# D.4 Cultural Resources

## D.4.1 Environmental Setting for the Proposed Project

The area encompassed by the San Onofre Nuclear Generating Station (SONGS) 2 & 3 steam generator replacement project, which includes three potential transportation routes and the site of SONGS itself, is located along the western base of the Peninsular Range geomorphic region, which is represented by the Santa Margarita Mountains, with a maximum elevation of 3,190 feet (972 meters). A series of major drainages flows from the northeast to southwest into the Pacific Ocean. The project area is situated at the lower reaches of these drainages, which include San Onofre Creek, Horno Canyon, Las Flores Creek, and the Santa Margarita River. The general area is typified by rolling hills and flat coastal terraces that are cut by these drainages. The coastal terraces are formed by coastal uplifting, and are mostly Pleistocene marine and nonmarine sedimentary rock overlying Miocene and Tertiary marine deposits (Deméré, 2005; Weber, 1963). The various landforms of the terrace, drainage, and slope, and the interface of microenvironments combined to form a favorable habitat for extensive populations of marine mammals, shellfish, sea birds, land mammals, and plants (Schoenherr, 1992).

California's coastal terraces have supported a continuous cultural occupation for at least the last 10,000 years. Current archaeological evidence suggests that relatively small groups existed in these areas until about two millennia ago, when populations appear to have expanded into resource-rich coastal and near-shore estuarine environments (Moratto, 1984).

### D.4.1.1 Prehistory

The earliest human occupation of California occurred in the Paleoindian Period (11,000 to 5500 B.C.), when people lived in small mobile groups that hunted, collected shellfish, and harvested wild seeds. This period of human occupation of the area is characterized by assemblages of artifacts that are considered to be representative of a hunter-gather lifestyle (Moratto, 1984; Byrd et al., 1994). This complex includes primarily flaked lithic tools such as scrapers, choppers, and large projectile points that were mounted on darts thrown with the *atlatl* (a throwing stick). Paleoindian sites have been documented in inland and coastal areas of San Diego County that were occupied during a climatic period of cooler and moister conditions than presently exist. Archaeological evidence may have been lost at the end of the Pleistocene when many coastal sites were submerged as glacial ice melted and the sea level rose.

The appearance of ground-stone artifacts and a strong bifacial tool component distinguishes Archaic period sites (Reddy and Byrd, 1997). Responses to changing climactic conditions during the mid-Holocene (5500 to 3000 B.C.), the introduction of new milling technologies, and population growth are usually seen as leading to increasingly sedentary ways of life and the gradual emergence of regionally differentiated cultures. Large bifacial points were replaced with smaller arrowheads, and ground stone implements appeared. Basin metates and manos were now being used to grind small, hard seeds, which formed a major part of the diet. Shellfish-gathering supplied most protein, as hunting and fishing became relatively less important. Pine forests were still extensive, reflecting cooler, wetter climate than today. Considerably more evidence exists for occupation during this period than the previous one. Later in this period (3000 B.C. to circa A.D. 500) there is evidence for increased use of ground stone pestles and mortars. Sites from this period are typically found near sloughs and lagoons, and burial was the primary means of interment (Strudwick et al., 1995).

Sometime after A.D. 500 the region experienced another major shift in technological innovations with the introduction of the bow and arrow, which is indicated by the presence of very small projectile points in the archaeological assemblages (WSA, 1999). Ceramics also became widely used during this period; millingstone tool kits were more prevalent, obsidian from the Salton Sea appeared with greater frequency, and cremation of the dead was the preferred treatment of the dead (Moratto, 1984). During this period cultural traits associated with the late Patayan-area culture groups (Yuman) that were predominant east of the Colorado River are visible in the material culture of the San Diego area during the Late Prehistoric period (Reddy and Byrd, 1997).

## D.4.1.2 Ethnography

SONGS is located at the ethnographic boundary between the Luiseño and the Juaneño (Kroeber, 1925). The term Luiseño is derived from Mission San Luis Rey and refers to the Takic-speaking people associated with the mission. The term Juaneño has a similar relationship with Mission San Juan Capistrano. Both these designations have been used since the time of Spanish occupation. Kroeber (1925) separated these groups based on linguistic differences, but more recent investigations indicate that ". . . they are ethnologically and linguistically one ethnic nationality" (Bean and Shipek, 1978:550). For purposes of this report, therefore, both these groups will be identified as the Luiseño (WSA, 1999).

The Luiseño people occupied a territory approximately 1,500 square miles in size, ranging from Agua Hedionda Creek in the south, to Aliso Creek in the north, Lake Elsinore in the east, and the Pacific Ocean to the west. They spoke a language that belongs to the ". . . Cupan group of the Takic subfamily and has been referred to elsewhere as Southern California Shoshonean. Cupan is part of the Uto-Aztecan language family" (Bean and Shipek, 1978:550). The Luiseño typically inhabited sheltered canyons, close to perennial water sources that were easily defended. They lived in conical, semisubterranean structures made from local reeds, brush, or bark. Communal purification rites were conducted in semisubterranean sweathouses, and a ceremonial structure typically occupied a central location within the village (Bean and Shipek 1978:551; WSA, 1999).

The Luiseño were regarded as a dangerous, warlike people by their neighbors and had a highly developed warrior organization (WSA, 1999). They were very territorial with strict boundaries; trespassing on their land was considered a reason to go to war (Bean and Shipek 1978:551). The Luiseño were divided into kin groups based on a patrilocal and patrilineal social system (WSA, 1999).

No rigid sexual division of labor has been recognized among them; men sometimes gathered plant resources and women occasionally hunted and trapped. Subsistence was acorn based, supplemented by various grass seeds. The principal faunal resources were rabbit, deer, antelope, woodrat, numerous bird species, freshwater fish and saltwater mollusks, crustaceans, and sea mammals. Hunting kits included bow and arrows, as well as curved throwing sticks. Dugout or balsa canoes were used for ocean fishing, and fishing kits included basketry fish traps, dip nets, bone fish hooks and harpoons (Bean and Shipek, 1978:552).

## D.4.1.3 History

The first documented European contact was in 1542, when Juan Rodriguez Cabrillo, an explorer commissioned by the monarch of Spain, arrived in San Diego Bay. In 1602, Sebastian Viscaino, leading another Spanish expedition, entered the harbor. It was not until 1768 when the Russians began seal hunting off the coast of California that King Carlos III of Spain instituted a policy of building settlements in California (Mission San Diego, 2005). Mission San Diego de Alcala, the first of the California missions,

was established in 1769. From the founding of the mission until Mexican independence in 1821, the Spanish controlled the area, building in the meantime the Mission San Luis Rey and the San Diego presidio.

With independence, the Mexican government began to secularize the mission properties, a process that was concluded in 1833. The missions were converted into parish churches, and regional commissions were established to dispose of the properties and resettle the Indians affiliated with the missions. Mexican government policy was to grant mission properties and other unclaimed land to prominent citizens, who were required to inhabit and develop the properties. This period of California history, known as the Rancho Period, brought in a class of wealthy landowners (rancheros) who controlled the subsequent development of the State. During this period the town of San Diego was established and began to grow rapidly.

The deterioration of relations between the United States and Mexico resulted in the Mexican War, which ended with Mexico relinquishing California to the United States under the Treaty of Guadalupe Hidalgo of 1848. With the formation of the new State of California, and the onset of the American period, rapid changes were in store for the region. With the discovery of gold in the Sierra Nevada in 1848, the population in California soared as emigrants flooded in, seeking gold or producing goods or services for miners. New land laws broke up the Mexican ranchos and thousands of acres of land became available for settlement by emigrants. Land use changes throughout California resulted, as livestock grazed some native grasses to extinction, woodlands were cut for lumber, railroad ties and mine timbers, and agricultural development occurred on nearly all arable land.

Don Juan Forster purchased the 90,000-acre Rancho Santa Margarita y Las Flores in 1864 from Pio and Andres Pico (Kyle, 1990). Used primarily for cattle grazing, the land was sold to James Flood in 1882 with the agreement that he would work off half ownership of the ranch as resident manager. In 1907, Flood's son leased part of the land to Henry Magee and transferred half title of the property to a Mr. O'Neill (Strudwick et al., 1995). Seeking a site for an emergency runway, the United States Government leased part of the Magee land in 1931 and built a runway. By 1940, the Rancho land was divided between the Flood and Baumgartner families (southern half) and the O'Neill family (northern half) (Sleeper, 1988). In 1941, 9,000 acres in the southern portion of the Rancho was purchased by the United States government to be utilized as a Naval Ammunition Depot. In 1942, the Marine Corps established Camp Joseph H. Pendleton and have utilized the land for training and transport ever since (Hines and Rivers, 1991).

### D.4.1.4 Previous Recorded Cultural Resources in the Project Area

Southern California Edison provided data to the CPUC on previously recorded cultural resources relating to the project area. The records included a review of cultural resource and excavation reports and recorded archaeological sites within a half-mile radius of the project area that are on file at the South Coastal Information Center (SCIC) at San Diego University. From previous work, the EIR preparers also have records and maps on file, as well as some reports of previous cultural resource surveys conducted on Camp Pendleton within the half-mile radius of the project area (WSA, 1999). The cultural resource studies within a half-mile radius of the project area including the transport route are listed in Table D.4-1.

**Table D.4-1. Cultural Resource Studies in the Project Area, Including the Transport Route**

| USGS Quad | NADB # | Author | Date | Report Title |
|---|---|---|---|---|
| Oceanside; San Luis Rey | 1120577 | Carrillo | 1982 | Map for Highway Alternatives Study 11-SD-76 0.012.9 11821-159021. |
| Oceanside; Las Pulgas Canyon; San Luis Rey; etc. | 1120805 | Clevenger and Schliz | 1987 | Cultural Resource Survey of the Stuart Mesa Family Housing Project Alternatives, Marine Corps Base, Camp Pendleton, San Diego County, California. |
| Oceanside | 1123147 | Robbins-Wade | 1995 | Archaeological Survey of Proposed Alternative Housing Sites Marine Corps Base Camp Pendleton, San Diego, California. |
| Oceanside | 1123369 | U.S. Army Corps of Engineers | 1988 | Oceanside Harbor Feasibility Study for Storm Damage Reduction. |
| Oceanside; Las Pulgas Canyon | 1122860 | Brown | 1994 | Cultural Reconnaissance for the Marine Corps Tactical Systems Support Activity, Camp Pendleton, California. |
| Oceanside; Las Pulgas Canyon | 1123023 | Brown | 1996 | Cultural Reconnaissance for the Marine Corps Tactical Systems Support Activity, Camp Pendleton, San Diego County, California. |
| Oceanside; San Luis Rey | 1120535 | Cupples | 1976 | Oceanside Harbor and Navigation Project: Archaeological Survey Report. |
| Oceanside; Las Pulgas Canyon | 1122867 | Pigniolo and Crawford | 1993 | Historic Properties Inventory of the Stuart Mesa Maintenance Facility Alternative, Camp Pendleton, California. |
| Oceanside; San Luis Rey | 1127615 | Walker | 1981 | A Cultural Resource Study of the AT&SF Switchyard Property Camp Pendleton Military Reservation. |
| Oceanside | 1124552 | Byrd | 1996 | Testing Plan for Evaluation of CA-SDI-10841 on Camp Pendleton, San Diego County, California. |
| Oceanside | 1124404 | Schwartz | 1983 | Cultural Resource Assessment of Proposed Projects at Oceanside Beach, San Diego County, California. |
| Oceanside | 1126130 | Lauter | nd | Cultural Resource Assessment of the Area Impacted by the Proposed Expansion of Oceanside Harbor, California. |
| Oceanside | 1126609 | Salazar | 1979 | Historic Property Survey Report (Repairs to Bridge Cone Protection), Camp Pendleton Marine Corps Base. |
| Oceanside; San Luis Rey | 1128795 | Donovan | 2002 | Wire Mountain 1 and 2 PPV Military Family Housing; Demolition and Replacement of 812 Military Family Housing Units with the Addition of up to 250 Housing Units. |
| Oceanside; Las Pulgas Canyon | 1120736 | Clevenger | 1987 | Cultural Resource Survey Stuart Mesa Family Housing Project Marine Corps Base, Camp Pendleton, San Diego, California. |
| Oceanside; Las Pulgas Canyon; San Clemente | 1120658 | Bull and Ezell | 1975 | Archaeological Reconnaissance of a Portion of the Coast of Camp Pendleton, San Diego County, California. |
| NA | 1123200 | Corum et al. | 1977 | An Analysis of Millingstone Horizon Catchment: Some Preliminary Comments. |
| San Clemente; Las Pulgas Canyon; Morro Hill | 1128246 | Cheever and Collett | 2002 | Results of a Phase I Survey of Nine Contonment Areas, USMCB Camp Pendleton, Oceanside, California. |
| Las Pulgas Canyon | 1125773 | Corum | 1977 | An Archaeological Survey Report for the Proposed Aliso Creek Roadside Rest Revision 11-SD-5, Northbound, P.M. 59.3. |
| Las Pulgas Canyon | 1128858 | Byrd et al. | 2004 | The Lower Las Flores Creek Landscape: Exploring the Interrelationship between Human Adaptations and Environmental Trends on Camp Pendleton, California. |

**Table D.4-1. Cultural Resource Studies in the Project Area, Including the Transport Route**

| USGS Quad | NADB # | Author | Date | Report Title |
|---|---|---|---|---|
| Encinitas | 1128567 | Westec Services, Inc. | 1986 | Pacific Rim Country Club and Resort Draft Environmental Impact Report. |
| Las Pulgas Canyon | 1126467 | U.S. Department of the Interior | 1993 | National Register of Historic Places Registration Form: Las Flores Adobe. |
| Las Pulgas Canyon | 1126342 | Thomas | 1996 | National Register of Historic Places/Las Flores Adobe. |
| Oceanside | 1123644 | Byrd et al. | 1997 | Archaeological Survey and Testing of a Limited-use Shell Scatter (CA-SDI-10841) for the Wire Mountain Housing Project, Southwestern Camp Pendleton, San Diego County, California. |
| NA | 1126245 | Foster and Woodman | 2001 | Archaeological Testing Under the Las Flores Adobe Ranch House, CA-SDI-821H, Locus B, Marine Corps Base, Camp Pendleton, California. |
| NA | 1125005 | King | 2001 | Archaeological Survey of a Portion of the Romeo Two Training Area, MCB Camp Pendleton, San Diego, California. |
| Del Mar | 1124384 | Westec Services, Inc. | 1980 | Archaeological Survey of Miramar Auto Center Project. |
| Del Mar | 1125547 | Collett | 2001 | Black Mountain Ranch West Clusters, Evaluation of CA-SDI-11983. |
| Las Pulgas Canyon | 1123919 | Rosenthal et al. | 2001 | Data Recovery Investigations at CA-SDI-812/H (Las Flores), MCB Camp Pendleton, San Diego County, California. |
| Las Pulgas Canyon | 1123431 | Robbins-Wade | 1997 | Archaeological Survey of Pacific Bell Las Pulgas Cellular Site Marine Corps Base Camp Pendleton, San Diego County, California. |
| Las Pulgas Canyon; San Luis Rey | 1123629 | York | 1999 | Cultural Resources Phase I Survey Report for Northern Power Distribution System Transmission Line Project (P046) Marine Corps Base, Camp Pendleton, California. |
| Las Pulgas Canyon; Morro Hill; Margarita Peak; etc. | 1121997 | Murray | 1981 | An Archaeological Survey of an Inland Portion of Joseph H. Pendleton Marine Corps Base, San Diego County, California. |
| Las Pulgas Canyon; Del Mar; Oceanside; etc. | 1125252 | Westec Services, Inc. | 1979a | Environmental Data Statement San Onofre to Mission 230 kV Transmission Line Addendum No. 1. |
| Las Pulgas Canyon; Del Mar; Oceanside; etc. | 1125251 | Westec Services, Inc. | 1979b | Environmental Data Statement San Onofre to Mission 230 kV Transmission Line Addendum No. 3. |
| Las Pulgas Canyon; Oceanside | 1124702 | Strudwick | 2000 | Monitoring and Discovery Plan for Six Waste Remediation Areas on Marine Corps Base Camp Pendleton, San Diego, California. |
| Escondido; Rancho Santa Fe; etc. | 1121689 | Walker and Bule | 1979 | A Cultural Resource Study of Proposed Access Roads Between the Escondido Substation and the Proposed Substation Site at Rainbow. |
| San Clemente; Margarita Peak | 1122799 | Clevenger et al. | 1993 | Phase I Historic Properties Inventory Marine Corps Base, Camp Pendleton, MCON Project P-527, San Onofre Sewage, San Diego County. |
| Oceanside; Las Pulgas Canyon; etc. | 1121800 | Welch | 1975 | An Archaeological Survey of the Santa Margarita River Valley and Adjacent Areas, Camp Pendleton, San Diego County, California. |

**Table D.4-1. Cultural Resource Studies in the Project Area, Including the Transport Route**

| USGS Quad | NADB # | Author | Date | Report Title |
|---|---|---|---|---|
| NA | 1123660 | Byrd et al. | 1994 | Draft Archaeological Testing Along San Mateo and San Onofre Creeks, Northwestern Camp Pendleton, San Diego County, California. |
| San Onofre Bluff; San Clemente | 1122426 | Hines and Rivers | 1991 | The Cultural Resources of the Pendleton Coast District. |
| NA | 1121262 | Isham | 1973 | An Archaeological Survey of the Japanese Mesa and Units 2 and 3 of the San Onofre Nuclear Generating Station. |
| San Onofre Bluff; San Clemente | 1121365 | Rosen | 1978 | An Assessment of the Archaeological Resources I the Area of the Proposed San Onofre Nuclear Power Plant Protective Earth-Filled Berm. |
| Oceanside | 1126270 | Schaefer | 1998 | World Mark Time Share Project Cultural Resource Study. |

Note: NA = not applicable; nd = no date.
Source: SCE, compiled by WSA, 2005.

The records search indicates that 118 archaeological sites have been previously recorded within a half-mile radius of the project area, including potential transport routes. The sites include a large number of prehistoric sites, including various artifact scatters and a few coastal shell midden sites. A number of historic sites have also been recorded, including historic dump sites and a number of historic highway-related features. Although none of the previously recorded sites appear to be situated within the project's Area of Potential Effect (APE), the entire area in which the project is located should be considered highly sensitive, as it is extremely rich in cultural resources. The known cultural resources are presented in Appendix 3.

## D.4.2 Applicable Regulations, Plans, and Standards

### Federal and State Standards

The following regulations from the State Public Resources Code and California Environmental Quality Act apply:

- Title 14, Public Resources Code (PRC), Section 5020.1 defines terms, including the following: (f) "DPR Form 523" means the Department of Parks and Recreation Historic Resources Inventory Form; (i) "historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California; (j) "local register of historical resources" means a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution; (l) "National Register of Historic Places" means the official Federal list of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, engineering, and culture as authorized by the National Historic Preservation Act of 1966 (Title 16 United States Code Section 470 et seq.); (q) "substantial adverse change" means demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired.
- Title 14, PRC, Section 5024.1 establishes a California Register of Historic Places; sets forth criteria to determine significance; defines eligible properties; lists nomination procedures.

- Title 14, PRC, Section 5097.5 establishes that unauthorized removal of archaeological resources on sites located on public lands is a misdemeanor. As used in this section, "public lands" means lands owned by, or under the jurisdiction of the state, or any city, county, district, authority or public corporation, or any agency thereof.
- Title 14, PRC, Section 5097.98 prohibits obtaining or possessing Native American artifacts or human remains taken from a grave or cairn; sets penalties.
- Title 14, PRC, Section 21083.2 establishes that the CEQA lead agency determines whether a project may have a significant effect on unique archaeological resources. If a potential for damage to unique archaeological resources can be demonstrated, such resources must be avoided; if they can't be avoided, mitigation measures shall be required; discusses excavation as mitigation; discusses cost of mitigation for several types of projects; sets time frame for excavation; defines "unique and non-unique archaeological resources," provides for mitigation of unexpected resources.
- Title 14, PRC, Section 21084.1 establishes that a project may have a significant effect on the environment if it causes a substantial change in the significance of a historic resource; the section further describes what constitutes a historic resource and a significant historic resource.
- Title 14, Penal Code, Section 622.5 establishes that anyone who damages an item of archaeological or historic interest is guilty of a misdemeanor.
- CEQA Guidelines (Title 14, California Code of Regulations, Chapter 3, Sections 15000, *et seq.*), Appendix G (j), specifically defines a potentially significant environment effect as occurring when the Proposed Project would ". . . disrupt or adversely affect . . . an archeological site, except as part of a scientific study."
- CEQA Guidelines (Section 15064.5) specifically addresses effects on historic and prehistoric archaeological resources, in response to problems that have previously arisen in the application of CEQA to those resources.

## Local Ordinances and Policies

Any portion of the project located in unincorporated areas may also be subject to several San Diego County ordinances specifically dealing with cultural resources. The following San Diego County ordinances apply:

- San Diego County Administrative Code, Section 396.7 establishes the San Diego County Local Register of Historical Resources; defines eligible properties, sets forth criteria to determine significance, and lists nomination procedures.
- The Resource Protection Ordinance requires a resource protection study to protect "environmentally sensitive lands" including significant prehistoric and historic sites. The ordinance defines significant cultural resources and prohibits damaging such resources. The ordinance also provides exemptions for essential public facilities, which are defined as "any structure or improvement necessary for the provision of public services, which must be located in the particular location to serve its purpose and for which no less environmentally damaging location, alignment, or non-structural alternative exists."

# D.4.3 Environmental Impacts and Mitigation Measures for the Proposed Project

## D.4.3.1 Definition and Use of Significance Criteria

CEQA regulations contain provisions regarding the preservation of historic (and prehistoric) cultural sites. Section 15126.4 of the CEQA Guidelines directs public agencies to "avoid damaging effects" on an archaeological resource whenever feasible. If avoidance is not feasible, the importance of the site shall be evaluated to determine impact significance and develop mitigation measures.

In considering impact significance under CEQA, the significance of the resource is determined first. CEQA Guidelines Section 15064.5 states: Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the following criteria for listing on the California Register of Historical Resources (PRC Section 5024.1, Section 4852):

- 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.

CEQA Guidelines Section 15064.5 also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under PRC Section 5097.98.

Impacts on "unique archaeological resources" are considered under CEQA, as detailed under PRC Section 21083.2. A unique archaeological resource implies that an archaeological artifact, object or site meets one of the following criteria:

- Contains information needed to answer important scientific questions, and there is demonstrable public interest in that information;
- Has a special and particular quality, such as being the oldest of its type or the best example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

A non-unique archaeological artifact, object, or site is one that does not meet any of the above criteria. Impacts on non-unique archaeological artifacts, objects, or sites receive no further consideration under CEQA.

Archaeological site evaluation assesses the potential of each site to meet one or more of the criteria for "significance" or "uniqueness" based upon visual surface and subsurface evidence (if available) at each site location, information gathered during the literature and record searches, and the researcher's knowledge of and familiarity with the historic or prehistoric context associated with each site. Potential impacts on identified cultural resources need only be considered if the resource is "significant" or "unique" under the provisions of CEQA cited above.

### Applicant-Proposed Measures

SCE has proposed to include the following measures as part of the Proposed Project in order to avoid impacts to the Historic El Camino Real road surface during transport (CR-1) and the historic San Diego Northern Railroad during transport crossing (CR-2) (SCE, 2004b):

- **CR-1:** If a qualified engineer determines that road compression damage is possible once a specific transporter is selected, protective matting or other suitable protection will be laid down on the road during transport.
- **CR-2:** The historic San Diego Northern Railroad will be protected from damage in areas where it will be crossed.

## D.4.3.2 Replacement Steam Generator Transport

The record search indicates that the Proposed Project transport route (Beach and Road Route) would pass through an area that has been the subject of previous cultural resource surveys. Forty-six recorded archaeological resources are known to exist in areas adjacent to the transport route.[1] However, no historic or archaeological resources have been identified within the route itself (i.e., in the APE for the Beach and Road Route). Transport would not involve excavation or ground disturbance. Specialized transporters used to move the RSGs along the approximately 15-mile route between the Camp Pendleton Del Mar Boat Basin offloading location and the SONGS 2 & 3 site would operate almost exclusively on existing paved and dirt roads or along the beach, and offloading at the boat basin would occur at an existing bulkhead, which would not require any modification of the shore or sea floor. The transporters would cross previously undisturbed areas at transitions in order bypass the Skull Canyon area (two transitions at Segment F) and at a transition from a dirt road to Old Highway 101 (at Segment G).

Much of the Beach and Road Route, including the three transition areas, was visited by a project archaeologist on November 5, 2004. This visit confirmed that no cultural resources are present either at the offload location, on the approximately 15-mile transport route, or at the three transition areas along the route. Offloading and transport activities associated with transport along the Beach and Road Route, therefore, would not adversely affect previously recorded historical or archaeological resources. Consequently, no impacts to cultural resources would be anticipated.

## D.4.3.3 Staging and Preparation

The record search indicates that the existing SONGS 2 & 3 facilities, which would be used during the staging and preparation of RSGs, are located in an area that has been the subject of previous cultural resource surveys, and four archaeological resources are known to exist within one-half mile of the facilities.[2] However, no historic or archaeological resources have been identified within the facilities. No

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[1] Refer to Appendix 3; the resources are: P-37-024469; P-37-024470; P-37-024471; P-37-024472; P-37-024473; CA-SDI-811; P-37-024474; P-37-024475; CA-SDI-4413; CA-SDI-5093; P-37-024476; P-37-024477; P-37-024478;P-37-024479; CA-SDI-10723; CA-SDI-10724; CA-SDI-10729; CA-SDI-10732; CA-SDI-12573; CA-SDI-12629/H; CA-SDI-12630/H; CA-SDI-13939; CA-SDI-13940; CA-SDI-14503; CA-SDI-14504; CA-SDI-14507; CA-SDI-14508; CA-SDI-14509; CA-SDI-14510; CA-SDI-14511; CA-SDI-14512; CA-SDI-14513; CA-SDI-14514; CA-SDI-14515/H; CA-SDI-14516; CA-SDI-14517H; CA-SDI-14518; CA-SDI-14519; CA-SDI-14520; CA-SDI-14521; CA-SDI-14522; CA-SDI-14723; CA-SDI-15254; CA-SDI-15663; CA-SDI-16162; and CA-SDI-16163.

[2] Refer to Appendix 3; the resources are: CA-SDI-1074; P-37-024480; P-37-024481; and CA-SDI-4916.

excavation or ground-disturbing activity would occur outside the SONGS OCA or Mesa. All temporary staging and preparation facilities would be located on previously developed and disturbed areas.

The SONGS 2 & 3 facilities were visited by a project archaeologist on November 5, 2004. This visit confirmed that no cultural resources are present at the staging and preparation locations. Therefore, staging and preparation activities would not adversely affect previously recorded historical or archaeological resources. Consequently, no impacts to cultural resources would occur.

## D.4.3.4 Original Steam Generator Removal, Staging, and Disposal

### Prepare for and Create Containment Opening

The record search indicates that the existing SONGS 2 & 3 facilities are located in an area that has been the subject of previous cultural resource surveys, and archaeological resources are known to exist within one-half mile of the facilities (as described in Section D.4.3.3 above). However, no historic or archaeological resources have been identified within the facilities. The work related to creating the containment opening would be confined to the developed surfaces surrounding the existing containment buildings.

The SONGS 2 & 3 facilities were visited by a project archaeologist on November 5, 2004. This visit confirmed that no cultural resources are present at the location of the existing containment buildings. Therefore, activities conducted to prepare and create containment openings would not adversely affect previously recorded historical or archaeological resources. Consequently, impacts to cultural resources would not be anticipated.

### Original Steam Generator Disposal

The record search indicates that the existing SONGS 2 & 3 facilities, where the original steam generators will be prepared for disposal, is located in an area that has been the subject of previous cultural resource surveys, and archaeological resources are known to exist within one-half mile of the facilities (see Section D.4.3.3 above). However, no historic or archaeological resources have been identified within the facilities. All temporary facilities related to staging the OSG for disposal would be located on previously developed and disturbed areas within the OCA, and the segmented OSGs would be loaded and transported by rail, which would not involve any ground-disturbing activities. The activities associated with the disposal of the OSGs would not affect previously recorded historical or archaeological resources. No impacts would be anticipated.

## D.4.3.5 Steam Generator Installation and Return to Service

The record search indicates that the existing SONGS 2 & 3 facilities, where the RSGs will be installed, is located in an area that has been the subject of previous cultural resource surveys, and archaeological resources are known to exist within one-half mile of the facilities (see Section D.4.3.3 above). However, none have been identified within the facilities. All installation activities would be located on previously developed and disturbed areas, and no ground-disturbing activity would occur. Because no cultural resources are present at the SONGS 2 & 3 facility, installation activities would not cause adverse impacts on previously recorded historical or archaeological resources. Consequently, impacts to cultural resources would not occur.

# D.4.4 Environmental Impacts and Mitigation Measures for the Alternatives

## D.4.4.1 Transportation Route Alternatives

### I-5/Old Highway 101 Route Alternative

The record search indicates that the I-5/Old Highway 101 Route would pass through an area that has been the subject of previous cultural resource surveys. Seventy archaeological resources are known to exist in areas adjacent to the transport route.[3] However, no historic or archaeological resources have been identified within the route itself (i.e., in the APE for the I-5/Old Highway 101 Route), and transport would not involve excavation or ground disturbance. Specialized transporters used along this approximately 14-mile route between the boat basin and SONGS 2 & 3 would operate almost exclusively on existing paved and dirt roads. The transporters would cross previously undisturbed areas at five transitions in order to circumvent two freeway overpasses that are too low for the transporter and RSGs to pass beneath. Access to I-5 would require construction of a temporary ramp in areas previously disturbed adjacent to I-5 (Segment L), and avoiding the overpasses would require short transitions in three locations (Segments N, Q, and R). As with the Proposed Project, a short transition would also be needed north of Skull Canyon (at Segments F and G).

Much of the I-5/Old Highway 101 Route, including the five transition areas, was visited by a project archaeologist on November 5, 2004. This visit confirmed that no cultural resources are present either at the offload location, on the approximately 14-mile transport route, or at the five transition areas along the route. Offloading and transport activities associated with the I-5/Old Highway 101 Route Alternative, therefore, would not adversely affect historic or archaeological resources. As with the Proposed Project, impacts to cultural resources along this route would not be anticipated.

### MCBCP Inland Route Alternative

The record search indicates that the MCBCP Inland Route would pass through an area that has been the subject of previous cultural resource surveys. Sixty-four archaeological resources are known to exist in areas adjacent to the transport route, but none of these 64 resources are within the route itself (i.e., in the APE for the MCBCP Inland Route).[4] Transport would not involve excavation or ground disturbance.

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[3] Refer to Appendix 3; the resources are: P-37-024120; P-37-024121; P-37-024122; P-37-024339; P-37-024469; P-37-024470; P-37-024471; P-37-024472; P-37-024473; CA-SDI-811; P-37-024474; P-37-024475; CA-SDI-4413; CA-SDI-5093; P-37-024476; P-37-024477; P-37-024478; P-37-024479; CA-SDI-4424; CA-SDI-4536; CA-SDI-4538; CA-SDI-4539; CA-SDI-10226/H; CA-SDI-4544; CA-SDI-4545; CA-SDI-8761; CA-SDI-10723; CA-SDI-10724; CA-SDI-10727; CA-SDI-10730; CA-SDI-10842; CA-SDI-12572; CA-SDI-12573; CA-SDI-12629/H; CA-SDI-12630/H; CA-SDI-13929; CA-SDI-13932; CA-SDI-13939; CA-SDI-13940; CA-SDI-14433; CA-SDI-14498; CA-SDI-14499; CA-SDI-14500; CA-SDI-14501; CA-SDI-14507; CA-SDI-14508; CA-SDI-14509; CA-SDI-14510; CA-SDI-14511; CA-SDI-14512; CA-SDI-14513; CA-SDI-14514; CA-SDI-14515/H; CA-SDI-14516; CA-SDI-14517H; CA-SDI-14518; CA-SDI-14519; CA-SDI-14520; CA-SDI-14521; CA-SDI-14522; CA-SDI-14723; CA-SDI-15254; CA-SDI-15558; CA-SDI-15663; CA-SDI-16046; CA-SDI-16159; CA-SDI-16162; CA-SDI-16163; CA-SDI-16513; and CA-SDI-16158.

[4] Refer to Appendix 3; the resources are: P-37-024118; P-37-024119; P-37-024339; P-37-024475; P-37-024476; P-37-024477; P-37-024478; P-37-024479; P-37-024480; CA-SDI-4414; CA-SDI-4424; CA-SDI-4425; CA-SDI-4426; CA-SDI-4427; CA-SDI-4536; CA-SDI-4540; CA-SDI-4544; CA-SDI-4545; CA-SDI-8761; CA-SDI-10226/H; CA-SDI-10733; CA-SDI-10841; CA-SDI-12572; CA-SDI-12631; CA-SDI-12632; CA-SDI-13711; CA-SDI-13929; CA-SDI-13930; CA-SDI-13932; CA-SDI-13933; CA-SDI-14145; CA-SDI-14343; CA-SDI-14344; CA-SDI-

Six previously recorded archaeological resources are known to exist within the MCBCP Inland Route APE.[5] All recorded site components at CA-SDI-812/H, CA-SDI-4538, CA-SDI-13320, and CA-SDI-13321 are away from the paved road that is planned to be utilized as the transport route. The northern 2.2 miles of the MCBCP Inland Route before its transition across I-5 (Segment Y) travels on the historic El Camino Real (P-37-018785). SCE has proposed to include a mitigation measure as part of the Proposed Project that, if implemented as proposed, would avoid impacts to the Historic El Camino Real road surface during transport (see CR-1 above, SCE, 2004b). The route also crosses CA-SDI-14005H, the historic railroad tracks. To address potential impacts to this resource, SCE has committed to the implementation of Applicant-Proposed Measure CR-2 to protect the historic San Diego Northern Railroad during transport crossing. With Applicant-Proposed Measure CR-2, potential impacts to these resources would be less than significant (Class III).

Although the transporters would operate almost exclusively on existing paved and dirt roads, they would cross previously undisturbed areas at three transition locations. A transition to railroad spur tracks would be necessary to pass under I-5 (Segment T), and two short transitions would be used to bring the transporters to and from the southbound lanes of I-5 near the north end of the route (Segments AA and AC). There are no recorded archaeological resources within these previously undisturbed areas.

Where the route passes through recorded sites CA-SDI-812/H, CA-SDI-4538, CA-SDI-13320, and CA-SDI-13321, all of the site components are off of the paved road and would not be disturbed by transport provided that all transport activities are confined to the paved road surface. If transport activities stray off road in these areas, the potential impacts to cultural resources would be more severe than with the proposed Beach and Road Route or the I-5/Old Highway 101 Route. This impact would occur only under the MCBCP Inland Route Alternative, and it is addressed below.

Much of the MCBCP Inland Route, including the three transition areas, was visited by a project archaeologist on November 5, 2004. This visit confirmed that no additional cultural resources are present either at the offload location, on the approximately 18-mile transport route, or at the three transition areas along the route.

### Impact C-1: RSG transport on the MCBCP Inland Route may damage or destroy previously detected cultural resources

Where the MCBCP Inland Route crosses known cultural resources, such as previously recorded archaeological sites (e.g., CA-SDI-812/H, CA-SDI-4538, CA-SDI-13320, and CA-SDI-13321), there would be a potential for damage or destruction of the cultural resources if transport activities accidentally stray from paved roads. This impact could be avoided by ensuring that the transporters remain on the designated transportation route. Destruction of potentially significant cultural resources without mitigation would be a potentially significant impact that can be reduced to a less than significant level with implementation of Mitigation Measure C-1a (Class II).

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14433; CA-SDI-14491; CA-SDI-14492; CA-SDI-14493; CA-SDI-14494; CA-SDI-14495; CA-SDI-14496; CA-SDI-14497; CA-SDI-14505; CA-SDI-14507; CA-SDI-14508; CA-SDI-14509; CA-SDI-14510; CA-SDI-14511; CA-SDI-14512; CA-SDI-14513; CA-SDI-14514; CA-SDI-14515H; CA-SDI-14748; CA-SDI-14940; CA-SDI-14941; CA-SDI-15558; CA-SDI-15610; CA-SDI-15663; CA-SDI-15664; CA-SDI-16046; CA-SDI-16159; CA-SDI-16160; CA-SDI-16161; CA-SDI-16513; and CA-SDI-16158.

[5] Refer to Appendix 3; the resources are P-37-018785; CA-SDI-812/H; CA-SDI-4538; CA-SDI-13320; CA-SDI-13321; and CA-SDI-14005H.

***Mitigation Measure for Impact C-1, RSG transport on the MCBCP Inland Route may damage or destroy previously detected cultural resources***

**C-1a** **Avoid cultural sites along the MCBCP Inland Route.** Prior to the commencement of RSG transport, archaeological sites CA-SDI-812/H, CA-SDI-4538, CA-SDI-13320, and CA-SDI-13321 shall be marked with barrier fencing, construction tape, or otherwise protected to prevent accidental disturbance during transport activities.

## D.4.4.2 OSG Disposal Alternative

### OSG Onsite Storage Alternative

The record search indicates that the existing SONGS facilities are located in an area that has been the subject of previous cultural resource surveys, and archaeological resources are known to exist within one-half mile of the facilities (as described in Section D.4.3.3 above). However, no historic or archaeological resources have been identified within the facilities. The work related to building an onsite OSG Storage Facility would be confined to the developed surfaces within the SONGS site. The discovery of new resources is not likely because although Native American populations are known to have lived along this coastal area, no deposits related to Native American habitation have been found in the immediate area, despite the level of study. The nearest sites are one-half mile away, which suggests that geological, geographical, environmental or some other factor may have made the immediate plant area unsuitable for habitation or that previous development of the plant facilities may have displaced remains. No cultural resources are known to be present at either of the potential locations for the OSG Storage Facility. Therefore, activities conducted to construct the facility would not adversely affect previously recorded historical or archaeological resources. Consequently, impacts to cultural resources would not be anticipated.

# D.4.5 Environmental Impacts of the No Project Alternative

The No Project Alternative would most likely cause SONGS to shut down prior to the expiration of the NRC licenses, which would decrease the level of ongoing activity and the potential for unintended damage to cultural resources on the site. New generation and transmission facilities could be sited in a manner that reduces or avoids impact on cultural resources; however, significant impacts may still occur, depending upon the location chosen. Appropriate mitigation considerations would be specific to the site selected and the type of generation constructed. In comparison to the Proposed Project, the No Project Alternative may have a greater likelihood of impacting cultural resources, since the Proposed Project would require very little ground-disturbing activities in an area with minor potential for cultural resources.

## D.4.6 Mitigation Monitoring, Compliance, and Reporting Table

Mitigation Measure C-1a would reduce potential environmental impacts resulting from the project-related use of facilities located at MCBCP to a less than significant level. Implementation of this mitigation measure on the Base, however, would require prior approval by the Base Commanding General and would be subject to review under the federal National Environmental Policy Act (NEPA).

Table D.4-2 shows the mitigation monitoring, compliance, and reporting program for Cultural Resources.

**Table D.4-2. Mitigation Monitoring Program – Cultural Resources**

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|---|---|
| **IMPACT C-1** | **RSG transport on the MCBCP Inland Route may damage or destroy previously detected cultural resources (Class II)** |
| **MITIGATION MEASURE** | **C-1a: Avoid cultural sites along the MCBCP Inland Route.** Prior to the commencement of RSG transport, archaeological sites CA-SDI-812/H, CA-SDI-4538, CA-SDI-13320, and CA-SDI-13321 shall be marked with barrier fencing, construction tape, or otherwise protected to prevent accidental disturbance during transport activities. |
| **Location** | At sites CA-SDI-812/H, CA-SDI-4538, CA-SDI-13320, and CA-SDI-13321 along MCBCP Inland Route |
| **Monitoring / Reporting Action** | CPUC and MCBCP to review site marking |
| **Effectiveness Criteria** | Known cultural resources are marked or protected |
| **Responsible Agency** | CPUC, MCBCP |
| **Timing** | At least 10 days prior to commencing RSG transport on the MCBCP Inland Route |

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