

Appendix D

Cultural Resources Assessment Report



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October 18, 2019

Ms. Devon Shay
Hellman Properties, LLC
1 Pacific Coast Highway
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Subject: Hellman Proposed Gas Plant Cultural Resources Assessment Report

Dear Ms. Shay,

The following presents a report of the cultural resources assessment conducted by AECOM for the proposed gas plant project (Project). Hellman Properties, LLC (Hellman) is proposing development of a state-of-the-art gas plant at their Hellman Ranch Oil and Gas Production Facility (OGPF) property located in northwest Orange County, east of the San Gabriel River and north of Pacific Highway, in the City of Seal Beach. The City of Seal Beach, which needs to issue a Conditional Use Permit, is preparing an initial study for the proposed Project pursuant to the California Environmental Quality Act (CEQA).

This study 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).

PROJECT DESCRIPTION

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

Hellman proposes to construct and operate a one million standard cubic feet per day (MMscfd) gas plant at the Hellman Ranch OGPF (Figure 2 in Attachment 1). The proposed gas plant would be designed with capacity to allow other users of the current joint venture facility to process their gas. The proposed gas plant pad would be approximately 0.37 acre in size and would be in a previously disturbed area of the OGPF. Surface elevation of the proposed gas plant area is approximately three feet above mean sea level. The site would be excavated to a depth of four feet and engineered material would then be brought to the site to construct the final pad to an elevation of five to six feet above mean sea level. The work would require about 2,305 cubic yards of cut and 3,555 cubic yards of fill. Excavated material would be spread in previously designated soil recovery areas that were used during prior improvements to the property, and any organic rich soil would be stockpiled separately for future landscaping use. Existing improvements near the site consist of graded unpaved roads, graded pads, above and below ground pipelines, storage tanks, pumping units, and electrical power lines. The SoCal Gas pipeline injection point is located at a Hellman facility at the corner of

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Seal Beach Boulevard and Anchor Way. This facility is connected to the Hellman Ranch OGP via several existing pipelines (Hellman 2018). Hellman is also applying to the California Coastal Commission for a Coastal Development Permit to develop the proposed Project.

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 is 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.

At an elevation of about three feet above sea level, the Project area is within the area formerly covered by 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

Initial Occupation

The southern California coast may have been settled as early as 10,000 B.P. (Jones 1992). These early inhabitants were likely maritime adapted groups exploiting shellfish and other marine resources found along the coastline (Dixon 1999; Erlandson 1994; Vellanoweth and Altschul 2002). A site in Newport Bay, Orange County (CA-ORA-64), which dates to approximately 9500 B.P., suggests early intensive utilization of shellfish, fish, and bird resources (Drover et al. 1983; Macko 1998).

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The Millingstone Period

Southern California coastal archaeological sites increase in number dramatically after about 8000 B.P. This time period is known as the Millingstone period due to the appearance of groundstone implements. In general, the Millingstone period is characterized by regional differentiation and adaptation to local conditions, and the intensified utilization of groundstone (Wallace 1955). Millingstone habitation sites are characteristically more sedentary, permanent settlements located adjacent to local water sources, which supported edible plant, animal, and marine resources (Drover et al. 1983). Early Millingstone sites typically contain numerous handstones (manos) and millings (metates), while those dating later than 5000 B.P. often contain a mortar and pestle component as well, suggesting regional exploitation of acorns (Vellanoweth and Altschul 2002).

Millingstone period sites in Orange County generally date to between 8000–4000 B.P. and indicate a low, stable population. Settlement patterns during this time period indicate the use of residential bases surrounded by seasonal satellite camps (Drover et al. 1983; Glassow et al. 1988; Grenda and Altschul 2002; Koerper et al. 2002; Macko 1998).

The Intermediate Period

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). Population increase led to the intensified exploitation of terrestrial and marine resources and the use of increasingly labor-intensive hunting and fishing equipment, such as the circular fishhook, and the mortar and pestle for acorn processing (Byrd and Raab 2007; Erlandson 1994; Koerper 1979; Koerper et al. 2002; Raab et al. 1995). Increasing population densities, with ensuing territoriality and resource intensification, may have given rise to increased disease and violence between 3300–1650 B.P. (Raab et al. 1995).

The Late Prehistoric Period

The Late Prehistoric period, spanning from approximately 1,500 years ago to the Mission Era, is the period associated with the florescence of the Gabrielino (Wallace 1955). The Gabrielino occupied what is presently Los Angeles County and northern Orange County, along with the southern Channel Islands, including Santa Catalina, San Nicholas, and San Clemente (Kroeber 1925). The Gabrielino are reported to have been second only to their Chumash neighbors in terms of population size and regional influence (Bean and Smith 1978). This period saw the development of elaborate trade networks and use of shell-bead currency. Fishing became an increasingly significant part of subsistence strategies at this time, and investment in fishing technologies, including the plank canoe, is reflected in the archaeological record (Erlandson 1994; Glassow 1980; Raab et al. 1995).

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

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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. The most likely location for this settlement seems to be Bixby Hill, now occupied by Rancho Los Alamitos and the California State University at Long Beach. Situated about 1.9 miles northwest of Landing Hill, *Puvungna* was an important ritual center to the Gabrielino and is reputed to have been the site of large ceremonial gatherings and the site where the deity *Chinigchnich* first appeared (Boscana 1933; Dixon 1972; McCawley 1996). Although more than 30 archaeological sites have been recorded on and around this hill, the exact location of *Puvungna* remains uncertain.

CULTURAL RESOURCES ARCHIVAL AND LITERATURE SEARCH

A records search of all areas encompassed by the Project Area of Direct Impact (ADI) and a 0.25-mile radius was conducted on August 21, 2019, at the South Central Coastal Information Center (SCCIC) at California State University at Fullerton. This review identified previous surveys and all known cultural sites within the records search areas, as well as information on previous evaluations for California Register of Historic Resources or National Register of Historic Places eligibility, historic maps on files with the SCCIC, and any historic addresses recorded within the records search area.

Table 1 lists the 18 surveys and studies located within or partially within the proposed Project Area of Direct Impact and/or the 0.25-mile surrounding radius. Of these, twelve were conducted within or partially within the Hellman property, including six research design reports, two archaeological survey reports, one baseline archaeological study, one archaeological test report, one cultural resources assessment, and one monitoring report.

Table 1. Investigations Conducted within 0.25 Mile of Project Area

Report Number	Date	Author	Title
LA-02114	1990	McKenna, Jeanette A.	Archaeological Investigations of the Proposed California Shores Property, Long Beach, California
LA-06107	2003	Shepard, Richard S.	Phase I Cultural Resources Assessment: Los Angeles Alamitos Pump Station Project in Long Beach, Los Angeles County, and Seal Beach, Orange County, California
LA-12960	2016	McKenna, Jeanette A.	Cultural Resources Overview: The City of Long Beach Southeast Area Specific Plan, Los Angeles County, California
OR-00493	1980	Archaeological Associates, Ltd.	Archaeological Survey Report: The Hellman Property in Seal Beach
OR-00639	1981	Scientific Resource Surveys, Inc.	Archaeological Test Report on the Hellman Property Located in Seal Beach
OR-01272	1991	Stickel, Gary E.	A Baseline Archaeological Study for the City of Seal Beach, California

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Report Number	Date	Author	Title
OR-01581	1997	Whitney-Desautels, Nancy A.	Cultural Resource Assessment of the Hellman Ranch, Seal Beach
OR-01608	1996	Stickel, Gary E.	A Research Design and Investigation Program for Test Level Evaluations of Archaeological Sites Located on the Hellman Ranch, City of Seal Beach, California
OR-01609	1997	York, Andrew, James Cleland, and Michael Baksh	A Research Design for the Evaluation of Archaeological Sites Within the Hellman Ranch Specific Plan Area
OR-01610	1996	Stickel, Gary E.	An Archaeological Site Survey of the Hellman Ranch, City of Seal Beach, California
OR-01643	1997	York, Andrew, James Cleland, and Michael Baksh	A Research Design for the Evaluation of Archaeological Sites Within the Hellman Ranch Specific Plan Area
OR-01816	1996	Stickel, Gary E.	A Research Design and Investigation Program for Test Level Evaluations of Archaeological Sites Located on the Hellman Ranch, City of Seal Beach, California
OR-01858	1997	York, Andrew and James Cleland	A Research Design for the Evaluation of Archaeological Sites within the Hellman Ranch Specific Plan Area
OR-02033	1987	Mason, Roger D.	Research Design for Evaluation of Coastal Archaeological Sites in Northern Orange County, California
OR-02774	2003	Shepard, Richard S.	Phase I Cultural Resources Assessment: Los Angeles Alamitos Pump Station Project in Long Beach, Los Angeles County, and Seal Beach, Orange County, California
OR-03391	2003	York, Andrew, James Cleland, Lorraine Willey, and Charlane Gross	Mitigation Plan for Significant Cultural Resource Discoveries Hellman Ranch Specific Plan Area Seal Beach, California
OR-03762	2009	Ehringer, Candace	Negative Archaeological Monitoring Report for the Hellman Ranch Tank Farm Replacement Project, City of Seal Beach, California
OR-03828	2007	Cleland, James, Andrew York, and Lorraine Willey	Piecing Together the Prehistory of Landing Hill: A Place Remembered

The records search identified seven cultural resources within the proposed Project 0.25-mile-radius buffer (Table 2). These resources include six prehistoric archaeological sites and one historic structure. Of the six archaeological sites, one consists of milling features with a scatter of groundstone or flaked stone artifacts; one is a groundstone scatter with a flaked lithic; one is a lithic and shell scatter, and three have midden deposits. Of these three midden sites, one also includes a shell scatter, and one a scatter of flaked stone and groundstone artifacts. The historic structure is a historic-period flood pump station. None of the resources are located within the Project ADI.

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Table 2. Summary of Previously Recorded Cultural Resources within the Proposed Project and a 0.25-mile Surrounding Radius

Primary Number	Permanent Trinomial	Resource Type	Site Constituents	Time Period	Date Recorded (or most recent update)	Approximate Distance to ADI
P-19-186926	N/A	Structure	Flood pump station	Historic	2003	550 ft
P-30-000257	CA-ORA-257	Site	Hand stones, milling stone fragments, and flake	Prehistoric	1969, 1996	645 ft
P-30-000258	CA-ORA-258	Site	Milling features, mano fragments, mortar fragments, hammerstones, pestles, polishing stones, metate, project points, sandstone bowl	Prehistoric	1969, 1996	550 ft
P-30-000259	CA-ORA-259	Site	Midden soil, milling stones, manos, mortars, hammerstone, polishing stone, projectile point, worked fragments, and angular waste.	Prehistoric	1969, 1996	580 ft
P-30-000850	CA-ORA-850	Site	Midden, shell scatter	Prehistoric	1969, 1996	680 ft
P-30-000851	CA-ORA-851	Site	Midden	Prehistoric	1969, 1996	580 ft
P-30-001544	N/A	Site	Shell scatter, mano, hammerstone	Prehistoric	2000	580 ft

N/A = not applicable

FIELD SURVEY

An intensive systematic pedestrian survey of the Hellman proposed gas plant ADI was conducted on August 27, 2019. The ADI is the 0.37-acre area of the proposed gas plant pad within the Hellman Ranch boundaries. The proposed gas facility is located approximately 200 feet west of the existing tank farm. Survey transects were spaced approximately one meter apart. The survey area is relatively level (Photograph 1 in Attachment 2) with surface elevation of about three feet above mean sea level. Previous disturbances within the ADI include surface grading, subsurface utility pipes, and unpaved roads (Photographs 1 and 2 in Attachment 2). A pipeline header is located at the west end of the ADI and metal water tanks of undetermined age at the southeastern portion (see Photograph 1 background and Plate 3, respectively, in Attachment 2). The metal tanks were noted during monitoring for pipeline trenching in 2013 with a wooden platform that no longer appears extant (Humphries 2013). The age of the tanks is undetermined, but they would not be considered significant resources. A pile of lumber and wooden pallets was also noted in the southeastern portion of the ADI (Photograph 4). Due to vegetation, the ground surface visibility was low, ranging from 0 to 30 percent (Photograph 5 in Attachment 2).



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SUMMARY AND RECOMMENDATIONS

Seven cultural resources have been previously recorded within 0.25 mile of the proposed Project; none are within the proposed gas plant ADI. The records search and intensive pedestrian survey identified no historic properties or potential historic properties within the ADI. Nonetheless, due to the presence of archaeological sites in the vicinity, coupled with the limited ground visibility within the ADI, it is recommended that a qualified archaeologist and a Native American cultural monitor be present during ground-disturbing gas plant construction activities in intact native soils.

PERSONNEL

Tanya Wahoff, M.A., R.P.A., served as the AECOM project manager, and was the primary point of contact for AECOM. Senior technical review was provided by Andrew York, M.A., R.P.A. The records and literature search was conducted by AECOM archaeologist Marc Beherec, Ph.D., and the survey by AECOM archaeologist Frank Humphries, B.A. Marcos Ramos-Ponciano, M.A., prepared the maps and assisted with the preparation of this letter report.

Respectfully,

A handwritten signature in black ink that reads "Tanya Wahoff". The signature is fluid and cursive, with the first name being more prominent.

Tanya Wahoff
Senior Archaeologist

Attachments: 1. Maps
 2. Photographs

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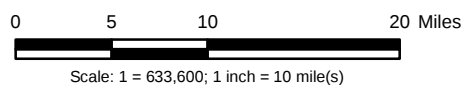
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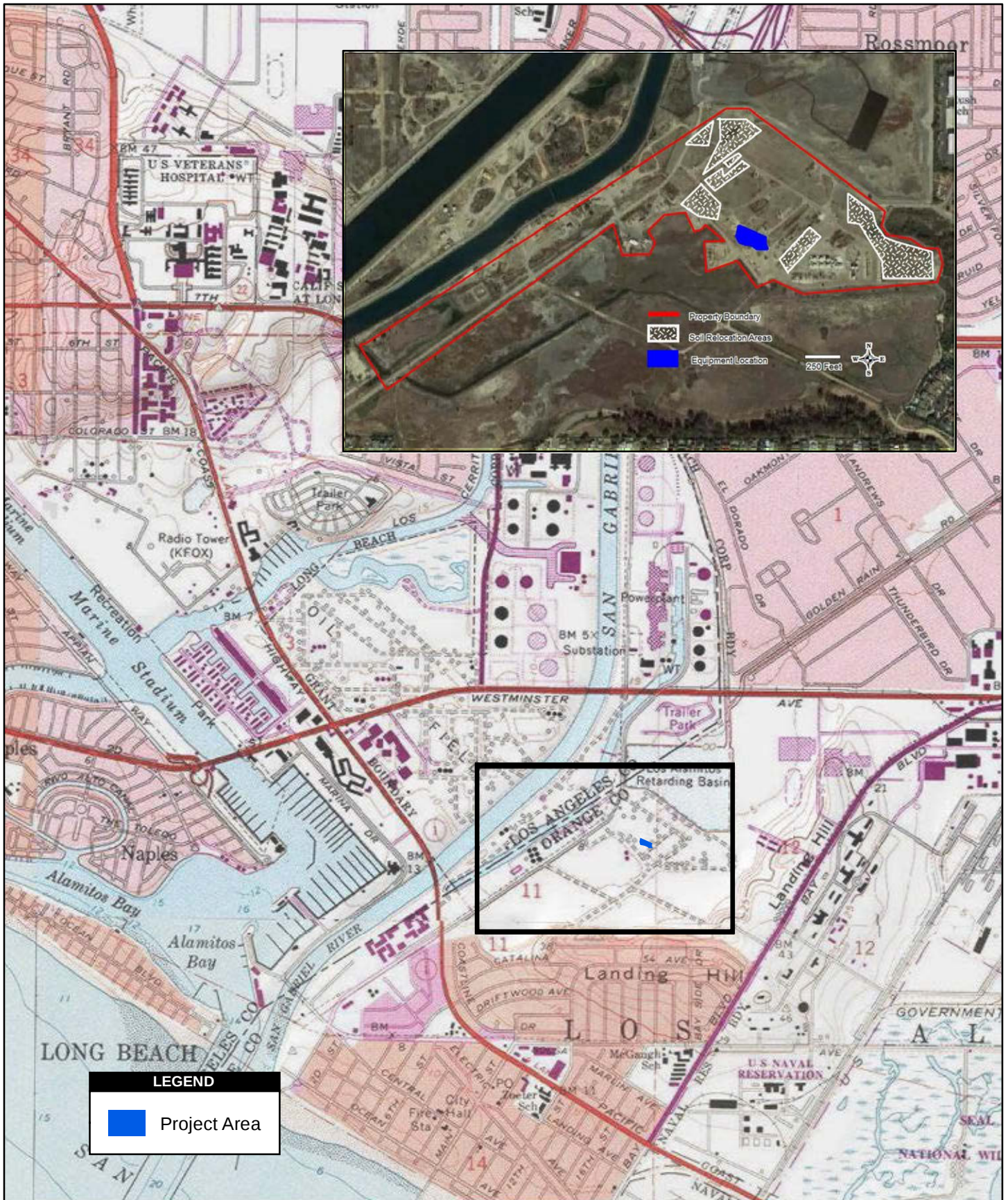
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ATTACHMENT 1

MAPS



Map 1 Proposed Project Vicinity



Source: National Geographic Society 2013, Hellman Properties, LLC



2,000 0 2,000 Feet

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

Map 2
Proposed Project Footprint

ATTACHMENT 2

PHOTOGRAPHS



Photograph 1. Proposed Gas Plant ADI Overview with header at west end of the ADI in left background; View to the west.



Photograph 2. Proposed Gas Plant ADI overview; view to the northwest.



Plate 3. Water tanks in southeastern portion of ADI; view to the southeast.



Plate 4. Wooden pallets and lumber; view to the northwest.



Photograph 5. Overview of the Proposed Gas Plant ADI, view to the southeast.



Photograph 6. View of low ground visibility within the Proposed Gas Plant ADI.