

6.5 CULTURAL RESOURCES

Cultural resources include prehistoric and historic archaeological sites, districts and objects; standing historic structures, buildings, districts and objects; and locations of important historic events, or sites of traditional/cultural importance. This section determines whether cultural resources are present at the VV2 Project site (including the Project's linear features), and whether the Project could adversely affect cultural resources. The significance of potentially affected resources is assessed and measures are identified to mitigate potential adverse effects.

The cultural resources study was performed by William Self Associates (WSA). Key WSA staff were James Allan, Ph.D, RPA; Allen Estes, Ph.D., RPA, and Eric Strother, M.A. RPA. Additional detail can be found in the full cultural resources assessment report provided as AFC Appendix I.

6.5.1 LORS Compliance

The VV2 Project will comply with applicable Federal, State, and local LORS throughout Project construction and operation. Potentially applicable LORS are summarized in Table 6.5-1 and discussed in text that follows the table.

**Table 6.5-1
LORS Applicable to Cultural Resources**

LORS	Applicability	Where Discussed in AFC
Federal:		
Antiquities Act of 1906, Title 16, United States Code, Sections 431, 432, and 433	Basic Federal legislation for protection of cultural resources	Sections 6.5.1, 6.5.3, and 6.5.4
National Historic Preservation Act (NHPA), Title 16, United States Code, Section 470	Establishes national policy to preserve historic resources for public use; requires Federal agencies to consider cultural resources issues and to consult with Advisory Council for Historic Preservation and State Historic Preservation Officer (SHPO).	Sections 6.5.1, 6.5.3 and 6.5.4
Executive Order 11593, , May 13, 1971, 36 Federal Register, 8921	Provides for protection and enhancement of the cultural environment.	Sections 6.5.1, 6.5.3 and 6.5.4

**Table 6.5-1
LORS Applicable to Cultural Resources**

LORS	Applicability	Where Discussed in AFC
American Indian Religious Freedom Act, Title 42 United States Code, Section 1996	Protects Native American religious practices, ethnic heritage sites, and land uses	Sections 6.5.1, 6.5.3 and 6.5.4
Native American Graves Protection and Repatriation Act (1990); Title 25, United States Code Section 3001, et seq.	Establishes mechanism for right of Indian tribes to claim ownership of human remains and certain cultural items.	Sections 6.5.1, 6.5.3 and 6.5.4
State:		
Public Resources Code, Section 5000 (various)	Includes definition of historic preservation terms used in CEQA, establishes a California Register of Historic Places (CRHR), and definition of procedures for notification of discovery of Native American remains	Sections 6.5.1, 6.5.3 and 6.5.4
Public Resources Code, Sections 21083.2 and 21084.1	Requires formal findings by lead State agency regarding project-related effects to important cultural resources (21083.2) and defines significant historic resources and significant effects (21084.1).	Sections 6.5.1, 6.5.3 and 6.5.4
California Environmental Quality Act (CEQA) , Public Resources Code Section 2100 et seq. and CEQA Guidelines, CCR Title 14, Section 15000 et seq.	Requires public agencies and private interests to evaluate impacts to cultural resources and provides guidance for evaluating and mitigating impacts.	Sections 6.5.1, 6.5.3 and 6.5.4
Local:		
City of Victorville General Plan	Establishes City policy to identify and protect or salvage significant archaeological resources that may be threatened by development	Sections 6.5.1, 6.5.3 and 6.5.4
Southern California Logistics Airport Specific Plan	Establishes monitoring requirement during project construction and procedures for dealing with significant resources uncovered.	Sections 6.5.1 and 6.5.4

6.5.1.1 Federal

The Federal LORS applicable to cultural resources are discussed below and listed in Table 6.5-1.

Antiquities Act of 1906, Title 16, United States Code, Sections 431, 432, and 433. The Antiquities Act of 1906 establishes the Federal legislative framework for the protection of cultural resources.

National Historic Preservation Act (NHPA), Title 16, United States Code (USC), Section 470. The NHPA of 1966 established the Federal government's policy on historic preservation and programs through which that policy is implemented. Historic properties include "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places" USC 470w(5). Section 106 of the NHPA requires Federal agencies, before taking action to implementing an "undertaking" (e.g., issuing a Federal permit) to take into account the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on undertakings that would adversely affect such properties. Federal agencies issuing a permit for the VV2 Project (e.g., the U.S. Army Corps of Engineers issuing a permit under Section 404 of the Clean Water Act), would be required to comply with NHPA requirements.

Executive Order 11593, Protection of the Cultural Environment, May 13, 1971, 36 Federal Register, 8921. This Executive Order calls for protection and enhancement of the cultural environment through leadership, establishing State offices of historic preservation and developing criteria for assessing resource significance.

American Indian Religious Freedom Act, Title 42 USC, Section 1996. This law establishes national policy to protect the American Indian's (and other indigenous groups) right to express and exercise their traditional religions. Federal agencies issuing a permit for the VV2 Project (e.g., U.S. Army Corps Section 404 permit) would have to consider this law.

Federal Guidelines for Historic Preservation Projects, 36 CFR Section 61. The Secretary of the Interior published Standards and Guidelines for Archaeology and Historic Preservation in 1983. These standards are considered to be the appropriate professional methods and techniques for gathering and treatment of data related to cultural resources. The SHPO utilizes these standards in its requirements for identifying qualified personnel

and in mitigation of potential impacts to cultural resources on public lands in California (such as the VV2 Project site, which is owned by the City of Victorville).

Native American Graves Protection and Repatriation Act (1990); Title 25, United States Code Section 3001, et seq. This law assigns ownership of Native American graves found on Federal land to their descendants or to a culturally affiliated tribe or organization. Since no Federal land would be affected by the VV2 Project, this law will not apply.

6.5.1.2 State

Applicable State of California LORS are summarized below.

Public Resources Code, Section 5000 et seq. Section 5000 establishes a California Register of Historic Places (CRHR), definitions and criteria for eligibility, and establishes unauthorized removal or destruction of historic resources on public lands as a misdemeanor. It prohibits obtaining or possessing Native American remains or artifacts from a grave and establishes possession with intent to sell or vandalize them as a felony. It defines procedures for the notification of discovery of Native American remains or artifacts and establishes that it is State policy to repatriate Native American remains and grave artifacts.

Public Resources Code Section 21083.2. This section states that the lead agency must determine whether a project may have a significant effect on “unique” archaeological resources and, if so, to prepare an EIR. If the potential for damage to such resources is demonstrated reasonable steps may be taken to preserve the resources in place or mitigation measures are required, e.g., excavation. The section discusses aspects of mitigation. The CEC licensing process is a CEQA-equivalent process.

California Environmental Quality Act (CEQA) , Public Resources Code Section 2100 et seq. and CEQA Guidelines, CCR Title 14, Section 15000 et seq. CEQA requires public agencies and private interests to identify the environmental consequences of proposed projects, and includes “objects of historic or aesthetic significance” in the definition of “environment”. Various sections of the PRC and CEQA guidelines provide guidance for how to categorize and address impacts on archaeological resources, how to characterize the significance of impacts to such resources, and identifies avoidance or preservation in place as the preferred mitigation approaches. The CEC licensing process is a CEQA-equivalent process.

6.5.1.3 Local

City of Victorville General Plan Resource Element. The Resource Element establishes City policy to identify and protect or salvage significant archaeological resources that may be threatened by development. The Planning Department is to submit development plans that require excavation/grading more than minor cut and fill to the San Bernardino County Museum for review to determine resource potential and the need for monitoring. All structures considered for designation as local points of interest will be reviewed to determine potential impacts on development.

Southern California Logistics Airport Specific Plan. The SCLA Specific Plan requires a qualified archaeologist to be onsite during grading that involves excavation; significant resources uncovered are to be recorded and studied by UC Riverside and/or the San Bernardino County Museum.

6.5.1.4 Involved Agencies and Agency Contacts

Table 6.5-2 lists the cultural resources management contact person for the VV2 Project at the Native American Heritage Commission.

**Table 6.5-2
Agencies and Agency Contacts**

Agency	Contact	Permit/Issue
Native American Heritage Commission 915 Capitol Mall, Room 364 Sacramento , CA	Ms. Carol Gaubatz (916) 653-4082	State Compliance regarding Native American cultural issues

6.5.1.5 Permits Required and Permit Schedule

The VV2 Project does not require permits, other than the CEC site certification, for cultural resources management.

6.5.2 Affected Environment

Understanding the cultural resources of the region requires some background knowledge of the natural environment, previous prehistoric research conducted, the ethnographic record, and the local history; each of these are briefly summarized below.

6.5.2.1 Natural Environment

The Mojave Desert is a vast basin situated between two major fault lines – the Garlock Fault on the north (bounded by the Tehachapi Mountains) and the San Andreas Fault on the west (bounded by the San Gabriel Mountains). Mountain ranges are visible throughout the Mojave, mountain ranges (San Bernardino, Little San Bernardino, and Eagle) form its southern margin and extensive valleys also found on its margin. The floor of the Mojave is primarily alluvial fill (i.e. sands and gravels that have eroded from the surrounding mountains) (Schoenherr, 1995).

Fluctuations in temperature, moisture variation, and seasonality through time have altered vegetation zones that developed in response to climatic conditions. In moister times, vegetation zones in the valleys and basins developed down slope. When the climate became drier, the vegetation zones developed up the slopes of the mountains, leaving the lower lands with sparser, arid-adapted vegetation. Changes in climate and vegetation affected the prehistoric populations of the Mojave Desert.

During the latter part of the Pleistocene (25,000-10,000 years ago), temperatures in California were cool and moist, causing widespread glaciations and the creation of numerous deep pluvial lakes (Antevs, 1953a, 1955). Pluvial lakes were common within the Mojave Desert and were an essential source of food and water for the earliest inhabitants of the desert.

During the Holocene or recent epoch (10,000 years ago to the present), the temperatures in interior California rose, bringing warmer conditions to the desert valleys and less precipitation to the surrounding mountains (Chartkoff and Chartkoff, 1984). During modern times the Mojave Desert experiences maximum daytime temperatures above 100° F during the summer. Winter temperatures are mild with little rain and abundant sunshine; winter temperatures generally reach a daytime maximum of 50-70° F. Rainfall averages about four inches annually with thirty percent of the annual precipitation between April and September.

Alkali soils devoid of vegetation are characteristic of the lowest elevations in the Mojave Desert. Vegetation is sparse consisting mostly of desert shrubs and an intermittent understory of annual and perennial grasses and herbs (U.S. Department of Agriculture, 1986). Although most of the Mojave Desert is extremely arid, some areas, such as Antelope Valley, support limited farming.

6.5.2.2 Prehistoric Background

Although the Mojave Desert is an area believed to have had limited prehistoric food resources and surface water, it supported a long and occasionally dense human population, particularly in Antelope Valley (Moseley and Smith, 1962). Evidence of villages and camps, burials, quarries, rock features, and bedrock mortars has been documented at archaeological sites. These sites may contain evidence of a lengthy prehistoric time span. Although early archaeological remains are not found frequently, when they are, they are usually located along the margins of pluvial lakes or in areas of dune deflation. Conversely, artifacts on the desert floor may be sparse, widely scattered, and not easily recognized among the desert pavement. Archaeologists have reached a broad consensus regarding the region's basic cultural chronology; the sequence consists of the Paleoindian Period and the Pinto, Gypsum, Saratoga Springs, and Protohistoric periods, as discussed below.

Paleoindian Period (12,000-7,000 years ago). The earliest documented evidence of human occupation in the Mojave Desert comes from the Paleoindian period, a cultural expression referred to as the Western Pluvial Lakes Tradition (WPLT). The WPLT occurred in the western Great Basin and covered an area that stretched from the currently arid lands of southern California to Oregon. A cultural adaptation to pluvial conditions (e.g., lakes, marshes, and grasslands) flourished for several millennia after around 9000 B.C., but then disappeared during the warmer and more arid Altithermal climatic period (Moratto 1984).

One of the most well-known expressions of the WPLT is the Lake Mojave Complex which is thought to have covered a vast area including parts of the southwestern Great Basin and the Mojave Desert, and may have reached as far south as the San Diego area. Artifacts indicative of the Lake Mojave Complex include foliated points and knives, Lake Mojave points, Silver Lake points, and flaked-stone crescents. Similar artifacts have subsequently been recorded along the shoreline of many other pluvial lakes in the Mojave Desert.

Pinto Period (7,000-4,000 years ago). The Pinto Period dates to the end of the Pleistocene, when the severe and dramatic environmental change from pluvial to arid conditions began. Rivers and lakes dried up and animal and plant life changed. In the Mojave Desert humans either adapted to this change or journeyed to areas with more favorable environmental conditions. Sites that contain elements of the Pinto Period are small and often limited to surface deposits. They may have been temporary or perhaps seasonal occupations by small groups (Moratto, 1984). A "Pinto Age" assemblage for the western Mojave Desert is based on observations during an extensive surface collection at the Sweetser site (CA-KER-302) in Antelope Valley, as well as several other sites in the

area (Glennan 1971). This collection included the Rhyolite Tradition that consisted primarily of knives, choppers, scrapers, cores, and some milling stones.

Gypsum Period (4,000-1,500 years ago). The presence of Humboldt Concave Base, Gypsum Cave, Elko Eared, or Elko corner-notched points are indicative of the Gypsum Period, which has been radiocarbon dated from 4,000 to 1,500 years ago. In addition to the diagnostic projectile points, the cultural assemblage at Gypsum Period sites includes leaf-shaped points, rectangular-based knives, flake scrapers, T-shaped drills, and occasionally large scraper-planes, choppers, and hammerstones. Use of milling stones and manos became fairly common during this period, and the mortar and pestle were introduced. Additional artifacts include shaft-smoothers; incised slate and sandstone tablets and pendants; fragments of drilled slate tubes; Haliotis rings, beads and ornaments of the “Middle Horizon” type found in California's Central Valley; Olivella shell beads; and bone awls.

Desert exhibited cultural diversification, with the development of distinctive regional traits. People occupying Antelope Valley during this period lived in large permanent or seasonally occupied villages in addition to a variety of smaller, special-purpose sites that were also seasonally based (Sutton, 1980). The presence of large villages with cemeteries, along with the large number and complexity of other sites, imply that the Antelope Valley supported a large population during the late prehistoric period. Besides village sites, smaller sites included rock rings, lithic scatters, and milling stations. Artifacts from these sites include shell beads, ornaments, and steatite from the southern California coast, as well as projectile points of the Rose Spring and Cottonwood types.

Protohistoric Period (800 years ago to the time of European contact). The historic aboriginal people of the California deserts are clearly the descendants of the prehistoric inhabitants. During the Protohistoric Period, the tradition of the Southern Desert moved northward and probably reached the project area. There is little doubt that late sites along the Mojave River are the prehistoric remains of the Serrano of the historic period. The Serrano appear to be similar to the Yuman people of the Colorado River; this similarity is attributable to a Mojave River trade route that, for centuries, brought the Serrano into contact with the cultural developments of the lower Colorado River. Because of the ongoing trade, there were undoubtedly opportunities to obtain relatively great amounts of wealth and to develop more complex socio-economic and political organization. The major occupation of Antelope Valley appears to have ended by 300 years ago, after which the valley became a marginal area, as reflected in the ethnographic record.

6.5.2.3 Ethnographic Background

The Project area is near the traditional territory of the Vanyume and the Serrano (see Figure 6.5-1). The following subsections provide an overview of these two populations.

Vanyume. Little is known about the Vanyume, who are believed to have become culturally extinct by 1900. The Vanyume, a subgroup of the Serrano, lived along the Mojave River, although their exact territorial boundaries are vaguely known (see Figure 6.5-1). The diary of Spanish explorer Francisco Garcés (1775) places the Vanyume “some few Spanish leagues east of the ‘sink’ of Mojave River, perhaps a third of the way from it to the Providence Mountains [near the Nevada border]” (Kroeber, 1925). The boundary between Serrano and Vanyume territory was apparently south of Victorville. The Vanyume population, although never very large, dwindled rapidly between 1820 and 1834, as the Spanish gathered the southern California Indians into various missions and *asistencias*. Garcés mentions observing one village of 25 people, a second village that was abandoned, a third village below Victorville where he encountered 40 people, and a fourth unidentified village.

Serrano. As shown on Figure 6.5-1, the Serrano territory included the San Bernardino Mountains, east of Cajon Pass, as well as the desert area that lies immediately south of Victorville, extending east as far as Twenty-nine Palms and south as far as Yucaipa Valley. The Serrano were organized into exogamous clans and were primarily hunters and gatherers. Individual family dwellings were circular, domed structures that were constructed of willow frames and covered with tule thatch. Vegetal staples varied with village locality: acorns and piñon nuts in the foothills; mesquite, yucca roots, cacti fruits, and piñon nuts in or near the desert regions. Diets were supplemented with other roots, bulbs, shoots, and seeds (Bean and Smith, 1978:571). Deer, mountain sheep, antelope, rabbits, and other small rodents were among the principal animals hunted. Various game birds were also hunted, quail being the most important. The bow and arrow was used for large game, while smaller game and birds were killed with curved throwing sticks, traps, and snares. Occasionally game was hunted communally, especially during annual mourning ceremonies (Benedict, 1924; Drucker, 1937; Bean and Smith, 1978).

The manufactured goods of the Serrano included baskets, pottery, rabbit-skin blankets, awls, arrow straighteners, sinew-backed bows, arrows, fire drills, stone pipes, musical instruments (rattles, rasps, whistles, bull-roarers, and flutes), feathered costumes, mats, bags, storage pouches, and nets (Bean and Smith, 1978). Food acquisition and processing required the manufacture of additional items such as knives, stone or bone scrapers, pottery trays and bowls, bone or horn spoons, and stirrers. Mortars, made of either stone or wood, and metates were also manufactured (Strong, 1929; Drucker, 1937; Benedict, 1924).

6.5.2.4 Historical Background

The sporadic settlement of the Mojave Desert was prompted by its close proximity to Los Angeles as well as its valuable mineral deposits. It also served as a crossing point for people traveling west during the period of exploration and settlement. Since much of the Mojave Desert is uninhabitable in the hot summer months, the availability of water, typically supplied to the desert regions by shipment in tanks and barrels during historic times, was a critical factor in the settlement of the Mojave Desert.

Spanish Period. The Spanish period (1769-1821) represents a time of European exploration and settlement. Spanish explorer Francisco Garcés' route west in 1771 followed an ancient Indian trail into the San Bernardino Mountains. The trail passed by the Barstow area, located about 30 miles north of Victorville. The Pedro Fages (1772) trail, initially referred to as the Old Spanish Trail, and later as the Salt Lake Road or Mormon Trail, is the earliest known in the region. It travels south within the Project area before ultimately reaching the coast. Francisco Garcés took this trail in 1776, and Jedediah Smith traveled it in 1826 and 1827 (Kyle, 1990).

American Period. The American period began in 1848; less than a year later gold was discovered in the northern California Sierra Nevada foothills. The great influx of Americans and Europeans that resulted quickly overwhelmed many of the Spanish and Mexican cultural traditions and eliminated many remaining vestiges of Native American Culture.

New Yorker Jedediah Strong Smith made two trips into California's desert region (Kyle, 1990). He first crossed the Mojave River in 1826, christening it the "Inconstant River," probably due to its intermittent, partially underground flow (Pierson, 1970). The route passed an Indian village on the Mojave Desert named Otangallavil, located near Hesperia (Pierson 1970). In April 1844, while searching for the Old Spanish Trail, General Fremont also recorded the "clear, bold stream" of the Mojave River (Pierson, 1970). He heard it called the "Rio de las Animas" by the Spaniards, but on his map he named it the "Mohave River" (Pierson, 1970).

The first trail in the region was established at an unknown (early) date by Indians and was referred to as the Old Indian Trail (Steele, 1975). By 1830, at least a portion of this trail was called the Old Spanish Trail, which was founded as a trade route for American goods shipped from Santa Fe and for Mexican horses and mules from Los Angeles (Latta, 1932). This trail extended from Santa Fe to Los Angeles across the Cajon Pass and represented a continuation of the Santa Fe Trail, which linked Mexican outposts in New Mexico and California (Lantis, Steiner, and Karinen, 1989). The Mojave River portion of the Old

Indian Trail, located on the banks of the intermittent river, was also a landmark to the vast number of migrants across the desert. Construction of a railroad to link the San Joaquin Valley to Los Angeles across the Mojave took place in the 1870s, traversing the western edge of the desert.

Mining in the Mojave led to increased settlement during the latter half of the 19th century. The town of Mojave was the rail terminus for the 20-mule-team borax wagons that operated from Death Valley between the years 1884 and 1889 (Kyle, 1990). The U.S. Borax and Chemical Company (formerly the Pacific Coast Borax Company) developed sodium borate mining at Boron, about 30 miles north of Victorville. Gold was discovered at Standard Hill (about 45 miles west of Victorville) in 1894, and the nearby Cactus Queen Mine produced the largest quantity of silver ore in California until World War II (Kyle, 1990). All of this activity led to the formation of small towns and the development of agriculture in the Victorville vicinity. The town of Victorville was established in 1886 as a railway stop on the Santa Fe Railroad.

The military has played an important role in the modern history of the Mojave Desert. In 1933, Rogers Dry Lake (located between Barstow and Boron) was used as a gunnery and bombing range. In 1942, the first U.S. jet airplane was tested at Muroc Army Airfield, which became Muroc Air Force Base in 1948 and was renamed Edwards Air Force Base in 1981 (Kyle, 1990). George Air Force Base was initially founded as the Victorville Army Flight Training School in 1941, and with 10,000 trainees, led to the rapid growth of the area surrounding Victorville. The base was decommissioned in 1992, and in 1994, the SCLA opened at the former base on 2,300 acres leased from the U.S. Air Force.

6.5.2.5 Cultural Resources Inventory

A complete archaeological resources inventory, including both archive/background research and surface pedestrian reconnaissance survey work, was conducted of the VV2 Project site (plant site and linear facilities). The results of the resource inventory are summarized in the following subsections and presented in greater detail in AFC Appendix I.

Archival Research, Previous Studies. A detailed record search was performed by staff of the San Bernardino Archaeological Information Center, San Bernardino County Museum (SBAIC) and covered the Project site including a one-mile buffer zone around the plant site and a 0.25-mile buffer zone around linear facilities (transmission line Segments 1, 2, and 3 and the water and sanitary lines). The study included a review of archaeological, ethnographic, historical, and environmental literature as well as records and maps on file.

According to the information available in the SBAIC files, there have been sixty one previous cultural resource surveys conducted within the Project area and associated buffer zone. These reports are listed in Table 6.5-3 and arranged in ascending order as cataloged by SBAIC.

Table 6.5-3
Cultural Resources Studies Conducted At and
Within One Mile of Plant Site and 0.25-Mile of Linear Facilities

Survey #	Author (Date)	Description
1060078	Walker (1967)	Life and Adventure along Mojave River Trail
1060191	Smith (1973)	Archaeological, Historical, and Paleontological Survey for County Service Area No. 70
1060240	Connelly (1074)	Archaeological Evaluation of SCE Proposed Generating Station in Johnson Valley and Associated Linear Facilities
1060257	SBCMA (1975)	Archaeological and Paleontological Assessment of Wastewater Facilities, Victorville
1060428	Hearn et al (1976)	Archaeological Resources, Mojave Water Agency Project No.C-06-0822, Victorville Area
1060480	Hearn (1977)	Archaeological-Historical Assessment of Main Street, Hesperia Area
1060507	Leonard (1977)	Archaeological Assessment of Three Job Sites within Hesperia County Water District
1060612	SBCM (1978)	Archaeological-Historical Assessment for System Improvements for Water System Master Plan, Victor Valley County Water District
1060799	Rector et al. (1979)	Archaeological Studies at Oro Grande
1060874	Barker et al. (1979)	Archaeological Sampling of Allen-Warner Valley Energy System Western Transmission Line Corridors
1060900	Weil (1979)	Prehistoric Cultural Resources Investigations, SCE Lucerne Valley Project
1060901	Weil (1980)	Prehistoric Cultural Resources Investigations, SCE Lucerne Valley Project
1061025	Harris (1973)	Archaeological, Historical, and Paleontological Survey for County Service Area No. 70, Improvement Zone J
1061026	Harris (1974)	Archaeological, Historical, and Paleontological Survey for County Service Area No. 70, Improvement Zone J
1061027	Reynolds (1980a)	Cultural Resources Assessment, Baldy Mesa Water Lines, County Service Area No. 70

**Table 6.5-3
Cultural Resources Studies Conducted At and
Within One Mile of Plant Site and 0.25-Mile of Linear Facilities**

Survey #	Author (Date)	Description
1061051	Geoscientific Systems (1980)	Final Report, Archaeological/Historical Assessment of George Air Force Base
1061158	Greenwood and McIntyre (1981)	Class III Cultural Resources Inventory, Los Angeles DWP Adelanto-Rinaldi 500 kV Transmission Line Corridors
1061219	Hall et al. (1981)	Archaeological Survey of Proposed SCE Ivanpah Generating Station Plant Site and Linear Facilities
1061220	Bean et al. (1981)	Ivanpah Generating Station Ethnographic Resources
1061280	Macko et al. (1982)	Class III Cultural Survey, Intermountain Power Project, Intermountain- Adelanto Bipole I Transmission Line ROW
106336	Rector et al. (1983)	Archaeological Studies at Oro Grande
1061479	Dames& Moore (1985)	Mead/McCullough-Victorville/Adelanto Transmission Project, Cultural Resources Technical Report
1061504	Greenwood and Foster (1985)	Cultural Resources Investigation for LADWP Victorville-Rinaldi 500kV Transmission Line 1
1061646	Norwood (1987)	Cultural Resources Survey for Add/Alter Boundary Fence, George AFB
1062158	Mortland (1974)	Archaeological Impacts, SCE Proposed Generating Station in Upper Johnson Valley and Associated Linear Facilities
1062283	King (1989)	Review of Shell Bead Exchange between California and Western Great Basin
1062399	McGuire and Glover (1991)	Cultural Resources Inventory Proposed Gas Pipeline Corridor from Adelanto to Ward Valley
1062421	Drover (1991)	Archaeological Assessment of Community Facilities District 90-1 Northern Sewer Trunk Project, Victorville
1062570	Sheets and Woodman (1990)	Archaeology Survey and Inventory, George AFB
1062644	Yohe and Parr (1992)	Archaeological Survey, Oro Grande Sewer Pipeline Alignment
1062731	Macko et al. (1993)	National Register Eligibility Determination for Historic Resources along Proposed AT&T Lightguide System
1062735	Yohe (1993)	Archaeological Test Excavations, Oro Grande Sewer Pipeline Alignment

**Table 6.5-3
Cultural Resources Studies Conducted At and
Within One Mile of Plant Site and 0.25-Mile of Linear Facilities**

Survey #	Author (Date)	Description
1062854	Cunkelman and Murray (1993)	Cultural Resources Report for Exchange of P&V Enterprise Selected Public Lands
1063020	Sturm et al. (1993)	Draft Adelanto-Lugo Cultural Transmission Project Resources Assessment
1063025	Parr (1995)	Archaeological Assessment of 50 Acres of Public Land for Exchange, north of Adelanto
1063164	Alexandrowicz et al. (1996)	Cultural And Paleontological Resources Inventory for the Airbase Road Improvement Project, Victorville - Interim Report.
1063703	Alexandrowicz and Loren-Webb (2001)	Historical Resource Identification Investigation for TTM 16252, Hesperia.
1063784	Earth Tech (1997)	Cultural Resource Investigation for the Rail Alignment Property & TCE Property at George AFB
1063785	Spanne (1985)	Cultural Resources Survey of Properties Proposed for Acquisition for Water Supply Improvements at George AFB
1063796	McKenna (1998)	Intensive Archaeological Survey of the Victor Valley Regional Wastewater Reclamation Plant Expansion Areas, Victorville
1063797	McKenna (2000)	Report on Archaeological Monitoring Activities at the California Bio-Mass, Inc. Project Area, Victorville
1063798	William Self Associates. (2002a)	El Evado Waterline Construction Corridor Survey, San Bernardino County
1063799	William Self Associates (1999)	Cultural Resource Assessment of High Desert Power Project, Victorville
1063800	WSA (2002b)	Archaeological Survey of Five Proposed Well Sites, San Bernardino County
1063801	Estes et al.(2002)	Archaeological Survey of Proposed Well Sites H-N & Water Pipeline Extension, High Desert Power Project, Victorville
1064182	Alexandrowicz and Krautkramer (2003)	Historical and Paleontological Resources Monitoring at the Forecast Homes Tract No. 16252 Development, Hesperia
1064187	Anon. (2001)	Negative Historic Property Survey Report on the paving of Mesquite Street in Hesperia, CA.
1064190	Goodwin and Tuck	Cultural Resource Assessment, Tentative Parcel No. 16886

**Table 6.5-3
Cultural Resources Studies Conducted At and
Within One Mile of Plant Site and 0.25-Mile of Linear Facilities**

Survey #	Author (Date)	Description
	(2004)	(APNs 0405-51-09, -11, -12, -13, -50), City of Hesperia, San Bernadino County, California.
1064192	Alexandrowicz (2004a)	Historical Archaeology at the Hall W. Watts Homestead
1064193	Alexandrowicz and Jrutkramer (2004)	Historical and Paleontological Resources Monitoring at the Forecast Homes Trust No. 16252 Development, City of Hesperia, San Bernadino County, California. [Phase II]
1064427	CRM Tech (2003)	Historical/Archaeological Resources Survey Report, SCLA Specific Plan Amendment and Rail Service Project.
1064428	CRM Tech (2001)	Identification and Evaluation of Historic Properties, SCLA Runway 17/35 Extension to 15,000 Feet.
1064429	CRM Tech (2004)	Historical/Archaeological Resources Survey Report, VVWRA Regional Plant Expansion Project, Victorville
1064434	Compass Rose Archaeological (2000)	Victorville Deteriorated Pole Project
1064436	Chadderdon (2003)	Federal Correctional Complex, Victorville Phase I Archaeological Survey for Proposed Energy Saving Performance Contracting Project
1064437	William Self Associates (2001)	Water Line Construction Corridor Survey
1064442	McKenna et al. (2002)	Results of a Paleontological and Archaeological Monitoring Program along a Portion of Shay Road, Victorville
1064446	McKenna et al. 2003)	CA-SBR-72 Site Review
1064447	Woodman (1991)	George Air Force Base, California: World War II Buildings/Facilities, Architectural and Historical Evaluation
1064453	Mooney/ Hayes Associates (2003)	Cultural Resource Survey of work stations on the Robin, Keno, and Mack 12 kV Circuits, and Portland, Poco, and Doble 33 kV Circuits, SCE Deteriorated Pole Replacement Program
1065205	McKenna et al. (2005)	Archaeological Investigations and Mitigation of Impacts to CA-SBR-72, a Prehistoric Archaeological Site Adjacent to the California Bio Mass, Inc. Facility, Victorville, San Bernadino County, California

The following sections discuss the archaeological and historic sites identified within the survey areas by previous cultural resource surveys.

Previously Identified Cultural Resources. Seventy archaeological and historic sites were recorded within the search radius of the VV2 project area during the studies identified above. These sites are listed in Table 6.5-4 and described in detail in AFC Appendix I.

Nineteen of these sites were recorded within the Project area including one within the plant site and eighteen within or crossing transmission line Segments 2 and/or 3. The site (CA-SBR-10951H) recorded within the VV2 plant site consists of a sparse scatter of historic materials, primarily tin cans. The site had undergone some change since it was recorded, and thus it was re-recorded (VV2 Site 22) and a DPR update sheet prepared (see AFC Appendix I).

The eighteen sites previously recorded within or crossing transmission line Segments 2 and/or 3 include: CA-SBR-1031H; CA-SBR-10317H; CA-SBR-10316H; CA-SBR-4272H; CA-SBR-7742H; CA-SBR-7752H; CA-SBR-7694H; CA-SBR-4275H; CA-SBR-7743H; CA-SBR-7744H; CA-SBR-4251H; CA-SBR-4269H; CA-SBR-7739H; CA-SBR-7740H; CA-SBR-2910H; CA-SBR-4255H; CA-SBR-8392H; CA-7753H; and CA-SBR-4274. Eight of these sites (CA-SBR-7752H, CA-SBR-7740H, CA-SBR-4255H, CA-SBR-4251H, CA-SBR-7739H, CA-SBR-47753H, CA-SBR-2910H, and CA-SBR-4274H) no longer exist in the Project area.

**Table 6.5-4
Previously Recorded Sites within One Mile of Plant Site and
within ¼ mile of Linear Facilities**

Site #	Site Type/Constituents	Cultural/Temporal Affiliations
SBR-3618/H	Food processing site/flakes, burned bone, fire-affected rock; residential/farm features	Prehistoric/Indeterminate; Late historic
SBR-10951H	Dump site/artifacts	Late historic/1914-1945
SBR-3007/H	Campsite/lithic scatter and fire-affected rock; Historic structure/ structural remains and artifact scatter	Prehistoric/Indeterminate; Late historic
SBR-10948H	Residential and dump site/reservoir, well, and artifacts	Late historic/1914-1945
SBR-10947H	Dump site/artifacts	Late historic/1914-1945
SBR-10946H	Dump site/can scatter	Late historic/1914-1945
SBR-10950H	Dump site/can scatter	Late historic/1914-1945
SBR-10949H	Dump site/ artifacts	Late historic/1914-1945

**Table 6.5-4
Previously Recorded Sites within One Mile of Plant Site and
within ¼ mile of Linear Facilities**

Site #	Site Type/Constituents	Cultural/Temporal Affiliations
SBR-8832H	Dump site/artifacts	Late historic/pre-1945
SBR-8833H	Dump site/artifacts	Late historic/pre-1945
SBR-8834H	Dump site/artifacts	Late historic/pre-1945
SBR-8831H	Linear/fence line	Late Historic
SBR-7154H	Dump site/artifacts	Late Historic/1930-1950
SBR-72	“Footprint site”/prehistoric human and animal tracks in dried Mojave River silt; prehistoric habitation site/hearths [NRHP nominated 1979]	Prehistoric/Pinto or Gypsum period based on radiocarbon dates (860-4190 B.C.)
SBR-10957	Campsite/lithic scatter and rock feature	Prehistoric/Indeterminate
SBR-3008	Lithic scatter/chalcedony and quartz flakes	Prehistoric/Indeterminate
SBR-5433	Lithic quarry/debitage	Prehistoric/Indeterminate
SBR-7155	Food processing site/ground stone artifacts and fire-affected rock	Prehistoric/Indeterminate
SBR-6153	Campsite/midden and lithic and ceramic scatter	Prehistoric/Indeterminate
P-1584-14	Lithic quarry/debitage	Prehistoric/Indeterminate
P-1584-15	Campsite/lithic scatter and rock feature	Prehistoric/Indeterminate
P-1584-16	Lithic quarry/debitage	Prehistoric/Indeterminate
SBR-2734	Prehistoric campsite/FCR and flakes	Prehistoric/indeterminate
SBR-3005	Lithic scatter/thin scatter of flakes on local stone	Prehistoric/indeterminate
SBR-3006	Prehistoric campsite/hearth features; ceramics, lithics, groundstone, shell beads	Prehistoric/indeterminate
SBR-3033/H + SBR-4272H + SBR-4411	Linear site/ Prehistoric trail and historic pioneer roads; trail monument (SBR-4272H)	Prehistoric/indeterminate; historic/1849-1880
SBR-10306H	Residential/house and reservoir remains	Historic/Late Historic
SBR-10952	Lithic scatter/sparse scatter of quartzite, chalcedony, and jasper debitage	Prehistoric/indeterminate
SBR-8392H	Linear/Railroad berm and tracks	Late historic /Indeterminate

**Table 6.5-4
Previously Recorded Sites within One Mile of Plant Site and
within ¼ mile of Linear Facilities**

Site #	Site Type/Constituents	Cultural/Temporal Affiliations
SBR-4272H + 4411H	Linear / Historic pioneer roads	Historic/1849-1880
SBR-10315H	Linear/Historic power transmission line	Historic/1931
SBR-10317H	Linear/Historic power transmission line	Historic/1918
SBR-8389H	Campsite/Fire-cracked rock and bottle glass	Historic/Indeterminate
SBR-8863	Campsite/debitage and fire-cracked rock	Prehistoric/Indeterminate
SBR-8391	Campsite/debitage and fire-cracked rock	Prehistoric/Indeterminate
SBR-8393	Campsite/debitage and fire-cracked rock	Prehistoric/Indeterminate
SBR-7043	Campsite/debitage and groundstone fragments	Prehistoric/Indeterminate
SBR-10316H	Linear/Historic power transmission line	Historic/1913
SBR-4275H	Linear/Road	Historic/pre-1878
SBR-4251H	Linear/Historic power line	Historic/pre-1941
SBR-4276H	Linear/Road	Historic/1860s
SBR-2910H	Linear/ Historic power line	Not Available
SBR-4255H	Linear/Power line	Historic/pre-1941
SBR-7744H	Dump site/SCA glass, vent hole cans, sanitary cans	Historic/20 th century
SBR-7745H	Dump site/ glass fragments, vent hole cans	Historic/20 th century
SBR-7739H	Dump site/SCA glass fragments, hole in top cans	Historic/20 th century
SBR-7740H	Dump site/ glass and ceramic fragments, vent hole cans	Historic/20 th century
SBR-7741H	Dump site/ SCA and clear glass fragments	Historic/20 th century
SBR-7743H	Dump site/ can scatter	Historic/20 th century
SBR-7742H	Dump site/domestic trash	Historic/20 th century
SBR-11272H	Linear/Road	Historic/pre-1942
SBR-11267H	Linear/Road	Historic/late 19 th -early 20 th centuries
SBR-11273H	Linear/Road	Historic/pre-1942

**Table 6.5-4
Previously Recorded Sites within One Mile of Plant Site and
within ¼ mile of Linear Facilities**

Site #	Site Type/Constituents	Cultural/Temporal Affiliations
SBR-11264H	Dump site/domestic trash	Historic/early 20 th century
SBR-11266H	Dump site/domestic trash	Historic/early 20 th century
SBR-11269H	Dump site/domestic trash	Historic/early 20 th century
SBR-11271H	Dump site/domestic trash	Historic/early 20 th century
SBR-11659H	Dump site/domestic trash	Historic/early 20 th century
SBR-11660H	Dump site/domestic trash	Historic/late 19 th -early 20 th centuries
SBR-4274H	Linear/Road	Historic/late 19 th century
SBR-6353H	Dump site/domestic trash	Historic/20 th century
SBR-7752H	Dump site/can scatter	Historic/20 th century
SBR-7753H	Dump site/can scatter	Historic/20 th century
SBR-11999H	Dump site/domestic and industrial trash	Historic and Modern/late 20 th century
SBR-7694H	Linear/Power transmission line	Historic/1933-1936
SBR-69	Midden partly covered with layer of outwash; manos, pestle frag., debitage	Prehistoric/indeterminate
SBR-10958	Lithic Scatter: 11 Lithic Flakes, 1 Scraper	Prehistoric/indeterminate
SBR 7154H	Two concentrations of cans & tins, glass bottles & shards, ceramic shards, pot handle, crown caps, and metal automotive parts.	Historic/Late Historic

Field Survey. Cultural resources surveys of the Project site, including the main plant site area, two laydown areas, and the linear facilities, were conducted in March 2006, November 2006, and January 2007. The surveys consisted of pedestrian archaeological surveys using a maximum transect interval of 20 meters of all Project areas that were accessible (not covered by structures, access granted by property owners, etc.) and potentially impacted by Project activities. Criteria used to identify sites followed the Secretary of Interior's Standard and Guidelines. Results are discussed below.

Field Survey Results, Plant Site. Project archaeologists performed pedestrian surveys of the plant site in March 2006, November 2006, and January 2007. Ground visibility was good, ranging between 60 and 70 percent. The entire area has been highly disturbed by

modern and late historic activities that consist of construction of dwellings and outbuildings, dirt road formation through repeated vehicular traffic, scavenging, and both periodic and habitual dumping of garbage. The entire plant site was scattered with modern and historic trash including several tin can scatters and concentrated trash scatters around old house foundations.

During the course of the survey, Project archaeologists recorded no prehistoric isolates or prehistoric archaeological sites. Twenty-two previously undocumented historic sites (VV2 Sites 1 through 21 and Site 33) were recorded on State of California DPR 523 Forms (See AFC Appendix I). These sites consist of either dump sites or house foundations and associated scatter from the twentieth century. None of the 22 sites meet the criteria for significance as discussed in Section 6.5.3 and shown in Table 6.5-4.

In addition to the pedestrian survey of the plant site, a windshield survey of the area within a one-mile radius the plant site was performed to determine whether historic buildings and structures are present and to assess the impact of the Project on the historic context of historic properties present within the one-mile buffer area. The survey was conducted from existing vantage points (e.g., available access roads) and did not create new ground disturbances. Prior to the survey, available aerial photographs of the one-mile buffer area were studied to identify existing structures. Two existing structures were observed on the aerials and were examined on the ground during the survey. In addition, one additional structure was identified and examined during the survey. None of the structures were historic; all were modern (less than 50 years old). No other prehistoric or historic resources were observed.

Field Survey Results, Laydown Areas. Project archaeologists surveyed the two laydown areas in March 2006. Ground visibility was good (between 60 and 70 percent) in the laydown area survey. The entire area appeared to be relatively undisturbed except for a number of dirt roads that cross the southern laydown area. No previously unrecorded prehistoric or historic material was observed. However, one previously recorded historic site (CA-SBR-10951H) was observed and updated on a State of California DPR-523 Continuation Form (see AFC Appendix I). For purposes of this AFC, the updated site is referred to as VV2 Site 22. The site consists of a dump site from the mid to late twentieth century (see detail in AFC Appendix I). This site does not meet the criteria for significance as discussed in Section 6.3 and shown in Table 6.5-4.

Field Survey Results, Transmission Line Route Segment 1, Reclaimed Water Supply, and Sanitary Wastewater Pipelines. Project archaeologists surveyed the 100-ft wide linear corridor for Segment 1 of the transmission line route as well as the routes of the reclaimed water supply and sanitary wastewater pipelines in March 2006, May 2006,

November 2006, and January 2007. A 50-foot buffer on each side of the corridors was also surveyed.

Ground visibility was good (from 60 to 70 percent). The entire area appeared to be relatively undisturbed, except for a number of dirt roads that cross it. Additionally, the southern section of Segment 1 has been disturbed by modern and late historic activities that consist of construction of dwellings, outbuildings, and a water detention basin.

The portion of the linears route that follows the outside of the VVWRA's western fence line and then crosses VVWRA property has been highly disturbed by VVWRA construction activities. The VVWRA land crossed by the transmission line route is highly disturbed, having been graded and cleared of all vegetation with a portion of it excavated for the creation of waste holding reservoirs.

One prehistoric site (VV2 Site 23) was recorded during the survey. Additionally, four previously unrecorded historic sites (VV2 Sites 32, 34, 35, and 36) were identified. The VV2 Site 23 consists of a light scatter of prehistoric artifacts; one mortar bowl fragment and two chert flakes. The VV2 Site 34 consists of a single concentration of historic trash including historic cans, sun-colored amethyst glass, and aqua, clear, and brown bottle glass shards. VV2 Site 35 and Site 36 each consist of two separate concentrations of historic trash; a concentration of bottle glass and a concentration of historic cans. These sites (see detailed discussion in AFC Appendix I) do not meet the standard of criteria for significance as discussed in Section 6.5.3 and shown in Table 6.5-4.

Field Survey Results, Transmission Line, Segment 2. Project archaeologists surveyed Transmission Line Segment 2 in November 2006. The Segment 2 survey area consisted of the areas where construction activities will occur that would disturb the ground surface. For most of Segment 2, VV2 Project activities will only involve stringing new lines on existing transmission towers; in these areas only two pull areas were surveyed (the pull areas are the areas where the equipment is placed to perform the actual stringing of the lines on the transmission structures). The area that will be disturbed at each pull area is estimated to be 100 feet wide (the width of the ROW) and 40 feet long. A 300-foot-wide corridor was surveyed between the two tower sites to cover the area that was proposed for a pull area. Surveys also were conducted in the 1.47-mile long portion of Segment 2 within which three new pairs of transmission towers are needed. Ground visibility ranged between 60 and 70 percent.

The entire survey area of Segment 2 is relatively undisturbed, except for a number of paved and dirt roads that crisscross it. Large quantities of modern trash have been dumped at various locations along Segment 2. No prehistoric isolates or prehistoric archaeological

sites were recorded. One previously unrecorded historic site (VV Site 31), a large artifact scatter, was recorded, and is discussed in detail in AFC Appendix I. This site does not meet the criteria for significance as discussed in Section 6.5.3 and shown in Table 6.5-4.

Field Survey Results, Transmission Line Segment 3. Project archaeologists surveyed Segment 3 in November 2006 and January 2007. The area surveyed including the 78 new transmission tower sites, eight pull areas, an approximately one-mile-long corridor immediately east of the Lugo Substation, and an approximately 6.5-mile-long 115 kV replacement line corridor that extends south from the Victor substation within the same ROW as the new VV2 230 kV line. The area required for the construction of each new tower is 160 feet wide and 100 feet long. The survey area at each new tower location covered an area 300 feet by 300 feet centered on each tower site. The estimated area of disturbance at each pull area is 100 feet wide (the width of the ROW) and 40 feet long. A 300-foot-wide corridor was surveyed between tower sites. A 100-foot buffer was surveyed for pull areas 7 and 8 and on either side of the one-mile long corridor leading to the Lugo substation.

Ground visibility was good (between 60 and 70 percent), except in the last two to three miles of Segment 3, where thick grassy ground cover obscured ground visibility to less than 15 percent. The entire survey area is relatively undisturbed except for a number of dirt roads that crisscross it. The major feature identified was large quantities of modern trash that have been dumped at various locations along the survey areas. No prehistoric isolates or prehistoric archaeological sites were recorded. Seven previously unrecorded historic sites (VV2 Sites 24 through 30 and 37 through 44) were recorded and one historic transmission line site (CA-SBR-103161H) was updated on a State of California DPR-523 Continuation Form (see AFC Appendix I). The newly recorded sites, discussed in detail in AFC Appendix I, consist of dump sites from the mid to late twentieth century with mainly light to moderate scatter of historic refuse. These sites and the portion of the historic transmission line within the survey area do not meet the criteria for significance, as discussed in Section 6.3.5 and shown in Table 6.5-4.

6.5.2.6 Consultation with Local Historical Societies and Other Interested Parties

In addition to the record search conducted by SBAIC, the following agencies were contacted by letter on May 12, 2006, requesting information regarding historic or other cultural resources within or adjacent to the VV2 Project area.

- San Bernardino County Planning Department, Victorville Office;
- City of Victorville Planning Department;
- Mojave Desert Heritage and Cultural Association;

- Victor Valley Museum and Art Gallery;
- Roy Rogers and Dale Evans Museum;
- San Bernardino Historical and Pioneer Society; and
- Mojave Historical Society.

The letters sent to the Mojave Historical Society and the Roy Rogers and Dale Evans Museum were returned, address unknown. The City of Victorville provided a copy of the Cultural Resources Technical Report for the City of Victorville General Plan. No other responses to these inquiries have been received as of February 2007 (see AFC Appendix I for a summary of consultation).

Additional historical research into the date of construction and possible association of the structural remains encountered during the archaeological survey began by contacting local historian Richard Thompson, who has served as the president of both the Mojave Historical Society and the San Bernardino Pioneer and Historical Society. Topographic maps were consulted to establish broad date ranges for the construction of structures within the Project area. Additional research was then conducted through the San Bernardino County Assessor's Office. Jeremy Johnson of the San Bernardino County Public Works Department provided historical aerial photographs of the Project area taken in 1955.

6.5.2.7 Native American Heritage Commission Consultation

A letter was sent to the Native American Heritage Commission (NAHC) in Sacramento, on February 24, 2006 describing the VV2 Project and requesting a listing of local, interested Native American representatives and information on traditional or sacred lands within the Project vicinity. In response, on March 8, 2006 NAHC staff member Ms. Carol Gaubatz wrote that a "record search of the sacred lands file has failed to indicate the presence of Native American cultural resources in the immediate project area." Included in the response was a list of Native American Contacts (see AFC Appendix I).

On May 23, 2006 letters were sent to the following Native American persons requesting information regarding traditional or sacred properties at the Project site and vicinity:

- Mr. Britt Wilson, Cultural Resource Coordinator, Morongo Band of Mission Indians;
- Mr. Maurice Lyons, Chairperson, Morongo Band of Mission Indians;
- Mr. John Valenzuela, Chairperson, San Fernando Band of Mission Indians;
- Mr. Deron Marquez, Chairperson, San Manuel Band of Mission Indians;
- Ms. Bernadette Brierty, Cultural Resources Coordinator, San Manuel Band of Mission Indians; and

- Goldie Walker, Serrano Band of Indians (contacted June 23, 2006).

An email response from Britt Wilson of the Morongo Band of Mission Indians was received on June 6, 2006 (see AFC Appendix I) and follow-up telephone calls to others on the above list were made in June and July 2006. Mr. Wilson requested a copy of the Phase I cultural report for review. Mr. Valenzuela expressed concern about the potential for prehistoric sites in the area of impact and asked to be informed if anything cultural is encountered during construction; and Ms. Walker asked to be contacted if human remains or any cultural materials are discovered as a result of construction activities.

6.5.3 Environmental Impacts

The determination of significance of a cultural resource in California is based on the criteria of the California Register of Historical Resources (CRHR) (Pub. Res. Code SS5024.1, Title14 CCR, Section 4852) that stipulates that a building, structure, archaeological site, etc., will be considered significant if it meets at least one of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

A project's impacts involve the level of direct and indirect physical changes to the resource it causes. Thresholds of significance are criteria used to determine if the project creates damaging impacts to cultural resources. The following thresholds of significance were used to assess whether or not the VV2 Project poses significant impacts to cultural resources. A significant impact would exist if the Project would:

- Directly alter the physical remains of a significant resource in a way that would adversely alter that determination;
- Indirectly alter the physical remains of a significant resource in a way that would adversely change the significance determination. This could occur by exposing intact archaeological or historic features or deposits to increased erosion, inadvertent damage, or vandalism due to decreased surface protection through site clearance and preparation;

- Directly alter the physical setting of the significant resource, if the natural setting is a contributing factor in the determination of the resource's significance. This could occur by the destruction or removal of natural features through grading, excavation, or any other ground-disturbing activity;
- Indirectly alter the physical setting of the significant resource, if the natural setting is a contributing factor in the determination of the resource's significance. This could occur by exposing the natural setting to increased erosion, inadvertent damage, or vandalism due to the decreased surface protection through site clearance and preparation; and/or
- Directly or indirectly disturb any human remains, including those interred outside of formal ceremonies.

6.5.3.1 Construction Phase

This section evaluates the potential impacts to cultural resources of construction of the VV2 Project. As a result of the archival research, field survey, and consultation efforts described above, one previously undocumented prehistoric site, 42 previously undocumented historic sites, and two previously recorded historic sites (SBR-10951H (VV2 Site 22) and SBR-10316H) were recorded or updated. Table 6.5-5 summarizes the VV2 Project's expected impacts on each of these sites.

Although ground-disturbing construction activities have the potential to directly impact cultural resources by disturbing both surface and subsurface soils, none of the recorded prehistoric or historic resources are considered significant. Thus, Project impacts to these resources are not considered a significant impact in terms of CEQA significance criteria.

**Table 6.5-5
Summary of VV2 Project Site Data and Impact Assessment**

Site No.	Site Type/Historic Context	Date	Significance Potential	VV2 Project Impact
VV2 Site 1	Dump site/Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness	Less than significant
VV2 Site 2	Dump site/Late historic occupation of Mojave Desert	Early to mid 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness	Less than significant
VV2 Site 3	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	1952-1989	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant

**Table 6.5-5
Summary of VV2 Project Site Data and Impact Assessment**

Site No.	Site Type/Historic Context	Date	Significance Potential	VV2 Project Impact
VV2 Site 4	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	1952-1955	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 5	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 6	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	1955-1989	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 7	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	1952-1989	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 8	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 9	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	1952-1989	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 10	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	1952-1955	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 11	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	1955-1989	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 12	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant

**Table 6.5-5
Summary of VV2 Project Site Data and Impact Assessment**

Site No.	Site Type/Historic Context	Date	Significance Potential	VV2 Project Impact
VV2 Site 13	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	Pre-1952	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 14	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 15	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 16	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	1952-1989	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 17	House pad, privy, and associated trash scatter/ Late historic occupation of Mojave Desert	Pre-1952	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 18	House foundation slab and associated trash scatter/ Late historic occupation of Mojave Desert	1952-1989	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 19	House pad, privy, and associated trash scatter/ Late historic occupation of Mojave Desert	Pre-1952	Not significant does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 20	House remains and associated trash scatter/ Late historic occupation of Mojave Desert	Pre-1952	Not significant; does not meet CRHR criteria or criteria for uniqueness; lacks historic integrity.	Less than significant
VV2 Site 21	Dump site/Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness	Less than significant

**Table 6.5-5
Summary of VV2 Project Site Data and Impact Assessment**

Site No.	Site Type/Historic Context	Date	Significance Potential	VV2 Project Impact
SBR-10951H (VV2 Site 22)	Dump site/Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness	Less than significant
VV2 Site 23	Artifact scatter/ Prehistoric occupation of Mojave Desert	Prehistoric	Not significant; potentially meets criteria (D) for CRHR listing, but the deposit lacks integrity, most likely in secondary context.	Less than significant
VV2 Site 24	Dump site/Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness	Less than significant
VV2 Site 25	Dump site/Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness	Less than significant
VV2 Site 26	Dump site/Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness	Less than significant
VV2 Site 27	Dump site/Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness	Less than significant
VV2 Site 28	Dump site/Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness	Less than significant
VV2 Site 29	Dump site/Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness	Less than significant
VV2 Site 30	Dump site/Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness	Less than significant
VV2 Site 31	Dump site/Late historic occupation of Mojave Desert	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness	Less than significant

**Table 6.5-5
Summary of VV2 Project Site Data and Impact Assessment**

Site No.	Site Type/Historic Context	Date	Significance Potential	VV2 Project Impact
VV2 Site 32	Two single-family dwellings, outbuilding, concrete basin and associated concrete pad; also additional concrete pad and associated refuse.	Mid to late 20 th century	Not significant; does not meet CRHR criteria or criteria for uniqueness	Less than significant
VV2 Site 33	Dump site/Late historic occupation of Mojave Desert	Mid to late 20th century	Not significant: does not meet CRHR criteria or criteria for uniqueness	Not a significant impact
VV2 Site 34	Dump site/Late historic occupation of Mojave Desert	Mid to late 20th century	Not significant: does not meet CRHR criteria or criteria for uniqueness	Not a significant impact
VV2 Site 35	Dump site/Late historic occupation of Mojave Desert	Mid to late 20th century	Not significant: does not meet CRHR criteria or criteria for uniqueness	Not a significant impact
VV2 Site 36	Dump site/Late historic occupation of Mojave Desert	Mid to late 20th century	Not significant: does not meet CRHR criteria or criteria for uniqueness	Not a significant impact
VV2 Site 37	Dump site/Late historic occupation of Mojave Desert	Mid to late 20th century	Not significant: does not meet CRHR criteria or criteria for uniqueness	Not a significant impact
VV2 Site 38	Dump site/Late historic occupation of Mojave Desert	Mid to late 20th century	Not significant: does not meet CRHR criteria or criteria for uniqueness	Not a significant impact
VV2 Site 39	Dump site/Late historic occupation of Mojave Desert	Mid to late 20th century	Not significant: does not meet CRHR criteria or criteria for uniqueness	Not a significant impact
VV2 Site 40	Dump site/Late historic occupation of Mojave Desert	Mid to late 20th century	Not significant: does not meet CRHR criteria or criteria for uniqueness	Not a significant impact
VV2 Site 41	Dump site/Late historic occupation of Mojave Desert	Mid to late 20th century	Not significant: does not meet CRHR criteria or criteria for uniqueness	Not a significant impact

**Table 6.5-5
Summary of VV2 Project Site Data and Impact Assessment**

Site No.	Site Type/Historic Context	Date	Significance Potential	VV2 Project Impact
VV2 Site 42	Dump site/Late historic occupation of Mojave Desert	Mid to late 20th century	Not significant: does not meet CRHR criteria or criteria for uniqueness	Not a significant impact
VV2 Site 43	Dump site/Late historic occupation of Mojave Desert	Mid to late 20th century	Not significant: does not meet CRHR criteria or criteria for uniqueness	Not a significant impact
VV2 Site 44	Dump site/Late historic occupation of Mojave Desert	Mid to late 20th century	Not significant: does not meet CRHR criteria or criteria for uniqueness	Not a significant impact
SBR-10316 H	Electric transmission line/ 20 th century occupation of Mojave Desert	Early to mid 20 th century	Overall line (over 200 miles originally) considered significant, but affected segment (less than 10 miles) is not unique and lacks integrity of location, setting, materials and feeling	Not a significant impact

The concentration of recorded historic structures was determined not to be a historic district because: (1) the settlement of the area appears to be random and haphazard, with up to a half dozen structures being constructed and used within any time period; (2) none of the structures are considered significant historic resources; and (3) no cultural or ethnographic affiliations can be established for those who inhabited the VV2 Project area.

Since evidence of potentially significant subsurface historic or prehistoric deposits was not identified within the Project area, the potential for such resources to be buried within the Project site is very low, making it unlikely that inadvertent discoveries will be made during construction.

6.5.3.2 Operations Phase

Once the power plant and associated pipeline and transmission lines are in place, no additional impacts to cultural resource are anticipated through operation of the VV2 Project.

6.5.3.3 Cumulative Impacts

Because the VV2 Project will not affect known significant cultural resources (i.e., no significant impacts), it is not expected to cause or contribute to significant cumulative impacts. The potential for project or cumulative impacts stemming from the VV2 Project encountering a previously unknown cultural site would be minimized by the planned mitigation measure, which requires halting project construction work in the event unexpected cultural resources are encountered in order to allow proper evaluation and mitigation of the newly discovered resource. Other potential projects in the area will be subject to the same or similar regulatory requirements as the VV2 Project, and will be expected to comply with regulations protective of cultural resources through avoidance, evaluation, and proper mitigation for discovered resources.

6.5.4 Mitigation Measures

Although significant archaeological and historic archaeological sites were not found during the Project field surveys, it is possible that subsurface construction could encounter buried cultural resources. For this reason, the measures listed below will be implemented to mitigate potential adverse impacts that could occur if there were an inadvertent discovery of buried materials.

CUL- 1: The project proponent will retain a designated cultural resources specialist (CRS) who will be available during the entire construction period to inspect and evaluate any finds of buried archaeological or historically significant resources that might occur during construction. If there is a discovery of archaeological remains during construction, the CRS, in conjunction with the construction superintendent and environmental compliance manager, will make certain that all construction activity stops in the immediate vicinity of the find until the find can be evaluated. The CRS will inspect the find and evaluate its potential significance, in consultation with CEC staff and the CEC compliance project manager (CPM). The CRS will make a recommendation as to the significance of the find and any measures that would mitigate adverse impacts of construction on a significant find.

The CRS will meet the minimum qualifications for Principal Investigator on Federal projects under the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The CRS will be qualified, in addition to site detection, to evaluate the significance of the deposits, consult with regulatory agencies, and plan site evaluation and mitigation activities.

CUL-2: The project proponent will prepare a construction worker sensitivity training program to ensure implementation of procedures to follow in the event that cultural or historically significant resources are discovered during construction. This training will be provided to each construction worker as part of their environmental, health, and safety training. The training will include photographs of various types of historic and prehistoric artifacts and will describe the specific steps that will be taken in the event of an unanticipated discover of cultural material, including human remains. It will explain the importance and legal basis for the protection of significant archaeological resources. The training will also be presented in the form of a written brochure.

CUL-3 If construction staff or others identify archaeological or historically significant resources during construction, they will immediately notify the CRS and the site superintendent, who will halt construction in the immediate vicinity of the find, if necessary. The CRS will use flagging tape, rope, or some other means as necessary to delineate the area of the find within which construction will halt. This area will include the excavation trench from which the archaeological finds came as well as any piles of dirt or rock spoil from that area. Construction will not take place within the delineated find area until the CRS, in consultation with the CEC staff and CEC CPM, can inspect and evaluate the find.

CUL-4 The CRS will follow accepted professional standards in recording any cultural resources find and will submit the standard Department of Recreation historic site form (Form DPR 523) and locational information to the State Clearinghouse.

If the CRS determines that the find is not significant, and the CEC CPM concurs, construction will proceed without further delay. If the CRS determines that further information is needed to determine whether the find is significant, the designated CRS will prepare a plan and a timetable for evaluating the find, in consultation with CEC.

CUL-5 If the CRS, CEC cultural resources staff, and CPM determine that a cultural resources find is significant, the CRS will prepare and carry out a mitigation plan in accordance with State guidelines. The plan will be submitted for CPM approval and will emphasize the avoidance, if possible, of significant archaeological resources. If avoidance is not possible, in order to mitigate damage or destruction of cultural materials, a data recovery program will be

developed to ensure recovery of information sufficient to address archaeological or historically significant research questions.

The mitigation program, if necessary, will be carried out as soon as possible to avoid construction delays. Construction will resume at the site as soon as the field data collection phase of any data recovery efforts is completed. The CRS will verify the completion of field data collection by letter to the Project owner and the CPM so that the owner and CPM can authorize resuming construction.

CUL-6 The CRS will arrange for curation of archaeological or historically significant materials collected during an archaeological data recovery mitigation program. Curation will be at a qualified curation facility meeting the standards of the California Office of Historic Preservation. The CRS will submit field notes, stratigraphic drawings, and other materials developed as part of the data recovery/mitigation program to the curation facility along with the archaeological collection, in accordance with the mitigation plan.

CUL-7 If a data recovery program is planned and implemented during construction, the CRS will prepare a detailed scientific report summarizing results of the excavations to recover data from an archaeological or historically significant site as a mitigation measure. The report will describe the site soils and stratigraphy, describe and analyze artifacts and other materials recovered, and draw scientific conclusions regarding the results of the excavations. This report will be submitted to the curation facility with the collection.

CUL-8 If human remains are found during construction, project officials are required by the California Health and Safety Code (Section 7050.5) to contact the County Coroner. If the Coroner determines that the find is Native American, he/she must contact NAHC. The NAHC, as required by the Public Resources Code (Section 5097.98) determines and notifies the Most Likely Descendant with a request to inspect the burial and make recommendations for treatment or disposal.

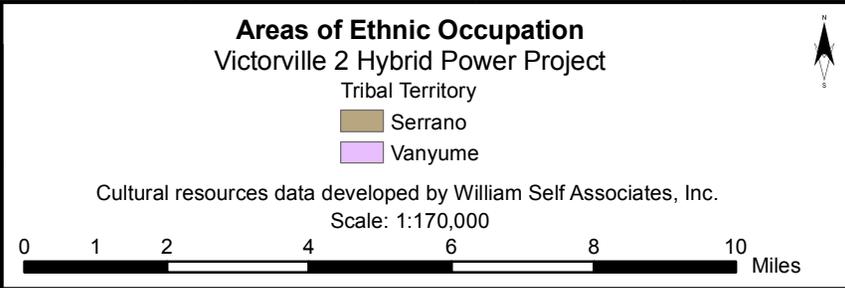
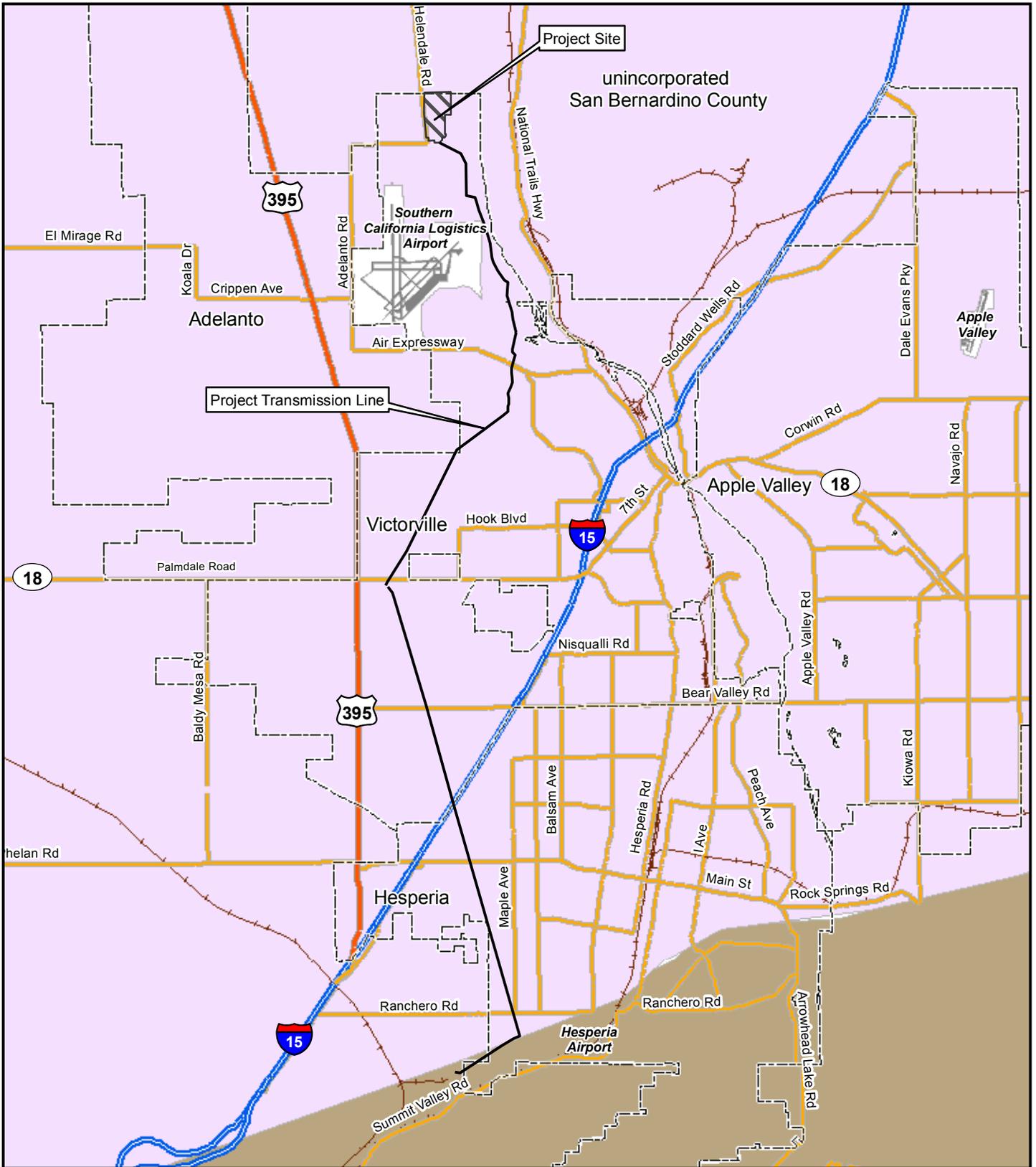
6.5.5 References

Antevs, E., 1953a. On Division of the Last 20,000 Years. University of California Archaeological Survey Reports 22.

Antevs, E., 1955. Geologic-Climatic Dating in the West American. *Antiquity* 20(4).

- Bean, L. J. and C. R. Smith, 1978. Serrano. In Handbook of North American Indians, Vol 8: California: 570-574. R. F. Heizer, ed. Washington, D.C.: Smithsonian Institution.
- Benedict, R., 1924. A Brief Sketch of Serrano Culture. *American Anthropologist* 26(3).
- Chartkoff, J. and K. K Chartkoff, 1984. *The Archaeology of California*. Stanford University Press.
- Drucker, P., 1937. Culture Element Distributions, V: Southern California. *University of California Anthropological Records* 1(1).
- Glennan, W. S., 1971. A Glimpse at the Prehistory of Antelope Valley – Archaeological Investigations at the Sweetser Site (Ker-302). Lancaster: Kern-Antelope Historical Society.
- Kroeber, A. L., 1925. *Handbook of the Indians of California*. Smithsonian Institution, Bureau of American Ethnology Bulletin 78. Washington, D. C.
- Kyle, D. E., 1990. *Historic Spots in California*. Palo Alto: Stanford University Press.
- Lantis, D. W., R. Steiner and A. E. Kariner, 1989. *California: The Pacific Connection*. Chico, CA: Creekside Press.
- Latta, F. F., 1932. El Camino Viejo. *Tulare Daily Times*. Tulare, CA.
- Moratto, M. J., 1984. *California Archaeology*. Orlando: Academic Press.
- Moseley, M. and G. A. Smith, 1962. Archaeological Investigations of the Mojave River Drainage. *San Bernardino County Museum Association Quarterly* 9: 3. Redlands.
- Pierson, E., 1970. *The Mojave River and its Valley*. Glendale: Arthur H. Clark Company.
- Schoenherr, A. A., 1995. *A Natural History of California* Berkeley. University of California Press.
- Steele, L., ed., 1975. A Surface Survey of Victorville Narrows. Occasional Paper (9). Archaeological Survey Association of Southern California. La Verne, CA.
- Strong, W. D., 1929. Aboriginal Society in Southern California. *University of California Publications in American Archaeology and Ethnology* 26(1).
- Sutton, M. Q., 1980. Some Aspects of Kitanemuk Prehistory. *The Journal of California and Great Basin Anthropology* 2(2).

United States Department of Agriculture, Soil Conservation Service, 1986. Soil Survey of San Bernardino County California; Mojave River Area





Inland Energy, Inc.
ENSR | AECOM

Figure: 6.5-1
Date: February 2007

Y:\Projects\InlandEnergy\Victorville\MXD\CEC_Figures_Finalized\Figure_6-5-1_Ethnic_Occupation.mxd