

DOCKETED

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Project Title:	Abengoa Mojave Compliance
TN #:	255494
Document Title:	Mojave Solar Project- Data Requests for Two New Evaporative Ponds
Description:	Data Request Letter for Two New Evaporative Ponds Petition to Amend Final Commission Decision
Filer:	Ashley Gutierrez
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**CALIFORNIA
ENERGY COMMISSION**



**CALIFORNIA
NATURAL
RESOURCES
AGENCY**

April 3, 2024

Mahnaz Ghamati, Compliance Manager
Mojave Solar LLC
42134 Harper Lake Road
Hinkley, California 92347

Data Requests for Mojave Solar Project (09-AFC-05C) Addition of Two New Evaporation Ponds

Dear Mahnaz Ghamati:

The California Energy Commission (CEC) staff, in consultation with Lahontan Regional Water Quality Control Board staff, is requesting information specified in the enclosed data requests, which is necessary for the staff analysis of the Mojave Solar Project petition to amend (TN# 253750, TN# 253751, and TN# 253752) to construct two new permanent evaporation ponds, one at Alpha block and one at Beta block.

These data requests seek further information in the areas of socioeconomics, transportation, cultural and tribal resources, and water resources, based on the contents of the petition to amend.

To ensure a timely environmental review, CEC staff is requesting responses to the data requests within 30 days. If you are unable to provide the information requested or need to revise the timeline, please let me know within 10 days of receipt of this letter.

If you have any questions, please email me at ashley.gutierrez@energy.ca.gov.

Ashley Gutierrez

Ashley Gutierrez
Compliance Project Manager

Enclosure: Data Requests

MOJAVE SOLAR PROJECT (09-AFC-05C) DATA REQUESTS

SOCIOECONOMICS AND TRANSPORTATION

Author: Steve Kerr

BACKGROUND

The project owner is proposing to construct one new evaporation pond at each plant (A-3 and B-3).

DATA REQUESTS

1. What is the estimated number of workers required for construction of the ponds? What is the estimated length of time required to complete construction of the ponds?
2. What is the estimated number of truck trips generated by the construction of the ponds? How many, if any, oversized trucks would be used for the construction of the ponds?

CULTURAL AND TRIBAL CULTURAL RESOURCES

Author: Patrick Riordan

BACKGROUND

Assessment of impacts on cultural and tribal cultural resources hinges in part on knowing the extent and character of ground-disturbing activities associated with a project. The applicant provides little information about the depth of excavation required to demolish existing improvements on the project site and to construct the proposed improvements, indicating only that "the depth of excavation for the proposed ponds is typically less than 6 feet and maximum depth of excavation for manholes and neutron probes is 15 feet". (Hushmand Associates, Inc., p. 4)

DATA REQUESTS

3. Please describe and characterize the scale of excavation (particularly depth) required for various project components, including:
 - a. Demolition of existing concrete foundation and pavement at the site of the mirror assembly building
 - b. Alpha and Beta ponds (with maximum depths of excavation identified for the liner system, sumps, leak detection pipes and manhole, and wastewater force main pipeline and control valves).
 - c. Perched groundwater monitoring wells.
 - d. Stormwater runoff retention basin.

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WATER RESOURCES

Author: James Ackerman

BACKGROUND

The project owner submitted a petition to amend (PTA) on November 29, 2023, to increase the berm height by 2 feet at the eastern end of each existing evaporation pond (Alpha-East, Alpha-West, Beta-East, and Beta-West). The purpose of this proposed action was to increase pond capacity due to the lower elevation of the berm at each of the existing evaporation ponds. Based on the original Alpha evaporation pond construction plans, the slope along the top of the berm is approximately one foot per 90 feet or a gradient of 0.011. This PTA (TN# 253380) was subsequently withdrawn; however, according to the Design Memorandum included as Appendix 10.1 in this PTA, "*The intent of the design was to replicate the existing evaporation pond design to the extent practical and consistent with current pond liner systems*". Based on design plan No. C004, *Alpha Site Grading and Drainage Plan*, included as Appendix 10.2 of the PTA, it appears that this design flaw may have been corrected. However, the finished grade elevation contours are not apparent.

DATA REQUEST

4. Will the top berm surface of the proposed evaporation ponds at the Alpha and Beta sites be constructed with or without a minimum slope?

BACKGROUND

Section 6.1 of the PTA justifies the construction of additional evaporation ponds to increase storage capacity based on accumulating wastewater over time due to decreasing evaporation rate as a result of increasing salinity and the installation of bird netting. However, CEC staff has been wondering why the original evaporation pond design could not compensate for seemingly small conditional changes and would like to investigate other possibilities for the increase in stored wastewater.

DATA REQUEST

5. Please provide the inflow/outflow water records for both the Alpha and Beta water treatment plants during the life of the Mojave Solar Project in Excel format.

BACKGROUND

In response to a CEC staff request, the project owner submitted a Post Certification Project Change Questionnaire (PCQ) describing modifications to the Beta water treatment plant that took place in 2019 and included changes to the reverse osmosis system being operated as a Closed-Circuit Reverse Osmosis (CCRO) system. The PCQ stated that the modification did not result in any changes in the plant water flow balance. CEC staff understands that the CCRO system works by recirculating pressurized feedwater until a desired recovery level is reached and brine is replaced with fresh feed without stopping

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the flow of pressurized feed or permeate. CEC staff would like to understand this change in relation to the original system design and is concerned that this system change may have increased freshwater use, thereby increasing wastewater discharged to the evaporation ponds. In addition, given recent issues with system pipe leakage, it is possible that system pressures may have exceeded the original design parameters.

DATA REQUEST

6. Please provide analysis regarding how much additional feed water is used since the 2019 modifications, and data justifying why the modification did not result in an increase in flow from the system to the ponds. Discuss operating pressures including original and new design parameters.

BACKGROUND

During the site visit conducted by CEC staff on December 12, 2023, a tank truck was observed discharging wastewater into the east end of the Beta West evaporation pond.

DATA REQUEST

7. Is the source of this discharge different from the water treatment plant and tracked separately?

LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD

Author: Todd Battey

BACKGROUND

Lahontan Regional Water Quality Control Board (LRWQCB) staff provided the following questions to better understand plant processes associated with the construction of the two new evaporation ponds.

DATA REQUESTS

8. Please provide the groundwater flow direction for the perched groundwater zone on a figure showing the evaporation ponds and the proposed perched groundwater monitoring wells to better document that the proposed wells are located appropriately.
9. Please document the nearest downgradient water table groundwater monitoring well, including how far away it is and how close (directionally) to being directly downgradient based on flow direction in the water table aquifer. This could be documented on a figure showing the evaporation ponds with an arrow pointing to the downgradient water table well with the distance listed, and another arrow showing the flow direction in the water table aquifer.

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10. If perched groundwater is not encountered during drilling of the proposed perched groundwater monitoring wells, then one or more deeper water table groundwater monitoring wells may be required to monitor for groundwater impacts from the new ponds. Please document this groundwater monitoring strategy.

11. As detailed in title 27, Section 20530, the "site shall be designed to discourage unauthorized access by persons and vehicles by using a perimeter barrier or topographic constraints." The PTA describes the use of netting, apparently without perimeter fencing or topographic barrier. Historically, the Lahontan Regional Water Quality Control Board requires perimeter fencing for Title 27 sites unless adequate justification is provided. Please provide additional information about how the netting (and perhaps other measures) will prevent unauthorized access by persons and vehicles.