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May 15, 2009



VIA FEDEX

CALIFORNIA ENERGY COMMISSION Attn: Docket No. 08-AFC-9 1516 Ninth Street, MS-4 Sacramento, California 95814-5512

# Re: City of Palmdale Hybrid Power Plant Project: Docket No. 08-AFC-9

Dear Sir/Madam:

Pursuant to California Code of Regulations, title 20, sections 1209, 1209.5, and 1210, enclosed herewith for filing please a copy of Applicant's Response to CEC Data Requests re Cultural Resources (DR 1-3).

Please note that the enclosed submittal was filed today via electronic mail to your attention and to all parties on the attached electronic proof of service list.

Very truly yours,

Paul E. Kihm Senior Paralegal

Enclosure

cc: 08-AFC-9 Proof of Service List (w/encl. via e-mail and U.S. Mail) Michael J. Carroll, Esq. (w/encl.)

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File No. 039610-0003

#### Technical Area: Cultural Resources

Response Date: May 15, 2009

On April 28, 2009, Staff provided three additional "informal" data requests via email regarding cultural resources. This document provides the responses to these data requests.

#### Informal Cultural Data Request 1:

Please explain in detail all aspects of the ground disturbance that would be required to install the project's proposed natural gas line under the railroad and how this installation would be accomplished in such a way a to avoid impacts to the railroad line.

#### **Response:**

CEC Staff expressed concern that the segment of the Union Pacific Railroad (UPRR) that crosses 10<sup>th</sup> Street East had the potential to be culturally significant. The segment of the UPRR, which intersects with the proposed natural gas pipeline at 10th Street E, is a major spur running east from the main north-south UPRR line. This segment is known as the 78-Mile Palmdale-to-Colton Cutoff, which was constructed in 1967 to bypass the Los Angeles basin (Union Pacific 2009). This construction date is corroborated by aerial photographs: an aerial photograph of the area from 1965 shows that the rail line had not been constructed, while the tracks appear on an aerial photograph of the same area dated to 1971 (Historic Aerial 2009). This segment of the UPRR is not historically or culturally significant because it does not meet the 50 year age requirement for eligibility (or the CEC's 45 year guideline for consideration). Therefore, any impacts to the rail line (which, as discussed below, are not expected) would not represent an impact to a historically or culturally significant resource.

The UPRR segment in question will be avoided during project construction by employing widely used and proven trenching methods. Pipelines crossing over or under railroads must be constructed in accordance with Part 5, "Pipelines," of the American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering. The natural gas line would use a trenchless method of "horizontal boring" in order to not disturb the tracks. Horizontal boring includes several widely accepted technologies. For project construction, the methods that will probably be used are hydraulic jacking or pneumatic ramming, each of which has been shown to successfully avoid structures such as the railroad tracks in this instance. A dummy pipe will be hydraulically pushed or rammed through the soil from a thrust pit on the north side to a target pit on the south side. A cutting device may be used on the end of the pipe. Afterwards the final pipe will be pushed through after the dummy pipe. Once the gas pipe is installed, the dummy pipe is removed. This method will preserve the integrity and load bearing capacity of the soil beneath the railroad and ensure the railroad line will not be adversely impacted.

During the detailed design phase, the pipe, excavations, and pipe installation procedures will be engineered specifically for the installation. The engineer will develop a site-specific specification that covers the construction, excavation, installation, and all other activities associated with installing the pipe line under the rail way. The installation will meet all applicable codes and standards.

#### Technical Area: Cultural Resources

Response Date: May 15, 2009

In sum, the segment of the UPRR line in the vicinity of the construction area is not historically or culturally significant. Nonetheless, project construction will employ proven methodologies to ensure the UPRR line will not be adversely impacted.

#### **Informal Cultural Data Request 2:**

Please provide a description of the proposed new pole (type, height, number of piles or foundations needed). Also, please determine how far from the railroad line this pole would be installed. If the pole is within 50 feet of the railroad line, please explain in detail the number, size, and depth of holes needed for the installation, and the extent of the area subject to ground disturbance form this installation. Please explain how the project would avoid impacts to the railroad line from the pole installation in this location.

#### **Response:**

The background to Informal Data Request 2 incorrectly referenced the pole location in question. To clarify, the pole in question is not part of transmission line Segment 2 along 106<sup>th</sup> Street between Avenues T and U. Rather, the pole in question is part of Segment 1 along 126<sup>th</sup> Street between Avenues T and U.

The Staff has expressed concern that the transmission line pole installation may impact a segment of railroad with the potential to be culturally significant. As discussed in the response to the previous data request, this segment of the UPRR line is not historically or culturally significant because it does not meet the 50 year age requirement for eligibility. Therefore any project impacts (which, as discussed below, are not expected) would not represent a significant impact to a historically or culturally significant resource.

The proposed new pole is currently identified as pole number 183 of 199 poles that will make up Segment 1 and has been sited approximately 110 feet south of the railroad spur in question. The proposed area of disturbance for pole installation is estimated to be a 50 foot radius around the pole. Consequently pole installation activities would still be approximately 60 feet from the railroad line.

The proposed pole will be a steel monopole consisting of three sections assembled to approximately 160' in height. It will weigh approximately 33,000 pounds not including the anchorage which will weigh an additional 6,000 pounds. The single anchorage will likely be installed into a hole bored by an auger unit and backfilled with some of the excavated earth. The precise components and anchoring methods will be determined upon completion of site specific design and geotechnical investigation. As discussed above, the pole has been sited approximately 110 feet from the railroad tracks, well outside the 50-foot distance cited in the Staff's question, and construction activities will be approximately 60 feet from the UPRR line. As a result, the project will avoid adverse impacts to the UPRR line.

#### Technical Area: Cultural Resources

Response Date: May 15, 2009

#### **Informal Cultural Data Request 3:**

Please provide a description of the poles (type, height, number of poles or foundations needed for each) that would be installed in this location. Please determine how close the replacement pole(s) are to the Palmdale ditch tunnel, show the horizontal relationship in a detailed plan drawing, and show the vertical relationship in a detailed section drawing. Please provide the size, the number, and the depth of the holes needed for installation of the poles. Please explain how the project would avoid impacts to the Palmdale Ditch from pole installation in this location.

#### **Response:**

The historic Palmdale ditch (LAN-1534H) is currently listed in the California Register of Historical Resources (CRHR). At least two tunnels in the vicinity of Segment 2 of the proposed PHPP transmission line were previously recorded as components of the ditch and are included in the original site record (Archeological Site Location Map, p. 7 of 8, of the record compiled by Bruce Love in 1989). Photo 6 in WSA's technical report (WSA 2008, Attachment 4) shows the entrance to one of the tunnels. In 2008, WSA updated the LA-1534H site record to add a bridge structure to the original site documentation. The entire ditch was recommended as eligible by WSA in its technical report (WSA 2008), which also included a recommendation that the proposed PHPP construction avoid this resource.

The new poles and power lines are proposed to be constructed in the existing transmission line ROW following the same general alignment as the current wooden poles. The proposed poles would replace the existing wood structures with a steel monopole design consisting of three sections assembled to approximately 160' in height. They will each weigh approximately 33,000 pounds not including the anchorage which will weigh an additional 6,000 pounds. The single anchorage will likely be installed into a single hole bored by an auger unit and backfilled with some of the excavated earth. The precise components and anchoring methods will be determined upon completion of site specific design and geotechnical investigation.

The entrance to the Palmdale ditch tunnel is located approximately 450 feet southwest of the proposed location of pole 68 and approximately 90 feet east of the proposed location for pole 69 of Segment 2. The area of disturbance for pole installation is proposed to be a 50 foot radius around the pole. No construction activities will take place outside the indicated disturbance area. That being the case, there will be an additional 40 feet from the outside edge of the disturbance area to the mouth of the Palmdale ditch tunnel. In addition, Applicant will take all required precautions and implement BMPs to mitigate erosion from the installation site from potentially impacting the Palmdale ditch.

In summary, the proposed new poles and construction activities will not impact the Palmdale Ditch and related tunnel because all of the proposed construction activity will take place within the proposed area of disturbance, the outside edge of which is 40 feet from the mouth of the Palmdale Ditch tunnel.

Applicant has previously submitted a .kmz file identifying the proposed pole locations and areas of disturbance for the entire transmission linear route. Attached are two static images from the same

#### Technical Area: Cultural Resources

Response Date: May 15, 2009

file that provide a horizontal and vertical view of the proposed pole location in relation to the Palmdale Ditch and tunnel. These images will show that construction of the proposed pole at this location will avoid a significant impact on the Palmdale Ditch and tunnel.

#### **References:**

Historic Aerials, 2009. Historic Maps of Palmdale from 1965 and 1971. Electronic document: http://www.historicaerials.com/default.aspx. Accessed May 4.

Union Pacific, 2009. Chronological History. Electronic document: http://www.uprr.com/aboutup/ history/uprr-chr.shtml. Accessed May 4.

William Self Associates, Inc. (WSA), 2008. Cultural Resources Technical Report, Palmdale Hybrid Power Project, Palmdale, California. Prepared for ENSR Corporation. Orinda, CA.





### STATE OF CALIFORNIA ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

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In the Matter of:

Application for Certification, for the CITY OF PALMDALE HYBRID POWER PLANT PROJECT Docket No. 08-AFC-9

**PROOF OF SERVICE** 

(Revised April 30, 2009)

### **APPLICANT**

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#### PALMDALE HYBRID POWER PROJECT CEC Docket No. 08-AFC-09

#### **INTERESTED AGENCIES**

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#### PALMDALE HYBRID POWER PROJECT CEC Docket No. 08-AFC-09

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# **DECLARATION OF SERVICE**

I, Paul Kihm, declare that on May 15, 2009, I served and filed copies of the attached:

# APPLICANT'S RESPONSE TO CEC DATA REQUESTS RE CULTURAL RESOURCES (DR 1-3)

to all parties identified on the Proof of Service List above in the following manner:

# **California Energy Commission Docket Unit**

Transmission via electronic mail and by depositing one original paper copy with FedEx overnight mail delivery service at Costa Mesa, California, with delivery fees thereon fully prepaid and addressed to the following:

## **CALIFORNIA ENERGY COMMISSION**

Attn: DOCKET NO. 08-AFC-09 1516 Ninth Street, MS-4 Sacramento, California 95814-5512

#### PALMDALE HYBRID POWER PROJECT CEC Docket No. 08-AFC-09

docket@energy.state.ca.us

### For Service to All Other Parties

Transmission via electronic mail to all email addresses on the Proof of Service list; and

by depositing one paper copy with the United States Postal Service via first-class mail at Costa Mesa, California, with postage fees thereon fully prepaid and addressed as provided on the Proof of Service list to those addresses **NOT** marked "email preferred."

I further declare that transmission via electronic mail and U.S. Mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210.

I declare under penalty of perjury that the foregoing is true and correct. Executed on May 15, 2009, at Costa Mesa, California.

and to

Paul Kihm