (Coordinates) | Daytime 30-minute Leq (dBA) | Nighttime 30-minute Leq (dBA) |
|---|---|---|---|
| 2 | 35.027507°N, 120.560325°W | 54.5 | 45.6 |
| 3 | 35.039948°N, 120.563988°W | 51.0 | 40.0 |
| 4 | 35.040125°N, 120.572990°W | 49.5 | 40.4 |
| 5 | 35.040290°N, 120.580060°W | 56.1 | 41.7 |

The short-term noise measurement data provided in Table 3-12.6 show that daytime noise levels range from 49.5 to 56.1 dBA Leq and nighttime noise levels range from 40.0 to 45.6 dBA Leq.

Construction is a temporary condition, and as a result, would not involve permanent increases in ambient noise levels. Therefore, there would be no impact.

To determine the potential impacts of operations on the existing residential community, the existing noise levels were compared with future modeled noise levels. This comparison is summarized below in Table 3-12.7.

The results of the comparison show that the increase in ambient noise levels would range from 0.6 dB at the eastern residential community to 5.3 dB at the northern residential community. This increase would not constitute a substantial increase in the existing ambient noise level. A 3 dB increase is considered to be barely noticeable to a human. A 5.3 dB increase would also be considered as noticeable but would not result in a substantial increase because of the logarithmic scale used to define noise levels.

**Table 3-12.7**

**Phillip 66 Santa Maria Refinery Rail Project Increase to the Existing Ambient Noise Levels**

| Receptor | Receptor Location | Measured Nighttime Noise Level (dBA Leq) | Calculated Noise Level (dBA Leq) | Combined Noise Level (dBA Leq) | Increase (dB) |
|---|---|---|---|---|---|
| 2 | Eastern Residential Community (Short-term Measurement | 45.6 | 36.9 | 46.2 | 0.6 |
| 3 | Northeastern Residential Community (Short-term Measurement | 40.0 | 38.7 | 42.4 | 2.4 |
| 4 | Northern Residential Community (Short-term Measurement Location 3) | 40.4 | 44.2 | 45.7 | 5.3 |

The analysis concentrates on train volumes along the coastal Union Pacific Railroad corridor using representative data samples from the cities of Santa Margarita and Guadalupe, California, which are located to the north and south of the proposed project site. The highest volume of project-related train traffic would travel along the tracks within this rail corridor because it is directly connected to the project.

Existing noise levels were not available for the many roadway crossings along the UPRR corridor, CadnaA was used to create a baseline noise profile for existing conditions considering the existing volume of train traffic. For the UPRR corridor, the existing noise profile was calculated by using the published training volumes at the 11th Street, Guadalupe, CA rail crossing which is located south of the project site. These volumes can be found in the U.S. Department of Transportation (DOT) rail crossing inventory information database. The published train volumes established 19 freight trains. No commuter trains were published for this railway crossing, so a worst-case 6 Amtrak commuter trains were added to the published data for a total of 25 trains per day.

For areas along the UPRR rail line that extends along the central and southern California coast, the existing train noise levels for residences located 50 feet from open track and not in the vicinity of a railway crossing signal are approximately 73.4 dBA Leq. With the project-related increase of 2 train events per day, rail-related noise would increase from 73.4 dBA to 73.7 dBA resulting in an increase of 0.3 dB. Along the same UPRR tracks but adjacent to a road crossing signal with crossing alarms and trains sounding their horns, a residence at 50 feet would experience approximately 78.3 dBA Leq. With the project-related increase of approximately 2 train events per day, rail-related noise would increase to 78.6 dBA resulting in an increase of 0.3 dB. Residences located greater than 50 feet from the tracks would experience lower increase to the existing noise levels. Therefore, with 3 dBA as the threshold for human perception of noise changes, project rail traffic would not result in a substantial noise increase. These results are summarized in Table 3-12.8 below.

**Table 3-12.8 Train Noise Impacts at Residences Located 50 feet from the Rail Corridor**

| No Train Crossing Signal in Vicinity | | | Train Crossing Signal in Vicinity | | |
|---|---|---|---|---|---|
| Existing Noise Level (dBA Leq) | Incorporation of Project Train Operation Noise Impacts (dBA Leq) | Noise Level Increase (dB) | Existing Noise Level (dBA Leq) | Incorporation of Project Train Operation Noise Impacts (dBA Leq) | Noise Level Increase (dB) |
| 73.4 | 73.7 | 0.3 | 78.3 | 78.6 | 0.3 |

The source of the crude oil is uncertain and could be obtained from a number of locations, it would be speculative to conduct detailed evaluations along a single route (e.g., coastal California to Upper Midwest) and impractical to evaluate potential noise impacts along all of the railway lines entering the State of California. This analysis provides a sample based evaluation of potential noise impacts associated with project-related rail traffic on sections of tracks located in select locations to the north and east outside of the State of California boundaries. The sample is based on 3 major train corridors that have a potential for crude oil shipping. These sample railway crossings are documented in the U.S. DOT railway crossing inventory database. This sample area includes corridors located in Salem, Oregon, Salt Lake City, Utah, and near Gila Bend, Arizona. Train volumes for these locations can be found in the U.S. crossing inventory

information database. All 3 chosen railway crossings are classified as main branches for the UPRR Company and include one main track to stay consistent with the track that runs parallel and in the vicinity of the proposed project site. The rail crossing located at Hines Street SE in Salem, Oregon contains an existing train volume of 27, the rail crossing located at Fulton Street (550 S) in Salt Lake City, Utah contains an existing train volume of 32, and the rail crossing located at 83rd Avenue near Gila Bend, Arizona contains an existing train volume of 25,

Calculations show that these sample corridors have similar or higher existing noise levels due to higher train traffic volumes when compared to tracks located in the California coastal corridor in the region of the proposed project site. An increase of 2 train events per day at these railway crossings would result in an increase to the existing noise levels ranging from 0.3 dB. A summary of sampled calculated railway crossings noted above are provided in Table 3-12.9 below.

**Table 3-12.9 Train Noise Impacts at Sample UPRR Railway Crossings**

| Railway Crossing Location | Existing Train Volume | Existing Noise Level (dBA Leq) | Noise Level with Project-Related Train Events (dBA Leq) | Increase to Existin Noise Level (dB) |
|---|---|---|---|---|
| Salem, OR – Hines St. SE | 27 | 78.6 | 78.9 | 0.3 |
| Salt Lake City, UT – Fulton St. (550S) | 32 | 79.3 | 79.6 | 0.3 |
| Gila Bend, AZ – 83rd Ave. | 25 | 78.3 | 78.6 | 0.3 |

Furthermore, project approval would not substantially increase movement of trains or the type of materials transported on state or regional rail lines, would not allow construction of new facilities outside the project site, and would not change the current use or capacity of the trains or the tracks.

The increase in noise levels along the existing train corridors within California, as well as north and east of the State of California boundaries would be less than 1 decibel. Therefore, the increased train events associated with the proposed project operations would be considered less than significant.

**d) Less Than Significant Impact.** Construction activities would occur on weekdays and only during the daytime period. The existing ambient measured noise levels range from 49.5 dBA Leq to 56.1 dBA Leq.

The modeled construction noise impacts range from 27.1 dBA Leq at the eastern residential community to 44.2 dBA Leq at the northern residential community. The noise levels from the construction activities would temporarily increase the existing ambient noise levels by 2 to 3 decibels. However, the construction activities would be conducted during daytime hours and would not increase the existing nighttime ambient noise levels. Because construction would be during the day and because of the temporary nature of construction, the increase in ambient noise levels at the nearest residence would be less than significant.

Noise impacts from proposed project operations would range from 36.9 dBA Leq at the eastern residential community to 44.2 dBA Leq at the northern residential community. The existing daytime ambient measured noise levels at the residential communities range from 49.5 dBA Leq to 54.5 dBA Leq. During the daytime period the noise impacts would result in an increase to the existing ambient noise levels of less than 1 dB. These increases would not represent a substantial increase and is therefore considered less than significant.

The existing nighttime ambient measured noise levels at the residential communities range from 40.0 dBA Leq to 45.6 dBA Leq. During the nighttime period, noise impacts would increase the existing ambient noise levels ranging from 0.6 dB at the eastern residential community to 5.3 dB at the northern residential community. This increase would not generate a substantial increase to the existing ambient noise level. A 3 dB increase is considered to be barely noticeable to a human. A 5.3 dB increase would also be considered as noticeable but would not result in a substantial increase because of the logarithmic scale used to define noise levels. This increase would not represent a substantial increase and is therefore considered less than significant.

**e) No Impact.** The project area is not located within an airport land use plan, nor is it within two miles of a public airport or public use airport. Therefore, neither construction nor operations would expose workers to excessive noise levels attributable to a public airport or public use airport, and there would be no impact.

**f) No Impact.** There are no private airstrips located within the vicinity of the Project. Therefore, the Project would not expose construction or operations workers to excessive noise levels attributable to a private airstrip, and there would be no impact.

**Population and Housing**

| 13. | **Population and Housing** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|---|
| | Would the project: | | | | | |
| | a) | Induce substantial growth in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)? | ☐ | ☐ | ☐ | ☒ |
| | b) | Displace existing housing or people, requiring construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ |
| | c) | Create the need for substantial new housing in the area? | ☐ | ☐ | ☐ | ☒ |
| | d) | Use substantial amount of fuel or energy? | ☐ | ☐ | ☒ | ☐ |

**Conclusion:**

a) **No Impact.** The project would be constructed and operated at the existing Santa Maria Refinery, which is located in unincorporated San Luis Obispo County. The unincorporated community of Nipomo is located to the east of the refinery.

The past, current, and projected population of San Luis Obispo County and the Nipomo Census Designated Place (CDP) are show in Table 3-13.1. The Nipomo CDP is projected to account for 30% of growth in urban areas of unincorporated San Luis Obispo through 2030 (SLO County Growth Assessment).

**Table 3-13.1**

**Population**

| Location | 1990 | 2000 | 2010 | 2020 | 2030 |
|---|---|---|---|---|---|
| San Luis Obispo County | 217,162 | 246,681 | 269,637 | 269,934 | 292,222 |
| Nipomo CDP | 7,109 | 12,626 | 16,714 | 21,705 | 27,800 |

Housing information for San Luis Obispo County and the Nipomo CDP are shown in Table 3-13.2. The rental vacancy rate has remained steady in the area around the refinery over the past decade. Short-term lodging is available in the area, with a number of hotels and motels in Nipomo and Santa Maria (to the south of the refinery).

**Table 3-13.2 Housing**

| Location | 2000 Units | 2010 Units | 2000 Rental Vacancy Rate | 2010 Rental Vacancy Rate |
|---|---|---|---|---|
| San Luis Obispo County | 102,275 | 117,315 | 3.2% | 5.5% |
| Nipomo CDP | 4,146 | 5759 | 3.3% | 3.1% |

Information on the labor force, unemployment, and employment by industry are presented in Tables 3-13.4 and 3-13.5 below. Countywide, the unemployment rate in the 2000-2011 period averaged 5.7 percent; unemployment over the 2000 to 2008 period averaged 4.5 percent, and rose sharply in the 2009-2011 period to an average of 9.4 percent. The unemployment rate in the Nipomo CDP over the 2000-2011 period averaged 7.2 percent; unemployment over the 2000 to 2008 period averaged 5.5 percent, and rose sharply in the 2009-2011 period to an average of 12.4 percent.

**Table 3-13.4 Labor Force and Unemployment**

| Location | Labor Force, 2011 | Unemployment Rate, 2011 | Labor Force, October 2012 | Unemployment Rate, October 2012 |
|---|---|---|---|---|
| San Luis Obispo County | 138,700 | 9.3 | 141,400 | 7.4 |
| Nipomo CDP | 6,900 | 12.3 | 7,000 | 9.9 |

**Table 3-13.5 Employment by Industry**

| Industry | 1990 | 2000 | 2010 | 2011 |
|---|---|---|---|---|
| Total Farm | 2,700 | 4,800 | 4,700 | 5,000 |
| Mining, Logging, and Construction | 5,500 | 6,100 | 4,900 | 5,100 |
| Manufacturing | 5,400 | 7,400 | 5,800 | 5,800 |
| Trade, Transportation & Utilities | 15,500 | 18,100 | 19,100 | 19,300 |
| Information | 1,500 | 1,800 | 1,200 | 1,200 |
| Financial Activities | 3,600 | 3,700 | 3,900 | 4,000 |
| Professional & Business Services | 5,600 | 8,800 | 9,800 | 10,300 |
| Educational & Health Services | 6,300 | 8,700 | 11,500 | 11,400 |
| Leisure & Hospitality | 10,600 | 13,000 | 14,800 | 14,700 |
| Other Services | 4,400 | 4,300 | 4,600 | 4,400 |
| Government | 16,900 | 22,400 | 20,900 | 20,400 |

Source: CAEED 2012

The project would not induce, either directly or indirectly, population growth in the area. The construction work would require approximately 100-200 workers over a period of 7 months. Most if not all of this labor demand would be met by local hiring; the current level of unemployment in the area indicates the presence of a sufficient labor pool to meet the project's labor demands. Specialty construction contractors from outside the immediate area would be used on an as-needed basis over the short-term construction period; the short-term nature of construction would not be expected to result in in-migration of labor or population from outside the immediate area. In addition, construction of the project would not create any new public infrastructure that could directly or indirectly induce any population growth.

Operation of the project would result in the creation of 4-6 new positions at the refinery. It would not include any new public infrastructure, and therefore would not have substantial effects on population growth.

**b) No Impact.** There is no housing or people residing on the Phillips 66 property on which the project would be constructed and operated. Therefore, the project would not displace existing housing or people, and thus would not necessitate the construction of replacement housing elsewhere.

**c) No Impact.** As presented in (a) and (b) above, neither construction nor operation would induce population growth and would not necessitate the construction of replacement housing. Therefore, the Project would not create a need for any new housing in the area.

**d) Less than Significant Impact**. The project would not use substantial fuel or energy. The unloading operation would result in a small additional increment of fuel and energy beyond that used by the existing refinery operation. The project is consistent with current Industrial zoning, including the Coastal Zone Land Use Ordinance which describes refining and other industrial processes. Phillips 66 would implement design measures to increase the energy efficiency of the project, including insulating the heating system and would recover the refinery's produced fuel gas for use in operating the heating system.

**References:**

State of California, Department of Finance. 2010a. E-4 Population Estimates for Cities, Counties and the State, 2001-2010, with 2000 Benchmark. Available at: http://www.dof.ca.gov/research/demographic/reports/estimates/e-4/2001-10/. Accessed on May 20, 2010.

State of California, Department of Finance. 2010b. E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2010, with 2000 Benchmark. Available at: http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2001-10/. Accessed on May 20, 1010.

Tulare County Resource Management Agency. 2010. Tulare County Housing Element—2009 Update. Available at: http://www.co.tulare.ca.us/civica/filebank/blobdload.asp?BlobID=5570. Accessed on May 18, 2010.

**Public Services**

| 14. | **Public Services** | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| | Would the project: | | | | |
| a) | Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire protection, police protection, schools, parks, or other services?: | ☐ | ☐ | ☒ | ☐ |
| | Fire protection? | ☐ | ☐ | ☒ | ☐ |
| | Police protection? | ☐ | ☐ | ☒ | ☐ |
| | Schools? | ☐ | ☐ | ☐ | ☒ |
| | Parks? | ☐ | ☐ | ☐ | ☒ |
| | Other public facilities? | ☐ | ☐ | ☐ | ☒ |
| | Roads? | ☐ | ☐ | ☒ | ☐ |
| | Solid Wastes? | ☐ | ☐ | ☒ | ☐ |

**Conclusion:**

**a) Less than significant and No Impact**: The proposed project would not result in increased throughput of crude oil and would only result in a change of delivery method to SMR. Therefore, the need for fire protection services would not change significantly for project operations. Construction would result in a peak workforce of approximately 200 and the potential to result in injuries and increased need for fire protection services. However, this need would not require construction of additional physical facilities and would be temporary during construction and therefore, any impacts would be less than significant.

The project would not result in an increase in police response time or the need for additional facilities. The project would result in only a minor increase in staff at the refinery and would therefore not result in additional need for schools, parks or other public facilities within the County. Therefore, the project would not result in impacts on police protection, schools, parks, or other public facilities.

The project entails the construction and operation of a new rail spur on the Phillips 66 property. Construction of the rail spur would require delivery of materials, construction equipment access, and contractor access using public roadways and would result in minor temporary increase in vehicular traffic on public roads in the vicinity of the refinery. However, this increase is not anticipated to result in a degradation of public roads or require improvements or expansion of existing public roadways. The increase would be considered temporary during construction and operation of the project would not result in substantial long-term increases of vehicular traffic on public roadways. Therefore, because any increase in roadway use would be minor and temporary during construction and operations would require 4-6 new employees, impacts on public roads would not require new construction would be less than significant.

Construction would result in a temporary increase in solid waste generation, including packaging and any excavated material requiring disposal. These wastes would be removed by the construction contractor and would not result in a need for new solid waste disposal facilities.

**Recreation**

| 15. | **Recreation** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|---|
| | Would the project: | | | | | |
| | a) | Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | ☐ | ☐ | ☐ | ☒ |
| | b) | Affect the access to trails, parks or other recreation opportunities? | ☐ | ☐ | ☐ | ☒ |
| | c) | Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | ☐ | ☐ | ☐ | ☒ |

**Analysis:**

The project would be constructed and operated at the existing SMR on Phillips 66 property, which is located in unincorporated San Luis Obispo County. The unincorporated community of Nipomo is located to the east of the refinery.

The area has a range of recreational facilities and parks. The Oceano Dunes State Park is located along the beach immediately west of the Phillips 66 property. The 3,600-acre (1456 ha) park has 5.5 miles (8.8 km) of beach access with 1,500 acres (607 ha) of sand dunes open for vehicle and recreational vehicle use. The park is the only California State Park facility that allows vehicles to be driven on the beach. The Oso Flaco Lake Natural Area is also part of the Oceano Dunes State Park. The Lake area is off-limits to vehicles and is primarily used by the public for viewing plants, wildlife, and scenic landscapes. The Oso Flaco Lake Natural Area offers a 1.5-mile (2.4 km) boardwalk path, including a span that crosses over the lake itself, that connects the parking lot at the west end of Oso Flaco Lake Road to the beach. Portions of the SMR facility are visible from Oso Flaco Lake Road.

The County of Santa Barbara Parks Department manages the Rancho Guadalupe Dunes Preserve, located approximately 5 miles south of the site. The Rancho Guadalupe Dunes Preserve supports pristine sand dunes and offers fishing, hiking, wildlife viewing, picnicking, and other activities for the public.

The Guadalupe-Nipomo Dunes National Wildlife Refuge is located to the southwest. Refuge management programs focus on habitat and wildlife management, population monitoring, public use and wildlife-dependent recreational activities, interagency and public coordination, and development of refuge partners; there are no developed recreational facilities in the refuge, but non-motorized recreation is available.

Black Lake Canyon is located approximately 1 mile north of the Site. Black Lake Canyon represents a

significant natural resource, containing habitat for a number of rare plant and wildlife species.

Nipomo Community Park and the adjacent Mesa Meadows Natural Area are located approximately four miles to the east. The western terminus of the Nipomo Bluff Trail is located approximately 0.6 miles from the east end of the rail spur. The Juan Batista de Anza National Historic Trail overlies the route of Highway 1 through the area, and is located within 0.6 miles of the east end of the rail spur. Private recreation facilities are also found in the area, including golf courses and health clubs/gymnasiums.

**Conclusion:**

**a) No Impact.** The use of, and demand for, parks or other recreational facilities is closely tied to population; as population increases, the use of existing parks and recreational facilities can be expected to increase. Similarly, the loss of existing parks and recreational facilities would result in a concentration of use at remaining parks and facilities. However, the project would not directly or indirectly induce any population growth during construction and would add 4-6 full-time positions during operations. Additionally, the project would not result in the loss of existing parks or recreational facilities or areas. Therefore, construction and operation would not result in displacement of recreation or any increase in the use of existing neighborhood and regional parks or other recreational facilities resulting in degradation of facilities, and there would be no impacts under this criterion.

**b) No Impact.** The proposed project would be constructed and operated on private property at the existing Phillips 66 refinery. There are no existing access to trails, parks, or other recreational opportunities on the property. Similarly, access to trails, parks or other recreational opportunities would not be affected by rail traffic, which would use existing facilities.

**c) No Impact.** The proposed project is not expected to result in a population increase and therefore would not require the construction or expansion of any recreational facilities. In addition, the project does not include any recreational facilities. Therefore, the proposed project would not include or require the construction or expansion of any recreational facilities, and therefore the proposed project would not have an adverse physical effect on the environment as a result of the construction or expansion of any recreational facilities.

**References:**

California Department of Parks and Recreation. 2012. Oceano Dunes State Vehicular Recreational Area. [webpage] Accessed at http://ohv.parks.ca.gov/?page_id=1207

United States Fish and Wildlife Service. 2012 Guadalupe-Nipomo Dunes National Wildlife Refuge. [webpage] Accessed at http://www.fws.gov/hoppermountain/GuadalupeNDNWR/GuadalupeNipomoDunesNWR.html

**Transportation and Traffic**

| 16. | **Transportation and Traffic** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|---|
| | Would the project: | | | | | |
| | a) | Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | ☐ | ☐ | ☐ | ☒ |
| | b) | Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? | ☐ | ☐ | ☐ | ☒ |
| | c) | Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | ☐ | ☐ | ☐ | ☒ |
| | d) | Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | ☐ | ☐ | ☐ | ☒ |
| | e) | Result in inadequate emergency access? | ☐ | ☐ | ☐ | ☒ |
| | f) | Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | ☐ | ☐ | ☐ | ☒ |
| | g) | Result in inadequate parking capacity? | ☐ | ☐ | ☐ | ☒ |
| | h) | Result in inadequate internal traffic circulation? | ☐ | ☐ | ☐ | ☒ |

**Conclusion:**

**a) No Impact.** The project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. The project would require transport of construction workers and construction materials. Construction truck trips would include deliveries of rail components and construction materials for the unloading facility and pipeline. Mass transit in the project area is limited. These trips and deliveries would not affect mass transit and would not interfere with existing trails or paths. Construction deliveries would occur over a period of months and would have less than significant effects on the performance of area highways, freeways and streets.

As enumerated in the Phillips 66 Throughput EIR, the refinery currently generates approximately 160 employee roundtrips (320 one-way trips) per day and normal operations generate approximately five truck roundtrips (10 one-way trips) per day. In addition, the refinery generates truck trips related for coke removal, which historically has been approximately 41 trucks per day (82 one-way truck trips). The proposed project would generate an average of approximately 40 worker trips during construction, with a short term peak of up to 200 during assembly of the unloading facility, heating system, and pipeline. Workers would arrive before the peak traffic period and depart throughout the afternoon and evening depending on the stage of construction  Following construction, operations would increase traffic levels by approximately 1-6 worker trips per day (assuming no carpooling), with fluctuating schedules depending on the arrival and departure of trains. Existing refinery traffic uses State Route 1 (Willow Road) to U.S. Highway 101. Eastbound traffic uses Willow Road to Pomeroy Road to West Tefft Street to U.S. Highway 101. Southbound traffic follows State Route 1 to State Route 166 to U.S. Highway 101. The project would result in a significant impact if it caused an intersection operating at LOS C to operate at LOS D or worse. However, the project would not contribute to a change in LOS. Truck deliveries would avoid the intersection at Tefft and Highway 101 during peak hours and would use other available delivery routes throughout the day. Truck deliveries would occur over specific periods depending on the construction activities and thus would be short term episodic impacts.

**b. No Impact.** The project would be constructed within the existing Phillips 66 property boundaries and would not have direct effects on county roads. It would not conflict with an applicable congestion management program and would not affects levels of service, travel demand measures, or other standards. Therefore, the projects would have no impact on congestion management.

**c. No Impact.** The project would have no impact on air traffic patterns, air traffic levels or the locations of airports.

**d. No Impact.** The project would not introduce new transportation hazards such as sharp curves or dangerous interactions.  All project traffic would use existing roads and intersections and as with existing conditions, would consist of private cars, construction deliveries, and trucks. Therefore, the project would

have no impacts on transportation hazards.

**e. No Impact.** The project would not cross roadways or result in short-term roadway closure. Construction and operations would occur entirely with existing property boundaries. Therefore, the project would have no impact on emergency access.

**f. No Impact.** The project would be constructed and operated entirely within the existing boundaries of the Phillips 66 property. It would not affect public transit, bicycle and pedestrian trails or facilities, or decrease the performance of any related facilities. Therefore, the project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.

**g. No Impact.** The project would have no impact on parking. All workers, trucks and trains would park at the construction site on the existing Phillips 66 property.

**h. No Impact.** The project would not result in inadequate internal traffic circulation. All vehicles would use existing roadways and parking within the property boundary. The rail modification would provide adequate space for trains to circulate and would have no impacts on-site or off-site.

**Utilities and Service Systems**

| 17. | **Utilities and Service Systems** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|---|
| | Would the project: | | | | | |
| | a) | Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board | ☐ | ☐ | ☐ | ☒ |
| | b) | Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☐ | ☒ |
| | c) | Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☒ | ☐ |
| | d) | Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | ☐ | ☐ | ☒ | ☐ |
| | e) | Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | ☐ | ☐ | ☒ | ☐ |
| | f) | Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | ☐ | ☐ | ☒ | ☐ |
| | g) | Comply with federal, state, and local statutes and regulations related to solid waste? | ☐ | ☐ | ☒ | ☐ |
| | h) | Violate waste discharge requirements or Central Coast Basin Plan criteria for wastewater systems? | ☐ | ☐ | ☐ | ☒ |
| | i) | Change the quality of surface or ground water (e.g., nitrogen-loading, daylighting)? | ☐ | ☐ | ☐ | ☒ |
| | j) | Adversely affect community wastewater service provider? | ☐ | ☐ | ☒ | ☐ |

**Conclusion:**

**a) No Impact.** All water use will comply with the applicable on-site treatment requirements with the exception of construction worker use portable restrooms that would be hauled off-site by the contractor for treatment. Short term increases in wastewater generation would not increase the volume of wastewater in

the system. The project would not exceed the treatment requirements of the Central Coast Regional Water Quality Control Board and there would be no impact.

**b) No Impact.** The project would not require additional water supply or increase in wastewater generation. Therefore, no new water or wastewater treatment facilities are required. Water required for dust control during construction would be trucked to the site by the contractor. As described above, the project would not result in an increase in wastewater generation with the exception during construction. Therefore, the project would not require construction or expansion of water or wastewater facilities and there would be no impact.

**c) Less Than Significant.** Construction and operation of the project would result in a localized increase in stormwater runoff from the unloading area rooftop. The rooftop and other small structures (e.g., restrooms) would add a total of approximately 1 acre of impervious surfaces. Storm water from the unloading facility rooftop would drain to an on-site storm water infiltration basin. However, the project would not result in new impervious surfaces that would increase off-site stormwater runoff volumes that would require the construction of new municipal stormwater collection, treatment or disposal facilities in local streets or other public areas. Therefore, impacts related to increased stormwater runoff and construction of new drainage facilities would be localized on-site and specific to collection and infiltration of rooftop drainage within the project footprint and any impacts would therefore be less than significant.

**d) Less Than Significant.** On-site wells would provide water for the project; therefore, the project would not require new sources of water that would require new or additional entitlements. Water used for dust control during construction would be provided by on-site groundwater wells and would not be in quantities large enough to have a substantial effect on water supplies or require new sources. Because the project would only affect the method of transport and would not result in greater refinery throughput, no new water sources or new or increased entitlements would be necessary and any impacts on water utilities and services would be less than significant.

**e) Less Than Significant.** The project would be served by a new septic system and would not result in increased production of wastewater requiring treatment by a municipal wastewater treatment provider. There would be an increase in wastewater during construction as described under a), above; however, this increase would be limited to the construction period and be hauled by the construction contractor to a fee-based disposal facility. Because this increase in wastewater would be limited to construction and longer-term wastewater disposal would be addressed on-site, any impacts on wastewater services and utilities would be less than significant.

**f) Less Than Significant.** The project is not expected to generate significant amounts of construction waste. There are three active landfills within proximity of the project site that could accommodate construction waste and debris. Of these three, all have sufficient permitted capacity to accept construction

waste from the project (Table 3-17.1). It is assumed that the entire amount of construction waste would be deposited at local landfills but this amount would not significantly reduce the capacity at local landfills. Because the project would not generate significant amounts of construction waste and all local landfills have sufficient capacity to accept construction waste impacts related to local landfill capacity would be less than significant.

**Table 3-17.1**

**Capacity of Local Landfills**

| Facility | Max Permitted Capacity (cubic yards) | Remaining Capacity (cubic yards) |
|---|---|---|
| Cold Canyon Landfill | 10, 900, 000 | 1,830,000 |
| Chicago Grade Landfill | 8, 950,220 | 8,329,699 |
| City of Paso Robles Landfill | 6,495,000 | 5,327,500 |
| Total remaining capacity | | 15,487,199 |

**g) Less Than Significant.** The project will generate insignificant amounts of waste from construction or operation. The exact quantity of waste is not currently known, and it is not known how much, if any of the waste can be reused or recycled in compliance with waste diversion regulations. However, because of the minor amounts of anticipated waste, if none were appropriate for reuse or recycling, it would not significantly reduce the percentage of diverted waste in the City of Arroyo Grande or San Luis Obispo County.

Construction and operation of the project would comply with all local, state, and federal regulations, including local ordinances regarding waste diversion. Because of project would generate insignificant waste volumes requiring landfill disposal, the project would not prevent the County from meeting its waste diversion goals. Therefore, the project impacts related to complying with waste regulations would be considered less than significant.

**h) No Impact.** No additional wastewater would be generated during construction and operation of the project, with the exception of construction worker use or portable restrooms that would be off hauled by the contractor for disposal. Because the project would not result in an increase in wastewater generation, the project would not exceed the treatment requirements of the Central Coast Regional Water Quality Control Board and there would be no impact.

**i) No Impact.** The project includes on-site collection and treatment of both storm water and wastewater through storm water infiltration and a new septic system. The sandy soils on the site have substantial infiltration capacity. Storm water and wastewater disposal systems would be designed and permitted to ensure adequate treatment and sufficient hydraulic capacity to prevent daylighting. The project would not discharge directly to surface water or groundwater and would not result in substantial adverse changes in surface water or groundwater quality and therefore no impacts would result.

**j) Less Than Significant Impact.** The project would not result in increased production of wastewater. There would be a slight increase in wastewater during construction as described under a), above, but this increase would be considered negligible and only during construction. Because there would not be an increase in wastewater, the impacts would be less than significant.

**Mandatory Findings of Significance**

| 18. | **Mandatory Findings of Significance** | Potentially Significant Impact | Less than Significant with Mitigation Incorporation | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| | Would the project: | | | | |
| a) | a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | ☐ | ☐ | ☒ | ☐ |
| b) | Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | ☐ | ☐ | ☒ | ☐ |
| c) | Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | ☐ | ☐ | ☐ | ☒ |

**Conclusion:**

**a)** The project as described would not substantially degrade the quality of the environment. Construction air quality impacts would be short term and would be reduced to less than significant with mitigation. Other potential impacts would be addressed through compliance with existing regulatory requirements such as implementing storm water BMPs, restoring affected areas to pre-construction conditions and other requirements related to spill control and handling of hazardous materials. Combined, these measures would prevent the proposed project from substantially degrading the quality of the environment.

The project would not substantially reduce the habitat of a fish or wildlife species. The rail spur extension would be constructed adjacent to the existing refinery and would not have significant direct impacts on fish or wildlife habitat. No impacts on adjacent waterways are expected. For these reasons, the project would not substantially reduce the habitat of a fish or wildlife species.

The project would not cause a fish or wildlife population to drop below self-sustaining levels. Indirect construction impacts would be reduced through the implementation of the resource protection measures described herein and with construction BMPs. Construction and operation of the project would occur with existing refinery boundaries and would have no significant direct impacts on fish or wildlife. Therefore, the

project would not cause a fish or wildlife population to drop below self-sustaining levels.

For the reasons stated above, the proposed project would not threaten to eliminate a plant or animal community. The project would be constructed within the boundaries of the refinery and would not have significant direct impacts on plants or animals, wetlands, trees or waterways. Similarly, the proposed project would not substantially reduce the number or restrict the range of an endangered, rare, or threatened species. For these reasons, the proposed project would not reduce the number or restrict the range of an endangered, rare, or threatened species.

The proposed project would not have direct impacts on known important cultural resources. The project would have no impacts on existing buildings or other structures greater than 50 years old. Therefore, the project would not eliminate important examples of the major periods of California history or prehistory.

To avoid and minimize environmental effects to the extent practicable, the project would include the following environmental and resource protection measures:

1. Minimize disturbance – The project will take advantage of existing disturbed areas such as the coke storage area and on-site dirt roads. The unloading, parking, and construction laydown areas will be within the existing coke storage area and the proposed pipeline will parallel an existing dirt road.
2. Maximum Health and Safety – Incorporate the proposed facility within the existing refinery health and safety and hazard mitigation programs, including spill control, dedicated emergency response services and infrastructure, accident prevention systems and infrastructure, fire protection system (at the unloading area with a foam and water deluge system), and with regular monitoring and emergency response training.
3. Aesthetics – Construct a low-profile facility that maximizes earth tones, avoids public views, and include habitat restoration of vegetation in the construction area.
4. Field Surveys – Conduct pre-construction field surveys and construction monitoring to identify sensitive biological and cultural resources.
5. Stormwater Protection – Implement a formal storm water pollution prevention plan to minimize erosion during construction and to prevent degradation of stormwater during operations, including stormwater infiltration and a water collection and treatment system.
6. Air Quality Protection – Employ all required air quality protection measures and greenhouse gas reduction measures.

**b)** The project would not have impacts that are individually limited but cumulatively considerable. Cumulatively considerable means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. The project would be constructed within the boundaries of the existing Phillips 66 property. The only other project in the immediate area is the approved refinery throughput project. The rail project would have less than significant impacts on biological, cultural and geological resources; land use; recreation; utilities; water quality, hydrology, traffic and public services. The proposed measures to

avoid, minimize, and mitigate potential impacts to less than significant would also reduce cumulative impacts to less than cumulatively considerable. Storm water BMPs would reduce any contribution to water quality or hydrology effects to less than cumulatively considerable. Noise impacts from both construction and operation of the proposed project, when considered in view of ambient noise, would not result in cumulatively considerable noise impacts on the community and would not exceed the significance thresholds. Therefore, the noise impacts from the proposed project would not be cumulatively considerable.

c) The project would not cause substantial adverse effects on human beings, either directly or indirectly. Impacts on human health from air emissions would be mitigated to less than significant through existing regulatory programs. Operational noise impacts would be less than significant given the isolated nature of the refinery and ambient noise levels. Any impacts from handling and use of hazardous materials would be addressed through design measures and existing refinery health and safety programs. The project would have less than significant impacts on biology, cultural resources, energy consumption or infrastructure, geology and soils, greenhouse gases , hydrology and water quality, land use planning, public services, traffic and transportation and utilities and service systems. The project would have no impacts on mineral resources, population and housing and recreation.

# Tables

# Figures

**Appendix A**

Air Quality and Project Emissions Report