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July 26, 2024

Curt Hilderbrand
Hydrostor, Inc.
400 Capitol Mall, Suite 3000
Sacramento, CA 95814-4497

Data Requests Set 1 for Willow Rock Energy Storage Center (21-AFC-02)

Dear Curt:

Pursuant to Title 20, California Code of Regulations, section 1716, California Energy Commission (CEC) staff is asking for the information specified in the enclosed Data Requests Set 1, which is necessary for a complete staff analysis of the Willow Rock Energy Storage Center (WRESC) under the Warren-Alquist Act and California Environmental Quality Act (CEQA).

Responses to the data requests are due to staff within 30 days. If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send written notice to me and the Committee within 20 days of receipt of this letter. Such written notification must contain the reasons for not providing the information, the need for additional time, or the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions, please email me at leonidas.payne@energy.ca.gov.

_____/S/_____

Leonidas Payne
Project Manager

Enclosure: Data Requests Set 1

WILLOW ROCK ENERGY STORAGE CENTER
DATA REQUESTS SET 1

ALTERNATIVES

BACKGROUND: Preferred Gen-Tie Route Options

Section 2.0 Project Description lists project features, including the transmission line to connect the project to the grid at the Whirlwind Substation: "One, approximately 19-mile-long 230 kV single-circuit, double-bundle, conductor generation-tie (gen-tie) line interconnecting to the SCE Whirlwind Substation with a preferred gen-tie route and route options."

In Section 6.0 Alternatives, subsection 6.5.1.2 Preferred Gen-Tie Route Options, several options are listed. It states that these route options "deviate slightly from the primary alignment that are also included in the proposed project. These are all considered available but less preferrable than the primary route." (The options are numbered: 1, 2a, 2b, 3a, 3b, 4, 5, and 6.)

DATA REQUEST

1. Please clarify whether all the transmission line route options are considered part of the proposed project. If not, please clarify whether the applicant is seeking CEC certification only for the "primary route."

BACKGROUND: Alternative Sites

Section 6.0 Alternatives of the supplemental application evaluates several alternative sites, including the original Sweetser Road Site, for a total of eight alternative sites. The three alternative sites from the original application are included in the supplemental application (BLM Site, Little Buttes Site, and Rosamond Hills Site). The applicant provided details to staff on these three sites in its August 2022 Data Request Response Set 1, Attachment DR6-1, "Nonconfidential Summary of the Geotechnical Examination" (TN 245698). These details included large-scale (i.e., zoomed in) maps and other information to allow staff to examine these alternative sites.

The applicant added four sites to the Alternatives analysis in the supplemental application for the relocated project: VH Site, PS Site, G Site, and OT Site. These sites are shown as dots on a map (Figure 6-1) with general descriptions of their locations relative to the proposed site. Additional information is required to allow staff to describe and evaluate these new alternative sites.

DATA REQUEST

2. Please provide assessor's parcel numbers and large-scale, zoomed in maps showing the locations of the VH Site, PS Site, G Site, and OT Site. Please provide any additional details on these sites that might have been acquired by the applicant prior to submittal of the supplemental application (e.g., information from a preliminary site assessment or other similar study).

WILLOW ROCK ENERGY STORAGE CENTER
DATA REQUESTS SET 1

CULTURAL/TRIBAL CULTURAL RESOURCES

BACKGROUND: 5.0 Research Design for the Cultural Resources Testing Program

The discussion of regional research issues in the testing plan is underdeveloped. For instance, the historic archaeological research questions are only mentioned in Chronology (WSP 2024, pages 23–24). The CEC staff informed the applicant and its consultant team during a May 17, 2024, meeting that the testing plan should make use of a few readily available, thematic archaeological research designs: COHP (1990) for general guidance on research design and methods, Caltrans (2008) for mining cultural resources, and Caltrans (2023) for agricultural cultural resources. WSP (2024) does not reference these documents.

DATA REQUESTS:

3. Please provide a summary of regional research issues.

4. Please provide historic archaeological research questions relevant to the area or region and activities that were present in this region (i.e., mining, agriculture, ethnicity, gender, etc.).

5. Please provide historic research questions relevant to the artifacts expected to be recovered at the specific site types.

BACKGROUND: Figure 2 Site Testing Locations (map)

The map is missing two archaeological resource locations (WRESC-ZEV-HIST-2 and WRESC-P1-PRE-SITE-2).

DATA REQUEST:

6. Please add WRESC-ZEV-HIST-2 and WRESC-P1-PRE-SITE-2 to Figure 2.

BACKGROUND: 3.2.2 Ethnographic Context

The testing plan does not contain ethnographic information for the Serrano, except for scattered references in the Kitanemuk and Tataviam discussions (WSP 2024, pages 8–11).

DATA REQUEST:

7. Please add a Serrano context to the Ethnographic Context of the survey addendum when that report is completed.

BACKGROUND: 4.1 General Testing Methodology

The testing plan does not contain data thresholds to determine what constitutes a "substantial cultural deposit" (COHP 1990, page 10).

When excavating historic features where discernable layers are present, excavation should be done stratigraphically using the Harris Matrix or similar approaches.

To confirm the character and composition of surface deposits in aeolian depositional environments, incorporate the use of 2-meter-by-2-meter Surface Test Units (STUs), excavated to a depth of 5 centimeters below surface and screened through 1/8-inch wire mesh. STU locations can be determined to incorporate cultural materials visible on the surface. STUs can be expanded to shovel test pits (STPs) or test units (TUs) if cultural materials are encountered beyond an established threshold of what was initially visible on the surface. The Testing Plan must determine the conditions upon which a STU would be expanded to a STP or TU. Be specific in determining this threshold.

The prescribed testing plans for Native American archaeological site WRESC-ZEV-PRE-SITE 1 indicates that "STPs will be excavated in a manner that avoids potential direct impacts to the identified site until it is determined that surface collection and additional excavation within the recorded site boundary is appropriate" (WSP 2024, page 18). If testing the exterior margins of a site does not show evidence of subsurface cultural deposits, subsurface testing should be explored within the recorded site boundary to determine the presence or absence of subsurface cultural deposits for the purposes of evaluating the significance of the resource. Phase II investigations are the appropriate time to excavate within the recorded site boundary. This approach to identifying subsurface cultural deposits should be discussed within the methods section and applied to all Native American archaeological sites (WRESC-ZEV-PRE-SITE 1, WRESC-ZEV-PRE-SITE 2, WRESC-P1-PRE-SITE 1, and WRESC-P1-PRE-SITE 2).

DATA REQUESTS:

8. Please add data thresholds for what constitutes a substantial deposit (i.e., a concentration of __ artifacts or intact features, etc.). These can be site-specific based on the site type and context.

9. Please verify that when historic features are encountered that warrant it, industry standards for the excavation of historical archaeology will be employed such as stratigraphic excavation methods (i.e., Harris Matrix).

10. Please incorporate the use of 2-meter-by-2-meter STUs at Native American archaeological sites with surface deposits in aeolian depositional environments.

11. Please incorporate methods for subsurface testing within site boundaries of all Native American archaeological sites to determine the presence or absence of subsurface cultural deposits for the purposes of evaluating the significance of the resource if the testing of the exterior margins of a site does not show evidence of a subsurface cultural deposit.

BACKGROUND: 4.2 Site-Specific Plans

Site-specific plans need to be more developed to include how and what decisions will be made if intact deposits or features are encountered.

WESC-ZEV-HIST-SITE-1 methods should also focus on identifying features that could contribute to the eligibility of the site or answer relevant research questions, as well as diagnostic artifacts to help identify the period of occupation of the homestead.

Historic sites CA-KER-8324H, CA-KER-8325H, CA-KER-3816H, and CA-KER-8328H along the Gen-Tie Route generally fall outside of the areas of direct impacts and the present plan is geared toward establishing the presence or absence of archaeological deposits. The plan should include decision thresholds, if an intact deposit or feature is encountered, that include whether the unit will be expanded to determine if the deposit would contribute to the overall site eligibility or to exhaust the data potential of the deposit.

The prescribed testing plan for sites WRESC-P1-PRE-SITE 1 and WRESC-P1-PRE-SITE 2 proposes over 100 STPs across 1,000 square meters, to potentially redefine the boundaries of the two resources among obsidian isolates recently identified in January of 2024. The testing plan also proposes to assess the potential for subsurface archaeological deposits using these STPs. It is not clear how using 100 STPs spaced every 10 meters across a grid projected between the two sites is going to determine if the boundaries of these two resources are accurately defined if the resources are not yet known to contain subsurface deposits. A thorough surface survey or deployment of STUs seems a more likely way to identify sparse lithic scatters in surface deposits. The proposed prescribed testing for WRESC-P1-PRE-SITE 1 and WRESC-P1-PRE-SITE 2 only addresses the matter of defining the boundaries of the resources; it does not address the how the resources are going to be investigated to evaluate their significance.

DATA REQUESTS:

12. Please include figures that show the area(s) that will be tested, limits of property access, and survey area for each site.

13. Please update WESC-ZEV-HIST-SITE-1 to include methods for identifying features that could contribute to the eligibility of the site or answer relevant research questions.

14. Please update the site-specific plans for CA-KER-8324H, CA-KER-8325H, CA-KER-3816H, and CA-KER-8328H to include decision thresholds, if an intact deposit or feature is encountered, that include whether the unit will be expanded to determine if the deposit would contribute to the overall site eligibility or to exhaust the data potential of the deposit.

15. Please update WRESC-P1-PRE-SITE 1 and WRESC-P1-PRE-SITE 2 with methods that include thorough surface survey or deployment of STUs to aid in defining the existing

site boundaries and how the resources are going to be investigated to evaluate their significance.

BACKGROUND: Information Requirements for AFC Application

CEC staff has received via confidential filing the Cultural Resources Assessment of WRESC Advanced Compressed Air Energy System (A-CAES) Project prepared by WSP USA, Inc. (WSP) (Amorelli et al. 2024). Section (g)(2)(C) of Appendix B, Information Requirements for an AFC (Cal. Code Regs., tit. 20, Div. 2, Ch. 5) requires that the cultural resources technical report conforms to the Archaeological Resource Management Report (ARMR) format (COHP 1990), so that staff has sufficient information upon which to complete its analysis.

Section 3.1 of the confidential Cultural Resources Assessment (Amorelli et al. 2024) describes the natural setting of the proposed project's area and provides an overview of the geology, climate, biology, and hydrology. However, a description of the natural environment as it is believed to have existed during the temporal periods of occupation being investigated is absent.

Additionally, the ethnographic context contained in the report (Amorelli et al. 2024) provides a review of ethnographic information regarding the Kitanemuk, Tataviam, and Kawaiisu. However, a discussion of the Serrano is absent, even though their ancestral lands are closer to the project site than the Tataviam.

Section (g)(2)(C) of Appendix B requires that new pedestrian surveys be conducted inclusive of the project site and project linear facility routes, extending no less than 200 feet around the project site, substations and staging areas, and to no less than 50 feet to either side of the right-of-way of project linear facility routes. Section 6.3 of the confidential Cultural Resources Assessment (Amorelli et al. 2024) discusses the methods and results of the cultural resources survey, and report that 18 percent of the P1 Staging Area, a two-mile segment of Alternative C of the gen-tie route, and several portions of the preferred gen-tie route have not been surveyed.

The ARMR (COHP 1990, page 10) indicates that for survey reports, maps should be used to depict areas surveyed, not surveyed, or surveyed using various strategies. No such maps were provided in the application.

Lastly, several bibliographic resources cited in the confidential Cultural Resources Assessment (Amorelli et al. 2024) are not included in the References section of the report.

To resolve these issues identified with the confidential Cultural Resources Assessment (Amorelli et al. 2024), the applicant may address the data requests identified below in its addendum survey report(s).

DATA REQUESTS:

16. Please provide a description of the paleoenvironmental setting, per ARMR, p. 8.

17. Provide a review of the ethnographic information relating to the Serrano that includes the Vanyume.

18. A significant amount of the project area remains unexamined by cultural resources specialists. Obtain access to all properties within the archaeological study area, survey them for the presence/absence of cultural resources and provide a supplemental report of methods and findings.

19. Provide archaeological survey coverage maps per ARMR, p. 10.

20. Provide bibliographic entries for these text citations: Kern County Gazette 1876; Kern-Antelope Historical Society 1936, 2018; Mayer and Laudenslayer 1988; Norwood and Kilanowski 1991; San Bernardino Museum n.d.; USGS 1963.

BACKGROUND: Historic Built Environment Resource Documentation

The Cultural Resources Assessment of the WRESC A-CAES project states that one built environment resource, the Zabriski Place (P-15-003098), was inaccessible from the right of way and therefore the applicant's consultants only inventoried the property at a reconnaissance level instead of the intensive level survey and documentation that all other built environment resources received (Amorelli et al. 2024, page 75). While the condition of the resource may be difficult to fully document with visual obstructions from the right of way, the historic context and potential significance of P-15-003098 should still be still be documented at an intensive survey level, especially considering that this resource was previously recommended eligible for listing in the National Register of Historic Places, likely qualifying the Zabriski Place as a historical resource under the California Environmental Quality Act.

Additionally, several built environment resources documented in Appendix D of the Cultural Resources Assessment are not listed with the other surveyed resources in the Built Environment Investigation Results (Section 6.4) or shown on the Built Environment Survey Result Maps in Appendix C (Survey Results Figures). These include Map ID #35-54 (Amorelli et al. 2024, pages 7-90, Appendix C).

DATA REQUESTS:

21. Please document P-15-003098 on a DPR 523 form to the fullest extent possible given the visual obstructions from the right of way with emphasis on historic context and potential significance of the resource.

22. Please revise Section 6.4 and the Built Environment Survey Results Map in Appendix C of the Cultural Resources Assessment to include these resources.

REFERENCES

Amorelli et al. 2024 – Michael Amorelli, Allegria Garcia, Kate Umlauf, and Austin White. *GEM A-CAES, LLC: Cultural Resources Assessment of the Willow Rock Energy Storage Center (WRESC) Advanced Compressed Air Energy System (A-CAES) Project, Unincorporated Communities of Ansel, Willow Springs and Rosamond, Kern County, California*. Confidential report prepared by WSP, Riverside, CA, March 1, 2024.

Caltrans 2008 – California Department of Transportation. *A Historical Context and Archaeological Research Design for Mining Properties in California*. Accessed online at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/ser/mining-study-a11y.pdf. Sacramento, 2008.

Caltrans 2023 – California Department of Transportation. *A Historical Context and Methodology for Evaluating Agricultural Properties in California*. Accessed online at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/ser/historical-context-agricultural-properties-ca-a11y.pdf. Prepared for Cultural Studies Office, Division of Environmental Analysis, California Department of Transportation, Sacramento, 2023.

COHP 1990 – California Office of Historic Preservation. *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format*. Accessed online at: https://ohp.parks.ca.gov/pages/1069/files/armr-remediated.pdf. Sacramento, February 1990.

WSP 2024 – WSP USA Inc. *Report: Cultural Resources Phase II Testing Plan Willow Rock Energy Storage Center (21-AFC-02)*. Confidential report submitted to Hydrostor. Prepared by WSP USA Inc., Riverside, CA, June 17, 2024.

SOCIOECONOMICS

BACKGROUND: Local Versus Non-Local Construction Workers

Staff needs clarification on the percent of local and non-local workers for the construction on the project. Regarding cavern construction, Section 5.10.3.2.1 on page 5.10-12 of the application states, "Construction of the cavern and shafts requires a specialized workforce" and "The Applicant anticipates that the workforce for the cavern and shafts will largely consist of out-of-town workers". Regarding surface construction, Section 5.10.3.2.1 page 5.10-16 of the application states "The Applicant anticipates that 28 percent of the skilled labor needed for surface construction activities will be drawn from local communities." Additionally, Section 5.10.3.2.1 on page 5.1-12 states that "Based on the skilled labor requirements and the existing workforces in Kern County, local labor pools will be adequate to fulfill the WRESC's non-specialized construction labor requirements."

DATA REQUESTS

23. What is the percentage of local and non-local construction workforce for each of the three phases of construction?

24. Identify the construction workers and/or construction phase(s) that is referred to as the project's non-specialized construction labor and that could be fulfilled by Kern County local labor pools.