4.5 Cultural and Historic Resources

This section discusses the cultural resources setting; specifically the existing prehistoric archaeological site (CA-SLO-1190), and historic-era structures and buildings associated with the Santa Maria Refinery (SMR) within the Project Site, and the potential for newly discovered archaeological resources, which could potentially be impacted by construction of the Rail Spur Project. Mitigation measures are identified for any significant impact. The section also discusses the cumulative cultural and historic resource impacts, and potential impacts that may arise from the proposed use of existing UPRR mainline routes which would be utilized to import crude oil to the Project Site.

The analysis in this section is based on direct consultation with the local Native American community and on the following technical reports and memorandum:

- Cultural Resources Assessment Report: Phillips 66 Santa Maria Refinery Rail Project, San Luis Obispo County, California (Arcadis 2013a)
- Cultural Resources Assessment Report for a Portion of Archaeological Site CA-SLO-1190, Phillips 66 Santa Maria Refinery Rail Project, San Luis Obispo County, California (Arcadis 2103b)
- Memorandum: Cultural Resources Assessment of the Phillips 66 Santa Maria Refinery (Arcadis 2013c)
- Extended Phase 1 Archaeological Inventory for the Phillips 66 Santa Maria Refinery Rail Project, San Luis Obispo, California (Applied Earthworks 2014)

These reports were peer reviewed as part of the EIR process and SWCA cultural resources staff attended a field visit to the Project Site on August 19, 2013 to verify the information provided in the reports. Due to the sensitive nature of archaeological resources, which can be damaged or destroyed through uncontrolled public disclosure of information, specific resource locations are not disclosed in the EIR. The reports, however, are on file with the County of San Luis Obispo and are available for review by qualified persons.

4.5.1 Project Site Environmental Setting

The Project Site is located within the coastal plain, along the eastern margin of the Oceano Dune complex. An isolated dune area that extends above the present surface elevation is located directly north of the Rail Spur Project and east of the proposed pipeline corridor. Cross-sections of these Aeolian deposits indicate windblown sands up to 200 feet deep.

The Project Site is within the South Coast Ranges physiographic province (Moratto 1984). According to paleontological records search data compiled by the Natural History Museum of Los Angeles County: “The entire proposed project area has surficial deposits composed of older

Quaternary dune sands" and "Older Quaternary or even Pliocene deposits probably underlie the Quaternary dune sands at relatively shallow depth" (McLeod 2012).

The Project Site is within the coastal plain, with the southern end of the Santa Lucia Range to the east (Sharp 1976). An unnamed tributary to Oso Flaco Creek is located immediately south of the Project Site. Oso Flaco Creek provides water to Little Oso Flaco Lake and Oso Flaco Lake to the west before emptying into the Pacific Ocean.

4.5.1.1 Regional Prehistory

The Project Site lies in what is generally described as the Central Coast Archaeological Region, which is one of eight arbitrary organizational divisions of the state (Moratto 1984). This region extends southward from Monterey Bay and includes most of San Luis Obispo County.

Several chronological sequences have been devised to understand cultural changes within the Central Coast Region subsequent to the Paleoindian (ca. 10,000 B.C.) and Milling Stone (ca. 6500 – 3500 B.C.) periods. The Milling Stone period was first described by Wallace as part of his synthesis of earlier studies and development of a comprehensive southern California coastal region sequence, a chronological scheme that is still widely used today (Wallace 1955, 1978). Initially, Central Coast researchers relied on the cultural sequences developed for the San Francisco Bay area to the north, the Central Valley to the east, and the Santa Barbara region to the south. Breschini and Haversat proposed the Sur and Monterey Patterns to describe Central Coast occupations dating younger than 5,000 years (Breschini and Haversat 1980). Jones and Jones and Waugh presented an integrated central coast sequence after the development of cultural resource management in the 1980s and ensuing excavations of numerous archaeological sites (Jones et al. 1994, Jones and Waugh 1995). Three periods are presented in their prehistoric sequence subsequent to the Milling Stone period: Early, Middle, and Late periods.

More recently, Jones and Ferneau updated the sequence following the Milling Stone period as follows: Early, Early-Middle Transition, Middle, Middle-Late Transition, and Late periods (Jones and Ferneau 2002). It has become apparent that the archaeology of the Central Coast Region subsequent to the Milling Stone period is distinct from that of the Bay Area and Central Valley, although the region has more in common with the Santa Barbara Channel area during the Middle and Middle-Late Transition periods, but few similarities during the Late period (Jones and Ferneau 2002).

4.5.1.2 Regional Ethnography

The Project Site was historically occupied by the northernmost subdivision of the Chumash, the Obispeño (after Mission San Luis Obispo de Tolosa) (Gibson 1983, Kroeber 1925). The precise location of the boundary between the Chumashan-speaking Obispeño Chumash and their northern neighbors, the Hokan-speaking Playanos Salinan, is currently the subject of debate (Milliken and Johnson 2005). Jones and Waugh state that "those boundaries may well have fluctuated through time in response to possible shifts in economic strategies and population movement" (Jones and Waugh 1995).

The term Chumash initially applied only to the people living on Santa Cruz Island. Chumash now refers to the entire linguistic and ethnic group of societies that occupied the coast between San Luis Obispo and northwestern Los Angeles County, including the Santa Barbara Channel Islands, and inland to the western edge of the San Joaquin Valley. Neighboring groups included the Salinan to the north, the Southern Valley Yokuts and Tataviam to the east, and the Gabrielino (Tongva) to the south. Chumash place names in the project vicinity include Pismu (Pismo Beach), Tematatimi (along Los Berros Creek), and Tilhini (near San Luis Obispo) (Greenwood 1978).

The effect of mission influence upon local native populations was devastating. The dissolution of their culture alienated them from their traditional subsistence patterns, social customs, and marriage networks. European diseases, against which they had no immunity, reached epidemic proportions, and Chumash populations were decimated (Johnson 1987). The increase in agriculture and the spread of grazing livestock into their collecting and hunting areas made maintaining traditional lifeways increasingly difficult. Although most Chumash eventually submitted to the Spanish and were incorporated into the mission system, some refused to give up their traditional existence and escaped into the interior regions of the state, as refugees living with other tribes. With the secularization of mission lands after 1834, traditional Chumash lands were distributed among grants to private owners. Only in the area of Mission Santa Barbara and Mission San Fernando del Rey were several small ranchos granted to neophytes of these missions, providing a secure home and gardens for a few people.

Most Chumash managed to maintain a presence in the area into the early twentieth century as cowboys, farm hands, and town laborers. The Catholic Church provided some land near Mission Santa Ynez for ex-neophytes. This land eventually was deeded to the US government in 1901 as a 127 acre reservation and is the sole Chumash reservation. Since the 1970s, Chumash descendants living in the City of Santa Barbara and the rural areas of San Luis Obispo, Santa Barbara, and Ventura counties have formed social and political organizations to aid in cultural revitalization, to protect sacred areas and archaeological sites, and to petition for federal recognition. Today, the Santa Ynez Band of Chumash Indians is the only federally recognized Chumash tribe.

4.5.1.3 History

The major historic periods for the California area are defined by key events documented by participants, witnesses, historians, and cartographers. Paramount among these was the transfer of political control over *Alta California*, including the Project Site specifically.

- Spanish Period (1769-1821)
- Mexican Period (1821-1848)
- American Period (1848-Present)

The historic era encompasses the period of occupation by European descendants. This period marked a time of disease, exploitation, and deculturation of the native peoples, beginning circa 1769 with the founding of the Mission San Diego de Alcalá. The occupation and control by the

Spanish was passed on to Mexico after the latter gained its independence in 1821. The Mexican period, in turn, gave way to control by the United States subsequent to the Mexican-American War and the Treaty of Guadalupe Hidalgo in 1848.

4.5.1.4 Project Site Historic Map and Aerial Photograph Review

Inspection of historic maps of the area (USGS 1897 Arroyo Grande 15-minute, 1942 Arroyo Grande 15-minute, and 1952 Arroyo Grande 15-minute) indicates the railroad and a minor road network in the area of the project. The communities of Arroyo Grande and Oceano are noted with additional single structures spread throughout the area. The Project Site is completely undeveloped with the exception of an east-west dirt road on the 1942 and 1952 maps.

The USGS 1965 Oceano 7.5-minute map illustrates the northern end of the refinery, the existing rail spur, the coke ovens, and coke piles much as they are today. The southern part of the refinery included pipelines, roads, and ponds, but lacks the current structural elements.

Review of aerial images between 1994 and 2011 indicate no development within the Project Site. The only discernible activity is within the coke yard.

4.5.2 Regulatory Setting

4.5.2.1 Federal Regulations and Policy

Cultural resources are considered during federal undertakings chiefly under Section 106 of the National Historic Preservation Act of 1966 (NHPA) (as amended) through one of its implementing regulations, 36 CFR 800 (Protection of Historic Properties), as well as the National Environmental Policy Act (NEPA). Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d)(6)(A) of NHPA. Other pertinent federal laws include the Archaeological Data Preservation Act of 1974, the American Indian Religious Freedom Act (AIRFA) of 1978, the Archaeological Resources Protection Act (ARPA) of 1979, and the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990, among others.

Section 106 of the NHPA (16 United States Code 470f) requires federal agencies to take into account the effects of their undertakings on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP) and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings (36 CFR 800.1). Under Section 106, the significance of any adversely affected cultural resource is assessed and mitigation measures are proposed to reduce any impacts to an acceptable level. Significant cultural resources are those resources that are listed on, or are eligible for listing on the NRHP per the criteria listed at 36 CFR 60.4 (ACHP 2000) below.

The quality of *significance* in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and that:

(a) Are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) Are associated with the lives of persons significant in our past; or

(c) Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) Have yielded, or may be likely to yield, information important in prehistory or history.

4.5.2.2 State Regulations and Policy

CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources. Sections 21083.2 and 21084.1 of the Statutes of CEQA, PRC Section 5024.1, and Section 15064.5 of the CEQA *Guidelines* (2013) were used as the guidelines for the cultural resources study. PRC Section 5024.1 requires that any properties that can be expected to be directly or indirectly affected by a proposed project be evaluated for CRHR eligibility. The purpose of the register is to maintain listings of the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from material impairment and substantial adverse change. The term "historical resources" includes a resource listed in, or determined to be eligible for listing in, the CRHR, a resource included in a local register of historical resources, and any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (Section 15064.5[a] of the Guidelines). The criteria for listing properties in the CRHR were expressly developed in accordance with previously established criteria developed for listing in the NRHP.

According to PRC Section 5024.1(c)(1–4), a resource may be considered historically significant if it retains integrity and meets at least one of the following criteria. A property may be listed in the CRHR if the resource:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(2) Is associated with the lives of persons important in our past;

(3) Embodies the distinctive characteristics of a type, period, region or method of installation, or represents the work of an important creative individual, or possesses high artistic values; or

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

Under CEQA, if an archeological site is not a historical resource but meets the definition of a "unique archeological resource" as defined in PRC Section 21083.2, then it should be treated in

accordance with the provisions of that section. A *unique archaeological resource* is defined as follows:

> *An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:*
>
> *(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;*
>
> *(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type; or*
>
> *(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.*

Resources that neither meet any of these criteria for listing on the CRHR nor qualify as a "unique archaeological resource" under CEQA PRC Section 21083.2 are viewed as not significant. Under CEQA, "A non-unique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects" (PRC Section 21083.2[h]).

Section 21084.1 of the PRC also states that the fact that a resource is not listed in, or determined to be eligible for listing in, the California Register of Historical Resources, not included in a local register of historical resources, or not deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1 shall not preclude a lead agency from determining whether the resource may be an historical resource for purposes of this section.

Impacts that adversely alter the significance of a resource listed on or eligible for listing on the CRHR are considered a significant effect on the environment. Impacts to historical resources from the proposed project are thus considered significant if the project physically destroys or damages all or part of a resource, changes the character of the use of the resource or physical feature within the setting of the resource which contribute to its significance or introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

4.5.2.3 Local Regulations and Policy

The County of San Luis Obispo Coastal Zone Land Use Ordinance (CZLUO) includes ordinance requirements for the protection of known cultural resources, and implementation of mitigation measures to minimize potential impacts to known and unknown resources. In addition to General Plan and ordinance requirements, *Coastal Plan Policies* include policies for the protection of cultural resources consistent with the requirements of the California Coastal Act (1976).

4.5.3 Significance Criteria

CEQA guides lead agencies to protect and preserve resources with cultural, historic, scientific, or educational value. CEQA *Guidelines* Section 15064.5 provides significance threshold criteria for determining a substantial adverse change to the significance of a cultural resource. In addition, Appendix G of the CEQA Guidelines provides additional guidance in determining a project's impact on cultural resources. The information provided in the CEQA guidelines has been used to develop the significance criteria for cultural resources. The project would have a significant impact on cultural resources if:

- The project causes a substantial adverse change in the significance of an historical resource. This would include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
- The project causes a substantial adverse change in the significance of an archaeological resource.
- If the project directly or indirectly destroys a unique paleontological resource or site or unique geologic feature.
- If the project disturbs any human remains, including those interred outside of formal cemeteries.

Generally, intact cultural and historic deposits are considered significant. Severely disturbed or mixed deposits often are not considered significant but may have educational value. Human remains and associated goods are accorded special consideration, and even when fragmentary are considered significant.

4.5.4 Native American Consultation

Arcadis contacted the California Native American Heritage Commission (NAHC) by letter on requesting a review of the Sacred Lands File (SLF). The NAHC responded on indicating that the search of the SLF did not indicate the presence of Native American cultural resources in the project area or a ½ mile radius. The NAHC provided a list of 26 Native American contacts that may have additional information about the project area. SWCA mailed a letter requesting information concerning cultural resources in the area to each of these contacts on July 12, 2013. As a result of this additional consultation, three separate meetings were held with interested Native American parties on August 27, September 18, and September 19, 2013. At each of the meetings, topics including the preservation and protection of cultural resources, project modifications to avoid cultural resources, and the implementation of appropriate mitigation measures to avoid all impacts to cultural resources were discussed. The concerns and recommendations of the local Native American community were essential to the development of the cultural resources mitigation measures provided in the following Project Impacts and Analysis section.

4.5.5 Project Impacts and Mitigation Measures

Project-specific impacts include direct and indirect impacts. Direct impacts result from land modification directly and immediately caused by the construction, landscaping, operation, or maintenance of a facility. Indirect impacts also occur as a result of a specific project, but do not result from intentional ground disturbance. Common indirect impacts include erosion, vibration, unauthorized artifact collecting, and vandalism. As currently planned, the proposed project entails ground disturbance construction activities during the construction phase. The remainder of this section discusses the potential impacts to cultural resources from the construction and operation of the proposed project. Two cultural resources have been identified within the Project Area: the Santa Maria Refinery and a portion of prehistoric archaeological site CA-SLO-1190. Both the Refinery and the portion of CA-SLO-1190 within the emergency vehicle access road (EVA) have been evaluated and neither is considered a CRHR eligible resource (Arcadis 2013a, b).

No further mitigation for potential impacts to the Santa Maria Refinery is warranted and no further consideration of this resource is required under CEQA. While the same approach can be taken for impacts to the portion of CA-SLO-1190 that was determined ineligible, given the sensitive nature of prehistoric archaeological resources, and input from the local Native American community, mitigation measures for the avoidance of impacts to this resource are provided below.

Additionally, as the project proposes to transport crude oil to the project site via a nearly statewide train route, the potential exists for impacts to cultural resources in the event of a train derailment or oil spill. Given the vastness of the overall rail line route, and the range of speculation related to prediction of the exact location of this type of event (e.g., derailment, oil spill), a resource-specific analysis was not conducted for the preparation of this section. The presence of cultural resources is likely in the vicinity of the rail line route; however, identifying the locations of such resources, should they exist, does not further educate the development of feasible and verifiable measures to mitigate the potential impact(s) associated with rail accidents. More information on the possible train routes to the SMR is provided in Chapter 2.0, Project Description.

Impact #	Impact Description	Phase	Impact Classification
CR.1	Grading and excavation associated with the construction of the emergency vehicle access road (EVA) could result in the disturbance and destruction of a portion of CA-SLO-1190.	Construction (EVA)	Class II

Cultural resources survey and background research of the Project Site did not identify any previously recorded archaeological sites, newly identified cultural resources, or isolated artifacts within the Project Site. The cultural resource background research did reveal the presence of previously identified prehistoric archaeological site CA-SLO-1190 adjacent to the EVA route. The cultural resources survey confirmed the presence of artifacts associated with CA-SLO-1190 within the proposed EVA route (Arcadis 2013a). Based on available information, CA-SLO-1190

includes five distinct loci of concentrated artifacts. The proposed EVA would traverse and impact the outer limits of Locus C of CA-SLO-1190.

An evaluation of the portion of CA-SLO-1190 within the proposed EVA was conducted by Arcadis to determine if the portion of the resource within the impact area meets the criteria for inclusion in the CRHR. Based upon the results of the test excavations, the portion of archaeological site CA-SLO-1190 within the proposed EVA alignment is not recommended for inclusion in the CRHR due to the sparse recovery of artifacts, lack of temporally diagnostic artifacts and features, and evidence of disturbance (Arcadis 2013b). The remainder of Locus C and archaeological site CA-SLO-1190 were not evaluated and should, therefore, be assumed eligible until such time as data are acquired from which to evaluate their significance (Arcadis 2013b). The portion of CA-SLO-1190 within the EVA is not considered eligible for inclusion in the CRHR, and therefore no impacts to an eligible historical resource would occur as a result of the construction of the EVA, no further evaluation of this specific portion of the resource is required by CEQA.

CA-SLO-1190 consists of five distinct loci with concentrations of marine shell, lithic artifacts and debitage, fire affected rock (i.e., hearth stones), and midden soil. Only a small portion of Locus C is within the proposed EVA and this portion of the site is considered ineligible for listing in the CRHR. Ground disturbance within the site could result in the displacement and potential destruction of artifacts and features not identified during evaluative testing, and may impair the overall integrity of the site. Therefore impacts to this site are considered potentially significant.

Mitigation Measures

CR-1a *Prior to issuance of grading and construction permits, the Applicant shall submit plans showing a modified road alignment for the Emergency Vehicle Access (EVA) road to the Department of Planning and Building for review and approval. Grading and construction of the EVA shall avoid all ground disturbing activities within the previously identified boundary of CA-SLO-1190. The plans shall note the boundaries of the site as an Environmentally Sensitive Area (ESA) and shall include a 50-foot buffer around the ESA. No grading, storage of materials or equipment, or use of equipment shall occur within the ESA.*

CR-1b *Prior to issuance of grading and construction permits, the Applicant shall submit an Archaeological Monitoring Plan to the Department of Planning and Building for review and approval. The plan shall include, at minimum:*

a. List of personnel involved in the monitoring activities including a Native American monitor;

b. Clear identification of what portions of the project area in relation to CA-SLO-1190 shall be monitored;

c. Description of how the monitoring shall occur;

d. Description of monitoring frequency;

e. Description of resources expected to be encountered;

f. Description of circumstances that would result in the "work diversion," in the case of discovery, at the project site;

g. Description of procedures for diverting work on the site and notification procedures; and

h. Description of monitoring reporting procedures.

CR-1c A County approved archaeological monitor shall be present during all ground disturbing construction activities within intact native soil (i.e., undisturbed soils) within 300 feet of the previously identified boundary of CA-SLO-1190, and as noted in the approved Archaeological Monitoring Plan.

CR-1d Upon completion of all monitoring and mitigation activities required by CR-1 through CR-5, and prior to final inspection or occupancy, whichever occurs first, the Applicant shall submit to the Department of Planning and Building a report summarizing all monitoring and mitigation activities and confirming that all recommended mitigation measures have been met.

Secondary Impacts

Relocation of a portion of the roadway would have secondary impacts on agricultural resources and biological resources; however, these effects would be similar to the proposed project, and would be less than significant. The affected soil type is the same within the road and to the north (Oceano sand, 0 to 9 percent slopes, Farmland of Local Potential, Farmland of Statewide Importance). The habitat type is non-native Veldt Grassland. Mitigation measures applicable to the construction and operation of the roadway would apply to the project, including the roadway segment that would be affected by implementation of mitigation measures CR-1a above.

Residual Impacts

As proposed, implementation of the Rail Spur Project would impact a known prehistoric resource. As noted above, the affected portion of SLO-CA-1190 does not include components that appear to contribute to an eligibility determination for the site as a whole; however, pursuant to CEQA, avoidance of environmental resources is identified as the first mitigation option, when feasible. Therefore, avoidance is recommended, in addition to environmental monitoring. Realignment of a portion of the EVA would not result in an increased level of impact to other potential resources, including biological resources, agricultural resources, or geological resources. With implementation of the recommended mitigation measures, this impact would be considered *less than significant with mitigation (Class II)*.

Impact #	Impact Description	Phase	Impact Classification
CR.2	Grading and excavation associated with the project could result in the disturbance and destruction of unknown subsurface archeological resources.	Construction	Class II

Although no potentially significant archaeological resources were identified within the project area during the cultural resources survey of the project, the study (Arcadis 2013a) could not exclude the possibility that unrecorded buried archaeological material could exist and be encountered during grading, clearing, grubbing, and/or other construction activities. If intact cultural remains are encountered during grading, clearing, grubbing, and/or other construction activities, the potential for destruction of these potential unknown finds would be a potentially significant impact on cultural resources.

Given the extent of disturbance within the project area, archaeological monitoring shall focus on areas of intact native soils, which would be identified in the Archaeological Monitoring Plan prepared for the project. In addition to preparation and implementation of an Archaeological Monitoring Plan, cultural resources shall be included in the environmental training session for all construction staff to reduce the potential destruction of unanticipated resources.

Mitigation Measures

CR-2a *Prior to any grading or construction, contractors involved in grading and grubbing activities shall receive training from a County-qualified archeologist. The training shall address the following issues:*

a. Review the types of archaeological artifacts that may be uncovered;

b. Provide examples of common archaeological artifacts to examine;

c. Review what makes an archaeological resource significant to archaeologists and local native Americans;

d. Describe procedures for notifying involved or interested parties in case of a new discovery;

e. Describe reporting requirements and responsibilities of construction personnel;

f. Review procedures that shall be used to record, evaluate, and mitigate new discoveries;

g. Describe procedures that would be followed in the case of discovery of disturbed as well as intact human burials and burial-associated artifacts; and

h. Employees completing this training shall be given a special helmet sticker or card to show they have completed the training, where the sticker/card shall be kept with them at all times while at the work site.

CR-2b *Prior to issuance of grading and construction permits, the Applicant shall submit an Archaeological Monitoring Plan to the Department of Planning and Building for review and approval. The plan shall include, at minimum:*

a. List of personnel involved in the monitoring activities including a Native American monitor;

b. Description of how the monitoring shall occur;

c. Description of monitoring frequency;

d. Description of circumstances that would result in the "work diversion," in the case of discovery, at the project site;

e. Description of procedures for diverting work on the site and notification procedures; and

f. Description of monitoring reporting procedures.

CR-2c A County approved archaeological monitor shall be present during all ground disturbing construction activities within intact native soil (i.e., undisturbed soils) as noted in the approved Archaeological Monitoring Plan.

Residual Impacts

With implementation of the above measure, this impact would be considered *less than significant with mitigation (Class II)*.

Impact #	Impact Description	Phase	Impact Classification
CR.3	Unanticipated disturbance to human remains due to construction.	Construction	Class II

According to CEQA, "Archaeological sites known to contain human remains shall be treated in accordance with the provisions of Section (7050.5) Health and Safety Code." The PRC also ensures the protection of human remains (Sections 5097.94, 5097.98, and 5097.99). Section 22.10.040 of San Luis Obispo County's Land Use Ordinance has similar stipulations stating that "(i)n the event archeological resources are found to include human remains, or in any other case when human remains are discovered during construction, the County Coroner shall be notified in addition to the Department so proper disposition may be accomplished." The Coroner will determine the origin of the remains and, if determined to be of Native American origin, notify the Native American Heritage Commission, which will determine and notify a most likely descendant. The most likely descendant shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. If human remains were encountered during grading, the potential for disturbance of these remains would be potentially significant.

Mitigation Measures

CR-3 If human remains are exposed during construction, the Applicant shall notify the County Environmental Coordinator immediately and comply with State Health and Safety Code Section 7050.5, which states that no further disturbance shall occur until the County Coroner has been notified and can make the necessary findings as to origin and disposition of the remains pursuant to Public Resources Code 5097.98.

Construction shall halt in the area of the discovery of human remains, the area shall be protected, and consultation and treatment shall occur as prescribed by law.

Residual Impacts

Implementing mitigation measure CR-3 would reduce the impact of potentially encountering and disturbing human remains during grading and excavation to *less than significant with mitigation* (Class II).

Impact #	Impact Description	Phase	Impact Classification
CR.4	Construction of the Rail Spur Project would result in impacts to historical resources.	Construction	None

The Santa Maria Refinery was established in the mid-1950s and has played an important role in the development of the Santa Maria Valley and the oil and gas industry of California. Due to the potential for the historic-era (i.e., greater than 50 years in age) buildings and facilities to be considered historical resources, Arcadis conducted a cultural resources assessment of the Refinery itself (Arcadis 2013c).

Arcadis indicates that although the refinery has been an important part of the Santa Maria region, the facilities have experienced substantial modification and upgrades "that have altered the qualities of design, setting, materials, workmanship, feeling, and association adversely impacting its historic significance" (Arcadis 2013c:6). As such, the analysis determined the Refinery is not considered a historical resource due to a lack of overall integrity, and therefore, is not eligible for inclusion in the CRHR. Therefore, based on the design and location of the project, and remaining historic integrity of the refinery, no impact to historic resources would occur.

Impact #	Impact Description	Phase	Impact Classification
CR.5	Unanticipated disturbance to paleontological resources.	Construction	Class II

At present, there are no known paleontological resources or unique geologic formations or sites located within the project area. However, it is possible that paleontological resources could be discovered during ground disturbing activities associated with project construction. If unanticipated paleontological resources were disturbed it could potentially be a significant impact.

Mitigation Measures

CR-5 *If any paleontological resources are encountered during ground-disturbing activities, activities in the immediate area of the find shall be halted and the discovery assessed. A qualified paleontologist shall be retained to evaluate the discovery and recommend appropriate treatment options pursuant to guidelines developed by the Society of Vertebrate Paleontology. A paleontological resource impact mitigation program for*

treatment of the resources shall be developed and implemented if paleontological resources are encountered.

Residual Impacts

Implementing mitigation measure CR-4, if needed, would reduce the impact of potentially encountering and disturbing paleontological resources during grading and excavation to *less than significant with mitigation (Class II)*.

Impact #	Impact Description	Phase	Impact Classification
CR.6	Train traffic associated with the importation of crude oil to the project site could result in a derailment or a material spill, which could result in the disturbance and destruction of cultural resources along the mainline routes.	Operations	Class I

Cultural resources are known to occur throughout California and undoubtedly in the vicinity of existing rail lines that would be used to transport crude oil to the SMR. In the event of a train derailment or an oil spill, potentially significant adverse impacts to cultural resources could occur, including the destruction or disturbance of archaeological, historic, and paleontological resources as a result of the cleanup and restoration activities.

The probability of a crude oil train release incident is discussed in the Hazardous and Hazardous Materials Section (Section 4.7). This probability represents the probability of a release incident for the length of the rail routes between the SMR, the Roseville or Colton rail yards, and the California border. In order for there to be an impact to cultural resources, the incident would need to occur in the vicinity of these resources. This would lower the probability of an oil train release impacting cultural resources. The Hazardous and Hazardous Materials Section (Section 4.7) discusses the overall probability of a spill along the mainline rail routes to the Roseville or Colton rail yards, and the California border.

Clean up of an oil spill would likely require the use of bulldozers, frontend loaders, and other construction equipment to remove any contaminated soil. Use of this type of construction equipment could impact both known and unknown cultural, historic, and paleontological resources. As the exact location and extent of this type of event cannot be reasonably predicted, a resource-specific analysis was not conducted for the preparation of this section. While a cultural resources inventory of the entire route and all areas subject to potential impacts from a derailment or material spill would assist in the identification of culturally sensitive areas, it would not provide a means to avoid potential adverse impacts.

In the event of a derailment or material spill, however, a qualified cultural resources specialist could develop resource-specific measures for further avoidance, protection, and treatment of cultural resources in the vicinity of the accident. For instance, where feasible, a qualified cultural resources specialist could direct emergency crews, clean up, and remediation efforts to avoid further impacts to known resources and develop treatment plans for future activities that may result in adverse impacts. Total avoidance in the event of a derailment or a spill would not be feasible; therefore, if cultural resources are affected, the impact could be significant.

Mitigation Measures

CR-6 *As part of the Applicant's contract with UPRR, it shall require that a qualified archaeologist, architectural historian, and paleontologist who meet the Secretary of the Interior's Professional Qualification Standards prepare an Emergency Contingency and Treatment Plan for Cultural and Historic Resources along the rail routes in California that could be used to transport crude oil to the SMR. The treatment plan shall include, but not be limited to, the following components:*

a. Protocols for determining the cultural resources regulatory setting of the incident site;

b. Provide various methodologies for identifying cultural resources, as needed, within the incident site (e.g., California Historical Resources Information System records search, agency contact, field survey); and

c. If cultural resources are present, identify measures for their avoidance, protection, and treatment.

The Treatment Plan shall be in place prior to delivery of crude by rail to the Santa Maria Refinery.

Residual Impacts

Implementing mitigation measure CR-6 would potentially reduce potential impacts; however, there is the potential that a derailment or a spill may destroy a significant cultural or historic resource, and remediation actions may not result in the recovery of significant resources. In the event this occurs, the residual effect could be *significant and unavoidable (Class I).*

Federal law may preempt local agency regulation of rail lines; therefore, implementation of appropriate mitigation measures to protect cultural, historic and paleontological resources along the UPRR mainline may not be feasible or enforceable.

4.5.6 Cumulative Analysis

Implementation of the Rail Spur Project could contribute to the cumulative degradation of significant cultural resources in the County and along the proposed rail route. The destruction of cultural resources, which are inherently important to the descendants of native peoples and the heritage of California, can have the potential for significant cumulative impacts. Given the prevalence of cultural resource sites in the immediate vicinity of the project area, and the number of construction activities that involve disturbance of culturally sensitive areas that are not regulated, it is likely that significant pre-historic and historic resources are often not identified and are permanently lost. As such, the cumulative impacts to pre-historic and historic resources from the cumulative projects in the vicinity of the proposed project would likely be significant. For the proposed construction of the project, no impacts to any known CRHR eligible resources would occur, and mitigation measures are in place to reduce potential impacts to unknown buried resources. Therefore, the Rail Spur Project's contribution to the cumulative impact would be less than significant.

There is the potential for cumulative impacts associated with the crude by rail project discussed in Chapter 3. In conducting the cumulative analysis for crude by rail it has been assumed that the cumulative projects listed in Table 3.1 would use the same rail car tank design as the SMR Rail Spur Project, and that the cumulative crude by rail projects, with the exception of the Phillips Rail Spur Project, would transport a Bakken type crude, which is a worst case assumption.[1] It has also been assumed that all of the Rail Spur Project crude oil trains would use routes discussed below.

If all of the crude by rail projects travel via the UPRR Roseville Rail Yard, then up to eight crude oil trains per day could travel on the stretch of track between Sacramento and the California boarder (two for Valero, one for Kinder Morgan, two for Alon, one for Targa, one for Plains All American, and one for the SMR). From Roseville, rail traffic would likely follow two different routes; one following the I-80 corridor to Reno, Nevada, with the other heading north along the I-5 corridor to Oregon. A third route through the Feather River Canyon was not considered for further analysis.

From Sacramento the crude oil trains servicing the Valero Benicia and Kinder Morgan projects could use the same UPRR tracks as the Rail Spur Project from Sacramento to the Bay Area. This portion of track could have up to four crude oil trains per day (two for Valero, one for Kinder Morgan, and one for the SMR).

From Sacramento the crude oil trains servicing the Alon, Targa, and Plains All American projects could use the same tracks as the Rail Spur Project from Sacramento to Stockton a distance of about 46 miles. This portion of track could have up to five crude oil trains per day (two for Alon, one for Targa, one for Plains All American, and one for the SMR).

This level of crude oil train traffic would increase the probability of an oil spill along these mainline routes. Assuming all of the cumulative crude oil trains use the same route from Sacramento to the California border, the cumulative probability of a 100 gallon or greater oil spill would be about once every seven years for the route from the SMR to the Oregon border, and once every six years for the route from the SMR to the Nevada border.

None of the other cumulative crude by rail projects would use the mainline tracks along the southern route thorough the Los Angeles Basin since the crude oil trains going to Bakersfield would use Tehachapi Pass via Barstow and would not travel has far west as Colton. However, up to four unit trains per day could share the route between Nevada and Barstow (two for Alon, one for Plains All American, and one for the SMR). Assuming these cumulative crude oil trains use the same route from Barstow to the California border, the cumulative probability of a 100 gallon or greater oil spill would be about once every 25 years for the southern route from the SMR to the Nevada border.

Cumulative crude oil train traffic along these stretches of mainline track could cause adverse impacts to cultural, historic and paleontological resources if an oil spill were to occur in a

[1] Canadian Crude, as specified in the Project Description, was assumed for the Phillips Rail Spur Project as part of the project and cumulative analysis.

location where these resources were present. Clean up of an oil spill would likely require the use of bulldozers, frontend loaders, and other construction equipment to remove any contaminated soil. Use of this type of construction equipment could impact both known and unknown cultural, historic, and paleontological resources. Therefore, cumulative impacts to cultural, historic and paleontological resources in the unlikely event of an oil spill along these stretches of mainline tracks could be significant and unavoidable depending upon the location of the spill.

4.5.7 Mitigation Monitoring Plan

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
CR-1a	Prior to issuance of grading and construction permits, the Applicant shall submit plans showing a modified road alignment for the Emergency Vehicle Access (EVA) road to the Department of Planning and Building for review and approval. Grading and construction of the EVA shall avoid all ground disturbing activities within the previously identified boundary of CA-SLO-1190. The plans shall note the boundaries of the site as an Environmentally Sensitive Area (ESA) and shall include a 50-foot buffer around the ESA. No grading, storage of materials or equipment, or use of equipment shall occur within the ESA.	Avoid archaeological site.	Prior to issuance of grading and construction permits.	County Planning and Building
CR-1b	Prior to issuance of grading and construction permits, the Applicant shall submit an Archaeological Monitoring Plan to the Department of Planning and Building for review and approval. The plan shall include, at minimum: a. List of personnel involved in the monitoring activities including a Native American monitor; b. Clear identification of what portions of the project area in relation to CA-SLO-1190 shall be monitored; c. Description of how the monitoring shall occur; d. Description of monitoring frequency; e. Description of resources expected to be encountered; f. Description of circumstances that would result in the "work diversion," in the case of discovery, at the project site; g. Description of procedures for diverting work on the site and notification procedures; and h. Description of monitoring reporting procedures.	Prepare and implement Archaeological Monitoring Plan.	Prior to issuance of grading and construction permits.	County-approved archaeologist, County Planning and Building.
CR-1c	A County approved archaeological monitor shall be present during all ground disturbing construction activities within intact native soil (i.e., undisturbed soils) within 300 feet of the previously identified boundary of CA-SLO-1190, and as noted in the approved Archaeological Monitoring Plan.	Archaeological monitoring	During all ground disturbing activities within 300 feet of sensitive site.	County-approved archaeologist, County Planning and Building.
CR-1d	Upon completion of all monitoring and mitigation activities required by CR-1 through CR-5, and prior to	Submit monitoring	Upon completion	County-approved

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
	final inspection or occupancy, whichever occurs first, the Applicant shall submit to the Department of Planning and Building a report summarizing all monitoring and mitigation activities and confirming that all recommended mitigation measures have been met.	report.	of monitoring and mitigation.	archaeologist, County Planning and Building.
CR-2a	Prior to any grading or construction, contractors involved in grading and grubbing activities shall receive training from a County-qualified archeologist. The training shall address the following issues: a. Review the types of archaeological artifacts that may be uncovered; b. Provide examples of common archaeological artifacts to examine; c. Review what makes an archaeological resource significant to archaeologists and local native Americans; d. Describe procedures for notifying involved or interested parties in case of a new discovery; e. Describe reporting requirements and responsibilities of construction personnel; f. Review procedures that shall be used to record, evaluate, and mitigate new discoveries; g. Describe procedures that would be followed in the case of discovery of disturbed as well as intact human burials and burial-associated artifacts; and h. Employees completing this training shall be given a special helmet sticker or card to show they have completed the training, where the sticker/card shall be kept with them at all times while at the work site.	Environmental training	Prior to grading and construction.	County-approved archaeologist, County Planning and Building.
CR-2b	Prior to issuance of grading and construction permits, the Applicant shall submit an Archaeological Monitoring Plan to the Department of Planning and Building for review and approval. The plan shall include, at minimum: a. List of personnel involved in the monitoring activities including a Native American monitor; b. Description of how the monitoring shall occur; c. Description of monitoring frequency; d. Description of circumstances that would result in the "work diversion," in the case of discovery, at the project site; e. Description of procedures for diverting work on the site and notification procedures; and f. Description of monitoring reporting procedures.	Prepare and implement Archaeological Monitoring Plan.	Prior to issuance of grading and construction permits.	County-approved archaeologist, County Planning and Building.
CR-2c	A County approved archaeological monitor shall be present during all ground disturbing construction activities within intact native soil (i.e., undisturbed soils) as noted in the approved Archaeological Monitoring Plan.	Archaeological monitoring	During all ground disturbing activities	County-approved archaeologist, County Planning and Building.
CR-3	If human remains are exposed during construction, the Applicant shall notify the County Environmental Coordinator immediately and comply with State Health	Compliance with regulations	Prior to, during, and following	County Coroner, County

Mitigation Measure	Plan Requirements and Timing	Compliance Verification		
		Method	Timing	Responsible Party
	and Safety Code Section 7050.5, which states that no further disturbance shall occur until the County Coroner has been notified and can make the necessary findings as to origin and disposition of the remains pursuant to Public Resources Code 5097.98. Construction shall halt in the area of the discovery of human remains, the area shall be protected, and consultation and treatment shall occur as prescribed by law.	regarding human remains discovery.	construction.	Planning and Building
CR-5	If any paleontological resources are encountered during ground-disturbing activities, activities in the immediate area of the find shall be halted and the discovery assessed. A qualified paleontologist shall be retained to evaluate the discovery and recommend appropriate treatment options pursuant to guidelines developed by the Society of Vertebrate Paleontology. A paleontological resource impact mitigation program for treatment of the resources shall be developed and implemented if paleontological resources are encountered.	Treatment and mitigation upon incidental discovery.	Prior to, during, and following construction.	Applicant, Contractor, County-approved paleontologist (as necessary).
CR-6	As part of the Applicant's contract with UPRR, it shall require that a qualified archaeologist, architectural historian, and paleontologist who meet the Secretary of the Interior's Professional Qualification Standards prepare an Emergency Contingency and Treatment Plan for Cultural and Historic Resources along the rail routes in California that could be used to transport crude oil to the SMR. The treatment plan shall include, but not be limited to, the following components: a. Protocols for determining the cultural resources regulatory setting of the incident site; b. Provide various methodologies for identifying cultural resources, as needed, within the incident site (e.g., California Historical Resources Information System records search, agency contact, field survey); and c. If cultural resources are present, identify measures for their avoidance, protection, and treatment. The Treatment Plan shall be in place prior to delivery of crude by rail to the Santa Maria Refinery.	Develop avoidance, protection, and treatment plan.	Prior to crude delivery to the Santa Maria Refinery	Applicant, County-approved archaeologist and architectural historian

4.5.8 References

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