

APPENDIX 5.3B

Cultural Resources Technical Report

Lodi Energy Center Project (LEC); Cultural Resources Assessment

PREPARED FOR: Lodi Energy Center, LLC

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INTRODUCTION

As requested by the Northern California Power Agency (NCPA), CH2M HILL conducted an environmental review to specifically address potential impacts to cultural resources for the Lodi Energy Center Project (LEC). A field survey by Natalie Lawson, Cultural Resources Specialist of CH2M HILL, was conducted on June 26, 2008 and July 25, 2008. The archaeological sensitivity of the LEC site is considered low to moderate, based on the high degree of ground disturbance and the presence of an historic railroad on the eastern end of the project area. A summary of findings for archaeological resources is presented below and a technical memorandum has been prepared. Attached Figure 1 depicts the area surveyed for prehistoric and historic cultural resources.

AFFECTED ENVIRONMENT

In central California, cultural resources extend back in time for at least 11,500 years. Written historical sources tell the story of the past 200 years. Archaeologists have reconstructed general trends of prehistory in central California.

Regional Setting

The project site is located in rural San Joaquin County southwest of the intersection of Highway 12 and Interstate 5, at the end of North Cord Road on North Thornton Road. The project site is located within an extension of the City of Lodi city limit to the west of the city proper that encompasses the City of Lodi White Slough Water Pollution Control Facility (WPCF) to the east, treatment and holding ponds associated with the WPCF to the north, the existing NCPA Combustion Turbine Project STIG #2 (STIG plant) to the west, and the San Joaquin County Mosquito and Vector Control facility to the south. A proposed natural gas line runs east from the main project area for 3 ½ miles through agricultural fields, south of the Lodi -Kingdon airfield, and along West Armstrong Road, a paved road. Rural residences and farmhouse are located in the vicinity of the gas line, as well. The proposed gas line corridor crosses the Union Pacific Railroad, historically the Western Pacific

Railroad, on the eastern end of the project area and will connect to existing Pacific Gas and Electric pipeline, Line 108, on the east side of the rail line. The project site is located approximately 4 ½ miles southwest of Lodi.

The LEC site is located in the San Joaquin Valley in an area with recent sedimentary and metasedimentary fan deposits and basin deposits (Strand and Koenig 1965) and the site is relatively flat. Considerable disturbance exists within the STIG plant, the WPCF, and the LEC site. Excavation and grading occurred during the WPCF's initial construction in the late 1960's and excavations to a depth of six feet occurred during the construction of the STIG plant in the 1990's (Joe Bittner, 2008, email June 24, 2008). An underground Pacific Gas and Electric line runs to the STIG plant, through the LEC project area and two of the laydown and/or parking areas, through the WPCF, and continues east. Areas surrounding the STIG plant, the WPCF, and the LEC have been excavated to create reservoirs for the WPCF to the north and the San Joaquin mosquito abatement ponds to the south. Additionally, extensive earthmoving activities were observed within the proposed project area and the natural gas line is proposed along a corridor where a natural gas line is already extant.

Prehistoric Period

The general trend throughout California prehistory has been an increase in population density over time, coupled with greater sedentism and the use of a greater diversity of food resources. There is abundant evidence that humans were present in the New World for at least the past 11,500 years. There is also fragmentary, but growing, evidence that humans were present long before that date. Linguistic and genetic studies suggest that a date of 20,000 to 40,000 years ago for the human colonization of the New World may be possible. The evidence of this earlier occupation is not yet conclusive, but it is beginning to be accepted by archaeologists. The Meadowcroft Rockshelter in Pennsylvania and Monte Verde in Chile, for instance, are two early sites that have produced apparently reliable dates as early as 12,500 years before present. These earliest known remains indicate very small, mobile populations, apparently dependent on hunting of large game animals as the primary subsistence strategy.

Several chronologies have been proposed for central California archaeology. Generally, these chronologies are variations based on the general California chronology, which consists of an Early Horizon, a Middle Horizon, and a Late Horizon (Fredrickson 1974, Elsasser 1978). However, wide regional differences in central California, as well as significant temporal overlap between site types classified into these three horizons, prevented clear distinctions between horizons. Eventually, a model was proposed for central California that primarily emphasized the patterns of cultural identity and deemphasized associated occupation dates (Moratto 1984).

The earliest sites in the San Joaquin Valley are Fluted Point Tradition and Western Pluvial Lakes Tradition sites found at Tracy, Tulare, and Buena Vista lakes. These sites are few in number and remain undated by scientific means but the assemblage types indicate probable ages of 11,500 to 7,500 years old. Deposition in the San Joaquin Valley is quite active; many older sites are likely buried under rapidly building alluvial deposits (Moratto 1984).

Windmiller Pattern

The Windmiller Pattern generally coincides with Fredrickson's Early Horizon (1974) and the majority of the known Windmiller Pattern sites date to approximately 5,000 to 2,250 years ago. A small number of Windmiller sites date as late as 1,250 to 750 years ago. Windmiller sites are characterized by tools related to hunting, fishing, as well as milling and include mortars, baked clay balls, trident fish spears, two types of angling hooks, pecan sized baked clay that appear to have been used as fish line sinkers, bone awls and needles, polished charmstones, shell working and shell appliqué, and flaked tools, including projectile points. Hunting was clearly done in quantity as large numbers of projectile points are found at Windmiller sites as well as numerous faunal remains, including deer, elk, pronghorn, rabbits, and waterfowl. Fishing also was an important means of food acquisition and the remains of sturgeon, salmon, and many other species of fish are extant. Exotic materials recovered from Windmiller sites include obsidian from multiple source locales, *Haliotis* and *Olivella* shells, quartz and alabaster from the Sierra foothills, steatite beads, and imported asphaltum. Generally, Windmiller burials are west facing ventrally extended inhumations. Approximately 85% of all burials recorded contained red ochre and funerary artifacts. Interment of males in separate areas and the presence of greater quantities of funerary items in their graves would seem to indicate a higher status for the male members of Windmiller groups. The presence of Windmiller artifacts in mortuary caves in the Sierras, as well as the types of artifacts found at Windmiller sites and the high number of Windmiller graves, approximately 80%, which appear to be winter burials seem to indicate seasonal movement from the San Joaquin Valley in the winter into the Sierra foothills in the summer (Moratto 1984). A majority of sites recorded in the Lodi area are Windmiller Pattern sites and particularly in the area around Stockton, the Windmiller Pattern appears to continue much longer and many sites with late dates fit the Windmiller profile (Moratto 1984).

Berkeley Pattern

The Berkeley Pattern coincides roughly with the Middle Horizon and the majority of known Berkeley Pattern sites date to approximately 2,500 to 1,250 years ago. A small number of Berkeley sites extend outside of this time frame and date as early as 3,200 years ago and as late as 500 years ago. The Berkeley Pattern subsistence relied less on hunting and fishing than the Windmiller Pattern; rather the focus appears to have been on acorns. Mortars and pestles are present in far greater numbers at Berkeley sites. Other artifacts characterizing Berkeley sites include greater numbers of bone tools of superior manufacture, distinctive diagonal flaking of large concave base points, shell beads and ornaments. Berkeley Pattern burials are flexed with variable orientations and less funerary artifacts interred. A small number of cremations with funerary artifacts are known. Unlike the fairly widespread distribution of Windmiller Pattern sites, the Berkeley Pattern did not spread as evenly throughout central California (Moratto 1984) and few sites in the Stockton area fit the Berkeley Pattern.

Augustine Pattern

The Augustine Pattern coincides approximately with the Late Horizon and generally dates from 1,250 to 250 years ago. Augustine Pattern sites are much more widespread than

Berkeley Pattern sites and are characterized by intensive fishing, hunting, and acorn gathering. Population densities are much higher; exchange systems are more sophisticated and include the advent of using clam shell disk beads for good exchange. High variability in funerary artifacts seems to indicate more social stratification. Cremations and flexed burials are common. Artifacts associated with the Augustine Pattern include the bow and arrow, shaped mortars and pestles, and pottery in some parts of the central San Joaquin Valley (Moratto 1984).

Ethnographic Setting

The project area was occupied ethnographically by the Yokuts (Kroeber 1925, Wallace 1978). The Yokuts are unique among Native Californians in that they were divided into true tribes. Each tribe had a unique name, a distinctly different dialect, and a defined territory (Kroeber 1925). The Yokuts language is a member of the California Penutian stock that includes four other groups found in central California, Miwok, Costanoan, Maiduan, and Wintuan. Yokuts were divided into three groups: the Southern Valley Yokuts, the Northern Valley Yokuts, and the Foothill Yokuts. Specifically, the project area is situated within the traditional lands of the Northern Valley Yokuts, of whom the least is known. The Northern Valley Yokuts rapidly disappeared once Europeans reached the area as a result of disease, missionization, and most importantly, the gold rush.

The San Joaquin River was the center of the Northern Yokuts territory and their settlement and subsistence were heavily reliant on the river and its sloughs. Villages were placed on low mounds, above the flood levels and near larger bodies of water. The structure of the Northern Yokuts village is unknown but assumed to be quite similar to the groups to the north and south of the Northern Yokuts and based on the single family (Wallace 1978; 466). Members of a tribe lived in one principal settlement, periodically leaving the settlement during the spring floods to move to higher ground. The group would divide into smaller groups during different harvesting seasons, leaving a small group at the main settlement. Generally, the tribes stayed at the main settlement as food near the village was very abundant. Fish, mussels, pond turtles, waterfowl, tule elk, pronghorn antelope, jackrabbits, squirrels, and quails were all found in abundance in and near the water. Salmon, in particular, is noted as a prime source of food in historical accounts of the Northern Yokuts. Acorns from valley oaks and tule roots were ground into a meal and cooked as a thick soup or gruel.

Northern Yokuts dwellings were small with round or oval floors, a light frame of poles tied together at the top, and covered with tule stalks. In addition to dwellings, Northern Yokuts also built sweat lodges and ceremonial assembly structures in their villages (Wallace 1978). Sweat lodges appear to have been earth covered, though. Weaving of baskets, mats, and other items appears to have been done with tule stalks and bone awls made of large mammal bones were used to weave the stalks. Mortars and pestles were used to process acorns and other larger milling tools were not frequently used. Preferred lithic materials include chert, jasper, and chalcedony. Ceramics were not particularly important; only occasionally are potsherds are found at Northern Yokuts sites (Wallace 1978; 465).

Northern Yokuts made rafts from lashed bundles of tule for water transport. It is presumed that fishermen used these rafts as well (Wallace 1978: 465). Northern Yokuts also traveled by foot over a network of well-used paths that led west toward the coast and Monterey Bay. The Northern Yokuts traded with the Miwok, exchanging domesticated dog pups for baskets, bows, and arrows. They received abalone shells from the Costanoans (Wallace 1978).

During the Spanish and Mexican Periods, 1769-1846, the Northern Yokuts rapidly declined in population. European disease swept through the San Joaquin Valley. In 1833, a particularly virulent malaria epidemic wiped out entire tribes. Decreasing native populations along the coast resulted in the Franciscan friars pulling neophytes from further and further inland. Many of the Northern Yokuts were taken to the San Jose, Santa Clara, Soledad, San Juan Bautista, and San Antonio missions. It is not clear if the neophytes willing left the San Joaquin Valley (Wallace 1978). During the Mexican Period, Northern Yokuts, who had been successfully stealing animals from the new ranches, clashed with ranchers. Finally, during the American Period, which began in 1846, the Northern Yokuts were further decimated by the thousands of prospectors who descended upon the San Joaquin Valley in search of gold (Wallace 1978).

Most of the Northern Yokuts who lived near the project area are now gone; in October of 2007 when the US government issued direction regarding the return of funerary items to the Yokuts found in the 1930's near Lodi, the Santa Rosa Indian Community was determined to receive these items. The Santa Rosa Indian Community, also known as the Tachi Yokuts tribe, is located approximately 150 miles south of where the items were found (Federal Register; V. 72, No. 164; Friday, August 24, 2007; Notices).

Historic Setting

In 1542, Juan Rodriguez Cabrillo explored the California coast by ship. Much of the early exploration of California was conducted this way and the interior of California, including the San Joaquin Valley, remained unexplored by Europeans until the beginning of the Spanish Period.

The Spanish period spans the years from 1769 to 1822 in California beginning with the founding of the first mission, the Mission San Diego de Alcalá in 1769. It was not until March of 1772 that the first formal European expedition, led by Pedro Fages, entered the northern San Joaquin Valley. Fages went in search of the first Europeans to actually enter the San Joaquin Valley, Spanish deserters. The other purpose of the Fages expedition was to find an overland route to Point Reyes and the company kept to the shoreline until they reached the mouth of the San Joaquin River and first observed the valley (Smith 2004). Shortly after the Fages expedition returned to Monterey, Father Francisco Garcés entered the San Joaquin Valley and made the first scientific observations of the valley, which included native villages, wide rivers, large tule swamps, and huge herds of tule elk.

In 1821, Mexico gained independence from Spain and in 1848 the United States formally obtained California in the Treaty of Guadalupe Hidalgo (Cleland 1941). The period from 1821-1848 is referred to as the Mexican Rancho Period. It was during this period that large

tracts of land termed *ranchos* were granted by the various Mexican Governors of *Alta California*, usually to individuals who had worked in the service of the Mexican government.

In 1833, 11 years after gaining independence from Spain, the Mexican government's Secularization Act changed missions into civil parishes, and those natives who had inhabited regions adjacent to a Spanish Period mission were to obtain half of all mission possessions, including land. However, in most instances, this did not occur, and the Secularization Act resulted in the transfer of large mission tracts to politically prominent individuals.

The closest *rancho* to the project area is the *Rancho de los Franceses* situated on and around present day Stockton. *Rancho de los Franceses* was granted by Governor Micheltorena to William Gulnac, a native of New York on June 13, 1844. The *rancho* was comprised of eleven square leagues, or 48,747.03 acres. In 1845, shortly before the homestead deadline and after constructing several houses, corrals, planting a peach orchard, and raising several hundred cattle on the land, Gulnac sold the *rancho* to Captain Charles M. Weber for a \$60 grocery bill Gulnac owed the Weber Grocery Store in San Jose (Smith 2004: 153-154).

Following the end of hostilities between Mexico and the United States in January of 1847, the United States officially obtained California from Mexico through the Treaty of Guadalupe Hidalgo on February 2, 1848 (Cleland 1941). Thus, the American Period begins in 1848. In 1850, California was accepted into the Union of the United States primarily due to the population increase created by the Gold Rush of 1849.

In April of 1848, gold was first discovered in the San Joaquin Valley at Captain Sutter's now famous saw mill near present day Sacramento. Gold was never found in great quantities in the San Joaquin Valley, although mining in the adjacent foothills was prolific. The southern mines stretched from the Mokelumne River to the Kern River and Stockton became the main supply city for miners headed to these southern mines (Smith 2004: 179).

The cattle industry in California reached its greatest prosperity during the first years of the American Period. Mexican Period land grants had created large, pastoral estates in California, and a high demand for beef during the Gold Rush led to a cattle boom that lasted from 1849 to 1855. In 1855, however, the demand for California beef began to decline as a result of sheep imports from New Mexico, cattle imports from the Mississippi and Missouri valleys, and the development of stock breeding farms. When the beef market collapsed, the California ranchers were unprepared. Many had borrowed heavily during the boom, mortgaging their land at interest rates as high as ten percent per month. The collapse of the cattle market meant that many of these ranchos were lost through foreclosure, while others were sold to pay debts and taxes (Cleland 1941: 108-114).

Although no land grants were given to the Central Pacific in the San Joaquin Valley, the company financed itself and construction of the first railroad in San Joaquin Valley began in 1870 at a new railroad town named Lathrop. By the close of 1870, this line reached the Stanislaus River. The Central Pacific connected to the main Southern Pacific line at Goshen, approximately 150 miles south of Lathrop. Subsequently, other rail lines were constructed in

the San Joaquin Valley and served as feeders to this main line. In 1903, the Western Pacific Railway incorporated and between 1905 and 1909, the company constructed a railroad that ran from Oakland through the San Joaquin Valley and into the Sierra Nevada Mountains (Smith 2004).

During the American period, in addition to cattle and sheep ranches, a growing number of farms appeared. A rural community cultural pattern existed in the study area from approximately 1870 to 1930. This pattern consisted of communities made up of population aggregates that lived within well-defined geographic boundaries, shared common bonds, and cooperated to solve shared problems. They lived on farmsteads, tied together by a common school district, church, post office, and country store. These farmsteads and dispersed farming communities gave way to horse ranches, dairies, and nurseries, which in turn were replaced by the establishment of the roadside service complex. The roadside service industry thrived in the highly mobile, mechanized pre- and post-war society, which was linked by state and federal roadways.

City of Lodi

In 1859, a small group of families established a school on a site near Cherokee Lane and Turner Road, in the present day City of Lodi. By 1869, settlers Ezekiel Lawrence, Reuben Wardrobe, A.C. Ayers, and John Magley offered the Central Pacific Railroad 12 acres of a 160 acre town site to build a rail station. The railroad accepted and when surveyors began laying out streets, settlers came from Woodbridge, Liberty City, and Galt to create present day Lodi (Hillman and Covello 1985).

Lodi was initially called Mokelumne and Mokelumne Station for the nearby river. It is not clear where the name Lodi originated and several stories are told to account for the name. These stories include a local record setting horse named Lodi who reached fame in 1869, the first site where Napoleon won military victory in Lodi, Italy, and several families from Lodi, Illinois, who settled in present day Lodi, California (Hillman and Covello 1985). The city was officially incorporated in 1906, additional public buildings were built from 1906 to 1915, including a public library and a hospital, and the city purchased Bay City Gas and Water Works in 1919 (Hillman and Covello 1985). Early industries in the Lodi area included saw mills, flour mills, vineyards, orchards, and cattle ranching.

The City of Lodi now claims approximately 70,000 individuals and is considered a part of metropolitan Stockton. Lodi is likely best known for its wine production and is referred to as the Zinfandel Capital of the World. The Grape Festival is held every September in Lodi and a Spring Wine Show occurs near Easter. The Robert Mondavi Winery is located in the Lodi area. Other industries in the Lodi area include the Lodi Iron Works, General Mills, the Holz Rubber Company, and Kubota Tractors.

CULTURAL RESOURCES SURVEY RESULTS

On June 26 and July 25, 2008 Natalie Lawson, M.A., RPA performed a cultural resources pedestrian inventory of the LEC project site and associated proposed underground high pressure gasline in order to identify prehistoric or historic cultural resources. The "project

area" included the plant site and four temporary laydown and/or parking areas and the proposed corridor for an underground high pressure gas line. The LEC site is located within the existing WPCF and STIG plant, southwest of the intersection of Highway 12 and Interstate 5, at the end of North Cord Road on Thornton Road within an extension of the City of Lodi city limit to the west of the city proper that encompasses the City of Lodi White Slough Water Pollution Control Facility (WPCF) to the east, treatment and holding ponds associated with the WPCF to the north, the existing NCPA Combustion Turbine Project STIG #2 (STIG plant) to the west, and the San Joaquin County Mosquito and Vector Control facility to the south. The proposed gas line corridor begins on the western end of this property and runs east along the southern boundary of the LEC site, continuing past the I-5 freeway, along West Armstrong, and ending east of the Western Pacific Railroad, 3.5 miles east of the LEC site. The Lodi-Kingdon airport is located just north of the proposed natural gas line; rural residences and farmhouse are located in the vicinity of the gas line, as well.

The existing WPCF and STIG plant properties have been subjected to heavy disturbance since the construction of the waste treatment plant in 1966 and the construction of the Lodi energy plant in 1993 (Joe Bittner, email, June 24, 2008). Both excavation and grading occurred in during the WPCF's initial construction in the late 1960's. Excavations to a depth of six feet occurred during the construction of the LEC plant in the 1980's (Joe Bittner, 2008, personal communication). An underground Pacific Gas and Electric line runs to the STIG plant, through the LEC project area and two of the laydown and/or parking areas, through the WPCF, and continues east. Areas surrounding the WPCF and STIG plant have been excavated to create reservoirs for the WPCF to the north and the San Joaquin mosquito abatement ponds to the south. Extensive earthmoving activities were observed within the proposed project area during the survey, as well. Additional disturbances include the current use of the proposed plant site as a temporary lay down area, modern trash related to the waste treatment plant, and the dumping of modern concrete pipe fragments. The proposed natural gas corridor is situated where an existing natural gas line is already located; therefore, the gas line corridor is already disturbed.

Archival Research

CH2M HILL commissioned a literature search of the project area from the staff of the California Historical Resources Information System (CHRIS) Central California Information Center using a definition of a one-mile buffer zone around the Project site and associated laydown and/or parking areas and a one-quarter mile buffer zone around the proposed natural gas line. The CHRIS literature and records review included a review of all recorded archaeological sites as well as all known cultural resource survey and excavation reports. The National Register of Historic Places (NHRP), the California Register, California Historical Landmarks, and California Points of Historical Interest, as well as historic maps, including a GLO plat map for T3N, R5E (1853-1867) and T3N, R6E (1853-1865), the Thompson and West (1879) Map Number One, the 1939 *Lodi 15'* United States Army Corps of Engineers map, the 1952 *Terminus 7.5'* USGS topographic map, and the 1953 *Lodi South 7.5'* USGS topographic map were all examined.

According to information available in the CHRIS files, only four previous cultural resource studies have been prepared within one mile of the project area. All of these previous studies

encompass the project area. No cultural resources are previously recorded within the LEC project area, within a 1-mile radius of the project area, within the proposed gas line, or within a one-quarter mile radius of the proposed gas line. No buildings or structures were noted on any of the historic maps within LEC project area or within the proposed gas line; however the Western Pacific Railroad is visible on the 1953 *Lodi South 7.5'* USGS topographic map at the very eastern end of the project area.

Buildings and structures depicted on the 1952 topo map and located within the 1 mile radius of the LEC are limited to two structures, labeled 'pump house' situated adjacent and directly south of the project area. Both of these structures are now gone and only one large concrete standpipe which was likely related to the pump houses remains. This standpipe was photographed during the survey.

P-39-000098 Western Pacific Railroad

The section of rail line visible on the 1953 *Lodi South* quad is a segment of the Old Western Pacific Railway Company main line. This line was originally built as a feeder line for the main Southern Pacific and Central Pacific lines, which were the first railroads to run through the San Joaquin Valley. The Western Pacific Railroad (WPRR) is now a part of the Union Pacific Railroad (UPRR). Two separate sections of this railroad are recorded elsewhere in San Joaquin County as site P-39-00098, CA-SJO-000292-H. These previously recorded and discontinuous segments are not considered eligible to the NRHP as the segments lack integrity due to modern improvements made to the tracks, the rail ties, and the rail beds (Larson and Johnson 2003, Jensen, 2004).

The historic UPRR constructed in the late 1880's represented the westernmost portion of the Transcontinental Railroad between Sacramento and San Jose. The various rail lines of the UPRR are recorded elsewhere in San Joaquin County with the following site numbers: Southern Pacific, P-39-000002, CA-SJO-000250H; Western Pacific, P-39-000098, CA-SJO-000292H; and Tidewater-Southern, P-39-000015, CA-SJO-000256H. The Western Pacific Railroad Company was founded in 1903 and the WPRR was built between 1905 and 1909. The rail line ran from Oakland, through the San Joaquin Valley and into the Sierra Nevadas to Salt Lake City by Feather River Canyon and Beckwourth Pass. The WPRR ran the California Zephyr passenger train and was the first large western railroad to eliminate steam locomotives and replace them with diesel locomotives (Kneiss 1953).

The WPRR merged with the UPRR in 1983, two months before its 80th anniversary. Shortly after, the UPRR began a series of improvements to the Old WPRR tracks to enable larger locomotives and heavier freight cars running at higher speeds to run on the WPRR. The upgrades included heavier rails, new ties, and improved rail beds to permit higher tonnage on the tracks (Bridges 1983, Larson and Johnson 2003).

Consultation

A Sacred Lands File search and a Native American contacts list were requested from the Native American Heritage Commission (NAHC) on June 30, 2008. The NAHC responded on July 10, 2008 with a list of Native Americans interested in consulting on development projects. At this time, no sacred sites are known to exist within the proposed project area; however, Native American consultation with tribes and individuals provided by the NAHC

was conducted. Letters describing the project and including maps of the project location were sent via email or fax as well as standard mail to all individuals or tribes provided by the NAHC inviting comments and concerns regarding this project on July 11. As of the time of printing this document, no responses have been received.

Additionally, CH2M HILL contacted historical societies in the Lodi, California area, including the Lodi Historical Society and the San Joaquin Historical Society and Museum and the Planning Department of San Joaquin County. San Joaquin County does not maintain a list of historic properties within the County and was unable to provide additional information regarding historic properties in the vicinity of the project area. Letters describing the project and including maps of the project area were emailed or mailed to the historical societies requesting information about historical buildings near the project area and inviting comment on the project. As of this printing, no responses have been received.

The NAHC record search of the Sacred Lands file did not indicate the presence of Native American cultural resources in the immediate project area. The record search conducted at the CHRIS Central Information Center also did not indicate the presence of Native American traditional cultural properties. Aside from the two pumphouses noted on the USGS 1952 topo map, there were no other historical structures found in the LEC project area, the proposed gas line, or any of the buffer areas.

Field Survey

Using pedestrian transects spaced no more than 10 meters apart, Ms. Lawson surveyed up the project facilities, a 200-foot buffer surrounding them, the proposed gas line corridor, and a 50-foot buffer around the linear corridor (Figure 1).

The visibility within the proposed plant location was excellent at approximately 90%, throughout most of the area; the northwest corner of the plant site is very overgrown and visibility is poor at less than 10%. This area is currently in use as an equipment storage or laydown area. North and east of this area a series of reservoirs related to the waste treatment plant and west of this area is the Lodi energy plant which sits on an area that has been excavated to approximately six feet and paved. A Pacific Gas and Electric line runs to the STIG plant, through the LEC project area and two of the laydown and/or parking areas, through the WPCF, and continues east.

Much of the visibility within the laydown and/or parking areas is impaired by thick vegetation. Some areas have poor visibility at less than 10%, therefore any areas with good visibility were surveyed even when they were outside of transects. The laydown area adjacent to the plant site has been graded and extensive earthmoving activities have resulted in the creation of a very large mound of dirt. Concrete pipe pieces have been dumped atop the mound. The eastern laydown area has been graded for parking and gravel has been put down. Additionally, several water lines daylight throughout the easternmost laydown area; eucalyptus trees are present in this area as well. All observed standpipes, waterlines, and spigots appear to be modern. The northernmost laydown area was not particularly disturbed and visibility was fair at approximately 50%. No cultural resources

were present and sensitivity is considered very low within the project area. All observed soils in the surveyed area range from medium to dark brown silty loam with some gravel and fist sized cobbles.

Visibility on the eastern end of the proposed gas line along West Armstrong Road was fair at approximately 50%. Visibility ranged from excellent along the dirt road south of the Lodi-Kingdon airstrip to poor within fallow agricultural fields between the I-5 and the start of the paved road. The areas along the paved West Armstrong road are disturbed by two V ditches running adjacent to the road, grading for residences and a parking area for a small dairy, and grapevines. The areas along the dirt road are disturbed by both agricultural activities and grading for the dirt road. Underground water lines exist in the area; several were visible extending into V ditches adjacent to the dirt road. Several sections of ceramic water line have been pulled and dumped along the fields. All observed soils in the surveyed area range from medium to dark brown silty loam with some gravel and fist sized cobbles.

Cultural sensitivity is considered low to moderate within the LEC area as the Union Pacific Railroad, historically the Western Pacific Railroad, runs through the eastern end of the proposed natural gas line corridor. Two other short discrete segments of this railroad are previously recorded north of the project and buffer areas as P-39-00098, CA-SJO-000292-H. The section of the WPRR located within the proposed natural gas line corridor runs along the footprint of the original grade; however, modern upgrades to the rail line, including modern rail crossings, upgraded rail lines and ties are extant. Additionally, the rail grade itself has been modified to allow for heavier loads to be run upon the tracks. This 100 foot segment was recorded during the archaeological survey; the recorded section is limited to the section of the railroad which bisects West Armstrong and extends approximately 50 feet north and 50 feet south of the crossing.

A site record was prepared for the section of the UPRR, historically the WPRR, located on the eastern end of the project, on Department of Parks and Recreation (DPR) forms. These completed forms are located in Appendix A.

RECOMMENDATIONS

The literature search and pedestrian inventory have shown no significant prehistoric or historic sites located within the LEC site area of potential effect. Although a 100 foot segment of the UPRR, historically the WPRR, which crosses the proposed natural gas line corridor was recorded as an historic resource, this short segment is not eligible to the NRHP and not considered a significant resource. The integrity of the section of the UPRR/WPRR located in the project area was compromised by a series of improvements to enable larger locomotives and heavier freight cars running at higher speeds to run on the WPRR. The improvements, begun in 1983, included heavier rails, new ties, and improving the rail beds to permit higher tonnage (Bridges 1983, Larson and Johnson 2003). This short segment no longer retains the essential physical features that made up its character or appearance during its period of importance from 1905 to 1909, and although the rail line is located in its original footprint, the original historic materials and workmanship are no longer present or able to convey important associations with local historic events (National Park Service 1991).

Additionally, the two previously recorded discontinuous sections of the UPRR/WPRR that are located north of the project and buffer areas are also considered not eligible; however, these eligibility determinations are for the discontinuous segments of the WPRR only. Finally, as this railroad is now a part of the UPRR and currently in use, it will not be affected by the proposed project as placement of the new underground gas line will be accomplished by boring under the rail grade. Therefore, the project is unlikely to have an adverse effect on significant historical or archaeological sites (that are eligible for listing in the NRHP or CRHR). Lastly, there are no known cemeteries in the project area or linear facilities that project construction might disturb.

It is unlikely, due to the extensive disturbance by construction of the STIG plant or the WPCF, or the extant natural gas line, that the project would encounter buried intact cultural resources that have not previously been disturbed or destroyed in sediments near the ground surface. However, some limited potential does exist for intact cultural resources to be discovered in soils below the plow zone.

Although significant archaeological and historical sites were not found during the survey for the LEC, it is possible that subsurface construction could encounter buried archaeological remains. For this reason, the LEC will include measures to mitigate any potential adverse impacts that could occur if there were an inadvertent discovery of buried cultural resources. These measures include: (1) designation of an on-call cultural resources specialist (CRS) to investigate any cultural resources finds made during construction, (2) implementation of a construction worker training program, (3) monitoring during initial clearing of the power plant site and excavation at the plant site, (4) procedures for halting construction in the event that there is an inadvertent discovery of archaeological deposits or human remains, (5) procedures for evaluating an inadvertent archaeological discovery, and (6) procedures to mitigate adverse impacts on any inadvertent archaeological discovery determined significant.

If human remains are found during construction, project officials are required by the California Health and Safety Code (Section 7050.5) to contact the San Joaquin County Coroner. If the Coroner determines that the find is Native American, he or she must contact the NAHC. The NAHC, as required by the Public Resources Code (Section 5097.98) determines and notifies the Most Likely Descendant with a request to inspect the burial and make recommendations for treatment or disposal.

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Appendix A

Site Records

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
 HRI #
 Trinomial
 NRHP Status Code

Other Listings
 Review Code

Reviewer

Date

Page 1 of 3

*Resource Name or #: LEC-1; Segment of the Western Pacific Railroad

P1. Other Identifier:

*P2. Location: Not for Publication Unrestricted

*a. County: San Joaquin

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: Lodi South Date: 1968, photo revised 1976 T 3N ; R 6E ; W ½ of Sec 20; M.D. B.M.

c. Address:

City:

Zip:

d. UTM: Zone: 10 ; 645483 mE/ 4216639 mN (G.P.S.) NAD 27

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: From the SR-12 exit off I-5, turn south onto West Thornton Road. At DeVries Road, turn northeast. Take DeVries to West Armstrong Road and turn east. The recorded section of the Western Pacific Railroad crosses West Armstrong approximately 0.5 mile east of the intersection of DeVries Road and West Armstrong.

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) This historic resource consists of a segment of the Old Western Pacific Railway Company main line. This line is now a part of the Union Pacific Railroad (UPRR). The recorded section is limited to the section which bisects West Armstrong and extends approximately 50 feet north and south of the crossing.

The historic UPRR constructed in the late 1880's represented the westernmost portion of the Transcontinental Railroad between Sacramento and San Jose. These rail lines are recorded elsewhere in San Joaquin County with the following site numbers: Southern Pacific, P-39-000002, CA-SJO-000250H; Western Pacific, P-39-000098, CA-SJO-00292H; and Tidewater-Southern, P-39-000015, CA-SJO-00256H. The Western Pacific Railroad Company (WPRR) was founded in 1903 and built between 1905 and 1909. The rail line ran from Oakland, through the San Joaquin Valley and into the Sierra Nevadas to Salt Lake City by Feather River Canyon and Beckwourth Pass. The WPRR ran the California Zephyr passenger train and was the first large western railroad to eliminate steam locomotives and replace them with diesel locomotives.

The WPRR merged with the UPRR in 1983, two months before its 80th anniversary. Shortly after, the UPRR began a series of improvements to the Old WPRR track to enable larger locomotives and heavier freight cars running at higher speeds to run on the WPRR. The improvements included heavier rails, new ties, and improving the railbeds to permit higher tonnage.

*P3b. Resource Attributes: (List attributes and codes) AH 7 (Railroad grade)

*P4. Resources Present: Building Structure Object Site District Element of District Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #)

View of the railroad grade to the east from West Armstrong.

*P6. Date Constructed/Age and Sources: Historic Prehistoric
 Both

1905-1909

*P7. Owner and Address: Union Pacific Railroad, 1416 Dodge Street, Omaha, Nebraska 68179

*P8. Recorded by: (Name, affiliation, and address)
 Natalie Lawson, CH2M HILL, 3 Hutton Centre Drive, Santa Ana, CA 92707

*P9. Date Recorded:
 July 25, 2008

*P10. Survey Type: (Describe)
 Pedestrian survey

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Lodi Energy Center Project (LEC); Cultural Resources Assessment

*Attachments: NONE Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (List):

L1. Historic and/or Common Name: Western Pacific Railroad; now the Union Pacific Railroad

L2a. Portion Described: Entire Resource Segment Point Observation **Designation:**

b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map) The recorded section is limited to the section which bisects West Armstrong and extends approximately 50 feet north and south of the crossing. This section is located on the *Lodi South 7.5'* quadrangle approximately 1/2 mile east of the intersection of DeVries Road and West Armstrong Road.

L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)

This section of railroad is a single track with modern heavy gauge rails and pressure treated ties. The asphalt of West Armstrong gradually slopes up to the rail line which consists of a crushed granite ballast berm. The crossing guards and warning lights are modern.

L4. Dimensions: (In feet for historic features and meters for prehistoric features)

a. Top Width: 12 feet

b. Bottom Width: 20 feet

c. Height or Depth:

d. Length of Segment: approximately 100 feet

L5. Associated Resources: Modern crossing guards, warning lights

L4e. Sketch of Cross-Section (include scale) **Facing:**

L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.) This segment is located near agricultural fields, farms, residences, and a small dairy.

L7. Integrity Considerations: The integrity of this segment has been compromised due to the improvements made to the track in the 1980's following the UPRR acquisition of the WPRR. The original historic features of this line have been removed and thus, the historic integrity is gone.

L8a. Photograph, Map or Drawing



L8b. Description of Photo, Map, or Drawing (View, scale, etc.)
View to the east from the north side of West Armstrong Road.

L9. Remarks:

While the original location of the WPRR line remains, the track has been upgraded and thus, has lost historic integrity.

L10. Form Prepared by: (Name, affiliation, and address)
Natalie Lawson, CH2M HILL, 3
Hutton Centre Drive, Santa Ana,
CA 92707

L11. Date: July 25, 2008

