Appendix G

Cultural Resources Assessment Report

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April 26, 2023

Ms. Devon Shay
Hellman Properties, LLC
1 Pacific Coast Highway
Seal Beach, CA 90740

Subject: Cultural Resources Assessment Report for a Proposed Solar Array, Hellman Ranch Oil and Gas Production Facility, Seal Beach, California

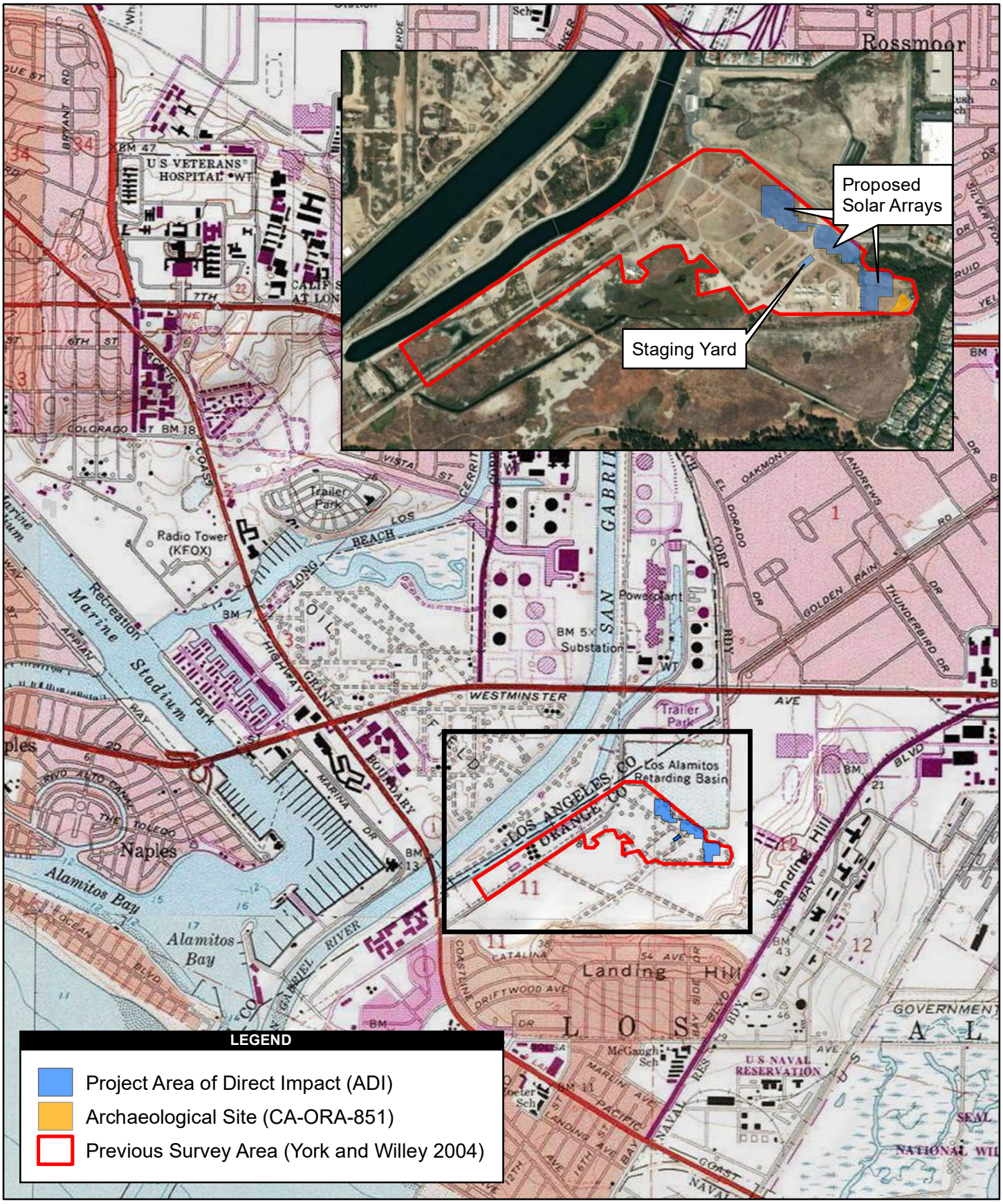
Dear Ms. Shay,

The following presents a report of the cultural resources assessment conducted by AECOM for the proposed solar array (Project) at the Hellman Ranch Oil and Gas Production Facility (OGPF) property located in the City of Seal Beach (City), Orange County, California. As discussed below, the proposed Project area has been surveyed or otherwise investigated for cultural resources on at least five different occasions, including exploratory subsurface trenching, and no cultural resources have been identified that would be affected by the proposed solar array installation. Additionally, the Project area is included in a recent cultural resources records search in support of a proposed gas plant just to the southwest, again indicating that no known cultural sites are present that would be affected by the proposed solar array installation.

Because the area of the proposed solar array is completely encompassed by these previous studies, no new field investigations were conducted for the present assessment. This assessment has been completed in accordance with Section 15064.5(a)(2)-(3) of the CEQA, and the guidelines for preparation of archaeological reports by the Office of Historic Preservation (OHP 1990). It also complies with Sections 1.C.1 and 1.C.2 of the Cultural Resources Element of the City of Seal Beach General Plan, which require literature searches and archaeological field surveys prior to development entitlements.

Project Description

The Project area is located in northern Orange County, California, approximately 1.2 miles northeast of the Pacific Ocean and 1.5 miles southwest of Interstate 405 (San Diego Freeway) (Figure 1). The Project area is within the existing Hellman Ranch OGPF, which is bounded roughly by the San Gabriel River to the west, residential areas to the north and south, and residential and industrial uses to the east.



Source: National Geographic Society 2013, Hellman Properties, LLC

2,000 0 2,000 Feet

Scale: 1:24,000 1 in = 2,000 feet

Figure 1
Project Area

The Project would consist of the construction of a ground mounted solar photovoltaic (PV) plant including PV modules, grid-interactive inverters, and racking structures. The plant will consist of 56 solar arrays spaced 8 feet apart and supported by concrete piers set 18 inches below grade. For the purposes of this assessment, the Project area is defined as all areas that would be subject to direct disturbance from installation of the photovoltaic plant, including the use of construction staging areas. The footprint of the areas subject to direct ground disturbance are shown as Areas of Direct Impact (ADI) in Figure 1.

Project Setting

The Hellman property is bordered to the northwest by the channelized San Gabriel River and the Haynes Cooling Channel. Wetlands owned by the Los Cerritos Wetland Authority are south of the Hellman property. Also to the south, at the foot of Landing Hill, is the City-owned Gum Grove Park, while to the east the northern portion of Landing Hill has been developed for residential use.

Natural Environment

At an elevation of approximately three feet above sea level, the Project area is within the area formerly covered by wetlands associated with Alamitos Bay, an extensive tidal estuary at the mouth of the San Gabriel River. Alamitos Bay was one of several large estuaries along the coast of northern Orange County (along with Anaheim Bay, Bolsa Bay, and Newport Bay) that were formed as rising sea levels flooded the coastal drainages during the early Holocene (ca. 8000–10,000 years before present [B.P.]). Initially, these consisted of open, relatively deep embayments during the rapid sea level rise that occurred before about 6000 B.P. These provided abundant fish and shellfish to prehistoric groups that moved among resource patches along their margins. As sea levels stabilized between about 6000–4000 B.P., silt began to accumulate along the inland edges of the embayments, forming extensive tidal wetlands and mudflats. This appears to be the time that the estuaries reached their maximum productivity of resources important to prehistoric Native Americans. Eventually, the siltation proceeded to the point that shellfish habitat was restricted, limiting their utility as an economic resource for prehistoric populations.

Although in the recent past the Project area was covered by the mud flats and marshes of Alamitos Bay, several thousand years ago some of the Project area may have been dry land. Before the stabilization of sea levels at mid-Holocene, the surface of Alamitos Bay would have been lower, and low terraces to the north and west of Landing Hill may have been exposed and available for human habitation. As sea levels rose, the margins of the bay would have expanded, eventually covering those areas with alluvium.

Cultural Setting

Coastal areas of southern California appear to have been occupied by humans for at least 10,000 years. Archaeological evidence suggests the earliest inhabitants were well adapted to marine habitats, exploiting shellfish and other marine resources found along the coastline (Dixon 1999; Erlandson 1994; Vellanoweth and Altschul 2002). Although these early sites are uncommon, archaeological components increase dramatically in number after about 8000 years before present

(B.P.), indicating expanding populations. This period, known regionally as the Millingstone Period due to the abundance of handstones and milling slabs in archaeological sites, saw the establishment of numerous settlements located adjacent to local lagoons and estuaries that supported edible plant, animal, and marine resources (Drover et al. 1983).

By approximately 3500–3000 B.P., settlement patterns shifted to reflect more sedentary and territorial lifestyles. The number of sites decreased as populations settled into residential bases near freshwater sources and seasonal camps became more infrequent (Koerper et al. 2002). By around 1500 B.P., new patterns emerged that are associated with the florescence of the contemporary Native American group known as the Gabrielino, or Tongva, who occupied what is presently Los Angeles County and northern Orange County, along with the southern Channel Islands (Kroeber 1925). Settlement at this time is believed to have consisted of dispersed family groups that revolved around a relatively limited number of permanent village settlements that were located centrally with respect to a variety of resources (Koerper et al. 2002). The nearest of these village settlements to Landing Hill was the ethnographic village of *Puvungna*, located in what is now Long Beach just north and west of the Project area.

In 1834, the Project area became part of Rancho Los Alamitos, which covered portions of southwestern Los Angeles and northwestern Orange Counties. The rancho was purchased in 1844 by Abel Stearns, who in 1881 sold it to Isaias Hellman, who built a ranch house near the north end of Landing Hill. At that time, the area surrounding the Project area was used for farming and cattle ranching. The property was developed for oil and gas production in the early-middle twentieth century and is currently owned by Hellman Properties, LLC.

Previous Cultural Resources Investigations

In 2019, a records search was conducted at the South Central Coastal Information Center (SCCIC) at California State University at Fullerton in support of a proposed gas plant to be located approximately 320 feet southwest of the current project area (Wahoff 2019). The results of this records search, including previous surface and subsurface investigations and known cultural resources, are discussed below.

Previous Surveys

The 2019 records search revealed that at least 18 previous cultural resources surveys or other archaeological investigations have been conducted within 0.25 mile of the current Project area, and that the entire Project area has been intensively surveyed for archaeological resources on at least four occasions (Archaeological Associates 1980; Rosenthal and Padon 1990; Stickel 1996; York and Willey 2004). None of these field surveys revealed any cultural resources within the Project area, although one (Archaeological Associates 1980) noted two dispersed scatters of marine shell (CA-ORA-850 and -851) located approximately 500 and 50 feet east and northeast of the Project area, respectively. Other cultural resources within 0.25 mile include CA-ORA-257, -258, and -259, all consisting of remnants of prehistoric shell middens along the crest of Landing Hill to the south of the Project area (Redwine 1958; Stickel 1996; Cleland et al. 2007); P-30-01544, a large but dispersed scatter of marine shell and artifacts located on the Boeing

property immediately north of Adolfo Lopez Drive (Underwood 2000); and the Los Alamitos Pump Station, approximately 550 feet north of the Project area (Shepard 2002).

Table 1. Previously Recorded Cultural Resources within 0.25 mile of Project Area

Primary Number	Trinomial	Description	Time Period
P-19-186926	N/A	Alamitos Pump Station	Historic
P-30-000257	CA-ORA-257	Shell midden, groundstone and flaked stone implements	Prehistoric
P-30-000258	CA-ORA-258	Shell midden; groundstone and flaked stone implements; polishing stone, debitage	Prehistoric
P-30-000259	CA-ORA-259	Shell midden; groundstone and flaked stone implements; debitage	Prehistoric
P-30-000850	CA-ORA-850	Shell scatter	Prehistoric
P-30-000851	CA-ORA-851	Shell scatter	Prehistoric
P-30-001544	N/A	Shell scatter; mano; hammerstone	Prehistoric

The most recent surface survey that included the current Project area (York and Willey 2004) also identified four scatters of marine shell elsewhere within the Hellman property. These contained no prehistoric artifacts and were all mixed with gravel, asphalt, and various recent debris. These and other shell-bearing surface deposits in the project area were interpreted as dredge spoil mixed with imported fill that was used to infill the former marshlands associated with Alamitos Bay at this location.

Previous Subsurface Investigations

Although several extensive archaeological excavations have been conducted along the crest of Landing Hill just to the south and east of the Project area (Cleland et al. 2007; Desautels 1981; Redwine 1958; Stickel 1996), subsurface investigation in the lower elevations within the Hellman Ranch OGPF have been limited to an unreported testing program at CA-ORA-851 by LSA Associates in 1990, and an exploratory archaeological trenching program by EDAW, Inc. in 2006.

LSA Testing at CA-ORA-851: In 1990, LSA Associates initiated an extensive subsurface testing program for a planned residential development on a portion of Landing Hill just to the east of the Project area. This testing program included several large prehistoric sites along the crest of the hill (CA-ORA-260, -261, -262, and -263), as well as site CA-ORA-851, which is located approximately 50 feet to the east of the present Project area. Although the LSA testing program included the excavation of more than 100 test units among the five sites, the project was discontinued before a report was completed and the artifacts have since disappeared (see Cleland et al. 2007; York 2006). However, York (2006) reported that field forms provided to EDAW, Inc. by LSA indicated that two 1-by-1 meter (m) test units were excavated at CA-ORA-851, both yielding only small amounts of marine shell. The shells were limited to the upper 20 cm of the

deposit, in a highly disturbed context that also included imported fill and construction debris. Below this disturbed layer, according to the LSA field notes, were natural sediments containing no shells.

Exploratory Trenching by EDAW, Inc. (York 2006): In 2006, EDAW, Inc. conducted a program of exploratory archaeological trenching at various locations throughout the Hellman Ranch OGPF in support of a proposed underground tank farm replacement project (York 2006). A total of 31 trenches were excavated, including 20 along proposed pipeline alignments and 11 within the footprint of the proposed tank farm. Each trench measured approximately 10 m long and between 120 and 200 centimeters (cm) deep. Of the 31 trenches, 4 were placed within or immediately adjacent to the present Project area: trenches 1, 2, and 20 in the far southeastern portion, and Trench 6 in the northwestern portion (Table 2).

Table 2. Exploratory Trenches Reported by EDAW, Inc. within Project Area (York 2006)

Trench	Depth	Description
1[1]	0-40 cm	Disturbed mix of natural sediments and artificial fill; contains small amount of marine shell
	40-120 cm	Natural alluvial/estuarine sediments – no cultural material
2	0-120 cm	Natural estuarine and alluvial sediments – no cultural material
6	0-30 cm	Disturbed silty clay loam – no cultural material
	30-120 cm	Natural estuarine and alluvial sediments – no cultural material
20	0-120 cm	Natural estuarine and alluvial sediments – no cultural material

[1] Partially within the recorded boundary of CA-ORA-851

The results of the 2006 trenching program within the present Project area (York 2006) are shown in Table 2. Trench 1, placed at the northern boundary of CA-ORA-851, appears to confirm the field notes for the LSA excavations: the upper 40 cm is clearly disturbed and contains sand, gravel, sparse marine shell, and recent debris. Underlying this were apparently undisturbed alluvial or estuarine fine sand, silt, and clay sediments that contained no shell. On this basis, York (2006) concluded that CA-ORA-851 likely represents an artificial fill deposit composed in part from sediment dredged from nearby Alamitos Bay.

Cultural Resources Assessment and Recommendations

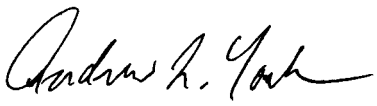
Several previous intensive archaeological surveys that have included portions of the Hellman Ranch OGPF revealed no archaeological resources within the present Project area. Of the seven cultural resources that have been previously recorded within 0.25 mile of the Project area, only one, CA-ORA-851, is closer than approximately 500 feet to areas subject to direct disturbance from the proposed solar array construction. This resource, a dispersed scatter of marine shell fragments, was subject to subsurface archaeological examinations in 1996 and 2006, both of which indicated that the deposit most likely represents recently imported fill materials. It would

not be affected by the proposed solar array construction. Additionally, the rest of the 2006 exploratory trenching program designed to identify buried archaeological resources at various locations within the Hellman Ranch OGPF was entirely negative, including at several locations within the present Project area (York 2006).

These results indicate that the archaeological sensitivity of the Project area is generally low, at least in near-surface contexts. During the late prehistoric and early historic periods, the Project area was within the low, marshy areas associated with Alamitos Bay and would have been regularly inundated and generally unsuitable for more than occasional habitation. However, as noted in previous studies, the lowlands at this location are largely mantled by either recent alluvium or artificial fill that could obscure older surfaces that could have supported habitation earlier in the Holocene when sea levels were lower than present. Moreover, the possibility for non-habitation archaeological activities, such as human interments, should be considered for these lowland contexts – particularly in view of the extensive mortuary complex that was identified nearby along the crest of Landing Hill (Cleland et al. 2007). Finally, it is also possible that archaeological materials associated with the historic period use of this locality – perhaps refuse deposits from the early Hellman Ranch, or early twentieth century industrial remains – could also be encountered.

For these reasons, it is recommended that a qualified archaeologist and a Native American cultural monitor be present during ground-disturbing activities associated with construction of the solar facility. Should potentially significant archaeological resources be encountered, construction would be suspended while a treatment plan is developed in consultation with the City, Hellman Properties, and tribal representatives as appropriate.

Sincerely,



Andrew L. York
Senior Archaeologist

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