

CULTURAL RESOURCES

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SUMMARY OF CONCLUSIONS

Staff's cultural resources analysis has determined that the proposed Orange Grove Project (OGP) would have no impact on known significant archaeological resources, historic standing structures, ethnographic resources, historic districts, or cultural landscapes. With the adoption of cultural resources Conditions of Certification **CUL-1** through **CUL-7**, the OGP would have no significant impact on as-yet-unidentified buried archaeological deposits.

These conditions are intended to provide for the identification and assessment of any buried archaeological resources discovered during project-related excavations, and for the mitigation of any significant impacts from the project on any newly identified resources assessed as eligible for the California Register of Historic Resources (CRHR). To accomplish this, conditions provide for the hiring of a Cultural Resources Specialist, archaeological monitors, and a Native American monitor to observe ground-disturbing activities and for cultural resources awareness training for construction workers. Other conditions provide for the recovery of data from CRHR-eligible discovered archaeological deposits, for the writing of a technical archaeological report on all archaeological activities and results, and for the curation of recovered artifacts and other data. When properly implemented and enforced, these conditions of certification would reduce to less than significant any impacts to cultural resources during the project's construction or operation. Additionally, with the adoption and implementation of these conditions, the project would be in conformity with all applicable laws, ordinances, regulations, and standards (LORS).

INTRODUCTION

This cultural resources assessment identifies the potential impacts of the Orange Grove Project on cultural resources. Cultural resources are defined under state law as buildings, sites, structures, objects, and historic districts and are generally divided into three kinds of resources: prehistoric, ethnographic, and historic.

Prehistoric archaeological resources are those materials relating to prehistoric human occupation and use of an area. These resources may include sites and deposits, structures, artifacts, rock art, trails, and other traces of Native American human behavior. In California, the prehistoric period began over 12,000 years ago and extended through the eighteenth century until 1769, when the first Europeans settled in California.

Ethnographic resources are those materials, locations, and structures important to the heritage of a particular ethnic or cultural group, such as Native Americans or African, European, or Asian immigrants. They may include traditional resource collecting areas, ceremonial sites, topographic features, cemeteries, shrines, or ethnic neighborhoods and structures. And are historical resources that are associated with cultural practices or beliefs of a living community that are rooted in the community's history and are

important in maintaining the continuing cultural identity of the community. They are tangible resources—that is a building, structure, historic district, site, or object.

Historic-period resources include archaeological deposits and standing structures usually associated with Euro-American exploration and settlement of an area and the beginning of a written historical record. They may include archaeological deposits, sites, structures, traveled ways, artifacts, or other evidence of human activity. Under federal and state requirements, historic resources must be greater than fifty years old to be considered of potential historic importance. A resource less than fifty years of age may be historically important if the resource is of exceptional importance.

For the OGP, staff provides an overview of the environmental setting and history of the project area, an inventory of the cultural resources identified in the project vicinity, recommendations of eligibility for the California Register of Historical Resources (CRHR) for those resources, and an analysis of the potential impacts to those historical resources from the proposed project using criteria from the California Environmental Quality Act

Staff determines which cultural resources identified in the OGP vicinity are CRHR-eligible and evaluates all project-related impacts to those. If significant project impacts to CRHR-eligible cultural resources cannot be avoided, staff recommends mitigation measures to reduce those impacts to below the level of significance.

Staff's primary concern is to ensure that all potentially CRHR-eligible cultural resources are identified, that all potential impacts to those are identified and evaluated, and that all significant impacts are mitigated to a less-than-significant level.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

Projects licensed by the Energy Commission are reviewed to ensure compliance with all applicable laws. For this project, which has no federal involvement,¹ the applicable laws are primarily state laws. Although the Energy Commission has exclusive permitting authority over OGP, it typically ensures compliance with all applicable laws, ordinances, regulations, standards, plans, and policies.

¹ Cultural resources in California are also protected under provisions of the federal Antiquities Act of 1906 (Title 16, United States Code, section 431 et seq.) and subsequent related legislation, policies, and enacting responsibilities, e.g., federal agency regulations and guidelines for implementation of the Antiquities Act.

**Cultural Resources Table 1
Laws, Ordinances, Regulations, and Standards**

Applicable Law	Description
State	
Health and Safety Code, section 7050.5	Makes it a misdemeanor to disturb or remove human remains found outside a cemetery; also requires a project owner to halt construction if human remains are discovered and to contact the county coroner.
Public Resources Code 5097.98 (b) and (e)	Requires a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until he/she confers with the NAHC-identified Most Likely Descendants (MLDs) to consider treatment options. In the absence of MLDs or of a treatment acceptable to all parties, the landowner is required to reinter the remains elsewhere on the property in a location not subject to further disturbance.
Local	
County of San Diego Resource Protection Ordinance (Ordinance No. 9842, County Code Chapter 6)	Requires that a resource protection study be performed to evaluate the potential for the project to impact cultural resources. Provides for protection of archaeological and historic resources within the County, and prohibits impacts to resources considered significant under the County guidelines.
Conservation Element of the San Diego County General Plan	Uses the Environmental Impact Report process to evaluate the potential impacts of proposed projects to cultural resources. Prohibits excavation of archaeological sites except by qualified archaeologists.
Zoning Ordinance, sections 5700-5749	Requires a landowner to submit a site plan concerning changes to historic resources to the County for approval.

SETTING

REGIONAL SETTING

The proposed project would be located on an approximately 41-acre parcel located east of Monserrate Mountain, north of the San Luis Rey River, west of the community of Pala and the Pala Indian Reservation, and approximately 4.0 miles west of the Cleveland National Forest. The project would be within the Peninsular Ranges geomorphic province of California, located in the southwestern part of the state, with a coastal plain on the west and rugged mountains with steep-walled valleys inland. The region is primarily rural, comprised of agricultural lands used for pasture, orchards, and truck crops in the southeastern portion, and for small rural residential parcels and open space

(OGE2008a, pp. 6.6-2–6.6-3, 6.7-1). The site sits on an old alluvial fan with a 10% grade, surrounded on the east, north, and west by moderately steep hillsides comprised of igneous basement rocks.

SITE, VICINITY, AND PROJECT DESCRIPTION

The proposed project is located near State Route (SR) 76, also known locally as Pala Road, approximately 3.5 miles east of Interstate 15 (I-15) in rural San Diego County. The site is approximately 2.0 miles east of the community of Pala and 5.0 miles west of Fallbrook. The project site has been used for agricultural purposes since the late 1930s and sits adjacent to San Diego Gas & Electric's (SDG&E) Pala Substation. Currently the remains of a citrus orchard, abandoned after the site was used by California Institute of Technology for field testing, are present on the project site. On the south side of the project site, an old aggregate mine and several dairies occupy part of the San Luis Rey River flood plain. The Pala Band of Mission Indians has acquired the gravel mine, which is no longer in operation, and the dairies are also in disuse (OGE2008a, pp. 1-3–1-4).

The proposed OGP is a 96-MW peaker facility that is expected to operate about 60 days a year. The project will consist of the following components:

- A 96-MW electric generating plant located on an approximately 8.5-acre site;
- An approximately 0.3-mile-long, underground electric transmission line interconnection between the site and the existing Pala Substation;
- An approximately 2.4-mile-long, natural gas pipeline that would connect the site to an existing SDG&E regional gas transmission main;
- A fresh-water pick-up station where water trucks would be filled from an existing Fallbrook Public Utility District water main for hauling to the site; and
- Pala Substation upgrades as required for interconnection and transmission system mitigation to be agreed upon with the California Independent System Operator (California ISO) and SDG&E.

A result of the proposed project, but not part of the project itself, would be the reconductoring of approximately eight miles of existing SDG&E transmission line between Monserate and Pala substation. As part of this process new poles would need to be installed and equipment would need to be replaced (OGE2008f, p. 0). A discussion of the cultural resources literature search and survey the area around components of the transmission line is included in the Archaeological Resources portion of this document.

Prehistoric Setting

Human Occupation of Southern California

The earliest generally accepted evidence for the human occupation of the North American continent dates to the geological epoch known as the Late Pleistocene, about 10,000 years BC. The evidence occurs primarily in the form of large, very skillfully made stone spear points, sometimes found in association with the bones of large game animals. This occupation is known archaeologically as the Big Game Hunting Tradition.

The Big Game Hunting Tradition, centered in the Great Plains and American Southwest, but evidenced all over the continent, apparently had a nearly exclusive focus on the exploitation of now-extinct giant mammals (megafauna), such as mammoths and giant bison. Archaeologists believe that California did not have the Big Game Hunting Tradition, although its characteristic fluted projectile points have been found all over the state. Rather, California's Late Pleistocene peoples were forced to adopt a general hunter-forager subsistence mode and to live near reliable water sources where food and plant resources were consistently available when the glaciers of the Pleistocene era retreated and the warmer and drier climate of the succeeding geological era, the Holocene, caused major environmental changes, including a rise in sea level along the coast, desiccation of the formerly plentiful inland lakes, and extinction of megafauna (Moratto 1984, pp. 78–81; Byrd and Raab 2007, p. 215).

Early Holocene Cultures (9600–5600 BC)

For the Early Holocene epoch, previous archaeological interpretations had characterized a prevailing, region-wide hunting tradition in Southern California, known as the Western Pluvial Lakes Tradition, as follows: site locations on or near shorelines of bodies of fresh water; economy based on hunting a variety of animals and birds and gathering shellfish and vegetal products; the absence of ground-stone artifacts (indicating no use of hard seeds as food); distinctive percussion-flaked stone artifacts; and a diverse stone toolkit. Gradually, archaeologists thought, people carrying this tradition spread to the coast where they increasingly exploited marine foods in the later part of this period (Moratto 1984, pp. 90–103; Byrd and Raab 2007, p. 218).

Moratto sums up the primary cultural-historical developments of the Early Holocene era in Southern California, listing several trends: increasing regional specialization, increasing technological diversification, increasing population, increasing sedentism, and intensification of use of plant resources (Moratto 1984, p. 113, Table 3.10).

Middle Holocene Cultures (5600–1500 BC)

After 5000 BC, the climate and environment that prevail today were established in California. Previous archaeological interpretations saw Native Americans in Middle Holocene Southern California refining their exploitative abilities by developing their technology and adapting to the seasonal availability of a wide variety of local food sources through a mobile lifestyle that required no substantial houses or permanent villages. One of the key technological developments of this era was the millingstone, which was a rock slab or shallow basin shaped by painstaking grinding with a smaller rock and used to process hard seeds into meal. Along with millingstones, important developments in this era in Southern California were: the appearance of many large shell midden sites on the bays and estuaries of what are now San Diego and Orange Counties; the wide regional distribution of shell beads; and the introduction of pottery and clay figurines. These developments were thought to signal the greater exploitation of marine resources on the coast, the greater exploitation of vegetal food sources throughout the region, and the development of a regional trading network (Moratto 1984, pp. 147–153).

While the coastal shell middens, known as the La Jolla Culture, were the archaeological type site for the Middle Holocene period, archaeologists also identified two variants

which co-existed with the shell midden sites during this time period: the Pauma Culture and the Sayles Culture, known from inland sites. Archaeologists characterize the three collectively as “Millingstone” cultures because sites of all three evidence extensive use of millingstones, an indication of dependence on vegetal food sources. Comparisons of sites of the three cultures suggest a basic similarity in subsistence among them, with variations reflecting adaptation to particular local resources, with shellfish remains being absent at Pauma and Sayles sites.

The late Middle Holocene cultures of San Diego County are not well understood and archaeologists have theorized that occupation was reduced from 3000 BC to 1500 BC. However, it is unlikely the interior was completely abandoned, and this portion of the archaeological record may be similar to previous and later periods that seem “invisible,” or the inhabitants may have followed a more ephemeral lifestyle not easily seen in the archaeological record.

Late Holocene Cultures (1500 BC–1769 AD)

Previous archaeological interpretations of this period in Southern California identify it as the developmental time for the Native American groups and lifeways that Euro-Americans encountered and described. These interpretations recognized three gradual changes: increasing social complexity in adaptation to a stable, resource-rich environment; assimilation of the technology and practices of Northern and Central California Native American groups; and immigration to the coastal area by Native American groups from the eastern interior (Moratto 1984, p. 153; Byrd and Raab 2007, p. 222). The most important new practice introduced from Northern and Central California into Southern California was the technology of processing acorns for food, in particular ground-stone mortars and pestles. Another new practice introduced in this period was cremation of the dead, probably adopted from Native American groups to the east. The use of the bow and arrow and of pottery emerged during this period, as well.

To explain these changes, archaeologists pointed to linguistic evidence, which suggested that, beginning around 500 BC at the latest, newcomers emigrated from the Great Basin area to the coast between northern San Diego County and southern Los Angeles County. The migrants displaced the resident groups but rapidly adopted the local technology and economic practices. The descendants of the migrants include the Luiseños, Gabrielinos, and Nicoleños. The migrants’ displaced neighbors to the north were probably the ancestors of the Chumash, and to the south, the ancestors of the Diegueños (Moratto 1984, pp. 156, 164–165).

A more recent archaeological interpretation of the Late Holocene, based on several subsequent decades of field work, again, in part contradicts and in part refines key aspects of the earlier interpretation. Instead of environmental stability and an adaptive balance between the population and the resources, the new interpretation sees a trend toward overexploitation of high-value food species resulting in intensified use of less-productive food species and less foraging efficiency over time. A related change in settlement pattern occurred in the Late Holocene, in which three linked kinds of sites were arrayed over a group’s territory: large, permanent residential bases, short-term, satellite, residential camps, and specialized-activity sites, facilitating the necessary intensified use of lesser-value foods. A related change in social complexity is posited,

brought about by the need for structured decision-making and labor assignment, resulting in the emergence of differing social statuses within a group. A possibly causal factor is implicated by paleoenvironmental data, which indicate that periods of drought and other environmental stresses may have required rapid adaptation and could have played a role in all of these changes (Byrd and Raab 2007, pp. 224–225). The newer interpretation additionally explains the Late Holocene immigration of Great Basin newcomers into Southern California as the continuation and expansion of the linkages between the two areas forged in the Middle Holocene via the shell bead trade network (Byrd and Raab 2007, p. 221).

Ethnographic Setting

The proposed project area is in territory thought to be formerly occupied by the Native American group known as the Luiseño. Later, at the time of European settlement, the Cupa were relocated to the Pala Valley. The greater Luiseño population was geographically associated with approximately 1,500 square miles of coastal Southern California, from Agua Hedionda to Alviso Creek on the north, west to Santiago Peak, and southwest to Mt. Palomar. Their territory covered most of the San Margarita River drainage and the San Luis River drainage (Bean and Shipek, 1978). The Luiseño were a Takic-speaking tribe that used all of the ecological zones of their territory: the ocean, sandy beaches, inlets, marshes, coastal chaparral, lush grassy valleys, oak groves, and pine and cedar forests on Mt. Palomar (ASM 2006, pp. 28-29).

The Luiseño maintained a hunter-and-gatherer economy based around autonomous semi-sedentary village groups, each with hunting and gathering areas. The variety in the ecological zones allowed for regional variations in subsistence strategies, but plant foods were the dominant source of dietary calories, with the acorn making up the largest portion of the diet. Fire was used to manage and enhance plant growth, and some researchers have argued that crop management was part of Luiseño food gathering. Game animals such as rabbit, deer, jackrabbit, and number of other medium-to-small size animals provided a large amount of dietary protein. Marine fish and shellfish were a mainstay for some groups that were based on the coast, but it is not clear how much marine foods were utilized by the interior groups (Bean and Shipek 1978, pp. 550-551).

The Luiseño had developed a varied material culture. An array of tools made from stone, wood, bone, and shell, were used to gather and process food, and because of the mild climate, needs for shelter and clothing were minimal. Great attention was paid to personal adornment despite the minimal need for clothing (OGE2008a, pp. 6.7-4–6.7-5).

Each village was a patrilineal tribelet headed by a chief and his advisors and assistants. Community membership was generally inherited through the male line. In some areas, year-round villages existed, with more remote resources being acquired by special groups. Other communities followed the more traditional pattern of seasonal camps (OGE2008a, pp. 6.7-4–6.7-5).

In 1796, the Spanish were the first Europeans to come into contact with the Luiseño. As with the rest of California, the arrival of Europeans brought disease and colonization to the Native Americans. The people of Pala region were brought into the Spanish political system with the establishment of Mission San Luis Rey.

After European contact, the Cupeño were relocated to the Pala Valley. Cupa, a Spanish name derived from the word *Kuupangaxwichem*, or “people who slept here” was one of the smallest bands of Native Americans in California, and it is unlikely they ever numbered more than a thousand persons. They once occupied a territory 10 square miles in diameter in an area of the upper watershed of the San Luis Rey River in the valley of San Jose de Valle (Pala Band 2006). Once Europeans began to travel to the Warner Springs area to take advantage of the mineral springs, the United States Indian Bureau evicted the Cupa from their territorial land near Warner Springs, and they were relocated to the present day Pala Valley on a 10,000-acre reservation in 1903. Today both the Luiseño and Cupeño descendants live on the Pala Reservation and call themselves the Pala Band of Mission Indians (Pala Band 2006).

Historic Setting

European American settlement began with the establishment of the Mission San Luis Rey de Francia in 1798 under the supervision of Padre Presidente Fermin Francisco de Lausen. The mission was established approximately four miles east of Interstate 5 and State Route 76, also called Mission Road. A granary for the mission was established in present day Pala in 1810 on a site that was known as a Native American gathering spot, and a ramada was added in order to hold morning mass. Soon after a chapel and bell tower were constructed and the complex was established as an Asistencia or annex. It was dedicated as Mission San Antonio de Pala. The natural route of travel between San Luis Rey and Pala would have followed the San Luis Rey River through staff's area of analysis (OGE2008a, pp. 6.7-2–6.7-3).

Continued disruption to the native peoples in western San Diego County occurred in the early nineteenth century from the rising number of private land grants, Mexico's separation from the Spanish Empire in 1821, and the secularization of the Mission system in the 1830s. Mission lands were broken up and granted to Mexican citizens for use as cattle ranches called ranchos. Some of the former neophytes were pulled into work on these cattle ranches while others would migrate to cities such as San Diego or join communities of native peoples that were largely autonomous. Land in the Pala Valley was parceled into private holdings, which included Rancho Monserrate, a 13,322-acre Mexican grant located approximately two miles from the project area. It was granted in 1846.

During the Mexican-American War, 1846-1848, the Mormon Battalion opened the first wagon road through San Diego from the east, passing through the area west of I-15 and Mission San Luis Rey. The Gold Rush in the northern part of the state, together with the annexation of California by the United States in 1850, brought more outsiders into the region. During the 1860s and 1870s, settlers began moving into the San Luis Rey River valley and acquired land through homesteading or purchase and established farmsteads (ASM 2008, p. 31).

During the late 1800s, the San Luis Rey River valley was the center of a dairy industry and supported larger ranches and small farms that pursued a diversified agricultural economy. Crops cultivated in the valley included corn, barley, wheat, alfalfa, sweet potatoes, watermelons, and onions. Land in the Pala Valley in staff's area of analysis was largely undeveloped during the early part of the nineteenth century through the turn of the twentieth century. Portions of Section 29 and 32 (the location of the proposed

power plant site) were deeded to six different individuals at the end of the nineteenth century, then were consolidated into three larger parcels at the beginning of the twentieth century, and continued to be split in varying sizes of parcels during the subsequent years. It does not appear that any residences or structures were constructed on the project site during the late nineteenth and early twentieth centuries (Urbana 2008, p. 4; OGE2008a, pp. 6.7-18–6.7-19).

American William Veale purchased the Asistencia San Antonio de Pala and its lands from the United States in 1877. Veale's wife, reportedly a devoted Roman Catholic, persuaded Veale to donate the chapel and associated cemetery to the Catholic Church in 1893. As with many of the missions, the Asistencia had fallen into disrepair and as part of the growing Mission Revival movement was acquired by the California Landmarks Club of Southern California. In 1902, services in the restored chapel commenced. The same year the 10,000-acre Pala Reservation was established.

Other development in the area included the establishment of Pala Road, now known as State Route 76. The road first appears on a historic San Diego County map as a Butterfield stage route and was later incorporated into the county road system (San Diego County 1955). Historic land use patterns in the Pala Valley continued to consist largely of small agricultural operations and some nurseries during the early 1900s with little change to the setting of the valley.

The largest changes in San Diego County came during World War II and in the post-war period. During World War II, military establishments, war industries, and war housing projects accounted for over 50% of water consumption in San Diego, and resolving the impending shortage quickly became of national importance. An interdepartmental committee was appointed by President Roosevelt to study the water supply of the city and to make recommendations for securing supplemental supplies. The committee recommended immediate construction of an aqueduct connecting to the Colorado River Aqueduct near San Jacinto, with the War Department, the Navy Department and the Federal Works Agency bearing the cost. The San Diego Project was authorized by President Roosevelt as a wartime priority on November 29, 1944 and approved by the United States Congress on April 15, 1948 (USBR, 2006).

The San Diego Aqueduct was comprised of two separate aqueducts that were 70 miles long and made up the backbone of the San Diego County Water Authority system. They were designed to carry San Diego's allotted water from the Los Angeles Metropolitan Water District's (MWD) Colorado Aqueduct near San Jacinto to the City of San Diego's San Vicente Reservoir, located approximately 15 miles north of San Diego (Urbana 2008, Attachment 1; USBR 2006).

Historically, San Diego procured water through acquisition or construction of a number of dams. Prior to World War II, San Diego contracted for Colorado River water, stored in Lake Mead, the reservoir formed behind Hoover Dam, and was allotted a portion of water not to exceed 112,000 cubic feet annually. To procure additional domestic water supply, the City entered into a contract in 1934 to participate in the construction of Imperial Dam and the All-American Canal under the Boulder Canyon Project. The year San Diego Aqueduct 1 was placed into service, 1947, the San Diego County Water Authority was fully annexed into MWD. Shortly after the first aqueduct was completed,

MWD requested that the pipe be enlarged to safeguard against additional water shortages. To accomplish this, the U. S. Bureau of Reclamation proposed a second aqueduct of the same capacity as the first, 196 cubic feet per second. The Authority selected the parallel route for Aqueduct 2 (Sholders 2002, p. 6).

With the progressive urbanization of San Diego County's coastal plain during the postwar period, agriculture became a diminishing part of the county's economy. Only scattered areas of undeveloped land between Camp Pendleton and the Mexican border remained. Population pressures and high property taxes forced farmers to sell their land. The Pala Valley became more accessible with the construction of I-15 and the Golden State Freeway (I-5), and small-scale, commercial roadside development occurred in the area of analysis.

The land at the project site was purchased by Gary Driscoll and Robert and Gale Driscoll. It was under their ownership that the citrus orchard at the project site was planted and cultivated. In the area of analysis, during the 1960s and 1970s, several dairy operations were established and several of the dairies' structures still remain along the route of the gas line. At the project site, SDG&E constructed the small substation in 1964 on land leased from Robert and Gail Driscoll. In 1970, SDG&E acquired the parcel adjacent to the substation from the Driscolls. The extant structures on the project site were constructed by the California Institute of Technology for use in passive solar technology tests. During the 1990s, the buildings were converted to residential use when a caretaker lived on site (OGE2008a, pp. 6.7-19–6.7-20).

Resources Inventory

The inventory of cultural resources in the area of analysis is the first step in the assessment of whether the proposed project may cause a significant impact to a significant cultural resource and therefore have an adverse effect on the environment. The area that staff considers when identifying and assessing impacts to historical resources, called the *area of analysis* for the project, is usually defined as the area that surrounds and is within the project site and associated linears. The area varies in extent depending on whether the resource is archaeological, built-environment, or ethnographic:

- For archaeological resources, the area of analysis is routinely defined as the project site footprint plus a buffer of 200' feet and the project linear facilities routes plus 50 feet to either side of the routes.
- For built-environment resources, the area of analysis is confined to one parcel deep from the project site footprint in urban areas and is expanded to include a half-mile buffer from the project site and above-ground linears in rural areas to include resources whose setting could be adversely affected by industrial development.
- For ethnographic resources, the area of analysis is expanded to take into account traditional use areas and traditional cultural properties which may be far-ranging, including views that contribute to the significance of the property. These resources are often identified in consultation with Native Americans and other ethnic groups, and issues that are raised by these groups may define the area of analysis.

Once the area of analysis has been established, the inventory begins with a research process to gather information regarding previously known and identified historical resources, through literature and records searches and through contact with the Native American Heritage Commission and appropriate tribes. After conducting the background research, fieldwork is undertaken to identify new historical resources, which may include prehistoric and historical archaeological resources, built-environment resources, ethnographic resources, and cultural landscapes. After the inventory of both previously identified and newly identified cultural resources has been compiled, then the resources are evaluated for CRHR eligibility. These procedures for the OGP are described below.

Literature and Records Search

On March 20, 2007, TRC Companies, Inc. requested a record search at the South Coastal Information Center (SCIC) to identify any previous cultural resources studies and recorded historical resources within a 1-mile radius around the project area and within 0.5 mile to either side of linear facilities. Within one mile of the OGP, 35 archaeological sites or isolates have been recorded previously. Of these previously recorded sites or isolates, 13 were located on or near the project site or linear facilities routes (OGE2007k, Figure: Historical Resources With Trinomial Designations).

Pacific Legacy conducted a second record search on February 25, 2008, covering the reclaimed fresh-water pick-up sites for the project. A third record search was performed by Urbana Preservation and Planning, the applicant's consultant for the built environment survey, on May 26, 2008, to cover the Fallbrook Public Utilities District (FPUD) fresh-water pick-up site (OGE2008a, pp. 6.7-22-23; App. 6.7-B-D). Eight previously recorded archaeological sites are located within 0.5-mile of the FPUD., including previously recorded resource CA-SDI-14005H, a section of the Santa Fe Railroad, a built-environment historic resource located just west of the FPUD.

Urbana conducted searches of the National Register of Historic Places, California Register of Historical Resources, California State Landmarks, California Points of Historic Interest, and San Diego County Historic Sites board of director's website to determine if there were any locally listed built-environment resources within the project area or vicinity. Previous environmental documents prepared for the Pala Substation construction project were also reviewed for pertinent information.

A fourth record search was conducted on September 2, 2008 to cover the area along the route of the transmission line that would be reconducted. Twenty-two previously known sites were located within the 0.5-mile buffer of the transmission line.

Staff conducted background research to find prior geoarchaeological analyses done in the San Luis Rey River Valley upstream or downstream of the project area. Staff found a draft environmental study for the widening of Highway SR 76 between the City of Oceanside and the City of Bonsall (FHWA/Caltrans 2007, pp. 3-89-3-96). As the project area is on or adjacent to the floodplain of the San Luis Rey River, the Federal Highway Administration and Caltrans conducted a geoarchaeological analysis to evaluate the potential effects that the project could have on archaeological deposits buried in or adjacent to the San Luis Rey River floodplain (Pope 2005). The study found that the San Luis Rey River floodplain is made up of a thick sequence of alternating alluvial

deposits and buried soils, or paleosols, where the probability for buried archaeological deposits is classified as moderate (Pope 2005, pp.2–3, 7).

Native American Coordination

The applicant's cultural resources consultant, Pacific Legacy, contacted the Native American Heritage Commission (NAHC) on March 7, 2007, and requested a search of the sacred lands files to identify any traditional cultural properties within the project area. On March 20, 2007, the NAHC responded that no sacred lands were located within the project area. The NAHC also provided a list of seven Native American individuals and organizations to be contacted for further consultation. Pacific Legacy sent letters to the seven identified groups and organizations, described the project, provided a map, and requested the Native Americans to contact them if they had concerns regarding cultural resources (OGE2008a, pp. 6.7-24–6.7-25).

In response, Dr. Joseph M. Nixon of the Cupa Cultural Center contacted the applicant on April 19, 2007, requesting that he be kept informed of the progress on the project. The project site falls within the vicinity of the Pala Band's traditional use area. Dr. Nixon also contacted Wendy Tinsley of Urbana Preservation Planning after Urbana sent out letters requesting information from local historical societies about built-environment resources. Dr. Nixon identified Gregory Mountain, located approximately 2,400 feet south of the project site, as a significant traditional cultural property for the Pala Band of Mission Indians (OGE2008a, p. 6.7-25).

Staff also requested a list of Native Americans in the proposed project area from the NAHC. Letters from staff were sent to Native American groups and individuals on November 26, 2007, asking for information regarding Native American concerns in the proposed project area.

In response to staff's letter, Dr. Nixon, representing the Pala Band of Mission Indians, sent a letter stating that the tribe wanted to be informed as the project progressed or changes. Dr. Nixon also expressed concern regarding potential impacts to numerous previously reported, culturally significant resources located in the vicinity of the project. He specified that the Tribe has guidelines that they would like contractors to follow. Nixon stressed that the Tribe wants to be contacted before construction work begins so that they can ensure that appropriate monitors are in place in case there are inadvertent discoveries.

Staff telephoned Dr. Nixon on February 29, 2008 to acknowledge the letter from the Pala Band of Mission Indians and to explain that the Tribe could become a formal intervenor on the project. Staff ensured that the Tribe was added to the general information list for the project and will receive notices regarding workshops and hearings.

The applicant contacted the NAHC again in September, 2008, to request a search of the sacred lands file for the area along the transmission line corridor. The NAHC responded on September 15, 2008, that no sacred lands fell within the transmission corridor.

Archaeological Field Survey

Pacific Legacy conducted pedestrian archaeological survey of the proposed project site and along the linear facilities during April and May 2007. Surveys at the site were conducted utilizing 5-meter transects. Soil visibility was variable, and in some cases was as low as 10% due to the dense, non-native grasses. Pedestrian surveys of the linear facilities routes were conducted by walking 10-meter transects covering and exceeding the 50-foot buffer zone along the linear facilities routes. The westernmost 1,600 feet of the natural gas pipeline was not accessible at the time of these surveys and was subject to a windshield survey. In September, 2007, pedestrian survey on this portion of the pipeline was completed. The survey was conducted utilizing a 10-meter transect along a 100-foot-wide survey area along SR 76 (OGE2008a, App 6.7-B).

A September 2008 survey identified 14 previously recorded sites within the half-mile corridor of the transmission line from Pala Substation to Monserrate Substation that would be reconducted as a result of the proposed project.

Pacific Legacy conducted subsequent pedestrian surveys in February and May, 2008. Survey of the project linear facilities routes and staging areas was conducted on foot, along 15-foot transects or less. Coverage of steeper slope areas was accomplished in a systematic zigzag, and rock outcrops were inspected for rock art and milling sites. Pacific Legacy unsuccessfully attempted to re-identify previously recorded archaeological sites CA-SDI-13004, CA-SDI-13005, CA-SDI-13768, and CA-SDI-13769. The area had been considerably altered by bulldozing, circa 1994, to create terraces, and it is possible these sites were destroyed. Alternatively, the sites may have been erosion features incorrectly identified as cultural features, or the site record location plots did not provide the precision required to relocate these sites. Site CA-SDI-13766 was re-identified, and the archaeologists observed no changes to the site description or condition. In May, 2008, Jessica Auck of Urbana performed an archaeological survey of the planned fresh-water pick-up station, but did not identify any cultural resources that had not been previously recorded (OGE2008a, App. 6.7-B; OGE2008b, pp. 7-8).

Pacific Legacy also conducted a pedestrian survey of approximately eight miles, between Monserrate and Pala Substations, of transmission line corridor that would be reconducted as a result of the OGP. The archaeological survey encompassed the 44 specific pole laydown locations where ground-disturbing activities would take place, 18 temporary stringing sites, and three temporary laydown sites. At each pole site, an area within a 100-foot radius of the pole location was surveyed. One pole site was inaccessible. The entire area of each stringing site and laydown site plus a 50-foot buffer area was surveyed (OGE2008f, p. 0).

Built-Environment Field Survey

Windy Tinsley of Urbana conducted the built-environment survey in September, 2007. The survey was inclusive of the project site and the project linear facility routes. Two resources were identified as of sufficient age to be considered potentially significant cultural resources: the citrus orchard on the proposed project site (a 1940s-era landscape element) and the San Diego Aqueduct (Urbana 2008, pp. 1-2).

Geoarchaeological Field Investigation

Geoarchaeology is a subfield of archaeology that uses the concepts and methods of the earth sciences to conduct archaeological research. The broader goal of geoarchaeology is to firmly establish the most basic elements of archaeological interpretation, which are the physical contexts of archaeological sites and the human material residues that are a part of them. Geoarchaeology provides information on the structure, the origin, and the development of archaeological deposits. Geoarchaeological research typically draw on a suite of concepts and methods from geomorphology (the study of landform development and history), stratigraphy (the study of the character and age of sequences of geologic deposits), pedology (the study of soils and soil development), and sedimentology (the study of the composition, character, and age of geologic sediments). Geoarchaeological research is essential to the analysis of the potential impacts of a proposed project on buried archaeological deposits, where a proposed project involves deep (greater than one meter) ground disturbance, because it provides a factual assessment of the likelihood that such deposits may be present in a project area and establishes the likely character of any such deposits.

As the construction of the OGP will involve deep ground disturbance on the project site and along the alignment of the natural gas pipeline, staff developed Data Request 46 in consultation with Pacific Legacy, OGE's cultural resources consultant, to provide data on the potential presence of buried archaeological resources in the proposed project's impact areas.

In its August 29, 2008, response to staff's request, OGE provided information about the age and character of the three landforms that were identified in the project area. The applicant eliminated, as unlikely to contain subsurface archaeological deposits, the ancient alluvial fan that would host the project site and the upland igneous bedrock terrain adjacent to and west of the alluvial fan. Staff agreed with the elimination of those two landforms from further consideration. The applicant described the remaining landform, the floodplain, as including both the active floodplain of the San Luis Rey River and a relatively shallow series of alluvial terraces that represent remnant floodplains, adjacent to the active floodplain. The applicant characterized these portions of the project area as being a "geomorphic setting in which buried archaeological resources could be found" (TRC2008n, p. 12) and in the Cumulative Impacts section of the AFC as having the greatest potential for unknown archaeological resources (OGE2008a, p. 6.7-33).

The applicant's response additionally cited the logs for four borings that are clustered along one 1,100-foot stretch of the approximately 9,200-foot length of the natural gas pipeline alignment that traverses the San Luis Rey River floodplain. The response characterized the subsurface sediments as being "primarily sand, indicative of channel deposits."

At the September 11, 2008 Data Response and Issue Resolution Workshop, staff sought to clarify that the applicant's response to Data Request No. 46, which was a broadly applicable discussion of geologic process, did not provide data sufficiently specific to inform staff's assessment of the project's potential effects. Staff needed to know how, specifically, the geologic processes of stream deposition unfolded in the project area, in time increments of hundreds of years, and whether the unique, historic

geologic events in the project area led to the local preservation of archaeological deposits at depths greater than one meter.

Subsequent to the workshop, OGE made additional efforts to obtain and provide to staff data relevant to the potential of the natural gas pipeline route to contain buried archaeological deposits.

On September 29, 2008, OGP Project Director and geologist Joseph L. Stenger held a telephone conversation with Mr. Marvin Howell, Director of Land Use Planning and Permitting for Hanson Aggregates (TRC2008k). Mr. Howell had formerly been involved, from 1986 until the mine closed in 2006, with the Fenton Sand Mine, located south of SR 76 near the OGP. The applicant contacted Mr. Howell as a person familiar with the Fenton Sand Mine's Holocene alluvium deposits, which the applicant considers representative of the Holocene alluvium in which the OGP proposes to excavate a trench for its natural gas pipeline.

Mr. Stenger asked Mr. Howell whether he was knowledgeable regarding operations at the former sand mine. Mr. Howell indicated that that he was very familiar with the operations that occurred there and described the sand that was quarried there as channel deposits with less than 10% gravel. When asked whether he knew if any buried cultural resources were ever found during excavations conducted at the mine, Mr. Howell stated that to his knowledge no cultural resources were encountered. Mr. Howell added that if cultural resources would have been found at the mine, he would know about it.

Mr. Stenger also conducted a field reconnaissance of accessible areas of the floodplain and the terraces along the San Luis Rey River near the project area to determine if there were any extant natural or artificial exposures of the upper portion of these alluvial deposits. One exposure was found in what Mr. Stenger describes as an erosion feature, and on October 1, 2008, observations were made at that location. The exposure was shovel-scraped, a measuring tape was draped down the vertical face of the exposure, and digital images of the exposure were made in approximately six-inch increments down the face of the exposure to a total depth of approximately six feet. The applicant observed that the exposure did not contain major fine-grain beds that would be indicative of overbank deposits nor were paleosols apparent. The sedimentary deposits in the exposure did not appear to contain organic matter of sufficient quantity to permit radiocarbon assays of the deposits, nor was evidence of material culture apparent (OGE2008g).

On October 16, 2008, TRC Solutions, Inc. (TRC) conducted an additional geoarchaeological investigation (TRC2008m). TRC archaeologist Tracy Stropes and TRC geologist John Nordenstam completed and evaluated four geotechnical borings within the State Route 76 (SR 76) right-of-way along the proposed OGP natural gas pipeline route. The borings were located near the west end of the gas pipeline route near the intersection of Couser Canyon Road and SR 76. The four borings were each completed to a depth of 20 feet below the ground. Prior to conducting field work, available geologic, geomorphic, and cultural resource information for the area was reviewed to facilitate understanding the local stratigraphy and other relevant conditions.

Both cuttings and sediment core samples were observed and characterized during drilling to provide continuous logging for all four borings. Geologic characteristics were recorded and documented in boring logs. Core samples were taken in each hole at intervals ranging from 1 to 3.5 feet. Drill cuttings were continuously sampled and logged from all four borings and sifted through ¼-inch screen to monitor for the potential presence of cultural materials. Cuttings and samples were observed for the potential presence of paleosol horizons, cultural horizons, or cultural matrices.

As a result of this field work, no cultural materials, cultural horizons, paleosols, or any other condition indicating the potential presence of cultural resources were observed. The materials encountered were primarily fine to course sand, with some sandy silt and silt with sand, interpreted as Holocene alluvium deposited by the San Luis Rey River. The applicant concluded that these materials have a low likelihood of containing significant cultural resources.

Results: Archaeological Resources

The presence of five previously recorded archaeological sites or isolates that might be impacted by ground disturbance at the proposed project site could not be reconfirmed by field surveys. However, caution is warranted during because there may be subsurface components to some of these sites.

Twelve additional archaeological sites were previously recorded in the vicinity of the gas line route. Although the applicant has stated that no sites appear to be present within 50 feet of the proposed trench, again caution is warranted because subsurface components of sites may extend into areas of pipeline excavation.

Cultural Resources Table 2
Previously Recorded Archeological Sites and Isolates within the Potential Impact Area of the Proposed Project Site and Proposed Gas Line Route

Resource Designation	Resource Type	Significance	On or Near Project Component
CA-SDI-683	Prehistoric, Protohistoric, and Historic multi-component Site	Not formally evaluated	Monitoring required
CA-SDI-744A, B1, B2, updated and now is known as CA-SDI-744	Prehistoric habitation site with midden, bedrock exposures and mortars.	Not formally evaluated	Monitoring required
CA-SDI-786	Prehistoric Pauma complex site	Not formally evaluated	Project will avoid
CA-SDI-12584	Prehistoric Ceremonial site	Presumed significant	Monitoring required
CA-SDI-12585	Milling sites with an artifact scatter	Not formally evaluated	Monitoring required
CA-SDI-13004	Single Milling Slick	Not formally evaluated	Monitoring required
CA-SDI-13006	Scatter of Prehistoric Ceramic Sherds	Not formally evaluated	Monitoring required
CA-SDI-13005	Isolated Bedrock Mortar	Not formally evaluated	Project will avoid
CA-SDI-13007	Scatter of Prehistoric and Historic Ceramic Sherds	Not formally evaluated	Monitoring required
CA-SDI-13766	Scatter of historic ceramic sherds; domestic refuse; glass fragments	Not formally evaluated	Monitoring required
CA-SDI-13768	Single Milling Slick	Not formally evaluated	Monitoring required
CA-SDI-13769	Single Milling Slick	Not formally evaluated	Monitoring required
CA-SDI-14609	Prehistoric pictograph site	Presumed significant	Monitoring required

Cultural Resources Table 3
Previously Identified Sites, Isolates, and Built-Environment Resources within the
Potential Impact Area of the FPUD Facility (TRC2008n, Figures 1a, 1b)

Resource Designation	Resource Type	Significance	On or Near Project Component
CA-SDI-14005H	California Southern Railroad	Not formally evaluated	Project will avoid
CA-SDI-14382	Bedrock Milling Complex	Presumed significant	Monitoring required
CA-SDI-14383	Bedrock Milling Feature	Presumed significant	Monitoring required
CA-SDI-14384	Bedrock Milling Feature	Presumed significant	Monitoring required

Table 4 below addresses sites and isolates that were identified in the potential impact area of the transmission line that would be reconductored as a result of this project.

Cultural Resources Table 4
Previously Identified Sites, Isolates, and Built Environment Resources Within the
Area of Potential Impacts of the Transmission Line to be Reconstructed as a
Result of the OGP (OGE2008e, p.7)

Resource Designation	Resource Type	Significance	On or Near Project Component
CA-SDI-744A, B1, B2, updated and now is known as CA-SDI-744	Prehistoric habitation site with midden, bedrock exposures and mortars.	Not formally evaluated	Yes
CA-SDI-773	Bedrock mortar	Not formally evaluated	Yes
CA-SDI-786	Prehistoric Pauma complex site	Not formally evaluated	Yes
CA-SDI-4356	Pictographs associated with bedrock mortar	Not formally evaluated	Yes
CA-SDI-4910	Pictographs with associated milling sites	Presumed significant	Yes
CA-SDI-12582	Bedrock mortar	Not formally evaluated	Yes
CA-SDI-12584	Milling slick, yoni, cupules, handstone	Not formally evaluated	Yes
CA-SDI-12585	Milling sites with an artifact scatter	Not formally evaluated	Yes
CA-SDI-13006	Scatter of Prehistoric Ceramic Sherds	Not formally evaluated	Yes
CA-SDI-13007	Scatter of Prehistoric and Historic Ceramic Sherds	Not formally evaluated	Yes
CA-SDI-13607	Single Milling Slick	Not formally evaluated	Yes
CA-SDI-13610	Single Milling Slick	Not formally evaluated	Yes
CA-SDI-14611	Maggie Lovell house site	Not formally evaluated	Yes
CA-SDI-13767	Bedrock milling slick	Not formally evaluated	Yes

Summary

There are a total of 13 archaeological sites or isolates that were previously identified on or near the proposed project site and proposed natural gas line route. Several of the identified sites would be avoided by the proposed project ground disturbance, and staff has recommended appropriate monitoring for 11 others.

In the vicinity of the FPUD, three archaeological sites or isolates and one built-environment resource have been identified within the potential impact area. Staff recommends monitoring of ground disturbance in the vicinity of the archaeological resources. The built-environment resource would be avoided.

The September 2008 survey identified and relocated 17 previously known sites within the half-mile corridor of the transmission line from Pala Substation to Monserrate Substation. Since the reconductoring activities will be permitted by another agency, it is not appropriate for staff to require mitigation for potential impacts. However, staff would recommend monitoring in the vicinity of cultural resources that might be impacted by reconductoring efforts.

Results: Built-Environment Resources

The first of the two resources identified within the built-environment area of analysis is the San Diego Aqueduct (SDA). The SDA is comprised of two separate aqueducts, identified as the first and second aqueducts. The first aqueduct consists of two pipelines constructed of pre-cast concrete designed to withstand a carrying capacity of 196 cubic feet of water per second. It runs 70 miles from the Colorado Aqueduct at San Jacinto, California, to the City of San Diego's Vicente Reservoir, located approximately 15 miles north of the city. The second aqueduct is approximately 94 miles long and designed to carry 144–500 cubic feet of water per second. It consists of two pipelines which run from Hemet, California, to the Lower Otay Reservoir in San Diego and the Alvarado Treatment Plant in La Mesa, California. The two aqueducts are subsurface with the exception of two pressure-relief valves located in Fallbrook, near old Highway 395 and Reche Road.

The SDA played an important role in the growth of the San Diego region. During World War II, for the first time, San Diego achieved a large population because of the large military presence there, with concomitant commercial growth. In the immediate post-war era the city experienced rapid suburbanization due to the Serviceman's Readjustment Act. Until the completion of the SDA, San Diego was completely dependent on local, limited sources of water. With the first delivery of water from the SDA and its connection to the Colorado River, San Diego sufficiently addressed water shortage as a barrier to its future growth.

The second resource evaluated by Urbana, OGE's built-environment consultant, was the 1940s-era citrus orchard located at the project site. The small group of citrus trees is a landscape element and a potential historic site. It appears to have been cultivated in the late 1940s. Research conducted by Urbana indicated that the orchard on the project site was the southwestern corner of a larger orchard, located on the west side of Pala Road, which contained approximately 39 rows of trees. Because the orchard does not represent a large agricultural operation that is significant within the context of agriculture in the Pala area, Urbana believes it does not appear to be eligible for listing in the CRHR. Staff agrees with the conclusion that the orchard was indeed more typical of small-scale agricultural operations in the Pala vicinity in the later part of the 1940s and in the 1950s and does not represent a significant trend within the area.

Urbana recommended the SDA as eligible for inclusion in the CRHR for its important association with the legal and political theme of water rights in California, in particular

for the Southern California region (Criterion 1, associated with events that have made a significant contribution to the broad patterns of our history). Urbana also recommended the SDA as CRHR eligible as an example of an engineered water conveyance system, designed and built by the U.S. Bureau of Reclamation (USBR) and the U.S. Navy (USN) (Criterion 3, embodying the distinctive characteristics of a type, period, or method of construction) (Urbana 2008).

Water conveyance systems, with their dams, aqueducts, and regulating reservoirs, are potentially significant under Criterion 1 if they are importantly associated with trends and/or events in transportation development or regional or local economic development. Establishing significance, though, should be done with certain principles in mind. These systems, like other infrastructure, are inherently important to their communities as they substantially affect the ability of communities to grow and prosper. That in turn affects development on both the local and regional levels. This effect in itself does not typically provide sufficient evidence to demonstrate how some infrastructure may be deemed significant for its association with an important historic context; otherwise virtually any aqueduct or dam, with associated structures would be shown to be important in this way.

To be eligible for listing in the CRHR, resource types such as water conveyances, structures, and other infrastructure must have demonstrable importance directly related to important historic events and trends, with emphasis given to specific demand for such infrastructure, and its effects on social, economic, commercial, and industrial developments locally, regionally, or nationally. In this way, these resources may be significant as physical manifestations of broad patterns in our history on the local, regional, state, or national level. The SDA does have demonstrable importance directly related to providing adequate water supply to the military in San Diego during World War II and for supporting the growth and suburbanization of the region after the war.

Staff believes the SDA is eligible under Criterion 1 at the local level of significance for its important association generally with a broad pattern of California history, the rapid suburbanization and the urgent demand to construct infrastructure to support suburbanization. In particular, the need to quickly supply water to the growing metropolitan areas of Southern California compounded the need to construct water conveyance systems such as the SDA. Thus, staff is in agreement with Urbana that the SDA is individually eligible for the CRHR, but also believes the SDA is eligible as a contributor to the larger San Diego Project, a potential historic district. Evaluation of the SDA in its entirety is not warranted at this time to fully assess the significance of the portions of the SDA that fall within the built-environment area of analysis.

In addition to Criterion 1, Urbana recommended the SDA is eligible under Criterion 3, as a significant example of engineered water conveyance system designed and constructed by the USBR and the USN. Staff disagrees with this assessment and believes the SDA is not eligible for inclusion as it does not represent a significant example of engineering or a significant example of a type. Even though the SDA is not eligible under Criterion 3, it is eligible under Criterion 1 and therefore is still considered a historical resource.

Results: Ethnographic Resources

One ethnographic resource, Gregory Mountain, is located approximately 2,400 feet from the project site. Gregory Mountain is currently being nominated to the National Register of Historic Places (NRHP) as a traditional cultural property, recognized by the Luiseño people. A revised version of the NRHP nomination is being forwarded to the Keeper for inclusion in the NRHP (Ambacher 2008). Eligible under Criteria A (CRHR Criterion 1) for its significance as a source of spiritual power, Gregory Mountain plays a key role in the Luiseno religion. The traditional spirit world of the Luiseno is centered on *Wiyot*, his children, the *Kahmekkum*, and Wiyot's death. The Luiseño believe that most of the *Kahmekkum* are no longer present on earth, but they have the ability to bestow *ayelkwi* or knowledge or power on people who seek it and often manifest themselves as lightning, thunder, or wind, or as spiritual rocks or mountains. *Taakwic* is the most powerful or feared of the original people, and one of his residences is Gregory Mountain. His main home is Lily Rock, a large granite outcropping north of Tahquitz Peak in the San Jacinto Mountains, but he is known to have several additional residences like Gregory Mountain. *Taakwic* is revered as the first shaman, the spiritual guardian and mentor to shamans, but also is a fearful figure known to be responsible for death and disaster (Baksh 2007, section 7).

Gregory Mountain is also known by the contemporary Luiseño as *Taakwic* Mountain or *Chokla*. It was first documented in John P. Harrington's ethnographic history of the Luiseño, based on his fieldwork among the Luiseño between 1932 and 1934. More supporting data on the religious significance of the mountain comes from interviews with Luiseño descendents, completed for the proposed Gregory Landfill Project EIR. These interviews establish the direct connection between the mountain and a living traditional belief, as required by the NRHP. The second prerequisite required by the NRHP is that the resource maintains sufficient integrity to convey its significance. In the case of Traditional Cultural Properties (TCPs), two fundamental questions arise in relation to integrity. First, the property must have an integral relationship to the traditional cultural practice or belief, and, second, the condition of the resource must be such that the relationship survives. Gregory Mountain maintains both a relationship to Luiseño belief and its intact condition, despite continued development in the area (Baksh, 2007, section 8). Because Gregory Mountain is eligible for the NRHP, it is automatically listed in the CRHR.

Summary of Potentially CRHR-Eligible Cultural Resources the Proposed Project Could Impact

Sixteen potentially CRHR-eligible resources were identified in the several areas of analysis for the OGP. Fourteen of these resources are previously known archaeological sites located on or adjacent to proposed OGP components whose construction could impact them. While the CRHR eligibility of these 14 resources was not evaluated by the recorders, staff assumes they are potential historical resources.

Additionally, the OGP could potentially impact an ethnographic resource, Gregory Mountain and a portion of the built-environment resource, SDA, so the project's potential impacts to these two historical resources need to be assessed.

ASSESSMENT OF IMPACTS AND DISCUSSION OF MITIGATION

METHOD AND THRESHOLD FOR DETERMINING SIGNIFICANT IMPACTS

Under CEQA, a project that may adversely change the significance of a historical resource may have a significant effect on the environment (Pub. Resources Code § 21084.1). The Energy Commission must therefore evaluate the potential significance of the cultural resources identified as subject to impacts from a project. The Energy Commission evaluates the significance of cultural resources by determining whether they meet several sets of specified criteria, set forth in state laws (below). Only a project's potential impacts to cultural resources evaluated as potentially significant must be assessed as having a significant effect on the environment for which mitigation may be required.

The CEQA Guidelines provide a definition of a historical resource as a "resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR", or "a resource listed in a local register of historical resources or identified as significant in a historical resources survey meeting the requirements of section 5024.1 (g) of the Public Resources Code," or "any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the agency's determination is supported by substantial evidence in light of the whole record." (Cal. Code Regs., tit. 14, § 15064.5(a)). Historical resources that are automatically listed in the CRHR include California historical resources listed in or formally determined eligible for the NRHP and California Registered Historical Landmarks from No. 770 onward (Pub. Resources Code, § 5024.1(d)).

Under the CEQA Guidelines, a resource is generally considered to be historically significant if it meets the criteria for listing in the CRHR. These criteria are essentially the same as the eligibility criteria for the NRHP. In addition to being at least 50 years old,² a resource must meet at least one (and may meet more than one) of the following four criteria (Pub. Resources Code § 5024.1):

- Criterion 1, is associated with events that have made a significant contribution to the broad patterns of our history;
- Criterion 2, is associated with the lives of persons significant in our past;
- Criterion 3, embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values; or
- Criterion 4, has yielded, or may be likely to yield, information important to history or prehistory.

In addition, historical resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association (Cal. Code Regs., tit. 14, § 4852(c)).

² The Office of Historic Preservation's *Instructions for Recording Historical Resources* (1995) endorses recording and evaluating resources over 45 years of age to accommodate a five-year lag in the planning process.

Even if a resource is not listed or determined to be eligible for listing in the CRHR, CEQA allows the lead agency to make a determination as to whether the resource is a historical resource as defined in Public Resources Code, section 5020.1(j) or section 5024.1. Whether a proposed project would cause a substantial adverse change in the significance of historical resources is the issue that staff analyzes to determine if the project may have a significant effect on the environment. The significance of an impact depends on:

- The cultural resource impacted;
- The nature of the resource's historical significance;
- How the resource's historical significance is manifested physically and perceptually;
- Appraisals of those aspects of the resource's integrity that figure importantly in the manifestation of the resource's historical significance; and
- How much the impact would change those integrity appraisals.

DIRECT/INDIRECT IMPACTS AND MITIGATION

In the abstract, direct impacts to cultural resources are those associated with project development, construction, and co-existence. Construction usually entails surface and subsurface disturbance of the ground, and direct impacts to archaeological resources may result from the immediate disturbance of the deposits, whether from vegetation removal, vehicle travel over the surface, earth-moving activities, excavation, or demolition of overlying structures. Construction can have direct impacts on historic standing structures when those structures must be removed to make way for new structures or when the vibrations of construction impair the stability of historic structures nearby. New structures can have direct impacts on historic structures when the new structures are stylistically incompatible with their neighbors and the setting, and when the new structures produce something harmful to the materials or structural integrity of the historic structures, such as emissions or vibrations.

Generally speaking, indirect impacts to archaeological resources are those which may result from changed circumstances that result from project activities, such as increased erosion due to site clearance and preparation, or inadvertent damage or outright vandalism to exposed cultural resources due to improved accessibility. Similarly, historic structures can suffer indirect impacts when project construction causes obsolescence and demolition or creates improved accessibility with consequent vandalism and/or greater weather exposure.

Ground disturbance accompanying construction at a proposed plant site, along proposed linear facilities, and at a proposed lay down area has the potential to directly impact archaeological resources, unidentified at this time. The potential direct, physical impacts of the proposed construction on unknown archaeological resources are commensurate with the extent of ground disturbance entailed in the particular mode of construction. This varies with each component of the proposed project. Placing the proposed plant into this particular setting could have a direct impact on the integrity of association, setting, and feeling of nearby standing historic structures.

Construction Impacts and Mitigation

Mitigation for Direct and Indirect Impacts on Significant Resources: Identification and Assessment

The proposed OGP construction activities involve grading with a maximum cut of 20 feet to provide pads for project facilities, clearing of agricultural vegetation, hauling and lay down of equipment, materials and supplies, and facility construction on the plant site, at the fresh-water pick-up station, and along the natural gas pipeline route. The gas line would require open trenching to a depth of approximately three feet (OGE2008a, p. 6.7-32). This ground disturbance could impact subsurface extensions of the 14 previously known, potentially CRHR-eligible archaeological sites located on or adjacent to the plant site, the fresh-water pick-up station, and the gas line. Consequently, staff recommends archaeological monitoring of construction-related ground disturbance on the project components near these 14 resources.

Additionally, the OGP could potentially impact two other resources, Gregory Mountain and a portion of the SDA. OGE determined that the pipe depths of the SDA, a built-environment resource, were 12.40 and 12.35 feet below the surface (TRC2008f, Data Response 45), so the proposed gas pipeline would not directly impact the SDA. The project would also not significantly affect the integrity of the setting of Gregory Mountain, an ethnographic resource. A combination of modern industrial and commercial development in the vicinity has already altered the setting of the resource, and the addition of the proposed OGP would not further diminish the integrity of setting of Gregory Mountain to the level that would significantly impair it.

Thus, OGE and staff did not identify any direct or indirect construction impacts from the proposed OGP that would significantly impact through demolition, destruction, relocation, or alteration of the resource itself or of the setting of the potentially CRHR-eligible SDA or Gregory Mountain that appear to be CRHR eligible. Because the project would not have significant impacts, no mitigation would be required for known historical resources. Proposed conditions of certification listed below would provide for effects on as-yet-unidentified historical resources.

As discussed earlier, subsurface disturbance of the ground could have direct impacts on unidentified buried archaeological resources which could be significant under CRHR Criterion 4 (“likely to yield information important in history or prehistory”). The risk of direct, physical impacts from the proposed OGP construction on as-yet-unidentified archaeological resources is commensurate with the extent of ground disturbance entailed in the particular mode of construction. This varies with each component of the proposed project.

The applicant recognizes the possibility that intact prehistoric and historic-period archaeological deposits could be present in undisturbed native soils on the proposed OGP site (OGE2008a, p. 6.7-33–35), and staff agrees with this assessment. Because of the moderate probability that prehistoric and historic-period archaeological deposits could be encountered during construction (see Literature and Records Search section above), staff recommends that procedures for identifying, evaluating, and possibly mitigating impacts to newly discovered archaeological resources be put in place through conditions of certification to reduce those impacts to a less than significant level.

OGE has suggested a number of measures intended to mitigate potential impacts to archaeological resources that could be discovered during the construction of the proposed OGP, including the following:³

Designated Cultural Resource Specialist. OGE would retain a designated Cultural Resource Specialist (CRS) who would be available during the entire construction period to evaluate any unanticipated discoveries. The CRS would meet the Secretary of the Interior's professional guidelines and would be responsible for preparing and presenting the Worker Education program, implementing construction monitoring, overseeing management of materials recovered during construction, and preparing the cultural resource management element of the project operation manual.

Worker Education Training. OGE would design and implement a worker education program for all personnel who have the potential to encounter and alter archaeological sites, historical resources, or properties that may be eligible for the CRHR.

Prepare and Implement a Construction Monitoring and Unanticipated Cultural Resources Discovery Plan. Prior to the initiation of any earth disturbance, OGE would prepare a construction monitoring plan and unanticipated cultural resources discovery plan with provisions for worker training, identification of workers with authorization to stop work, procedures for identifying and evaluating cultural resources, procedures for consulting Native Americans in the process of resource identification and evaluation, procedures for the treatment of human remains if encountered, and identification of a curation facility for materials that may be encountered during construction.

Archaeological Monitoring. OGE would provide for archaeological monitoring of earth-disturbing activities, including clearing, grubbing, grading, and trenching at the site, along linear facilities, and at the water supply points. In the event that earth-disturbing activities are taking place simultaneously at distances more than 100 meters apart, an archaeological monitor would be provided at each location.

Inadvertent Discovery of Human Remains. Any human remains discovered during OGP activities would be protected in accordance with current state law as detailed in Public Resources Code sections 5097.91 and 5097.98. These provisions for the discovery of human remains would be defined in the Construction Monitoring and Unanticipated Cultural Resources Discovery Plan. Archaeological excavations at sites would not, if at all possible, inappropriately disturb or remove human remains. Prior to construction, appropriate Native Americans would be consulted to develop a protocol to be followed if human remains are encountered during any OGP activity.

³ The indented material below is adapted from OGE2008a, pp. 6.7-35–6.7-38.

Protection and Preservation of Remains. OGE would ensure that impacts to cultural resources related to the unanticipated discovery of human remains are treated in accordance with state law as detailed in Public Resources Code sections 5097.91 and 5097.98.

Avoidance of the San Diego Aqueduct. OGE would ensure that project design and construction would avoid the aqueduct.

Protection of Historical Resources During Project Operation, Maintenance, and Upgrade. OGE would include in its operation and maintenance manual provisions that would be followed when any ground-disturbing work would occur at the power plant or linear facilities.

OGE has provided information applicable to assessing the likelihood of the presence of buried archaeological deposits along the route of the natural gas pipeline, and has concluded that the likelihood of such deposits is low. Staff, however, believes that while this information is sufficient to evidence a consideration of the potential presence of buried archaeological deposits in the area of analysis, it is insufficient to mitigate the potential impact of construction excavation to such deposits to a level below significant. Staff further has more pertinent evidence, such as the presence of known prehistoric archaeological sites on the surface of landforms adjacent to and partially buried beneath the floor of the San Luis Rey River Valley, the known Native American use of riverine resources on the valley floor before and after European contact, and knowledge of the geoarchaeology of stream systems, in general, and of a downstream portion of the San Luis Rey River Valley floor, in particular, to justify the ongoing concern for the potential for buried archaeological deposits along the gas pipeline route.

Consequently, staff is proposing conditions of certification that incorporate OGE's suggested mitigation measures and add further provisions to ensure that all impacts to potentially CRHR-eligible cultural resources discovered during construction-related excavations are mitigated to below a significant level. One of staff's conditions would require having an archaeologist and, additionally recommends having, a Native American representative together monitor construction excavations at the project site, at the fresh-water pick-up station, and along the natural gas pipeline. Staff believes that the desire of the Pala Band of Mission Indians to be informed and involved during OGP construction should be respected. Another proposed condition of certification would require the applicant to conduct systematic screening of sediments in the natural gas pipeline trench during its excavation to more reliably monitor for the presence of cultural materials. The proposed monitoring condition requires less monitoring than OGE proposed, but staff believes less monitoring is warranted based on the geoarchaeological data OGE provided. Staff's other proposed conditions provide procedures for expertly identifying, evaluating, and possibly mitigating impacts to newly discovered archaeological resources and require the project owner to train workers to recognize cultural resources, to halt ground-disturbing activities in the area of an archaeological discovery, and to fund data recovery, if needed.

Operation Impacts and Mitigation

During operation of the proposed power plant, if a leak should develop in any buried project components, repair of the buried utility could require the excavation of a large

hole. Such repairs could impact previously unknown subsurface archaeological resources in areas unaffected by the original excavation. The measures proposed for mitigating impacts to previously unknown archaeological resources during the construction of the plant and linear facilities (proposed Conditions of Certification **CUL-1** through **CUL-7**) would also serve to mitigate impacts from repairs occurring during operation of the plant.

Cumulative Impacts and Mitigation

A cumulative impact refers to a proposed project's incremental effects, considered over time and together with those of other, nearby, past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project (Pub. Resources Code, § 21083; Cal. Code Regs., tit. 14, §§ 15064(h), 15065(a)(3), 15130, and 15355).

Staff identified two additional projects within one mile of the proposed project site, the Gregory Landfill Project and the highway improvements along Highway 76 between I-15 and Rice Canyon Road. These projects must be considered as contributing to potential cumulative impacts on the cultural resources within this area. Cumulative impacts to cultural resources in the project vicinity could occur if impacts on cultural resources from the proposed OGP, when added to those of the other two projects would be cumulatively considerable.

Staff assumes that cultural resources studies would have been completed for these two projects as part of the local lead agency's CEQA review. Consequently, staff assumes that these studies identified CRHR-eligible cultural resources and potential project impacts to these cultural resources, and that any impacts have either been avoided or mitigated to a less-than-significant level. Staff, however, has not reviewed the cultural resources studies for these two projects.

This Staff Assessment has identified cultural resources near the proposed project site, assessed potential project impacts to these cultural resources, and determined that construction of the proposed OGP would not result in any significant impacts to known cultural resources. Additionally, the construction of this project would not contribute to any significant impacts to either the San Diego Aqueduct or Gregory Mountain, as it would not alter any of the characteristics which convey the significance of these resources. Staff has also proposed conditions of certification to mitigate any significant impacts to CRHR-eligible archaeological resources discovered during OGP-related ground disturbance. Proponents of future projects in the vicinity of the project can mitigate impacts to as yet undiscovered CRHR-eligible subsurface archaeological resources to less-than-significant levels by requiring archaeological monitoring of ground disturbance, evaluation of resources discovered during monitoring, and avoidance or data recovery. Impacts to human remains can be mitigated by following the protocols established by state law in Public Resources Code section 5097.98.

Since any impacts from the proposed project to CRHR-eligible cultural resources discovered during project-related ground disturbance would be mitigated to a less-than-significant level by the project's compliance with Conditions of Certification **CUL-1** through **CUL-7**, and since similar protocols can be applied to other current and future

projects in the area, staff does not expect any incremental effects of the proposed OGP to be cumulatively considerable, when viewed in conjunction with other projects.

COMPLIANCE WITH LORS

If the conditions of certification (below) are properly implemented, the proposed OGP project would result in a less-than-significant impact on known cultural resources and on any new archaeological resources discovered during construction. The proposed OGP would therefore be in compliance with the applicable state laws, ordinances, regulations, and standards listed in Table 1. Similarly, the project would be in compliance with the County of San Diego's General Plan, which requires CEQA review of project impacts to cultural resources within the county, and in compliance with San Diego Municipal Code requiring consideration of resources of historical value.

CONCLUSIONS AND RECOMMENDATIONS

Staff's cultural resources analysis has determined that the proposed OGP would have no impact on known significant archaeological resources, historic standing structures, ethnographic resources, historic districts, or cultural landscapes. With the adoption of cultural resources Conditions of Certification **CUL-1** through **CUL-7**, the OGP would have no significant impact on as-yet-unidentified buried archaeological deposits.

These conditions are intended to provide for the identification and assessment of any buried archaeological resources discovered during project-related excavations, and for the mitigation of any significant impacts from the project on any newly identified resources assessed as CRHR eligible. To accomplish this, the conditions provide for the hiring of a Cultural Resources Specialist and archaeological monitors to carry out monitoring of ground-disturbing activities and for cultural resources awareness training for construction workers. The other conditions provide for the recovery of data from CRHR-eligible discovered archaeological deposits, for the writing of a technical archaeological report on all archaeological activities and results, and for the curation of recovered artifacts and other data. When properly implemented and enforced, these conditions of certification would reduce to less than significant any impacts to cultural resources during the project's construction or operation. Additionally, with the adoption and implementation of these conditions, the project would be in conformity with all applicable laws, ordinances, regulations, and standards (LORS).

Consequently, staff recommends that the Commission adopt **CUL-1** through **CUL-7**.

PROPOSED CONDITIONS OF CERTIFICATION

CUL-1 Prior to the start of ground disturbance (includes "preconstruction site mobilization"; "construction ground disturbance"; and "construction grading, boring, and trenching," as defined in the General Conditions for this project), the project owner shall obtain the services of a Cultural Resources Specialist (CRS), and one or more alternate CRSs, if alternates are needed. The CRS shall manage all monitoring, mitigation, curation and reporting activities required in accordance with the Conditions of Certification (Conditions). The

CRS may elect to obtain the services of Cultural Resources Monitors (CRMs) and other technical specialists, if needed, to assist in monitoring, mitigation, and curation activities. The project owner shall ensure that the CRS makes recommendations regarding the eligibility for listing in the California Register of Historical Resources (CRHR) of any cultural resources that are newly discovered or that may be affected in an unanticipated manner. No ground disturbance shall occur prior to CPM approval of the CRS and alternates, unless such activities are specifically approved by the CPM. Approval of a CRS may be denied or revoked for non-compliance on this or other projects.

CULTURAL RESOURCES SPECIALIST

The resumes for the CRS and alternate(s) shall include information demonstrating to the satisfaction of the CPM that their training and backgrounds conform to the U.S. Secretary of Interior's Professional Qualifications Standards, as published in Title 36, Code of Federal Regulations, part 61 (36 C.F.R., part 61). In addition, the CRS shall have the following qualifications:

1. The CRS's qualifications shall be appropriate to the needs of the project and shall include a background in anthropology, archaeology, history, architectural history, or a related field;
2. At least three years of archaeological or historical, as appropriate, resource mitigation and field experience in California; and
3. At least one year of experience in a decision-making capacity on cultural resources projects in California and the appropriate training and experience to knowledgeably make recommendations regarding the significance of cultural resources.

The resumes of the CRS and alternate CRS shall include the names and telephone numbers of contacts familiar with the work of the CRS/alternate CRS on referenced projects and demonstrate to the satisfaction of the CPM that the CRS/alternate CRS has the appropriate training and experience to implement effectively the Conditions.

CULTURAL RESOURCES MONITORS

CRMs shall have the following qualifications:

1. A B.S. or B.A. degree in anthropology, archaeology, historical archaeology or a related field and one year experience monitoring in California; or
2. An AS or AA degree in anthropology, archaeology, historical archaeology or a related field, and four years experience monitoring in California; or
3. Enrollment in upper division classes pursuing a degree in the fields of anthropology, archaeology, historical archaeology or a related field, and two years of monitoring experience in California.

CULTURAL RESOURCES TECHNICAL SPECIALISTS

The resume(s) of any additional technical specialist(s), e.g., historical archaeologist, historian, architectural historian, and/or physical anthropologist, shall be submitted to the CPM for approval.

Verification:

1. At least 45 days prior to the start of ground disturbance, the project owner shall submit the resume for the CRS, and alternate(s) if desired, to the CPM for review and approval.
2. At least 10 days prior to a termination or release of the CRS, or within 10 days after the resignation of a CRS, the project owner shall submit the resume of the proposed new CRS to the CPM for review and approval. At the same time, the project owner shall also provide to the proposed new CRS the AFC and all cultural resources documents, field notes, photographs, and other cultural resources materials generated by the project. If there is no alternate CRS in place to conduct the duties of the CRS, a previously approved monitor may serve in place of a CRS so that construction may continue up to a maximum of three days without a CRS. If cultural resources are discovered then construction will remain halted until there is a CRS or alternate CRS to make a recommendation regarding significance.
3. At least 20 days prior to ground disturbance, the CRS shall provide a letter naming anticipated CRMs for the project and stating that the identified CRMs meet the minimum qualifications for cultural resource monitoring required by this Condition. If additional CRMs are obtained during the project, the CRS shall provide additional letters to the CPM identifying the CRMs and attesting to the qualifications of the CRMs, at least five days prior to the CRMs beginning on-site duties.
4. At least 10 days prior to any technical specialists beginning tasks, the resume(s) of the specialists shall be provided to the CPM for review and approval.
5. At least 10 days prior to the start of ground disturbance, the project owner shall confirm in writing to the CPM that the approved CRS will be available for onsite work and is prepared to implement the cultural resources conditions.

CUL-2 Prior to the start of ground disturbance, if the CRS has not previously worked on the project, the project owner shall provide the CRS with copies of the AFC, data responses, and confidential cultural resources reports for the project. The project owner shall also provide the CRS and the CPM with maps and drawings showing the footprints of the power plant, all linear facilities, all access roads, and all laydown areas. Maps shall include the appropriate USGS quadrangles and a map at an appropriate scale (e.g., 1:2000 or 1" = 200') for plotting cultural features or materials. If the CRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the CRS and CPM. The CPM shall review submittals and, in consultation with the CRS, approve those that are appropriate for use in cultural resources planning activities. No ground disturbance shall occur prior to CPM approval of maps and drawings, unless such activities are specifically approved by the CPM.

If construction of the project would proceed in phases, maps and drawings not previously provided shall be submitted prior to the start of each phase. Written notification identifying the proposed schedule of each project phase shall be provided to the CRS and CPM.

At a minimum, the CRS shall consult weekly with the project construction manager to confirm area(s) to be worked during the next week, until ground disturbance is completed.

The project owner shall notify the CRS and CPM of any changes to the scheduling of the construction phases.

Verification:

1. At least 40 days prior to the start of ground disturbance, the project owner shall provide the AFC, data responses, and confidential cultural resources documents to the CRS, if needed, and the subject maps and drawings to the CRS and CPM. The CPM will review submittals in consultation with the CRS and approve maps and drawings suitable for cultural resources planning activities.
2. If there are changes to any project-related footprint, revised maps and drawings shall be provided at least 15 days prior to start of ground disturbance for those changes.
3. If project construction is phased, if not previously provided, the project owner shall submit the subject maps and drawings 15 days prior to each phase.
4. On a weekly basis during ground disturbance, a current schedule of anticipated project activity shall be provided to the CRS and CPM by letter, e-mail, or fax.
5. Within five days of identifying changes, the project owner shall provide written notice of any changes to scheduling of construction phase.

CUL-3 Prior to the start of ground disturbance, the project owner shall submit the Cultural Resources Monitoring and Mitigation Plan (CRMMP), as prepared by or under the direction of the CRS, to the CPM for review and approval. The CRMMP shall be provided in the Archaeological Resource Management Report (ARMR) format, and, per ARMR guidelines, the author's name shall appear on the title page of the CRMMP. The CRMMP shall identify general and specific measures to minimize potential impacts to sensitive cultural resources. Implementation of the CRMMP shall be the responsibility of the CRS and the project owner. Copies of the CRMMP shall reside with the CRS, alternate CRS, each CRM, and the project owner's on-site construction manager. No ground disturbance shall occur prior to CPM approval of the CRMMP, unless such activities are specifically approved by the CPM.

The CRMMP shall include, but not be limited to, the following elements and measures:

1. A proposed general research design that includes a discussion of archaeological research questions and testable hypotheses specifically

applicable to the project area, and a discussion of artifact collection, retention/disposal, and curation policies as related to the research questions formulated in the research design. A prescriptive treatment plan may be included in the CRMMP for limited resource types. A refined research design will be prepared for any resource where data recovery is required.

2. The following statement included in the Introduction: “Any discussion, summary, or paraphrasing of the Conditions of Certification in this CRMMP is intended as general guidance and as an aid to the user in understanding the conditions and their implementation. The conditions, as written in the Commission Decision, shall supersede any summarization, description, or interpretation of the conditions in the CRMMP. The Cultural Resources Conditions of Certification from the Commission Decision are contained in Appendix A.”
3. Specification of the implementation sequence and the estimated time frames needed to accomplish all project-related tasks during the ground disturbance, construction, and post-construction analysis phases of the project.
4. Identification of the person(s) expected to perform each of the tasks, their responsibilities, and the reporting relationships between project construction management and the mitigation and monitoring team.
5. A description of the manner in which Native American observers or monitors will be included, the procedures to be used to select them, and their role and responsibilities.
6. A description of all impact-avoidance measures (such as flagging or fencing) to prohibit or otherwise restrict access to sensitive resource areas that are to be avoided during construction and/or operation, and identification of areas where these measures are to be implemented. The description shall address how these measures would be implemented prior to the start of construction and how long they would be needed to protect the resources from project-related effects.
7. A statement that all cultural resources encountered shall be recorded on Department of Parks and Recreation (DPR) 523 forms and mapped and photographed. In addition, all archaeological materials retained as a result of the archaeological investigations (survey, testing, data recovery) shall be curated in accordance with the California State Historical Resources Commission’s *Guidelines for the Curation of Archaeological Collections*, into a retrievable storage collection in a public repository or museum.
8. A statement that the project owner will pay all curation fees for artifacts recovered and for related documentation produced during cultural resources investigations conducted for the project. The project owner

shall identify three possible curation facilities that could accept cultural resources materials resulting from project activities.

9. A statement that the CRS has access to equipment and supplies necessary for site mapping, photography, and recovery of any cultural resource materials that are encountered during ground disturbance and cannot be treated prescriptively.
10. A description of the contents and format of the Cultural Resource Report (CRR), which shall be prepared according to ARMR guidelines.

Verification:

1. At least 30 days prior to the start of ground disturbance, the project owner shall submit the subject CRMMP to the CPM for review and approval.
2. At least 30 days prior to the start of ground disturbance, a letter shall be provided to the CPM indicating that the project owner agrees to pay curation fees for any materials collected as a result of the archaeological investigations (survey, testing, data recovery).

CUL-4 The project owner shall submit the Cultural Resources Report (CRR) to the CPM for approval. The CRR shall be written by or under the direction of the CRS and shall be provided in the ARMR format. The CRR shall report on all field activities including dates, times and locations, findings, samplings, and analyses. All survey reports, DPR 523 forms, and additional research reports not previously submitted to the California Historical Resource Information System (CHRIS) and the State Historic Preservation Officer (SHPO) shall be included as an appendix to the CRR.

If the project owner requests a suspension of construction activities, then a draft CRR that covers all cultural resources activities associated with the project shall be prepared by the CRS and submitted to the CPM for review and approval on the same day as the suspension/extension request. The draft CRR shall be retained at the project site in a secure facility until construction resumes or the project is withdrawn. If the project is withdrawn, then a final CRR shall be submitted to the CPM for review and approval at the same time as the withdrawal request.

Verification:

1. Within 90 days after completion of ground disturbance (including landscaping), the project owner shall submit the CRR to the CPM for review and approval. If any reports have previously been sent to the CHRIS, then receipt letters from the CHRIS or other verification of receipt shall be included in an appendix.
2. Within 90 days after completion of ground disturbance (including landscaping), the project owner shall provide to the CPM a copy of an agreement with, or other written commitment from, a curation facility that meets the standards stated in the California State Historical Resources Commission's *Guidelines for the Curation of*

Archaeological Collections, to accept cultural materials, if any, from this project. Any agreements concerning curation will be retained and available for audit for the life of the project.

3. Within 10 days after CPM approval, the project owner shall provide documentation to the CPM confirming that copies of the CRR have been provided to the SHPO, the CHRIS, and the curating institution, if archaeological materials were collected.
4. Within 30 days after requesting a suspension of construction activities, the project owner shall submit a draft CRR to the CPM for review and approval.

CUL-5 Prior to and for the duration of ground disturbance, the project owner shall provide Worker Environmental Awareness Program (WEAP) training to all new workers within their first week of employment at the project site, laydown area, and along the linear facilities routes. The training shall be prepared by the CRS, may be conducted by any member of the archaeological team, and may be presented in the form of a video. The CRS shall be available (by telephone or in person) to answer questions posed by employees. The training may be discontinued when ground disturbance is completed or suspended, but must be resumed when ground disturbance, such as landscaping, resumes. The training shall include:

1. A discussion of applicable laws and penalties under the law;
2. Samples or visuals of artifacts that might be found in the project vicinity;
3. Instruction that the CRS, alternate CRS, and CRMs have the authority to halt construction in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the CRS;
4. Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources discovery and shall contact their supervisor and the CRS or CRM, and that redirection of work would be determined by the construction supervisor and the CRS;
5. An informational brochure that identifies reporting procedures in the event of a discovery;
6. An acknowledgement form signed by each worker indicating that they have received the training; and
7. A sticker that shall be placed on hard hats indicating that environmental training has been completed.

No ground disturbance shall occur prior to implementation of the WEAP program, unless such activities are specifically approved by the CPM.

Verification:

1. At least 30 days prior to the beginning of ground disturbance, the CRS shall provide the training program draft text and graphics and the informational brochure to the CPM for review and approval, and the CPM will provide to the project owner a WEAP Training Acknowledgement form for each WEAP-trained worker to sign.
2. On a monthly basis, until ground disturbance is completed, the project owner shall provide in the Monthly Compliance Report (MCR) the WEAP Training Acknowledgement forms of workers at the project site and on the linear facilities who have completed the training in the prior month and a running total of all persons who have completed training to date.

CUL-6 The project owner shall ensure that the CRS, alternate CRS, or CRMs monitor full time all ground disturbance on the project site, at the fresh-water pick-up site, and along the natural gas pipeline route to ensure there are no impacts to undiscovered cultural resources and to ensure that known resources are not impacted in an unanticipated manner.

Additionally, the project owner shall ensure that the CRS, alternate CRS, or CRMs test a 20-centimeter-x-20-centimeter sediment column every 100 meters along the natural gas pipeline trench to assess whether buried archaeological deposits are present. The sediment column at each testing locale shall represent the complete complement of the sedimentary layers that the excavation of the pipeline trench cuts through. The project owner shall ensure that all of the sediments in each apparent natural or cultural layer of the column, to the bottom of the pipeline trench at each locale, are sifted separately through 1/8-inch mesh screen. Where discrete natural or cultural sedimentary layers are not apparent, where a proposed sediment column reveals what appears to be a single, massive depositional unit, the sediments in such a column shall be sifted, down the column in arbitrary layers no greater than 25 cm-thick. If cultural materials are identified, the project owner shall notify the CPM and obtain the services of a qualified geoarchaeologist (meets the U.S. Secretary of Interior's Professional Qualifications Standards for prehistoric archaeology and can demonstrate the completion of graduate-level coursework in geoarchaeology or Quaternary Science) to record a stratigraphic profile that captures the complete complement of the sedimentary layers that the excavation of the pipeline trench cuts through, including the strata above and below the identified cultural materials. In the absence of other locally viable chronometric techniques, the project owner shall ensure that soil humate samples from each such profile are submitted for radiocarbon assay to ascertain the approximate age of the sedimentary deposits in which found cultural materials are embedded. The results of this testing and any stratigraphic recordation done by the geoarchaeologist, as a component of the cultural resource monitoring for the construction of the project, shall be completely and thoroughly reported in the CRR required under **CUL-4**. The project owner shall further ensure that the geoarchaeologist and the CRS collaborate on the treatment of any discovery of cultural materials that result from this testing per the provisions of **CUL-7**.

Full-time archaeological monitoring for this project shall be the archaeological monitoring of all earth-removing activities on the construction site or along the linear facility routes for as long as the activities are ongoing. Full-time archaeological monitoring shall require at least one monitor per excavation area where machines are actively removing earth. If an excavation area is too large for one monitor to effectively observe the earth removal, one or more additional monitors shall be retained to observe the area.

In the event that the CRS believes that the current level of monitoring is not appropriate in certain locations, a letter or e-mail detailing the justification for changing the level of monitoring shall be provided to the CPM for review and approval prior to any change in the level of monitoring.

The research design in the CRMMP shall govern the collection, treatment, retention/disposal, and curation of any archaeological materials encountered.

On forms provided by the CPM, CRMs shall keep a daily log of any monitoring and other cultural resources activities and any instances of non-compliance with the Conditions and/or applicable LORS. Copies of the daily monitoring logs shall be provided by the CRS to the CPM, if requested by the CPM. From these logs, the CRS shall compile a monthly monitoring summary report to be included in the MCR. If there are no monitoring activities, the summary report shall specify why monitoring has been suspended. The CRS or alternate CRS shall report daily to the CPM on the status of cultural resources-related activities at the construction site, unless reducing or ending daily reporting is requested by the CRS and approved by the CPM.

The CRS, at his or her discretion, or at the request of the CPM, may informally discuss cultural resources monitoring and mitigation activities with Energy Commission technical staff (Staff).

Cultural resources monitoring activities are the responsibility of the CRS. Any interference with monitoring activities, removal of a monitor from duties assigned by the CRS, or direction to a monitor to relocate monitoring activities by anyone other than the CRS shall be considered non-compliance with these Conditions.

Upon becoming aware of any incidents of non-compliance with the Conditions and/or applicable LORS, the CRS and/or the project owner shall notify the CPM by telephone or e-mail within 24 hours. The CRS shall also recommend corrective action to resolve the problem or achieve compliance with the Conditions. When the issue is resolved, the CRS shall write a report describing the issue, the resolution of the issue, and the effectiveness of the resolution measures. This report shall be provided in the next MCR for the review of the CPM.

A Native American monitor shall be obtained to monitor ground disturbance along with the CRS, alternate CRS, or CRMs. Informational [contact] lists of concerned Native Americans and guidelines for monitoring

shall be obtained from the Native American Heritage Commission. Preference in selecting a monitor shall be given to Native Americans with traditional ties to the area that shall be monitored. If efforts to obtain the services of a qualified Native American monitor are unsuccessful, the project owner shall immediately inform the CPM. The CPM will either identify potential monitors or will allow ground disturbance to proceed without a Native American monitor.

Verification:

1. At least 30 days prior to the start of ground disturbance, the CPM will provide to the CRS an electronic copy of a form to be used as a daily monitoring log. While monitoring is on-going, the project owner shall include in each MCR a copy of the monthly summary report of cultural resources-related monitoring prepared by the CRS.
2. Daily, as long as no cultural resources are found, the CRS shall provide a statement that “no cultural resources over 50 years of age were discovered” to the CPM as an e-mail, or in some other form acceptable to the CPM. If the CRS concludes that daily reporting is no longer necessary, a letter or e-mail providing a detailed justification for the decision to reduce or end daily reporting shall be provided to the CPM for review and approval at least 24 hours prior to reducing or ending daily reporting.
3. At least 24 hours prior to implementing a proposed change in monitoring level, documentation justifying the change shall be submitted to the CPM for review and approval.
4. No later than 30 days following the discovery of any Native American cultural materials, the project owner shall submit to the CPM copies of the information transmittal letters sent to the Chairperson of the Native American tribes or groups who requested the information. Additionally, the project owner shall submit to the CPM copies of letters of transmittal for all subsequent responses to Native American requests for notification, consultation, and reports and records and any comments or information provided in response by the Native Americans.

CUL-7 The project owner shall grant authority to halt construction to the CRS, alternate CRS, and the CRMs in the event of a discovery. Redirection of ground disturbance shall be accomplished under the direction of the construction supervisor in consultation with the CRS.

In the event cultural resources over 50 years of age or, if younger, considered exceptionally significant are found, or impacts to such resources can be anticipated, ground disturbance shall be halted or redirected in the immediate vicinity of the discovery sufficient to ensure that the resource is protected from further impacts. Monitoring and daily reporting as provided in these conditions shall continue during all ground-disturbing activities wherever project

construction is not halted. The halting or redirection of construction shall remain in effect until the CRS has visited the discovery, and all of the following have occurred:

1. The CRS has notified the project owner, and the CPM has been notified within 24 hours of the discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning, including a description of the discovery (or changes in character or attributes), the action taken (i.e. work stoppage or redirection), a recommendation of eligibility, and recommendations for mitigation of any cultural resources discoveries, whether or not a determination of significance has been made.
2. The CRS has completed field notes, measurements, and photography for a DPR 523 "Primary" form. The "Description" entry of the DPR 523 "Primary" form shall include a recommendation on the significance of the find. The project owner shall submit completed forms to the CPM.
3. The CRS, the project owner, and the CPM have conferred, and the CPM has concurred with the recommended eligibility of the discovery and approved the CRS's proposed data recovery, if any, including the curation of the artifacts, or other appropriate mitigation; and any necessary data recovery and mitigation have been completed.

Verification:

1. At least 30 days prior to the start of ground disturbance, the project owner shall provide the CPM and CRS with a letter confirming that the CRS, alternate CRS, and CRMs have the authority to halt construction activities in the vicinity of a cultural resources discovery, and that the project owner shall ensure that the CRS notifies the CPM within 24 hours of a discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning.
2. Completed DPR 523 forms for resources newly discovered during construction shall be submitted to the CPM for review and approval no later than 24 hours following the notification of the CPM, or 48 hours following the completion of data recordation/recovery, whichever the CRS decides is more appropriate for the subject cultural resource.

CULTURAL RESOURCES ACRONYM GLOSSARY

AD	Common Era
AFC	Application for Certification
Area of Analysis	The area within and around a project site that staff considers when compiling an inventory of cultural resources and when assessing potential impacts. This will vary with the kind of cultural resources under consideration.
ARMR	Archaeological Resource Management Report
BC	Before Common Era
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
Conditions	Conditions of Certification
CRHR	California Register of Historical Resources
CRM	Cultural Resources Monitor
CRMMP	Cultural Resources Monitoring and Mitigation Plan
CRR	Cultural Resource Report
CRS	Cultural Resources Specialist
DPR 523	Department of Parks and Recreation cultural resource inventory form
FSA	Final Staff Assessment
LORS	laws, ordinances, regulations, and standards
MCR	Monthly Compliance Report
MLD	Most Likely Descendent
NAHC	Native American Heritage Commission
NRHP	National Register of Historic Places
OGE	Orange Grove Energy, the applicant
OGP	Orange Grove Project, the proposed power plant
OHP	Office of Historic Preservation
Project Area	The bounded area(s) identified by the applicant as the area within which they propose to build all the components of their project.
SA	Staff Assessment
SHPO	State Historic Preservation Officer
Staff	Energy Commission cultural resources technical staff
WEAP	Worker Environmental Awareness Program

REFERENCES

The *tn: 00000* in a reference below indicates the transaction number under which the item is catalogued in the Energy Commission's Docket Unit. The transaction number allows for quicker location and retrieval of individual items docketed for a case or used for ease of reference and retrieval of exhibits cited in briefs and used at Evidentiary Hearings.

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Bean and Shipek 1978—L. J. Bean and F C. Shipek, "Luiseño," in Handbook of North American Indians, Vol. 8. Robert F. Heizer, ed. Washington, D. C.: Smithsonian Institution, 1978.

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