STATE OF CALIFORNIA – THE RESOURCES AGENCY
CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

ARNOLD SCHWARZENEGGER, *Governor*

February 16, 2010

DOCKET
09-AFC-10
DATE FEB 16 2010
RECD FEB 16 2010

Mr. Jeffrey Benoit
Senior Project Manager
SolarReserve
2425 Olympic Blvd, Suite 500 E
Santa Monica, CA 90404

RE: RICESOLAR ENERGY PROJECT (09-AFC-10)
DATA REQUESTS SET 1 (#s1-168)

Dear Mr. Benoit:

Pursuant to Title 20, California Code of Regulations, Section 1716, the California Energy Commission staff seeks the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

This set of data requests (#s 1-168) is being made in the areas of Air Quality (#'s 1-35), Alternatives (#'s 36-43), Biological Resources (#'s 44-77), Cultural Resources (#s 78-88), Hazardous Materials (#s 89-93), Land Use (#s 94-99), Project Description (#s 100-107), Socioeconomics (#s 108-109), Soil & Water Resources (#s 110-146), Traffic & Transportation (#s 147-153), Transmission System Engineering (#s 154-155), Visual Resources (#s 156-158) and Waste Management (#s 159-168). Written responses to the enclosed data requests are due to the Energy Commission staff on or before March 15, 2010, or at such later date as may be mutually agreeable.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, you must send a written notice to both the Committee and me within 20 days of receipt of this notice. The notification must contain the reasons for not providing the information, the need for additional time, and the grounds for any objections (see Title 20, California Code of Regulations, Sec.1716 (f)). If you have any questions, please call me at (916) 654-4679 or email me at jkessler@energy.state.ca.us.

Sincerely,

John Kessler
Project Manager

cc: Docket (09-AFC-10)
Proof of Service List
Webworks

PROOF OF SERVICE (REVISED 2/4/10) FILED WITH
ORIGINAL MAILED FROM SACRAMENTO ON 2/16/10
HA

Technical Area: Air Quality
Author: Jacquelyn Leyva & William Walters

BACKGROUND: BASELINE SITE CONDITIONS

In order to evaluate the air quality impacts from this project the baseline conditions of the project site need to be understood.

DATA REQUESTS

1. Please describe the types of activities that currently emit combustion and fugitive dust emissions on the site, such as off-road use, and the quantities of those emissions that occur from those activities.
2. Please describe whether those activities will be permanently discontinued when the project is completed and estimate the reductions from the current onsite baseline emissions.

BACKGROUND: FUGITIVE DUST EMISSIONS ESTIMATION – EMISSIONS FROM WIND EROSION

The Application for Certification (AFC) only provides wind erosion from temporary storage piles during construction, but does not appear to provide wind erosion fugitive dust emissions from disturbed areas during construction or operation. Staff believes that this emission source needs to be included in the construction and operation emissions estimate.

DATA REQUEST

3. Please identify the increase or decrease in the acreage of non-stabilized disturbed land within the project site during operation and estimate the corresponding increase or decrease in wind erosion fugitive dust emissions at the site during construction and operation.

BACKGROUND: FUGITIVE DUST EMISSION CALCULATIONS – SILT CONTENT

The applicant's fugitive dust emission calculations use a soil silt content of 8.5 percent, which is a default value from USEPA. However, there is site specific surface/near surface sieve data in the Geotechnical Report (AFC Appendix 2B) that can be used to determine a more representative silt content value for the surface soils at this project site. Staff's review of the data in the Geotechnical Report suggests a higher silt content value than used in the fugitive dust calculations. Staff needs the applicant to review the site specific data and provide a defensible site specific silt content assumption, and as necessary revise the emission calculations appropriately.

DATA REQUESTS

4. Please provide an analysis of the available onsite surface/near surface soil sieve data that identifies a defensible site specific soil silt content value.
5. Please provide an updated fugitive dust emission calculation for both construction and operations using the defensible soil silt content value.

BACKGROUND: CONSTRUCTION EMISSIONS CALCULATIONS

The construction emission calculations include certain assumptions and calculations that require additional information to be confirmed by staff.

DATA REQUESTS

6. Please provide the URBEMIS off-road construction equipment emission factors used to calculate the off-road equipment emissions and the methodology used to determine these emission factors.

7. Please identify whether the derivation of the URBEMIS emission factors included any assumptions regarding the engine Tier level or age in determining the off-road emission factors, or if the emission factors are based on fleet average or some other basis.

BACKGROUND: INITIAL COMMISSIONING – DRY SALT HANDLING EMISSIONS

Section 2.2.13.1 describes several dry salt handling operations that will occur upon initial salt receipt prior to salt melting/conditioning. This includes use of a hammermill (crusher) and several dry salt transfer points. However, the applicant has not provided data on particulate emissions from the dry salt handling operations. Staff needs more information to understand the dry salt handling, the emissions controls if any, and the associated particulate emissions.

DATA REQUESTS

8. Please provide an estimation of any temporary point source and fugitive dust emissions associated with the dry salt crushing and handling activities.

9. Please describe any emission controls that will be used to reduce any temporary point source and fugitive dust emissions associated with the dry salt crushing and handling activities.

BACKGROUND: INITIAL COMMISSIONING - SALT CONDITIONING EMISSIONS

The applicant has provided data on salt conditioning emissions that seems incomplete. The emissions note only one impurity, magnesium nitrate, while the AFC Table 5.5-5 notes several other impurities in amounts large enough to be several hundred tons in total. Considering that the total salt quantity is stated to be 35,000 tons and that even one part per million of a toxic volatile metal, like arsenic, would equal 70 lbs; more information about the complete composition of the incoming salts and the potential decomposition products is needed for staff to evaluate the emissions and impacts of the salt conditioning.

DATA REQUESTS

10. Please provide complete sodium and potassium nitrate salt trace constituent compositions down to the ppm level.

11. Please provide copies of any vendor guarantees associated with these trace compositions, including the vendor guarantee noted in 5.1B-3.

12. Please describe the disposition of the magnesium oxide decomposition product. Does it remain in the salt solution, is it emitted with the vented gas decomposition product, does is settle as a solid at the bottom of the salt tanks, or is it otherwise separated from the salts and trucked offsite?

13. Please describe for all of the other salt impurities, which exist at or above 1 ppm in the raw incoming salts, the decomposition products and emissions or other final disposition.

BACKGROUND: CONSTRUCTION – OFFSITE VEHICLE EMISSIONS

Staff's review of the construction offsite vehicle emission calculations (Appendix 5.1A, Tables 5.1A.31 through 5.1A.38) indicates there are some errors in the table descriptions and calculations. Staff needs the applicant to confirm the units and correct the emissions provided in these tables.

DATA REQUESTS

14. Please confirm that the correct units for Table 5.1A.31 are trips per day, not trips per month, and confirm that the total number of trips is based on a 22 day per month construction schedule assumption.

15. Please confirm that the correct units for Table 5.1A.38 are miles per round trip, not miles per day.

16. Please correct the SOx, NOx, and PM10/PM2.5 monthly emissions Tables 5.1A.34 through 5.1A.37 that provide lb/day values for the heavy diesel vehicles rather than lbs/month, and that provide lb/month values for the employee commute emissions that are approximately 4.5 times too low compared to VOC and CO, which appear to be correct.

BACKGROUND: CONSTRUCTION – TEMPORARY CONCRETE BATCH PLANT

Section 5.1 includes fugitive dust emissions from a temporary concrete batch plant and the diesel engine-generator emissions from rock screening plant. It is unclear if these terms are used interchangeably. Staff needs additional information to understand if the engines/power needed to operate the concrete batch plant was actually included in the construction emission estimate.

DATA REQUESTS

17. Please identify whether the rock screening plant diesel engine emission source shown in appendix 5.1A would power the temporary concrete batch plant, or provide an emission estimate for the power source necessary for the temporary concrete batch plant.

BACKGROUND: OPERATIONS – MOLTEN SALT STORAGE

The potential for additional salt decomposition or salt fume emissions for the ongoing molten salt storage process is unclear. Staff needs additional information regarding the molten salt storage and handling.

DATA REQUESTS

18. Please describe the potential for salt decomposition and venting after the initial salt conditioning.

19. Sodium nitrate is described as having a decomposition temperature of 716 degrees Fahrenheit (380 degrees Celsius) and potassium nitrate is described as having a decomposition temperature of 752 degrees Fahrenheit (400 degrees Celsius), while the hot salt storage is noted to be 1,050 degrees Fahrenheit. Please describe how the salt mixture does not decompose at the hot salt storage temperature and provide the decomposition temperature for the salt mixture.

20. Please describe the molten salt storage containment and whether there is the potential for molten salt fume emissions being exhausted from the salt storage tanks.

21. Please describe the working pressure for the molten salt and whether there are any pressure relief valves or similar components.

22. Please describe whether a nitrogen blanket or similar will be used to prevent salt oxidation/decomposition and degradation.

23. Please provide evidence that shows there will not be any other molten salt loss or describe what would be done to offset any such losses.

24. Will the three stacks used to vent salt melting, salt heating, and salt conditioning - melting off-gases (stacks 1 to 3 on Figure 5.1C-3) be removed with removal of the fired heater and NOx scrubber system at the end of the commissioning process (page 5.1-13)? If not, what happens to these stacks?

BACKGROUND: BASIS FOR MIRROR WASHING FREQUENCY

The applicant has specified heliostat washing frequency of 37 times per year. Staff needs to understand the need for this washing frequency due to the PM emissions potential from both the direct vehicle use fugitive dust generation and the soil disturbance and resulting increase in wind erosion potential. Staff would like to confirm if this frequency is an optimized frequency proposed by the manufacturer of the heliostats, if it has been optimized for the local conditions, and has the applicant considered mirror washing routes and methods considered minimizing PM emissions and deterioration of the naturally occurring desert crust layer (“desert glaze”) that naturally reduces wind erosion.

DATA REQUEST

25. Please provide the technical basis for the heliostat mirror-washing frequency.

26. Please discuss any optimization of the mirror washing route and any other considered PM emission mitigation for mirror washing.

BACKGROUND: CONSTRUCTION AND OPERATION AIR DISPERSION MODELING

The applicant’s operation emissions air dispersion modeling did not include the onsite maintenance emissions, which was staff’s first comment on the applicant’s modeling protocol. Staff needs the applicant to remodel the operating emissions to include the maintenance vehicle tailpipe and associated fugitive dust emissions.

Additionally, there are several other data requests that may cause the applicant to revise emission estimates that also should be incorporated in a revised modeling analysis.

DATA REQUEST

27. Please revise the operation modeling to include the maintenance vehicle tailpipe and associated fugitive dust emissions, including any other changes in operating emission estimates as determined in response to other data requests.

28. Please revise the construction air dispersion modeling analysis to include any changes to the construction emissions estimate as determined in response to other data requests.

BACKGROUND: GASOLINE STORAGE

The AFC states there will be diesel onsite storage, but does not show any gasoline storage for vehicle refueling, and it is unclear if any gasoline vehicles will be refueled onsite. The nearest retail gasoline service station appears very distant from this remote site, so it would be seem prudent to have gasoline refueling capabilities for any dedicated onsite vehicles and for operations staff personal vehicles in case of emergency. Staff would like to confirm that the applicant does not plan to store gasoline for vehicle refueling at this site.

DATA REQUESTS

29. Please confirm that there will be no dedicated gasoline fueled onsite vehicles

30. Please confirm that there will be no vehicle refueling gasoline storage tank at the site.

BACKGROUND: INVENTORY AND EMISSIONS OF SF_6, HFCS, AND PFCS

The AFC notes that there will be use and emissions of sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs). While the applicant may be correct that the emissions from these potent greenhouse gases (GHGs) are minimal, to complete its analysis of the project's annual operating carbon dioxide equivalent emissions, staff needs an estimate of these emissions.

DATA REQUEST

31. Please provide an estimate of the SF_6 onsite inventory and annual leakage emissions.

32. Please provide the type of HFCs used, their inventory, their CO_2 equivalency values, and an estimate of their annual leakage emissions.

33. Please provide the type of PFCs used, their inventory, their CO_2 equivalency values, and an estimate of their annual leakage emissions.

BACKGROUND: GREENHOUSE GAS EMISSIONS – NET GENERATION

Staff includes an assessment of the greenhouse gas emissions, or emissions performance, per net amount of generation. It is unclear if the applicant's information includes all of the parasitic loads, such as the overnight molten salt electric heat trace load. Staff needs additional information to determine the complete net generation and GHG emissions performance for this facility.

DATA REQUESTS

34. Please provide a complete assessment of the net generation for this facility, including the explicit efficiency assumptions for generation and a tally of all of the parasitic load sources, to determine an annual net generation value that can be used to determine GHG emissions performance for this facility.

BACKGROUND: AIR QUALITY PERMIT APPLICATION PROCESS

A Determination of Compliance (DOC) analysis from Mojave Desert Air Quality Management District (MDAQMD or District) will be needed to complete staff's analysis. Staff will need to coordinate with the applicant and MDAQMD to keep apprised of any air quality issues determined by the MDAQMD during their permit review.

DATA REQUEST

35. Please provide copies of any official submittals and correspondence to or from MDAQMD within 5 days of their submittal to or their receipt from the District.

Technical Area: Alternatives
Author: Suzanne Phinney

BACKGROUND

In Section 6.0 Alternatives of the Application for Certification (AFC), page 6-3, Section 6.3, Solar Plant Site Area Alternatives, two site locations are identified as possible alternatives to the proposed project. General location information is provided for the McCoy Alternative Site and the Cadiz Alternative Site. The number of parcels and ownership of parcels are identified for each site. However, in order to accurately plot these locations and compare the alternative sites with the project site, staff needs more exact information on locations.

Data Request

36. Please provide the exact locations of the two alternative sites (Township/Range/Section and/or parcel numbers) and provide shape files for the two sites.
37. Please identify the size (total acreage) and dimensions of each alternative site.
38. For each alternative site, please provide an aerial or topographic map identifying the site boundary, township ranges, property parcels, roads, transmission line to which the site could interconnect, and any other pertinent features.
39. For BLM-administered land, please indicate if the BLM has received a right-of-way application for use of any of the parcels on BLM land.

BACKGROUND

In Section 6.0 Alternatives, page 6-4 to 6-14, Section 6.4 Comparative Evaluation of Alternative Sites, the environmental impacts of the alternative sites are compared to the impacts of the proposed project site. Data summarized in the discussion, as well as additional data, is needed to more fully discuss the alternative sites in the PSA.

Additionally, the environmental community has developed renewable siting criteria to provide ecosystem level protection to the California Desert Conservation Area by giving preference to disturbed lands, steering development away from lands with high environmental values, and avoiding the deserts' undeveloped cores. Understanding how the project site and the alternative sites compare in terms of these criteria will help determine the appropriateness of both the proposed project site and the alternative site locations identified in Section 6.3.

Data Request

40. Please provide results of the CNDDB search of the quadrangles within which the alternative sites are located.
41. Please provide an Information Center search (Class I) for recorded sites identified within the McCoy Site Alternative and the Cadiz Site Alternative.
42. Please fill in Table 1 on the last page of this Alternatives Data Request, using available data, to compare the alternative sites with the proposed project using the criteria developed by the environmental community.

BACKGROUND

In Section 6.0 Alternatives, page 6-19 to 6-21, Section 6.7.4, Alternative Tower Configurations, the effects of shorter and taller tower heights are modeled using the Solar Advisory Model 2009 (SAM2009). Text on page 6-21 states that "a decrease in tower height from the base case (the nominal RSEP design) causes the price of electricity to increase. Similarly, an increase in tower height of 30 meters from the base case would result in an increase in the price of electricity. However, Table 6.7-1, Tower Height Analysis, indicates that the Taller Tower Case 3 Differential (1st Yr PPA Price), is 1.1% less than the base case, indicating a lower cost.

Data Request

43. Please reconcile the table and text and indicate whether the taller tower case reduces or increases electricity cost.

Alternatives Data Request – Table 1

Environmental Criteria	Proposed Project Site	McCoy Site	Cadiz Site
Is site mechanically disturbed?			
Is site located adjacent to degraded and impacted private lands?			
Is site a Brownfield?			
Is site located adjacent to urbanized areas (indicate distance)?			
Does site require the building of new roads (indicate length)?			
Could site be served by existing substations (indicate name and distance)?			
Is site located proximate to sources of municipal wastewater (indicate name and distance)?			
Is site located proximate to load centers (indicate name and distance?)			
Is site located adjacent to federally designated corridors with existing transmission lines?			
Does site support sensitive biological resources, including federally designated and proposed critical habitat; significant populations of federal or state threatened and endangered species, significant populations of sensitive, rare and special status species and rare or unique plant communities?			

Environmental Criteria	Proposed Project Site	McCoy Site	Cadiz Site
Is site within an Area of Critical Environmental Concern, Wildlife Habitat Management Area, proposed HCP and NCCP Conservation Reserves?			
Does site contain land purchased for conservation including those conveyed to BLM?			
Does site contain landscape-level biological linkage areas required for the continued functioning of biological and ecological processes?			
Is the site within Proposed Wilderness Area, proposed National Monuments, and Citizens' Wilderness Inventory Areas			
Does the site contain wetlands and riparian areas, including the upland habitat and groundwater resources required to protect the integrity of seeps, springs, streams or wetlands?			
Is the site a National Historic Register eligible site and does it contain other known cultural resources?			
Is the site located directly adjacent to National or State Park units?			

Technical Area: Biological Resources
Author: Scott D. White

BACKGROUND

Desert Tortoise. The Biological Resources section (Section 5.2) of the Application for Certification (AFC) indicates that desert tortoises occur on the site (pp. 5.2-37 and 5.2-50). Several mitigation measures are proposed and described in the AFC to reduce impacts to desert tortoises. These include proposals to construct desert tortoise exclusion fencing (p. 5.2-66); provide environmental compliance training for on-site workers (p. 5.2-60 and 5.2-69); prepare and implement a Desert Tortoise Translocation / Relocation Plan (p. 5.2-65); and prepare and implement a Raven Management and Control Plan (p. 5.2-67).

Staff generally agrees with the AFC's assessment of potential impacts to desert tortoises and the general approach to mitigation. Staff notes, however, that the Soils section of the AFC states that "a drainage swale will be constructed on the outside of the perimeter fence surrounding the project" as a temporary erosion control measure during project construction (p. 5.11-13). Staff is concerned that grading and other construction impacts for this swale could cause adverse effects, possibly including take, to desert tortoises.

Staff, Bureau of Land Management (BLM) and Western Area Power Administration (Western) will need to review the Desert Tortoise Relocation/Translocation Plan and Raven Management and Control Plan that must be described in adequate detail in the Staff Assessment Addendum/Final Environmental Impact Statement. Staff will coordinate with the California Department of Fish and Game (CDFG) staff to evaluate the project's proposed mitigation of its impacts to desert tortoises, per Section 2081 of the California Endangered Species Act and will need to review detailed description and assessment of all proposed impacts and mitigation measures. Although the proposed generation facility is on private land, the proposed transmission line is on public land managed by BLM and would be interconnected to a Western transmission line. Thus, BLM and Western as co-lead agencies for evaluating the project under the National Environmental Quality Act (NEPA) will need to review and submit a Biological Assessment (BA) of the project's impacts to desert tortoise to initiate Section 7 consultation with the US Fish and Wildlife Service (USFWS) per the federal Endangered Species Act.

DATA REQUESTS

44. Revised Temporary Erosion Control Measures. Please provide an alternate plan for the temporary drainage swale that would be located outside of the perimeter fence to avoid any potential take of desert tortoises.

45. Biological Assessment. Please provide a copy of the Draft Biological Assessment to address project impacts to desert tortoises.

46. Incidental Take Permit Application. Please file with CDFG and provide a copy of the Incidental Take Permit application, per Section 2081 of the California Endangered Species Act.

47. Draft Desert Tortoise Relocation/Translocation Plan. Please provide a draft Desert Tortoise Relocation/Translocation Plan, incorporating the elements described in the AFC mitigation section as well as the information summarized here. The Plan should incorporate the most recent guidance from the USFWS and CDFG. All methods discussed in the plan should be consistent with the Guidelines for Handling Desert Tortoises During Construction Projects (Desert Tortoise Council 1999) or the most recent handling guidance provided by the USFWS. Translocation is required when a desert tortoise must be moved more than 1000 meters to clear it from the project site, while relocation is required when a desert tortoise can be moved less than 1000 meters to clear it from the project site.

The goals of this relocation/translocation effort should be to:

- Relocate/ translocate all desert tortoises from the project site to nearby suitable habitat,
- Minimize impacts on resident desert tortoises outside the project site,
- Minimize stress, disturbance, and injuries to relocated/translocated tortoises, and
- Assess the success of the relocated/translocated effort through monitoring.

The translocation site must:

- Be on Federal or State lands in California that are located outside of desert tortoise critical habitat, off-highway vehicle management areas, and desert wildlife management areas;
- Have no proposed rights-of-way or other encumbrances at the time of its establishment; and
- Be at least 10 kilometers away from major highways (e.g. Interstate 10) to provide a safety buffer for long-distance movements that some desert tortoises are likely to make following translocation.

Generally, the translocation plan should include the following information:

a. Discussion of the relocation/translocation procedures and guidance in the plan, including a description of clearance survey protocol and desert tortoise transportation and release procedures;

b. Identification of potential relocation areas within 1,000 meters of the project site based on the presence of suitable soils, vegetation (annual and perennial species composition, shrub density and cover, forage species availability, geomorphology, slope, existing and proposed future land uses, and existing or potential future threats to desert tortoise (e.g., dispersal barriers).

c. Surveys of resident populations at translocation sites, including health assessment sampling.

d. Description of measures that would be implemented to prevent relocated/ translocated desert tortoise from reentering the site or other hazardous areas.

e. Description of quarantine facilities to provide individual quarantine for all tortoises prior to translocation.

f. Description of health assessments to be performed by qualified biologist or veterinarian on each tortoise prior to translocation.

g. A treatment/disposition plan for each tortoise, including any that may be unfit for translocation.

h. Description of translocation procedures, including timing (e.g., time of year, time of day). Note that desert tortoises may only be moved during spring and fall; the fall 'window' is quite narrow; and that timing of desert tortoise relocation/ translocation can have broader implications for the project construction schedule.

i. Description of post-translocation monitoring and adaptive management activities.

j. Description of methods used to mark relocated/translocated tortoises and fit them with transmitters to so that they can be located and identified during post-relocation/translocation monitoring.

k. Description of how data would be compiled, synthesized, and reported to USFWS, CDFG, BLM, Western and Energy Commission staff.

48. Raven Management and Control Plan. Please provide a Draft Raven Management and Control Plan that describes methods to avoid attracting common ravens and/or providing subsidies during all phases of project development and use, including construction, operation, and decommissioning. In situations where subsides such as power lines and structures for perching cannot be eliminated, the plan should require implementation of best management practices such as reduction of available subsidies, raven monitoring and raven nest removal. Potential subsidies to be considered in the plan should include but not be limited to:

- Availability of water from dust abatement activities, equipment cleaning and maintenance, evaporation and retention ponds, drainage areas or landscaping;
- Potential perching, roosting, or nesting sites;
- Food sources from soil disturbance and road kill (e.g., small mammals, insects); and

- Food sources and attractants from human and animal food and waste.

To address the indirect and cumulative effects of the project, participation would also be recommended in a regional raven management plan either through monetary or in-kind contributions coordinated by the Desert Managers Group. The draft Raven Monitoring and Control Plan should incorporate the most recent guidance from the USFWS and include at least the following elements:

a. Purpose/objectives of the Plan;

b. Identification of project design features and other measures to manage potential introduction of subsidies that may attract ravens to the area;

c. Identification of the area covered by the monitoring and raven control activities;

d. Description of baseline data documenting the abundance of raven on the project site;

e. Establishment of quantitative success criteria for achieving the objectives of the plan;

f. Documentation of the effectiveness of project design features and BMPs;

g. Identification of triggers that will prompt implementation of management actions to control ravens, and a description of those management actions (e.g., nest removal, elimination of problem ravens);

h. Description of a monitoring plan, including a discussion of survey methods and frequency, for establishing baseline data on pre-project raven numbers and activities and assessing post-project changes from this baseline;

i. Description of adaptive management practices used to ensure effectiveness of accomplishing the purpose of the raven management plan;

j. Regular reporting to document raven management measures that have been implemented and results of raven abundance and effectiveness monitoring throughout the life of the project; and

k. Description of worker education, at all phases of development, as it pertains to avoiding and reducing subsidies for ravens and to promoting desert tortoise awareness.

BACKGROUND

Mojave Fringe-Toed Lizard. The Mojave fringe-toed lizard is ranked by CDFG as a Species of Special Concern and by BLM as a Sensitive Species. The USFWS is reviewing the Mojave fringe-toed lizard population in the Amargosa River area for potential listing under the federal Endangered Species Act, though the proposed project site is not within the Amargosa River area under USFWS review. The AFC indicates that no Mojave fringe-toed lizards or their preferred dune habitat occur within the proposed project site, but occupied habitat occurs in the extensive Rice Valley dunes

system, about 0.75 mile to the south (e.g., pp. 5.2-1 and 5.2-44). There also is a CNDDB Mojave fringe-toed lizard record about two miles northwest of the project site (Fig. 5.2 of the AFC), and a Mojave fringe-toed lizard was observed about 0.75 mile south of the project site during zone of influence desert tortoise surveys (AFC p. 5.2-44). The AFC indicates that soils throughout the proposed project site and most of the transmission line corridor are mapped as the Rositas-Carrizo mapping unit and that the Rositas soil series is described as "dunes and sand sheets formed in [a]eolian material" (AFC p. 5.11-2, 5.11-5, and Fig. 5.11-1). No large dunes are visible on aerial views of the site, but soil descriptions indicate likely presence of aeolian (windblown) sand, at least in scattered patches. The occurrence of sand verbena (*Abronia villosa*; AFC p. 5.2-30) on the proposed project site is further indication that aeolian sand habitat also is on the site.

The AFC states that the project would not directly affect dune habitat, but could adversely affect Mojave fringe-toed lizards if they were to travel northward through sandy wash habitat to the project site (p. 5.2-50). The AFC does not indicate whether Mojave fringe-toed lizards occur on or near the proposed transmission line alignment. The AFC does not propose mitigation measures to prevent Mojave fringe-toed lizards from accessing the construction site where they could be "harassed, crushed, buried, or stranded" (p. 5.2-50).

Staff notes that fringe-toed lizards are not strictly endemic to active dunes, though they do require wind-blown or wind deposited sand fields (Jennings and Hayes 1994; Grismer 2002). Mojave fringe-toed lizards may be found where patches of loose windblown sand occur in "desert dunes, dry lakebeds, riverbanks, desert washes, sparse alkali scrub, and desert shrub habitats" (Palermo 1988). A closely related species, Colorado Desert fringe-toed lizard, may occur in patches of windblown sand, described by Grismer (2002) as follows: "Although sand does not accumulate in large enough quantities to form dunes, it forms extensive hummocks around the bases of vegetation, and these are sufficient to support *Uma notata*." Based on the mapped location of the CNDDB Mojave fringe-toed lizard occurrence, as shown on an aerial view in AFC Fig. 5.2-2, habitat on-site does not appear substantially distinct from known occupied habitat to the northwest.

Staff notes that sand dune habitats off-site or smaller aeolian sand patches, if they occur on-site, may also support several other special concern species and plant communities. The Coachella Valley California Desert Conservation Area Plan Amendment (Table 2-4: Habitat Conservation Objectives), available online at: *http://www.blm.gov/pgdata/etc/medialib//blm/ca/pdf/pdfs/palmsprings_pdfs/pdfs_coachella.Par.c08671fe.File.pdf/table2-4.pdf* provides guidance on the species and management issues of several sensitive habitats, including sand dune habitats. Please see also the Staff's discussion and data requests regarding on-site and off-site vegetation and habitat, below.

Staff is concerned about direct, indirect, and perhaps cumulative effects of the project on Mojave fringe-toed lizards because their distribution, restricted to aeolian sand, is naturally discontinuous and geographically complex (Murphy et al. 2006). Many local Mojave fringe-toed lizard populations are quite small with some having perhaps fewer than 500 adults (Murphy et al. 2006) and are therefore vulnerable to local extirpation.

The AFC and supplemental information does not include sufficient detail about presence or absence of windblown sand in scattered patches on-site or downwind (off-site), or about the sand transport system that would maintain them (if they occur) to assess potential direct or indirect project impacts to such habitat.

Staff needs additional information about any potential effects of the project to on-site aeolian sand habitat that may support Mojave fringe-toed lizards (and perhaps other sensitive biological resources) in scattered or intermittent patches. Staff also needs additional information about any effects of the project to off-site aeolian sand habitat that may support these resources between the southern project site boundary and the extensive Rice Valley dune system to the south. For example, it is not clear if fluvial sand transport and deposition on the site may contribute to small patches of suitable aeolian sand on-site or (downstream and downwind to the south) off-site for Mojave fringe-toed lizards. Also, it is not clear what proportion of sand supply to any scattered patches of off-site aeolian sand habitat would be interrupted by proposed project construction and operation. Without this information it will be difficult to assess potential impacts of the proposed re-routing of drainages and other project facilities to this habitat.

DATA REQUESTS

49. Aeolian Sand Habitat Maintenance. Please provide information, including any appropriate modeling and quantitative analysis, describing how wind and water contribute to the creation and maintenance of any aeolian sand habitat (e.g., dunes, sand hummocks, sandfields, or partially stabilized sand dunes) on the project site and between the site's southern boundary and the larger Rice Valley dune system, approximately 0.75 mile to the south.

50. Impacts of Project to Aeolian Sand Habitat. Please provide an analysis, including any appropriate modeling or quantitative assessment, of the potential direct and indirect effects of project construction and operation (for example, alteration of hydrology, dust palliatives, fencing) on creation and maintenance of aeolian sand habitat.

51. Mitigation Plan for Impacts to Aeolian Sand Habitat. Please provide a draft mitigation plan for avoidance and minimization of direct and indirect impacts to aeolian sand habitat. The mitigation plan should include measures for minimizing direct impacts to any preserved habitat during construction, indirect effects of operation, and a plan for compensatory mitigation.

BACKGROUND

Western Burrowing Owl. The AFC indicates that burrowing owls occur on the proposed project site and that the entire site is suitable habitat for burrowing owls (p. 5.2-53). The AFC proposes to prepare a Burrowing Owl Mitigation and Monitoring Plan prior to construction at the facility. The Plan would include preconstruction surveys to identify active burrowing owl nest sites, avoidance of those burrows during nesting season, and forced dispersal of burrowing owls from occupied burrows outside the nesting season. The AFC does not indicate the number of burrowing owls or active burrows on the project site. Burrowing owl numbers may vary according to season. They are migratory in some parts of their range though generally are year-around

residents in most of southern California (Johnsgard 1988). In similar desert habitat in southern Nevada, burrow occupancy was highest between March and May (Greger and Hall 2009). To the extent possible, staff must assess and quantify the proposed project's anticipated impacts to burrowing owls. However, staff does not find sufficient information in the AFC to make this assessment. Staff needs additional information to evaluate adequacy of the burrowing owl data or, if needed, follow-up field data to provide an estimate of the number of owls potentially inhabiting the site, and seasonal use on the site. In addition, staff needs to evaluate the adequacy of proposed mitigation.

DATA REQUESTS

52. Burrowing Owl Survey Data. Please provide a summary of all available burrowing owl field data, including date, start, and stop times of the surveys (not including travel time to reach the survey area), personnel conducting the survey, number and location of burrows surveyed during each visit, evidence of nesting activity at any occupied burrows. The summary of field data should apply to the extent data exists for the project site, transmission line alignment, and within 500 feet of both project elements.

53. Evaluation of Burrowing Owl Survey Data. Please provide estimates of the total number of active burrows and number of burrowing owls on the project site, transmission line alignment, and within 500 feet of both project elements.

54. Draft Burrowing Owl Mitigation and Monitoring Plan. Please provide a draft Burrowing Owl Mitigation and Monitoring Plan.

BACKGROUND

Bird and Bat Collision / Incineration / Electrocution. The AFC briefly describes potential for birds or bats to collide with proposed project facilities, including transmission line towers and the solar receiver tower (c. 650 feet tall); and the potential for incineration of diurnally-active birds flying through reflected sunlight between the project heliostats and solar receiver tower (p. 5.2-57). This discussion indicates that most bird collisions occur when migratory flocks strike antenna guy-wires, usually at night. The AFC states that the project site is not on any known flyway and that regional topography should not tend to "funnel" migratory birds in Rice Valley into the project area. The applicant proposes mitigation measures to minimize bird collision risk along transmission lines (p. 5.2-72 and following). The applicant proposes to monitor bird use at the proposed evaporation ponds, but not in the remainder of the project site.

The proposed project would include uncovered evaporation ponds which may attract birds. Further, the solar project consists of a very large array of mirrors which could cause a "mirage" effect to flying birds, perhaps simulating a lake. For example, see the simulated view of the project in Figure 5.13-8 (in the Visual Resources section of the AFC). Staff is unable to assess the potential that the project itself would attract resident or migratory birds, leading to significant impacts associated with collision or incineration.

DATA REQUESTS

55. Revised / expanded analysis of potential bird collisions and incinerations. Please provide an expanded analysis of potential bird collisions and incinerations. The analysis should:

- Summarize available data on tendency for resident or migratory birds to be attracted to evaporation ponds or other anthropogenic water sources (e.g., sewage ponds and artificial lakes) where they are found in arid desert landscapes
- Provide simulated views of the proposed mirror field, from flight altitudes of migratory birds and foraging raptors, from several directions and in varying light conditions to indicate any similarities or dissimilarities to natural or anthropogenic ponds or lakes.
- Describe the flight patterns and altitudes of migratory birds, particularly waterfowl, which could affect their likelihood of striking the solar receiver tower, particularly at night.
- Describe the flight patterns and altitudes of migratory and resident raptors, particularly during foraging, which could affect their likelihood of flying over the project site, leading to collision or incineration.

56. Bird Collision and Incineration Monitoring and Mitigation Plan. Please provide a Draft Bird Collision and Incineration Monitoring and Mitigation Plan to describe the following, in detail:

a. Specific methods and schedules for locating and quantifying the remains of birds killed by collision with the solar collector tower or incinerated by flying between the tower and the reflector field. Include methods for identifying dead birds to species or higher taxonomic rank.

b. Quantitative thresholds to determine the point at which bird mortality mitigation measures must be implemented. Please include a descriptive rationale to validate the recommended thresholds.

c. Feasible measures to be implemented by the operator in the event that bird mortality exceeds proposed thresholds, and follow-up monitoring to evaluate their efficacy.

d. Describe method and location for disposition of bird specimens (e.g., to a resource agency, museum, or on-site facility). List any necessary permits for specimen handling or disposition.

BACKGROUND

Evaporation Ponds. According to the AFC (p. 5.15-16), the proposed project would include three evaporation ponds, five acres each, to be located at the southern end of the heliostat field. These ponds apparently would be uncovered and may attract birds. The AFC proposes to monitor bird use at the proposed evaporation ponds, and indicates that “documented mortality resulting from salt toxicosis or encrustation would

result in corrective measures implemented in coordination with the agencies" (p. 5.2-73). From the information provided, Staff is unable to assess potential significance of bird mortality from salt toxicosis or encrustation, or to evaluate whether feasible mitigation measures could reduce this impact below a level of significance.

In proposing evaporation ponds, the applicant's plans are not consistent with the Energy Commission's water conservation policy from the 2003 Integrated Energy Policy Report (IEPR 2003) for utilizing a Zero Liquid Discharge (ZLD) wastewater treatment and recovery system that would eliminate the need for evaporation ponds. Staff has prepared Data Request 144 in the Soil & Water section requesting the applicant to evaluate a ZLD system. In addition, elimination of the evaporation ponds and the storm water detention pond would support a low-impact development approach by allowing pass-thru of storm water to maintain habitat values of the drainages and minimize impacts to waters of the state.

DATA REQUESTS

57. Evaporation pond design. Please describe the proposed design of the evaporation ponds in further detail, including design elements to lessen the likelihood of bird usage such as steep sides and netting over the pond surfaces.

58. Evaporation Pond Bird Mortality Monitoring and Mitigation Plan. Please provide a Draft Evaporation Pond Bird Mortality Monitoring and Mitigation Plan to describe the following, in detail:

    a. Characterizing the wastewater quality to be evaporated during initial discharge to the ponds and in its highest concentration before complete evaporation;,

    b. The concentrations of mineral solids that would result;

    c. A table comparing (a) and (b) above with the thresholds at which concentrations of water quality and solid constituents would be toxic to wildlife;

    d. Specific methods and schedules for locating and quantifying bird use and bird mortality at the proposed evaporation ponds; Include methods for identifying dead birds to species or higher taxonomic rank.

    e. Quantitative thresholds to determine the point at which bird mortality mitigation measures must be implemented; Please include a descriptive rationale to validate the recommended thresholds.

    f. Feasible measures to be implemented by the operator in the event that bird mortality exceeds proposed thresholds, and follow-up monitoring to evaluate their efficacy; and

    g. A description of the method and location for disposition of bird specimens (e.g., to a resource agency, museum, or on-site facility). List any necessary permits for specimen handling or disposition.

BACKGROUND

Wildlife Corridors. The AFC indicates that the project site (which would be fenced) would be a barrier to most wildlife movement (p. 5.2-58). It further indicates that existing east-west linear barriers (SR 62, aqueduct, and rail lines) individually are substantial barriers to desert tortoise (and presumably other wildlife) movement and that, in combination, they are formidable (p. 5.2-43). Potential crossings beneath the aqueduct and rail line are located at a "series of widely spaced" locations, where aqueduct overpasses and railroad trestles cross runoff channels. Some of the local mountain ranges probably now support small Nelson's bighorn sheep populations and there is a strong potential that the other mountain ranges surrounding Rice Valley will eventually be re-occupied by Nelson's bighorn sheep (p. 5.2-7, 5.2-26). Movement among mountain ranges is important to long-term viability of the regional metapopulation (p. 5.2-26). The locations of these overpasses and trestles are not mapped or described, and their potential suitability as wildlife crossing points across these barriers is not described. Staff is unable to assess potential project impacts to regional wildlife movement.

DATA REQUEST

59. Expanded analysis of site conditions and project impacts to wildlife movement. Please provide the following:

    a. A description and map of all drainage channels crossing beneath the aqueduct and rail lines near the northern boundary of the project site and within five miles east or west of the site that have potential to serve as crossing points for terrestrial wildlife;

    b. A description of each channel's suitability as crossing points for large mammals (including bighorn sheep and others), small mammals, desert tortoises, and other herpetofauna;

    c. An assessment of the proposed project's likely impacts to north-south wildlife crossing opportunities in the immediate vicinity of the project site and, more broadly, throughout the Rice Valley. In particular, please assess the project's potential impacts to existing opportunities for desert tortoises and Nelson's bighorn sheep to move north and south through the general area, and what implications, if any, these impacts may have for long-term population viability in the region for both species.

BACKGROUND

Lake and Streambed Delineation & Application. The AFC Appendix 5.2 E notes that hydrology on the proposed project site has been affected by berms constructed to protect the disused airfield on-site, though these berms have since breached. The applicant's Evaluation of Wetlands and Waters and Impact Estimates (Appendix 5.2E) estimates total acreage of state and federally jurisdictional waters by delineating linear desert washes and ephemeral drainages within 25 percent of the project area and 25 percent of the transmission line corridor, assuming an average width of 3 feet for each wash or channel, and then extrapolating these results. Staff understands from the AFC

that the delineation was made from digital aerial images, but staff does not understand how those images were used to identify jurisdictional washes and drainages. Staff understands that the width was based on field estimates taken during rare plant field surveys at several locations along the drainages.

The locations of channel banks or ordinary high water mark (OHWM) indicators are transitory in arid environments. Channel sediments, including banks and beds, are reworked by infrequent heavy storm flows (typically a 5- to 10-year storm event in arid channels). OHWM indicators are predominantly concentrated near the margins of the affected area. Subsequent smaller discharge events scatter the OHWM indicators within or below the limits of the last geomorphically effective event (Lichvar and McColley 2008). Due to the inherent problems of delineating the boundaries of non-wetland water, Lichvar et al. (2006) proposed using other features associated with the limits of the active floodplain to support the traditional indicators. “The impact produced by geomorphically effective events renders the limit of the active floodplain the only repeatable feature that can be reliably used to delineate the non-wetland water’s OHWM”; Lichvar and McColley (2008) recommend a delineation procedure based on aerial photo interpretation, combined with the use of topographic maps, soil and geology maps, and other data. Their recommended field approach is based on data collected along cross-section transects to help identify subtle changes in topography, vegetation, and other indicators.

Staff must quantify total project impacts to jurisdictional desert washes and ephemeral drainages. The project effects could include soil disturbance within the washes (including channel bed and banks), and changes in natural stormwater drainage paths and flow rates.

The Biological Resources section (Section 5.2) of the Application indicates that the project site is located within a closed basin with no hydrologic connection to other watersheds (e.g., the Colorado River or the Salton Sea). The Wetlands and Waters Documentation (Appendix 5.2 E) includes the applicant’s letter to the Army Corps of Engineers (USACE) Regulatory Division Los Angeles District indicating that hydrologic features in the project area and proposed transmission line are isolated intrastate waters and would not be subject to USACE jurisdiction under the federal Clean Water Act.

DATA REQUESTS

60. Revised jurisdictional delineation. Please revise the delineation of desert washes and ephemeral drainages to include all the drainage features within active floodplains with a well-defined channel. Smaller features with no surface connection to a larger downstream hydrologic feature may be omitted. Please delineate jurisdictional lakebed, streambed, and other jurisdictional features over 100 percent of the proposed project site and transmission line corridor.

61. Lake and Streambed Alteration Notification. After completing the revised delineation, please prepare and submit a Lake and Streambed Alteration Notification to the California Department of Fish and Game and Energy Commission staff.

62. Army Corps of Engineers correspondence. Please provide written indication from the Army Corps of Engineers Regulatory Division that they do not consider the drainages to be waters of the US. Please also provide any other follow-up correspondence with the Corps of Engineers regarding federal Clean Water Act jurisdiction for the proposed project.

BACKGROUND

Direct On-Site Project Impacts. The AFC Project Description (Section 2.0) does not provide details of direct project construction disturbances to soils, vegetation and habitat, or of site operation procedures that may impact vegetation and wildlife within the operational facility. The Soils section of the AFC states that "the project plans to limit grading activity and vegetation removal within the heliostat field. Vegetation will be cut and removed only as required to install the heliostat foundations and associated facilities. In areas where grading is not required, the vegetation will be cut and the root mass left in place to provide a level of erosion control. Effective mitigation measures would include application of soil dust palliatives, application of mulch or other soil amendments, and implementation of methodology derived from other successful desert restoration projects in the area" (p. 5.11-6). Further, the Soils section states that "permanent erosion-control measures on the site will be identified in the SWPPP and DESCP and would include gravel, paving, and surface drainage systems. The perimeter drainage swale (see desert tortoise background, above) and stormwater detention basin are expected to be permanent facilities that will contribute to effective erosion and sediment controls during project operations."

It is not clear what proportion of the site would be graded to bare soil, paved, treated with soil dust palliatives, or covered by gravel. It also is not clear what proportion of the site would be mowed, with root masses left intact, whether those root masses would survive and re-sprout after mowing, and to what extent these areas would continue to serve as remnant vegetation and habitat, or permit natural fluvial or aeolian sand transport. It also is not clear whether facility operations and maintenance would affect any remnant vegetation and habitat resources. Staff needs further information to determine whether these design, construction, operation, and maintenance elements could partially mitigate anticipated project impacts to biological resources.

DATA REQUESTS

63. Description of proposed direct impacts to on-site resources. Please describe the construction methodology, including proposed acreage of vegetation mowing, soil treatments, paving, and other surface alterations, and analyze the associated impacts to soils, vegetation, and habitat within the proposed project area. Please include a graphic and description of areas to be graded and areas where root systems would be left in place, and indicate whether or not those plants will be allowed to regrow on-site or whether they would be continually mown.

64. Description of proposed direct operation and maintenance impacts to on-site resources. Please provide a detailed description and analyze the associated biological resource impacts related to ground disturbance from post-construction operations and maintenance.

65. Low Impact Development Approach (Vegetation and Habitat). Please provide a detailed description and feasibility assessment of a low impact development approach to native vegetation and habitat (i.e., by minimizing removal of native vegetation, grading, paving, and other soil disturbance).

BACKGROUND

Avoiding Impacts to Desert Washes. The delineation of state-jurisdictional project area waters in the AFC (pending a revision based on the guidance described above) includes numerous ephemeral drainages that would be eliminated or directly affected by the proposed project. Ephemeral washes such as those occurring on the project site provide many important functions and values, including: landscape hydrologic connections; stream energy dissipation during high-water flows that reduces erosion and improves water quality; water supply and water-quality filtering; groundwater recharge; sediment transport, storage, and deposition aiding in floodplain maintenance and development; nutrient cycling; wildlife habitat and movement/migration corridors; and support for vegetation communities that help stabilize stream banks and provide wildlife habitat (Levick et al. 2008).

California Wetlands Conservation Policy (EO W-59-93) provides for "no overall net loss" of jurisdictional areas and achieving a "long-term net gain in the quantity, quality, and permanence of [jurisdictional areas] acreage and values in California." The first priority in meeting this no-net loss standard is to avoid impacts to state waters where possible. Staff needs more information than provided in the AFC to determine if an adequate assessment was made as to the feasibility of avoiding or minimizing impacts to the project area ephemeral washes.

DATA REQUESTS

66. Functions and Values of Project Area Washes.

    a. Please provide a description of the beneficial functions and values provided by the ephemeral washes on the project site;, and

    b. Discuss how the proposed project would affect these functions and values within the project footprint and downslope of the project boundaries.

67. Low Impact Development Approach (Desert Washes). Please provide a detailed discussion, with supporting quantitative analysis, of implementation of a low impact development approach to managing stormwater flows on-site (i.e., by reducing the diversion of surface storm flows around the project site perimeter, and instead allowing some or all surface flow to cross the site in existing ephemeral washes) including the following:

    a. An assessment of the feasibility of reconfiguring the project footprint to retain some or all of the project area ephemeral drainages with setbacks from the banks of the drainages to accommodate a buffer for protection of water quality and to provide a wildlife movement corridor across the site.

    b. Quantitative results of models and/or analyses describing representative on-site depths and velocities of stormwater flows; and

c. Potential impacts to project features if some or all of the natural drainages were left intact, and an analysis of how this flooding might affect project features and operations under 10-year and 100-year, 24 hour storm -, flood events.

BACKGROUND

Mitigating Impacts to State Waters/Channel Design. The mitigation section of the AFC does not propose mitigation measures for loss of the project area ephemeral washes. The data requests above describe staff's request for a quantitative assessment and analysis of the feasibility of retaining some or all of the project area desert washes within the reconfigured project site. If this analysis demonstrates that retention of some or all of the existing drainage features on the project site is infeasible, mitigation would need to include re-creation of the desert washes hydrologic, geomorphic, and ecological functions and values. Staff needs an assessment of whether the engineered drainages to be constructed around the site perimeter could eventually replicate the functions and values of a natural desert wash. This analysis should include a discussion of how the new channels could recreate natural soil characteristics (Cryptobiotic soil crust, permeability), microtopography (microcatchments for moisture, seeds), hydrology, geomorphology, and vegetation and wildlife functions and values. At a minimum, the diversion channels must maintain the hydrologic and ecologic functions and values of the desert washes and sheet flow between the southern project site boundary and the valley floor, to the south. If the diversion channels cannot replicate the lost function and values of the channels on-site, replacement must be addressed through a separate Habitat Mitigation Plan that may be accomplished on-site or off-site and within the Rice Valley area or watershed.

Considerably more detail is needed than provided in the AFC on the proposed design and revegetation of those channels. The plan needs to address the potential for head-cutting on the channels above the site, assess the area available for revegetation within the channels (extent of unarmored banks and channel bottom), whether or not grade control structures are needed, how wildlife could or would move throughout the channel if grade control structures were present, how sediment and flood flows would move through the rerouted channels under different storm water conditions, and whether the channel design would support natural geomorphic and hydrologic processes.

To fulfill requirements that, but for the Energy Commission's exclusive permitting authority under the Warren-Alquist Act, would have been satisfied by the CDFG Streambed Alteration Agreement, staff is requesting detailed information about how the proposed diversion channels would be designed, revegetated, maintained, and decommissioned. Staff is requesting conceptual design drawings for the re-created channel based on appropriate geotechnical and hydraulic analysis. In addition to design, creation of new channels to carry floodwaters around and through the site would need to be accompanied by a Maintenance Plan to maintain those channels for their habitat value over the life of the project. Before the project is constructed a firm commitment would be needed from a Maintenance District to undertake a Channel Maintenance Program for the life of the project. The data requests below outline the information that will be needed on the re-routed channels before staff can prepare the

SA. [*Please note: These data requests related to Mitigating Impacts to State Waters/Channel Design would not require responses if the applicant plans to retain, and to the extent possible, avoid impacts to the dry washes.]*

DATA REQUESTS

68. Diversion Channel Design Drawings. Please provide conceptual design drawings for design of the diversion channels, upstream- and downstream- transitions, bank protection, and grade control structures using hydraulic criteria appropriate for the anticipated channel stability thresholds. These thresholds should be based on the Riverside County standards where applicable. If warranted, the design should also address stilling basins and features needed to prevent perched groundwater conditions and promote groundwater recharge. Design drawings should include typical channel cross section dimensions, typical details for all grade control structures and structural elements needed to protect the channel from erosion, and a grading plan for proposed conditions that ties into existing topography.

69. Revegetation Plan for Re-Routed Channels: Please provide a draft Revegetation Plan for the re-routed channels that include at least the following elements:

    a. Overall Goals: Explicitly state the overarching goal of the revegetation plan, which should include at least replicating the hydrological and biological functions and values of the impacted desert washes.

    b. Existing Functions and Values: Describe the existing functions and values of the drainages that are being replaced by the engineered channels including a discussion of the following:

        i. Characteristics of soils (Cryptobiotic soil crust, permeability), sediment transport and other geomorphic processes, and microtopography (microcatchments for moisture, seeds);

        ii. Vegetation (zonation, composition, cover density, dominants in each stratum, rare or uncommon species or communities, non-native component); and

        iii. Wildlife habitat and values (connectivity and corridors, rare species, habitat elements).

    c. Reference Reach. Select one or several reference reach(es) of the existing channels that would provide a target for mitigation design and success criteria, and provide the following:

        i. Photos and a hard-copy and GIS [shape files & metadata] map of the reference reach(es);

        ii. A detailed description of the reference reach and how the features of the reach(es) relate to the success criteria for the mitigation design and goals; And

iii. Rationale for selection for the reference reach(es).

d. Proposed Mitigation Design. Describe the mitigation design including:

   i. Goals and target functions/values (hydrologic, geomorphic, water quality, habitat function/value) of the revegetation plan;

   ii. Rationale for these goals and targets; and

   iii. A discussion of compensation ratios, indicating the ratio(s) of acreage of impacted vegetated wash to the recreated acreage, long-term goal(s) for target habitat to be created at the site 10, 20, and 30 years following implementation.

e. Success Criteria. Provide a table of success criteria and quantitative parameters to measure successful achievement of these criteriafor each major aspect of the project including:

   i. replication of natural hydrological and geomorphological processes;

   ii. establishment of appropriate vegetation values; and

   iii. establishment of appropriate wildlife habitat values.

f. Monitoring Methods. Describe proposed methodology for measuring progress toward success criteria including:

   i. Rationale for each method that has been chosen to evaluate progress in relation to each success criterion; and

   ii. Sampling methods used including size of sample units and number of samples.

g. Monitoring Schedule. Monitoring should be tied to the appropriate spring growing season, with the “first year” of monitoring occurring one full growing season following completion of installation. Given the slow pace of revegetation in desert ecosystems, a monitoring period of 10 years is appropriate. In addition to quantitative methods, ground and/or aerial photos can be used to illustrate year-to-year progress of the overall project.

h. Implementation Plan. Describe equipment, procedures, access paths, and any measures used to avoid sensitive areas outside of the grading plan during revegetation. Topsoil storage and disposition are particularly important. The implementation plan should include:

   i. A description of how the top layer (top 1 inch) of soil will be salvaged from the existing washes, stockpiled and maintained to sustain viability;

   ii. How these soils will be applied during revegetation efforts

iii. Storage location of topsoil, area required for storage, duration of intended storage, and ultimate disposition of topsoil material in the engineered channels;

iv. Discussion of how the area available for revegetation in the channel bottom would integrate with the channel slope protection and erosion control and any opportunities for bioengineering.

i. Weed Control. Describe method(s) to be used to remove noxious plants from the mitigation site during the course of revegetation and monitoring, and specific triggers for when weed control is required.

j. Planting/Seeding. Provide a table of species to be planted and indicate the following:

i. Geographic source of plants (of local origin);

ii. Type of propagules to be used; and season in which seeding/planting/transplanting is to be done;.

iii. Size and quantity of propagules and/or intended spacing; and

iv. For transplant propagules, describe method, location of harvest site, and duration of storage, if applicable.

k. Irrigation. Most mitigation projects should become hydrologically self-sustaining. The function of irrigation in the early years of a project is to give new vegetation a head start at becoming established. Describe any proposed irrigation methods including:

i. Estimated frequency, and indicate month(s) in which it is to occur;. And

ii. Water source(s) for irrigation.

l. Implementation Schedule. Provide a schedule showing intended timing (by month) of site preparation, any seed/topsoil storage, seed/topsoil application, and plantings.

m. Maintenance and Monitoring. Please describe the following:

i. Planned maintenance activities (e.g. inspection of irrigation system, inspection of water structure(s), erosion control, weeding, etc.);.

ii. Identification of any pest species (plant and/or animal) that might cause problems on the site, and provide a control plan for these species if appropriate;

iii. Critical threshold of disturbance that will trigger the implementation of control methods; and

iv. A table showing proposed schedule of frequency of maintenance inspections over the life of the project.

n. Monitoring Reports. Monitoring reports to the Compliance Project Manager (CPM) are typically due January 31st of each year. Describe the overall content and purpose of the annual reports.

o. Contingency Measures. If an annual performance goal is not met for all or any portion of the mitigation project in any year, or if the final success criteria are not met, please describe how the failure will be remedied including:

   i. A process for analysis of the cause(s) of failure and propose remedial action for CPM and agency approval. Remedial actions might include replanting, weed or herbivore control.

   ii. A funding mechanism to pay for planning, implementation, and monitoring of any contingency procedures that may be required; and

   iii. Assurances that the funds will remain available until success criteria have been achieved.

p. Long-Term Management. Integrate long-term management (weed/vegetation management, preventing wildlife entrapment hazards) with the Channel Maintenance Program described above so as to achieve and meet the revegetation success criteria.

BACKGROUND

On-Site Vegetation and Habitat. The Applicant's Botanical Inventory Report (Appendix 5.2B) maps and describes only one "biological community," Sonoran creosote bush scrub, on the project site and transmission line corridor. The California Dept. of Fish and Game (2003) recognizes numerous special-status vegetation types which may be broadly characterized as falling within creosote bush scrub vegetation, depending on mapping scale and localized characteristics. These include plant communities characteristic of aeolian sand habitats (discussed above under Mojave fringe-toed lizard) and desert wash communities. Staff must analyze impacts to native vegetation and habitat, including any potential impacts to the communities listed here:

22.010.00 – Active desert dunes and sand fields
22.100.00 – Desert sand verbena
33.010.02 – Sonoran dune scrub
33.010.07 – Creosote bush – white ratteny – big galleta
33.010.13 – Creosote bush – big galleta
33.050.00 – Teddybear cholla succulent scrub
33.060.02 – White bursage, terrace association
33.060.04 – White bursage – big galleta
33.140-17 – Creosote bush – white bursage – big galleta
33.140.33 – Creosote bush – white bursage – barrel cactus
61.510.00 – Mesquite woodland, scrub, thickets (several types)
61.513.00 – Tornillo (screwbean mesquite) scrub
61.540.01 – Blue palo verde wash woodland
61.570.01 - Smoketree wash woodland

The description and analysis of Sonoran creosote bush scrub, as provided, is insufficient for staff analysis of potential impacts to special status vegetation types.

DATA REQUEST

70. Revision and expansion of Biological Communities descriptions. Please provide a revised discussion of Biological Communities to include the following:

    a. A description of the analytical methods and results to support the conclusion that no special status vegetation types occur; and

    b. If appropriate, add any of the vegetation types listed above to the discussion of biological communities occurring on the proposed project site or transmission line corridor, and map and quantify their acreages.

BACKGROUND

Identify Special Status Vegetation Off-Site and Evaluate Indirect Effects. The California Dept. of Fish and Game (2003) recognizes numerous special-status vegetation types in regional deserts, listed above (On-site Vegetation and Habitat). Several of these, particular desert wash and aeolian sand communities, are dependent upon off-site resources (water and sand source, respectively) for their long-term maintenance. The project site is located on a desert bajada, upslope of numerous desert washes and ephemeral channels and upwind of an extensive dune system. Desert lands between the site's southern boundary and the dune system approximately 0.75 mile to the south may include habitat types dependent on upstream or upwind water or sand sources. The AFC does not provide sufficient discussion of vegetation and habitat downstream and downwind of the site to enable staff to adequately assess potential off-site or indirect project impacts.

DATA REQUEST

71. Describe off-site vegetation or habitat and analyze potential impacts. Please provide the following:

    a. Maps and discussions of any special status off-site vegetation or habitat between the project site's southern boundary and the extensive dune system to the south that could be affected by altered upstream hydrology or upwind sand supply/transport; and

    b. An evaluation of the project's likely contributions to existing hydrologic and aeolian sand supply transport, and any likely effects of the proposed project.

BACKGROUND

Special Status Plants. The project site is within the geographic ranges of several special status plant species not addressed in the AFC. The applicant's botanical surveys and "target" species list are described on pages 5.2-8 and following. All except one of the field survey dates were during early spring (March) 2009; the other date was in late May 2009. Staff is satisfied that early spring flowering species, if they were to occur on the site, would have been found by field botanists, even if not included in the

initial list of “target species.” Staff recognizes that the list of “target” species was compiled from a California Natural Diversity Data Base (CNDDB) review of special status species reported from the project area and adjacent USGS quads. However, staff has noted on previous large-scale desert projects that existing botanical knowledge in the California desert is surprisingly sparse and that CNDDB reports often do not adequately represent the geographic distributions of rare plants. Thus, staff believes that rare plant occurrences over a larger review area should be considered and that field surveys should not be restricted to only the early spring flowering season. Based on a review of the CNPS Inventory (*http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi*), staff believes that the following additional species have potential to occur on the project site, but were not addressed in the AFC may not have been adequately addressed in botanical field survey methods:

Angel trumpets (*Acleisanthes longiflora*)
Lobed ground cherry (*Physalis lobata*)
Small-flowered androstephium (*Androstephium breviflorum*)
Three-awned grass (*Bouteloua trifida*)
Pink fairy-duster (*Calliandra eriophylla*)
Argus blazing star (*Mentzelia puberula*) (new addition to the CNPS Inventory segregated from *M. oreophila*)
Emory’s crucifiction-thorn (*Castela emoryi*)
Glandular ditaxis (*Ditaxis claryana*)
California ditaxis (*Ditaxis serrata* var. *californica*)
Arizona pholistoma (*Pholistoma auritum* var. *arizonicum*)
Lobed ground cherry (*Physalis lobata*)
Narrow-leaved psorothamnus (*Psorothamnus fremontii* var. *attenuatus*)
Coves’ cassia (*Senna covesii*)
Dwarf germander (*Teucrium cubense* var. *depressum*)
Desert germander (*Teucrium glandulosum*)
Jackass clover (*Wislizenia refracta*)

Utah cynanchum is a special status plant listed in the Desert Tortoise Survey Report (Appendix 5.2C), Table 2, but not listed in the Botanical Inventory Report (Appendix 5.2B) or discussed in the Biological Resources section of the Application (Section 5.2). Wiggins cholla is also reported in the Desert Tortoise Survey Report; it is discussed briefly on page 5.2-35 of the AFC, but there is no indication where the plant was found or whether impacts would be significant. Staff is unable to assess numbers of plants or acres of occupied habitat to be affected, or significance or project impacts to these two species.

Several alternate mitigation strategies for adverse impacts to special status plants are listed on pages 5.2-63 and 64. These include (a) translocation, (b) seed collection and subsequent donation to a botanic garden or similar facility, (c) seed collection and follow-up sowing at a suitable off-site location, and (d) an in lieu fee, to be paid to a suitable agency or foundation. Each of these potential strategies may have significant shortcomings and none of the strategies are described in sufficient detail to allow staff to evaluate whether the mitigation would reduce adverse impacts to rare plants below a level of significance. The CDFG has found that rare plant translocation has been an ineffective mitigation strategy on numerous previous projects. Donation of seed for long-

term preservation or for botanic garden propagation would preserve genetic material but not serve to mitigate adverse impacts to rare plants in their natural habitat. Seed collection and follow-up sowing off-site, similar to translocation projects, has generally been ineffective with rare plants, and, absent a known effective method, should only be implemented experimentally. An in lieu fee would serve to mitigate rare plant impacts only if it were used to fund habitat acquisition and management, or implementation of known, proven propagation and enhancement techniques for the species adversely impacted by the project.

DATA REQUESTS

72. Additional analyses of special status plant occurrence and impacts. Please evaluate potential for occurrence on the project site and potential for on-site or off-site adverse project impacts to the plants listed above. For species with potential to occur on-site but which would not have been found during March 2009 field surveys (i.e., generally, those plants flowering later in the season, including some that may flower in late summer), please provide follow-up field survey methods and results, including mapping of any special status species found on or near the proposed project site. Field survey methods, results, and report contents should follow the most recent guidelines provided by CDFG (2009) and BLM (2009).

73. Utah cynanchum and Wiggins cholla. Please indicate locations of these two species' occurrences on project site maps (as shown for Harwood's milk-vetch and chaparral sand verbena on Fig. 5.2-4) and describe and evaluate potential project impacts to both species..

74. Special status plant mitigation. Please provide an expanded discussion of potential special status plant mitigation measures, including the strategies below. Please limit the discussion to feasible measures with documented successful implementation in comparable projects and involving plants of comparable ecological and life history characteristics.

    a. A strategy to minimize or avoid adverse impacts to special status plants on-site.

    b. Discuss and evaluate project-specific suitability of any known experimental or proven techniques to relocate or propagate the special status species that would be affected by the proposed project.

    c. Describe any known agency or private entity capable of accepting and managing an in lieu fee to mitigate project impacts to rare plants.

BACKGROUND

Noxious Weeds. The AFC recognizes the project's potential contribution to noxious weed invasions in the region (p. 5.2-49) and proposes to mitigate those impacts through preparation of a Noxious Weed Control Plan (p. 5.2-63). Invasive species increase fire risk, reduce natural habitat for native plants and wildlife, and compete with native plants for water and other resources. Noxious weeds can be accidentally introduced onto a site via equipment tires, soil imported from off-site, and various other vectors. The Soils section of the AFC indicates a variety of temporary erosion control measures, to include mulching and possibly straw bale or straw wattle sediment barriers, and that sediment

barriers could be “used as mulch after construction” (p. 5.11-13). Staff notes that, depending on the plant material and its source, mulch or straw could include seeds of invasive weed species. Staff needs to review a draft Weed Management Plan in order to evaluate whether it would reduce potential impacts on-site and to adjacent off-site habitat below a level of significance and, for the portion of the proposed project that is on BLM lands (i.e., the transmission line alignment) whether it is in conformance with BLM standards.

DATA REQUESTS

75. Weed Management Plan. Please prepare and submit a Draft Weed Management Plan that includes the herbicide compounds and formulations to be used in control methods, and describes specific methods for weed management under heliostat structures (e.g., pre-emergent herbicide or other methods).

76. Mulch, sediment barriers, and import soils. Please provide the following:

    a. Details on the origin and composition of any mulch, sediment barriers, or soils to be used onsite or imported from off site; and

    b. Measures that would be included in the Weed Management Plan to ensure that weed seeds are not introduced onto the site in soils or erosion control materials.

BACKGROUND

Decommissioning. Section 2.9 of the AFC, Facility Closure, does not specify the contents or performance criteria to be included in an eventual Decommissioning Plan. The proposed generation facility is on private land, surrounded by public lands managed by BLM; the proposed transmission line is on public land. Upon closure of the facility, long-term land use on the site should be compatible with surrounding open space land uses. Staff needs information regarding the eventual fate of the project site, including manufactured drainage channels, to develop appropriate conditions of certification. If the manufactured channels would be removed or filled during decommissioning of the facility, the site would need to be restored to preexisting hydrology. If the revegetation plan is successful in replacing the functions and values of the impacted state waters within the manufactured channels, then filling these re-created drainages at the end of the project could have significant impacts to sensitive biological resources, possibly including impacts to listed species. Furthermore, restoring the original topography of the facility site is only the first step in restoring habitat functions and values. A substantial revegetation effort would need to be implemented and sustained for at least five to ten years to ensure recruitment of native vegetation and to prevent dominance by noxious weeds throughout the decommissioned site.

DATA REQUEST

77. Decommissioning Plan components. Please describe the likely components of a Decommissioning Plan (e.g., decommissioning methods, timing of any proposed habitat restoration, restoration performance criteria), and discuss each component relative to biological resources and specifically to desert tortoise and its habitat. Components should include, but should not be limited to:

a. The potential funding (e.g., a performance bond) and/or legal mechanisms for decommissioning and restoration of the project site that would be used at the end of operations; and in the event of bankruptcy or the untimely project closure for financial reasons.

b. A discussion of applicable facility and transmission line closure requirements of the BLM, Western, County of Riverside, USACE, USFWS, CDFG, and any other agency that may have closure requirements.

c. A conceptual Restoration Plan After Decommissioning. The plan should address:

   i. The fate of the project site, including uplands, engineered channels, and any natural channels remaining within the decommissioned site;

   ii. If the engineered channels would be filled, please provide a conceptual plan for filling and rehabilitating them to upland habitat, and for restoring drainages on the project site, including a description of a revegetation plan for restoring the function and values of the ephemeral drainages;

   iii. A cost estimate, adjusted for inflation, for implementing the closure, including the revegetation component of the closure activities; and

   iv. A conceptual plan and funding mechanism for monitoring and maintenance until existing functions are reestablished.

References:

Bureau of Land Management (BLM). 2009. Survey Protocols Required for NEPA/ESA Compliance for BLM Special Status Plant Species. Unpublished report, BLM, Sacramento, California.

California Department of Fish and Game (CDFG). 2003 (Sep). List of California Natural Communities Recognized by the Natural Diversity Database. Unpublished report, CDFG Wildlife Habitat Data Analysis Branch.

California Department of Fish and Game (CDFG). 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. Unpublished report, CDFG, Sacramento.

Desert Tortoise Council. 1994 (Revised 1999). Guidelines for Handling Desert Tortoises During Construction Projects. Edward L. LaRue, Jr., editor. Wrightwood, California.

Greger, P.D. and and D.B. Hall. 2009. Burrow occupancy patterns of the western burrowing owl in southern Nevada. Western North American Naturalist 69:285-294.

Grismer, L. L. 2002. Amphibians and Reptiles of Baja California. University of California Press, Berkeley. 399 pp.

Jennings, M.R. and M.P. Hayes. 1994. Amphibian and reptile species of special concern in California. California Dept. of Fish and Game Inland Fisheries Division, Rancho Cordova, California. 225 pp.

Johnsgard, P. A. 1988. North American Owls. Smithsonian Institution Press, Washington, DC. 295 pp.

Levick, L., J. Fonseca, D. Goodrich, M. Hernandez, D. Semmens, J. Stromberg, R. Leidy, M. Scianni, D. P. Guertin, M. Tluczek, and W. Kepner. 2008. The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest. U.S. Environmental Protection Agency and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046, 116 pp.

Lichvar, R.W., D. Finnegan, M. Ericsson, and W. Ochs. 2006. Distribution of Ordinary High Water Mark (OHWM) indicators and their reliability in identifying the limits of "Waters of the United States" in arid southwestern channels. ERDC/CRREL TR-06-5. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. (http://www.crrel.usace.army.mil/techpub/CRREL_Reports/reports/TR06-5.pdf)

Lichvar, R. W. & S. M. McColley. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual. U.S. Army Corps of Engineers, Engineers Research and Development Center, Hanover NH Cold Regions Research And Engineering Lab. August 2008.

Murphy, R.W., T.L. Trepanier, and D.J. Morafka. 2006. Conservation genetics, evolution and distinct population segments of the Mojave fringe-toed lizard, *Uma scoparia*. Journal of Arid Environments 67 (suppl. 1):226-247.

Palermo, L. 1988. Mojave fringe-toed lizard, *Uma scoparia*. Pages 122-123 *in* D.C. Zeiner, W.F. Laudenslayer, Jr. and K.E. Mayer (eds.) California's Wildlife, Vol. I: Amphibians and Reptiles. California Dept. of Fish and Game, Sacramento.

Technical Area: Cultural Resources
Authors: Amanda Blosser

Any information that identifies the location of archaeological sites needs to be submitted under confidential cover.

BACKGROUND

The applicant identified a portion of Rice Army Airfield (AAF) as falling within the Rice Solar Energy Project (RSEP) area, and Camp Rice sits adjacent to the RSEP project area. Both Rice AAF and Camp Rice were components of the Desert Training Center/California-Arizona Maneuver Area (DTC/CAMA). Established by General George S. Patton, the mission at DTC/CAMA was to train U.S. Army troops for war in a desert environment. The DTC/CAMA operated from 1942–1944 and consisted of divisional camps, depots, airfields, ranges, bivouacs, maneuver areas, and hospitals spread over 18,000 acres in the Mojave Desert.

Rice AAF, when it was active, consisted of two 5,000-foot-long oiled runways, along with aircraft parking dispersal stands and taxiways, a parade ground, and small support buildings. Currently, all that remains of Rice AAF are remnants of runways and dispersal pads, a cement parade ground, and concrete pads that were foundations for administrative structures and barracks. Archaeological remains of Rice AAF consisted of 30 artifact concentrations and 128 ruins of structural features. No prehistoric archaeological sites were encountered during the survey.

Camp Rice is located within the RSEP project parcel, although outside of the proposed fenced area. The part of Camp Rice located within the RSEP project parcel represents only a small portion of the 3-mile-long and about one-mile-wide original camp. The portion of the camp within the RSEP that was surveyed measures 1,500 feet east to west and about 4,500 feet north to south. No standing structures are left of Camp Rice, and no prehistoric resources were found within the portion of Camp Rice surveyed for archaeological deposits.

The applicant's consultant recommended Rice AAF and Camp Rice as eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion A and in the California Register of Historical Resources (CRHR) under Criterion 1 for their important association in training U.S. Army troops for war in North Africa.

The applicant's consultants did not provide sufficient information to explain the resources' significance within their historic contexts, nor did they provide a justification for significance under NRHP and CRHR criteria for either of the two resources. Consequently, at the present time, staff does not have enough information regarding these two resources to determine whether they are significant under NRHP and CRHR criteria. Staff needs information on these resources to determine their eligibility for the NRHP or for the CRHR because staff's assessment of the significance of the project's impacts to these two resources depends on their eligibility.

DATA REQUEST

78. Please provide a justification for recommending Camp Rice and Rice AAF as eligible for the NRHP under Criterion A and CRHR under Criterion 2.

BACKGROUND

General Patton established the DTC in February of 1942 (officially opening on April 30) and in the summer of 1942 left the facility to lead a portion of the Allied invasion of North Africa known as Operation Torch. Although General Patton's legacy associated with DTC is well publicized, many other important commanders from WWII also served at the facility.

The applicant's consultant recommended Rice AAF and Camp Rice as eligible for inclusion in the NRHP under Criterion B and in the CRHR under Criterion 2 for their association with General George S. Patton, who established the Desert Training Center.

The applicant's consultants did not provide a justification for significance under NRHP and CRHR criteria for either of the two resources, based on their association with General Patton. Consequently, at the present time, staff does not have enough information regarding these two resources to determine whether they are significant under NRHP and CRHR criteria. Staff needs information on these resources to determine their eligibility for the NRHP or for the CRHR because staff's assessment of the significance of the project's impacts to these two resources depends on their eligibility.

To establish significance under NRHP Criterion B (CRHR Criterion 2), the significant individual must be directly associated with the resource, the resource must be associated with the productive life of the individual in the field in which (s)he achieved significance, and documentation must make clear how the resource represents an individual's significant contribution to history. Each resource associated with important persons should be compared with other properties associated with that individual to identify those resources that are good representatives of the person's historic contributions.

There is no question as to the importance of General Patton in American military history, but the applicant's consultant should carefully consider whether the length and nature of General Patton's relationship to Rice AAF and Camp Rice is an important representation of Patton's accomplishments or whether other resources could better represent that importance. Additionally the consultant should provide a better justification of how the historic integrity of the Rice AAF conveys Patton's association, considering there are almost no remaining historic structures from the time of February 1942 to summer 1942, the period when Patton was associated with Rice AAF and Camp Rice.

DATA REQUEST

79. Please provide a justification for recommending Camp Rice and Rice AAF as eligible for the NRHP under Criterion B and CRHR Criterion 2. Please refer to National Register Bulletin 32 "Guidelines for Evaluating and Documenting

Properties Associated with Significant Persons," when preparing the justification for significance under Criterion B (Criteria 2) for Rice AAF and Camp Rice.

BACKGROUND

Both Camp Rice and Rice AAF, the two built-environment resources considered in the above data requests, may also be the locations of potentially significant historical archaeological deposits associated with the DTC/CAMA that may be eligible under NRHP Criterion D (CRHR Criterion 4) as well. The applicant's consultant concluded that more consideration of the recording work and preliminary analysis would determine whether or not the resources were also eligible under Criterion D (Criterion 4). To complete its inventory of cultural resources of the proposed project, and because these resources would be subject to significant impacts from the project, staff needs additional information on these possible historical archaeological sites.

DATA REQUESTS

80. Please have a historical archaeologist who meets the U.S. Secretary of Interior's Professional Qualifications Standards for historical archaeology provide a letter report which evaluates the potential eligibility of the archaeological deposits at Rice AAF and Camp Rice for inclusion in the NRHP and CRHR under Criterion D (Criterion 4). Please include a resume that demonstrates the required qualifications have been met by the author of the report.

81. The letter report should describe for staff the field methods used and a description of the historical archaeological deposits present, and make recommendations for the sites as eligible/ineligible for the CRHR.

82. If the historical archaeologist cannot reach conclusions on the CRHR eligibility of the sites, please request that they draft and submit for staff approval testing plans for the sites to determine if any subsurface deposits are present at these sites and to acquire sufficient data to make recommendations of eligibility for the CRHR for these sites, with the potential of the recovered data evaluated according to its applicability to the research questions posed in the confidential cultural resources technical report.

83. After implementation of the testing plans, please provide to staff a letter report on the testing methods and results at these sites, presenting an analysis of the recovered data and recommendations regarding the eligibility of these sites.

BACKGROUND

On April 30, 1944, the CTC/CAMA was deactivated, and the War Department dismantled all the camps, gathered supplies, materials, and all equipment, and shipped it all to other depots. Today there are no buildings or structures associated with any of the training camps, headquarters, or airfields.

In the case of Camp Rice and Rice AAF, the US Army removed all salvageable building materials and burned or buried anything that was not able to be moved or re-issued elsewhere. The applicant's consultant states there are numerous indications of burning on site, and there has been substantial looting by treasure hunters over the years. In

addition to the modern disturbance, erosion and alluvial deposition have taken place throughout the site.

To be eligible for inclusion in the NRHP and the CRHR, the resource not only needs to be significant under at least one of the Criteria, but it must maintain sufficient integrity to convey its significance. The applicant maintains Rice AAF and Camp Rice retain sufficient integrity despite the historic and modern disturbances and the on-going erosion and deposition taking place through cultural and natural processes. Of the seven aspects of integrity, the applicant's consultant maintains that Camp Rice and Rice AAF retain integrity of location, integrity of design, and integrity of setting but does not provide sufficient information for staff to independently assess these aspects, nor does the consultant present a discussion of how the integrity of location, integrity of design, and integrity of setting of Camp Rice and Rice AFF are sufficient to convey the historical significance of these resources.

Staff needs more information on the integrity of Camp Rice and Rice AFF Staff to determine their eligibility for the NRHP or for the CRHR because staff's assessment of the significance of the project's impacts to these two resources depends on their eligibility.

DATA REQUEST

84. Please provide a discussion of the integrity of Camp Rice and Rice AAF and how the resources maintain sufficient integrity to convey their significance.

BACKGROUND

The applicant states that the entire DTC/CAMA within California is classified as California Historical Landmark (CHL) #985, including all seven facilities in Riverside and San Bernardino counties. All California Historical Landmarks are historical resources for the purposes of CEQA. However, in the California Historical Landmarks guidebook (p. 198), CHL #985 is listed as DTC/CAMA-Camp Iron Mountain, Camp Clipper, and Camp Ibis.

DATA REQUEST

85. Please confirm that Camp Rice is included in CHL #985, and please provide a copy of the records or documentation of CHL #985 on file with the State Office of Historic Preservation.

BACKGROUND

The applicant identified Rice AAF and Camp Rice as important components of the NRHP-eligible DTC/CAMA cultural landscape district. A draft multiple-property NRHP nomination for this district was previously prepared and submitted and is awaiting edits for final approval.

DATA REQUESTS

86. Please provide a copy, with any completed edits, of the draft multiple-property nomination for the DTC/CAMA cultural landscape district.

87. Please identify to whom the draft was submitted and an update on its status.

BACKGROUND

Several background materials are cited in the References Cited or Consulted, but copies were not provided. Staff needs to review these materials to complete its assessment of the potential NRHP and CRHR eligibility of Rice AFF and Camp Rice.

DATA REQUEST

88. Please provide a copy of the following references for staff's review:

Bishcoff, Matt. C. 2000. The Desert Training Center/California-Arizona Maneuver Area, 1942-1944: Historical and Archaeological Contexts. Statistical Research, Inc. Technical Series 75.

Bureau of Land Management. 1998. Desert Training Center: California-Arizona Maneuver Area Interpretive Plan. Patton Camps: World War II Desert Training Center California Maneuver Area. April 24. Unpublished material on the Bureau of Land Management, Needles District Website.

Technical Area: Hazardous Materials Management
Author: Geoff Lesh

BACKGROUND: TEMPORARY PROPANE STORAGE

Large amounts (up to 15,000 gallons) of liquefied petroleum gas (propane) will be temporarily stored onsite in two truck semi-trailer tanks during the salt melting and conditioning operations. In the event of an uncontrolled accidental fire near the propane storage tanks, it is possible for a boiling liquid expanding vapor explosion (BLEVE) of the tanks to occur.

DATA REQUESTS

89. Please provide results from a blast effects model of such a BLEVE of one of the full storage tanks indicating how far from the tank any blast effects would occur.

90. Show on a site map whether, and how far, blast effects would extend beyond the project's boundaries.

BACKGROUND: TEMPORARY PRE-MELT SALT STORAGE

The project will have the solid bulk chemicals sodium nitrate and potassium nitrate delivered to the site separately for mixing and melting. Ultimately, approximately 75 million pounds of these salts will be used, although none will remain on site after melting is complete. These salts being oxidants, if mixed with sufficient combustible materials, can act as combustion accelerants, potentially resulting in an explosion.

DATA REQUESTS

91. Please describe the maximum amount of the solid chemical salts that may present at any one time during the melting-conditioning process.

92. Please describe what measures will be taken to prevent contamination of the unmelted salts by significant amounts of combustible materials, ensuring their ability to be handled safely.

93. Please describe the measures that will be taken to prevent the theft of significant amounts of either of the salts, while they are in transit to the facility and while being stored on site, prior to melting.

Technical Area: Land Use
Author: Shaelyn Strattan

BACKGROUND

In Sections 1, 2, and 5.6 of the AFC, several Figures show a "buffer" around the proposed facilities site and transmission line corridor. It appears that this buffer area represents the one-mile study area around the proposed facilities site and quarter-mile study area along the transmission line corridor. However, use of the term "buffer" is not defined and no reference is made to this term in the text of the AFC.

DATA REQUEST

94. Please identify the intent of the delineated "buffer" on project description and land use figures in the AFC.

95. If the buffer does not represent the boundaries of the project study area, please discuss how buffer areas relate to the actual proposed project area, rights-of-way requested from the Bureau of Land Management (BLM), and easements from private property owners along the transmission line corridor.

96. If area defined by the buffer boundaries expands the actual project site to include lands within San Bernardino County, please provide additional analysis to address the effect(s) of such land use for that county, including any permitting requirements or restrictions to development.

BACKGROUND

AFC Figure 5.6-1, Existing Land Uses, identifies BLM and State-owned land. However, none of the Land Use figures, including Figure 5.6-1, identifies the parcel locations of privately held lands within or adjacent to the project footprint. AFC Appendix 1A (Parcel Map) provides a record of survey for the primary site proposed for the solar field and power block. However, Assessors Parcel Numbers (APNs) and ownership is only shown for the property owned by the Metropolitan Water District, to the west of the site.

DATA REQUEST

97. Please provide a figure identifying the location (boundaries), parcel identifier (e.g., County APN), and name of owner for all privately held parcels within and immediately adjacent to the project footprint, including transmission line corridor and substation locations.

BACKGROUND

The proposed project site, including the transmission line corridor, is within Riverside County's Desert Center/CV Desert Development Impact Fee Area (Ordinance 659). This ordinance requires payment of specific fees, based on location and type of development, to support county construction and operation of public service facilities. There is no discussion of compliance with this ordinance or calculation of the cost of this fee to the project.

DATA REQUEST

98. Please provide a discussion of the proposed project's compliance with Riverside County Ordinance 659-659.7, amending Ordinance 659 and Chapter 4.60 of the Riverside County Code, establishing development impact fees.

99. Please provide calculations to support conclusions regarding the fiscal impact of this ordinance on the proposed project.

Technical Area: Project Description
Author: John Kessler

Project Roads

BACKGROUND

Figure 2.2-1 in the AFC Project Description shows the Overall Site Plan and Conceptual General Arrangement of project facilities. The figure indicates locations of primary access roads, but neither in the figure nor elsewhere in the Project Description does it describe plans for vehicular access within the heliostat field. Staff needs to understand the level of disturbance to the soil, water and habitat resources within the heliostat field.

DATA REQUEST

100. Please describe the planned routes, frequencies and purposes of vehicular traffic within the heliostat field, and the type of vehicles and equipment that would be used during:
    a. Construction; and
    b. Operations.

101. Please describe the planned spacing between rows of heliostats and the width of any maintenance roads that would be used during project operation such as for mirror washing.

102. Please describe any surface stabilization and dust control measures planned for the primary access roads and maintenance roads within the heliostat field.

103. Please provide a figure showing typical plans and profiles representative of any road crossings of dry washes, including ingress and egress and stabilization measures for the road and channel for crossings through the channel, and use of any bridges or drainage structures for crossings over a channel.

Heliostat Arrangement and Installation

BACKGROUND

Section 2.2.2 of the AFC Project Description describes the heliostats as having a reflecting surface of 24 x 28 feet mounted on a 12-foot tall post or pier foundation. Staff needs to understand the general arrangement and installation plans to support its project assessment.

DATA REQUEST

104. Please describe the range of spacing between heliostats, both side by side and between concentric rows of heliostats, and the variation that may occur between rows closest to and farthest from the solar power tower.

105. Please describe the dimensions of the proposed post or pier foundation, and the depth below ground for the following:
    a. Posts that would be located outside of dry washes; and

b. Posts that would be located within dry washes.

106. Please describe the planned installation method(s) and if drilling/augering may be needed, include the following:

a. An estimate of the volume of spoil for each heliostat and in total for all heliostats; and

b. The proposed location for placement of spoils, and any BMPs that would be applicable for spoil stabilization.

Construction Sequence and Duration

BACKGROUND

Section 2.2.12 of the AFC Project Description generally describes the proposed project construction schedule, beginning in the first quarter of 2011 and completing in the third quarter of 2013 for a duration of about 30 months. Staff would like to understand in more detail the sequence of construction activities and each activity's duration for the primary project components including roads, site grading, power block foundations, power tower and generating equipment, heliostats, switchyard, generation tie line and the new substation needed for interconnecting to Western's Parker-Blythe 161-kV transmission line.

DATA REQUEST

107. Please provide an estimate of start and completion months for construction and testing of the primary project components as listed above in terms of Month 1, Month 2, etc. through Month 30.

Technical Area: Socioeconomics
Author: Kristin Ford

BACKGROUND

The AFC discusses Desert Center Unified School District (District) as a "basic aid" or "excess revenue" district, for which funding comes from property taxes and state revenue funds, not from developer fees (Capp, 2009). It further states that the California Legislature sets revenue limits for each school district. If property taxes exceed the revenue limit, then the district is allowed to keep the extra money. In case of a shortage because of property tax fluctuations, the state meets the difference through categorical funding (AFC, 5.10-25, RSEP, 2009).

DATA REQUEST

108. Please provide a discussion of the following as applicable for the District:
    a. The District's revenue limit;
    b. The existing and/or previous year's revenue from property taxes and/or state revenue funds; and
    c. If the district was allowed to keep extra money or if the state met the difference through categorical funding (for the previous school year).
109. Please provide a definition of a "closed mining area" and why the District does not collect developer fees because it is located within a closed mining area (AFC. Appendix 5.10, RSEP, 2009).

Technical Area: Soil and Water Resources
Authors: Mike Conway and Cheryl Closson

DRAINAGE AND STORM WATER MANAGEMENT

BACKGROUND

The proposed onsite detention pond identified in the application for certification (AFC) Conceptual Project Drainage Plan (Appendix 5.15C) is designed to capture all onsite storm water runoff for events as large as a 100-year/24-hour event. The drainage plan/study indicates that approximately 65 acre-feet (AF) of water could be produced during the design event and that the pond would discharge at a rate of 96 cubic feet per second (cfs) or less. Staff requires additional information about the onsite detention pond in order to determine the appropriateness of the proposed pond sizing and operation.

DATA REQUEST

110. Please provide preliminary calculations demonstrating that the proposed 30 acre-foot onsite detention pond can contain runoff and retain appropriate pond freeboard during the design event.

111. Please explain how the basin has been designed to perform during the design event.

112. If the pond relies on discharge for drawdown for all low flows, please explain how the project would ensure that onsite spills are not discharged offsite.

113. If the pond relies on infiltration, please explain whether or not vectors are a concern and how potential vectors would be managed.

BACKGROUND

As described in the Conceptual Project Drainage Plan in Appendix 5.15C, offsite storm water runoff would be captured in channels, routed around the site, and allowed to spread-out to a broad shallow sheet flow south of the site. Energy dissipation would be accomplished at the channel outlets with rip-rap. Staff needs additional information on how flows would be managed in order to determine appropriateness of the proposed drainage plan.

DATA REQUEST

114. Please explain in more detail how diverted flows would be returned to their natural sheet flow condition at the discharge point(s).

115. Please explain what, if any, devices other than rip-rap are proposed to restore the natural sheet flow depth and distribution of flow into the ephemeral drainages.

116. Please discuss what channel stabilization methods, other than rip-rap on one side of the diversion channel, will be utilized on the channel bottom and on the non-rip-rap side.

BACKGROUND

The diversion channel above the site was reported to have been breached over time due to a lack of maintenance. Staff needs additional information on any possible maintenance activities or other actions that could be undertaken to help ensure proper operation of offsite storm water management structures to prevent unanticipated storm water run-on to the project site.

DATA REQUEST

117. Please provide additional information on any maintenance activities that may be the responsibility of another entity or other actions that can be undertaken by the applicant to help ensure that offsite storm water management structures operate properly to prevent unanticipated storm water run-on to the project site.

BACKGROUND

Page 5.11-6 states that soils in the project area are predicted to have rapid permeability with low amounts of runoff, and that, therefore, their potential for water erosion is relatively low. However, page 4 of the Preliminary Geotechnical Engineering Report gives a soil description that says “the near surface materials at the site are laden with caliche which creates low permeability characteristics.” Page 16 of the Engineering Report also states that “given the well cemented nature of the caliche laden soils on site, we believe storm water infiltration is not feasible over most of the project area.” Given the apparent conflicts in the soil characteristic information provided in the AFC documents, staff needs additional information and clarification about the nature of the soils at the project site, especially the soil permeability, runoff potential, and potential for wind and water erosion. In addition, staff needs additional information on how the project would control storm water flows given the high runoff potential with caliche-laden soils.

Staff is also familiar with the natural formation process of cryptobiotic soil crusts that could potentially be present on the project site, consisting of cyanobacteria, lichens and mosses, and the important ecological role they play for increasing the stability of otherwise easily eroded soils. Cryptobiotic soil crusts are highly susceptible to soil-surface disturbance such as from vehicle traffic as the site would be exposed to during construction and operations. When crusts in sandy soils are broken in dry periods, previously stable areas can become moving sand dunes in a matter of only a few years (Ref:USGS, Jayne Belnap, http://geochange.er.usgs.gov/sw/impacts/biology/crypto/).

DATA REQUEST

118. Please provide additional information characterizing the soils at the project site as follows:

    a. General characterization of the extent of caliche-laden soil at the project site in terms of its expanse and range of depth;

    b. General characterization of the extent of cryptobiotic soil crusts on the project site, as well as the extent of the project’s potential effects on degrading the soil crust;

c. Effects of (a) and (b) above on site soil permeability, runoff potential, and potential for wind and water erosion.

119. Please provide information on how the project would mitigate potential increased storm water run-off or soil erosion in areas with caliche-laden soils.

120. Please provide information on how the project would mitigate for the loss of cryptobiotic soil crusts through Best Management Practices (BMPs) such as by application of non-toxic soil stabilizers or soil weighting agents during construction after initial grading and during project operation.

BACKGROUND

To help determine the potential impacts to soil and water resources from the construction and operation of the Rice Solar Energy Project, the Energy Commission requires a draft Drainage, Erosion and Sediment Control Plan (DESCP). The draft DESCP is separate from any Construction and Industrial Storm Water Pollution Prevention Plans (SWPPP) or municipal storm water plan requirements that may apply to the project. Once the project is approved, the draft DESCP would be required to be updated and revised as the project moves from the preliminary to final design phases, on through to construction and operation of the facility. In addition, the DESCP submitted prior to site mobilization would be required to be designed and stamped by a professional engineer/erosion control specialist.

DATA REQUEST

121. Please provide a draft DESCP that contains elements "A" through "I" below outlining the site management activities and erosion/sediment control Best Management Practices (BMPs) to be implemented during site mobilization, grading, construction, and operation of the proposed project. Please provide all preliminary erosion control information for both the construction and operation phases, or provide a statement identifying when such information will be available. **Note: The content and level of detail presented in the draft DESCP should be consistent with any site drainage or erosion-related information to be provided in response to the data requests above and the Biology section data requests.**

    A. Vicinity Map – Provide a map(s) at a minimum scale 1"=100' indicating the location of all project elements, including depictions of all significant geographic features including swales, storm drains, and sensitive areas.

    B. Site Delineation – Identify all areas subject to soil disturbance (i.e., project site, lay down areas, all linear facilities, water pick-up areas, landscaping areas, and any other project elements) and show boundary lines of all construction/demolition areas and the location of all existing and proposed structures, pipelines, roads, and drainage facilities.

    C. Watercourses and Critical Areas – Show the location of all nearby watercourses including swales, storm drains, and drainage ditches. Indicate the proximity of those features to the project construction, laydown, and landscape areas, and all transmission and pipeline construction corridors.

    D. Drainage Map – Provide a topographic site map(s) at a minimum scale 1"=100' showing all existing, interim and proposed drainage systems and

drainage area boundaries. On the map, spot elevations are required where relatively flat conditions exist. The spot elevations and contours should be extended off-site for a minimum distance of 100 feet in flat terrain.

E. Narrative Discussion of Project Site Drainage – Include a narrative discussion of the drainage management measures to be taken to protect the site and downstream facilities. The narrative should include the summary pages from the hydraulic analysis prepared by a professional engineer/erosion control specialist. The narrative should state the watershed size(s) (in acres) that was used in the calculation of drainage control measures, and include discussions justifying selection of the control measures to be used. Information from the hydraulic analysis should also be provided to support the selection of BMPs and structural controls to divert off-site and on-site drainage around or through the project construction and laydown area, as well as post-construction and operation areas.

F. Clearing and Grading Plans – Identify all areas to be cleared of vegetation and areas to be preserved. Provide elevations, slopes, locations, and extent of all proposed grading using contours, cross sections or other means and include locations of any disposal areas, fills, or other special features. Illustrate existing and proposed topography tying in proposed contours with existing topography.

G. Clearing and Grading Narrative – Include a table that identifies all of the following: all project elements where material will be excavated or fill added; the type and quantities of material to be excavated or filled for each element; whether the excavation or fill is temporary or permanent; and the amount of material to be imported or exported.

H. Construction Best Management Practices Plan – Identify on the topographic site map(s) the location of the site-specific BMPs to be employed during each phase of construction (initial grading, project element excavation and construction, and final grading/stabilization). Any treatment BMPs used during construction should also address testing of storm water runoff, or storm water that comes in contact with equipment, if necessary, prior to onsite discharge or offsite disposal.

I. Operation Best Management Practices Plan - Identify on a separate topographic site map(s) the location of the site-specific BMPs to be employed during operation of the facility. Any treatment BMPs to be used during facility operation should also address testing of storm water runoff, or storm water that comes in contact with equipment, if necessary, prior to onsite discharge or offsite disposal.

J. Soil Wind and Water Erosion Control - The plan shall address exposed soil treatments to be used during construction and operation of the proposed project for both road and non-road surfaces including specifically identifying all chemical based dust palliatives, soil bonding, and weighting agents appropriate for use at the proposed project site that would not cause adverse effects to vegetation; BMPs shall include measures designed to prevent wind and water erosion including application of chemical dust palliatives after rough grading to limit water use.

K. BMP Narrative – Provide a narrative discussion on the selection, location, timing, and maintenance schedule for all erosion and sediment control BMPs to be used prior to initial grading, during project element excavation and construction, at final grading/stabilization, and for post-construction/operation. A narrative discussion with supporting calculations should also be included addressing any project specific BMPs. Separate BMP implementation schedules should be provided for each project element for each phase of construction. The maintenance schedule should include post-construction and operation maintenance of structural control BMPs, or a statement when such information will be available. All erosion control measures identified in the DESCP should be consistent with any revised biological impact mitigation measures proposed in response to Biology data requests for avoidance of impacts to desert tortoises and burrowing owls, and for maintenance of aeolian sand habitat.

BACKGROUND

In the Biology Section of this set of Data Requests (See Avoiding Impacts to Desert Washes) staff requests the applicant to provide a detailed discussion, with supporting quantitative analysis, of implementation of a low impact development (LID) approach for management of project storm water flows in desert washes. The request also asks the applicant to "include in this assessment the feasibility of reconfiguring the project footprint to retain some or all of the project area ephemeral drainages with setbacks from the banks of the drainages to accommodate a buffer for protection of water quality and to provide a wildlife movement corridor across the site". In the event that the project footprint and storm water management features are changed to include LID, staff would need a revised project DESCP that addresses any proposed changes in project footprint and resulting storm water management structures, as well as drainage and erosion control BMPs to be implemented by the project. In addition, staff would need revised calculations for any drainage facilities proposed along with a study of the sedimentation and erosion potential of the area due to any changes in flow across the site.

DATA REQUEST

122. Consistent with the Biology Data Request in the "Avoiding Impacts to Desert Washes" section, please provide revised DESCP elements, as appropriate, to address any project footprint changes or LID storm water management practices that may be necessary to maintain biological integrity of the desert washes and wildlife corridors within the project site.

123. Please provide revised calculations for any drainage facilities or structures that would be necessary for implementation of an LID storm water management approach.

124. Please provide an evaluation of the sedimentation and erosion potential for the project area that would take into account any changes in flows that might result from implementation of an LID storm water management approach.

BACKGROUND

The project application states that areas next to and under the heliostats are expected to be left ungraded but with possible disturbance from vehicles during construction. The project's Preliminary Geotechnical Engineering Report recommends that foundations for the heliostats be some type of deep foundation such as drilled shaft or driven pile. However, the report also states that some additional effort may be necessary where moderately to strongly-cemented soils are encountered. Staff requests additional information about any potential impacts, increased grading requirements, or storm water mitigation that may be necessary in areas where heliostat drilling requires extra effort due to cemented soil conditions.

DATA REQUEST

125. Please provide additional information on methods of heliostat installation that would be used in areas where drilling may be impeded by cemented soils or other difficult drilling/boring conditions.

126. Please provide additional information about any potential impacts, increased grading requirements, or changes in storm water mitigation that may be necessary in areas where heliostat drilling requires extra effort due to cemented soil or difficult drilling conditions.

BACKGROUND

The current project application proposes to route upstream storm water flows around the project site through use of a channel structure. In the event that offsite storm water is not routed around the site as currently proposed (due to ecological considerations or in response to staff's concern about upstream containment structure breaches), the potential for scour within ephemeral washes on the project site may be more significant. Scouring effects from storm water generated by big storm events could destabilize heliostats in the washes and cause failure and offsite discharge of mirror debris or other materials. Staff needs additional information on how project heliostats would be placed and managed to mitigate adverse impacts from potential increased scour within site ephemeral washes.

DATA REQUEST

127. Please describe how project heliostats would be placed and managed to mitigate adverse impacts from potential increased scour within site ephemeral washes, and monitored for stability over the life of the project.

WATER SUPPLY AND USE

BACKGROUND

Project construction activities would require water for grading and dust control activities, as well as for other construction uses onsite. The construction water would be supplied by onsite wells. The project expects use an average of 29 AF per month or about 350 acre-feet per year (AFY) over the 27-30 month construction period. Page 5.15-16 of the project AFC gives general information on construction water uses and volumes. However, in order to evaluate project water use, staff requires more information on the specific water use activities, timelines and water use estimates.

DATA REQUEST

128. Please provide additional detailed information on the activities that will require water during construction, the duration of those activities, and the estimated water demands associated with each activity. Please include daily use volumes in gallons and monthly use volumes in AF, along with estimates for total water use over the entire construction period.

129. Please provide detailed information and discussion on how the project water use during construction was calculated, including all assumptions made in developing the water use estimates and associated calculations.

BACKGROUND

The project proposes to utilize an existing well onsite and also drill a new well to provide water for project construction and operation. However, insufficient information is provided on project well drilling activities (i.e., what reconstruction may be needed; sizing and proposed location for the new well; and abandonment plans for other existing wells onsite) to determine impacts, compliance with water well laws, ordinances, regulations, and standards (LORS), and to establish appropriate conditions of certification in lieu of local water well permit requirements .

DATA REQUEST

130. Please provide detailed information on the proposed well drilling, reconstruction (if necessary), development, and abandonment activities to be undertaken for the wells associated with the Rice Solar Energy Project including the following:

    a. Please be sure to include draft well completion diagrams as well as a site map showing existing and proposed well locations; and

    b. Please provide documentation of consultation with Riverside County and describe how the wells will conform to County Ordinance No. 682 for the Construction, Reconstruction, Abandonment and Destruction of Wells.

BACKGROUND

The Project Description section of the AFC (Section 2.2.5 – Water Supply and Use, page 2-24) describes the water treatment process as including two multi-stage reverse osmosis (RO) units, and electrodeionization equipment. The Water Balance Diagrams, Figures 2.2-5A and 2.2-5B, also shows this arrangement of treatment equipment. However, on page 2-29, water treatment is described as including a Multimedia Filter (MMF). The MMF would include a reject stream from backwash of the filter.

DATA REQUEST

131. Please clarify what the proposed water treatment system would consist of during operations.

132. If the proposed treatment system would include the MMF, please update the following for the proposed project:

    a. Water Balance Diagram for the Annual Average scenario including instantaneous flow rate (gallons per minute); and

    b. Estimate of annual volume (acre-feet) for the Annual Average scenario.

BACKGROUND

The proposed project would employ an air cooled condenser (dry cooling) for the power plant steam turbine generator, along with a wet surface air cooler (WetSAC) to cool plant auxiliary equipment. The ground water supply proposed for use in the WetSAC process could potentially have many beneficial uses. While the volume of water to be used by the WetSAC is relatively small (less than 38 acre-feet per year), the Energy Commission carefully considers the necessity of all water uses for power plant operation. Staff needs additional information and analysis of any possible water supply or cooling technology alternatives for the proposed WetSAC process.

DATA REQUEST

133. Please provide additional information and analysis demonstrating that alternative water sources (such as treated process wastewater, or high TDS groundwater) for the proposed WetSAC process are infeasible.

134. Please provide an analysis considering implementation of mechanical chillers as an alternative to use of the proposed WetSAC for the turbine lubricating oil cooling system. Please include the following:

    a. Address technical feasibility, environmental and economic (capital and operating cost) considerations.

    b. Estimate the makeup water conservation that would be achieved expressed in both instantaneous flow rate (gallons per minute) and annual volume (acre-feet) for the Annual Average scenario.

    c. If the applicant determines mechanical chilling is feasible, provide a Water Balance Diagram for the Annual Average scenario.

SANITARY WASTE MANAGEMENT

BACKGROUND

The Colorado River Basin Regional Water Quality Control Board (CRBRWQCB) requires projects using onsite wastewater treatment and disposal systems (i.e., septic tanks and leach fields) to submit a Report of Waste Discharge (ROWD), and an Engineering Report in support of the ROWD, detailing the proposed discharge and method of treatment and disposal of the sanitary wastes generated at the project site. Staff requires additional information on the proposed onsite wastewater treatment system and discharge in order to determine project compliance with applicable water quality laws, ordinances, regulations and standards (LORS) and allow for development of appropriate waste discharge requirements.

135. Please provide all the information necessary for compliance with the CRBRWQCB requirements for onsite wastewater treatment and disposal systems (i.e., septic tanks and leach fields). The information provided should include copies of any ROWDs and Engineering Reports required by the CRBRWQCB. (For more on information requirements, see CRBRWQCB guidance: Contents of a Proposed On-site Wastewater Treatment System – Engineer's Report, http://www.waterboards.ca.gov/coloradoriver/water_issues/available_documents/docs/wts_engineers_rpt3.pdf.)

136. Please submit the required ROWD and Engineering Report for the project's proposed onsite wastewater treatment and disposal systems to the CRBRWQCB, along with all appropriate fees necessary for document review and compliance assessment/determination.

WASTEWATER EVAPORATION PONDS

BACKGROUND

The project AFC included a draft Report of Waste Discharge (ROWD) and Waste Discharge Requirement (WDR) Application for construction and operation of evaporation ponds to manage project wastewater brines (Appendix 5.15B). However, it is unclear whether or not the ROWD was also submitted to the CRBRWQCB, along with the appropriate application review fee. Staff needs confirmation that the ROWD for the project's wastewater evaporation ponds, along with payment of applicable review fees, has been made to the CRBRWQCB.

DATA REQUEST

137. Please confirm that the ROWD for the project's proposed wastewater evaporation ponds has been submitted to the CRBRWQCB, along with all appropriate fees necessary for document review and compliance assessment/determination.

BACKGROUND

The project proposes to place three lined wastewater evaporation ponds immediately down-gradient of a shallow, thirty acre-foot capacity storm water detention basin. However, information on any potential hydrostatic impacts to the wastewater ponds from impounded storm water was not provided in the project AFC documents. Staff needs confirmation that the location and operation of the storm water detention basin would not negatively impact the integrity of the proposed wastewater disposal ponds.

DATA REQUEST

138. Please provide additional information confirming that the location and operation of the proposed storm water detention basin would not negatively impact the integrity of the wastewater disposal ponds.

GROUNDWATER

BACKGROUND

The Groundwater Resources Investigation (Appendix 5.15A) in the AFC indicates the Rice Valley Groundwater Basin "is assigned a Type 'C' water budget by Department of Water Resources (DWR) (DWR, 2004), which means that little information is known about the water budget components in the basin." The AFC also shows the Rice Valley may be recharged by underflow from the hydraulically connected Ward Valley groundwater basin to the northwest and discharge underflow to the Vidal Valley groundwater basin to the northeast. Natural recharge in the Rice Valley groundwater basin has been estimated at approximately 500 acre feet per year (AFY) and is assumed to represent mountain front recharge (DWR, 1975). The applicant has appropriately revised this estimate based on the interpretation that a topographic divide

and bedrock high that occur within Big Wash which separates the main portion of the Rice Valley Groundwater Basin from the Colorado River Aquifer. They assumed that recharge is apportioned equally among the mountain fronts that encircle Rice Valley, which effectively decreases mountain front recharge to the remainder of the basin from 500 AFY to 394 AFY. Staff also agrees with the applicant that evaporation/evapotranspiration is likely insignificant in the Rice Valley basin, due to the depth of groundwater. Given this recharge estimate and project use of groundwater which would average approximately 350 AFY during the 30 month construction period and 150 AFY for the 30-year operating life of the plant, the project would consume 38 to 89% of the total basin recharge, respectively.

Staff has conducted preliminary analysis of basin recharge using the Maxey-Eakin method and estimates recharge to Rice Valley groundwater basin as zero. Staff considers use of the Maxey-Eakin (1949) method (and modified Maxey-Eakin methods) appropriate for estimating mountain front recharge in a desert system. This suggests Rice Valley groundwater basin storage may be largely derived from underflow from adjacent basins. Staff is concerned that since there are widely varying estimates of recharge in the basin and flow between basins appears to be poorly understood, project pumping could result in basin overdraft or impacts on adjacent basins.

DATA REQUEST

139. Please provide more detailed or different analysis of Rice Valley basin recharge (or adjacent valleys if necessary) using methods such as Maxey-Eakin (1949) or modified methods such as Donovan and Katzer (2002).

140. Please provide an analysis of impacts to the Rice Valley basin and users in adjacent groundwater basins based on any new estimates that may be developed from further analysis of basin recharge.

141. Please discuss whether the applicant proposes to implement a water level monitoring program during project development and operation given the challenges in estimating basin recharge and safe yield of the groundwater basin.

BACKGROUND

The Groundwater Resources Investigation (Appendix 5.15A) in the AFC includes an analysis of potential drawdown impacts in the groundwater basin using the United States Geological Survey modeling code THWELLS. The model uses the Theis non-equilibrium well equation which incorporates a number of assumptions. The AFC points out the limitations of this method for analysis of impacts and identifies where assumptions were difficult to meet. In addition, the applicant also makes an un-conservative assumption that all mountain front recharge flows to the lower or confined aquifer where project wells will be developed for production. Staff needs to further evaluate the sensitivity of the predicted drawdown to model assumptions.

DATA REQUEST

142. Please provide a copy of the THWELLS program, documentation, and modeling files developed for analysis of the project.

BACKGROUND

The Groundwater Resources Investigation (Appendix 5.15A) in the AFC points out and concludes that "Soils particularly susceptible to such consolidation and subsidence include compressible clays in overdrafted confined aquifer systems that have experienced significant drawdown on the order of tens or hundreds of feet. Based on the small amount of drawdown predicted to result from groundwater pumping for the project, significant subsidence is not anticipated." The project groundwater supply will be pumped from a confined aquifer that the applicant shows is overlain by a substantial clay layer. There is no discussion of aquifer storage and potential for dewatering of the confined layer due to project pumping. Given the uncertainty in the basin recharge and safe yield discussed above, staff needs further analysis of the potential for significant subsidence to occur in the basin.

DATA REQUEST

143. Please provide further analysis of aquifer characteristics, basin storage, and drawdown impacts that could result in significant subsidence.

144. Please discuss whether the applicant proposes to implement a monitoring program to evaluate whether project pumping is causing basin subsidence.

PROCESS WASTEWATER

BACKGROUND

The project AFC does not appear to include consideration and analysis of using a zero-liquid discharge (ZLD) technology for reuse of process wastewaters. The Energy Commission's 2003 Integrated Energy Policy Report (IEPR 2003) states the following with regard to ZLD:

Consistent with the Board policy and the Warren-Alquist Act, the Energy Commission will approve the use of fresh water for cooling purposes by power plants which it licenses only where alternative water supply sources and alternative cooling technologies are shown to be "environmentally undesirable" or "economically unsound." Additionally, as a way to reduce the use of fresh water and to avoid discharges in keeping with the Board's policy, the Energy Commission will require zero-liquid discharge technologies unless such technologies are shown to be "environmentally undesirable" or "economically unsound." The Energy Commission interprets "environmentally undesirable" to mean the same as having a "significant adverse environmental impact" and "economically unsound" to mean the same as "economically or otherwise infeasible."

Due to the uncertainty in the understanding of the groundwater basin budget, staff believes consideration of additional water conservation measures, including use of ZLD technologies for management of project wastewaters, is appropriate for this project. Staff therefore needs additional information on wastewater conservation measures that may further reduce project reliance on groundwater.

DATA REQUEST

145. Please provide an analysis to consider implementing zero-liquid discharge (ZLD) for treatment and recovery of wastewater during project operations including the following:

    a. Address technical feasibility, environmental and economic (capital and operating cost) considerations.

    b. Estimate the makeup water conservation that would be achieved expressed in both instantaneous flow rate (gallons per minute) and annual volume (acre-feet) for the Annual Average scenario.

    c. Provide a Water Balance Diagram for the Annual Average scenario.

146. Please provide an analysis to consider implementing any alternatives (if any) to zero-liquid discharge for treatment and recovery of wastewater that would accomplish recovery of a greater portion than currently proposed during project operations, but less than ZLD. Please provide the following:

    a. Address technical feasibility, environmental and economic (capital and operating cost) considerations.

    b. Estimate the makeup water conservation that would be achieved expressed in both instantaneous flow rate (gallons per minute) and annual volume (acre-feet) for the Annual Average scenario.

    c. Provide a Water Balance Diagram for the Annual Average scenario.

Technical Area: Traffic and Transportation
Author: Scott Debauche and James Jewell

BACKGROUND

Title 14, Code of Federal Regulations, Part 77.13(2)(i) requires an Applicant to notify the Federal Aviation Administration (FAA) of the construction of structures with a height greater than 200 feet from grade. RSEP AFC Section 2.0 (Project Description), page 2-4, states that the proposed project will include:

> *… a 538-foot-high concrete solar receiver tower with a 100-foot-tall solar receiver and 15-foot crane (for a total height of 653 feet).*

Energy Commission staff needs information regarding the applicant's completion of FAA Form 7460 and an applicant-secured FAA Determination of No Hazard to Navigable Airspace. At this time, staff has not been provided with a completed FAA Form 7460 or an applicant-secured FAA Determination of No Hazard to Navigable Airspace. Therefore, proposed project impacts related to inconsistency with FAA Form 7460 are unknown at this time. This information is necessary prior to Final Staff Assessment publication.

DATA REQUEST

147. Please provide information on the applicant's status of and completion of the FAA 7460 requirements and attainment of an FAA Determination of No Hazard to Navigable Airspace.

BACKGROUND

The applicant describes the power tower as having a one hundred foot high solar receiver on top of the circular concrete tower. The receiver is described as being composed of manifolds and tubes for the flow of the salt to collect heat from the reflected solar radiation. The applicant has submitted Figure 5.13-6 showing the power tower from KOP 1. The receiver appears as if it were a candle flame high above the desert. Energy Commission staff (staff) believes the receiver may be a bright, obtrusive nuisance in the midst of the desert landscape and that it may prove to be a hazardous attraction to observers, especially to motorists on SR 62.

The applicant states that the luminance of the receiver will be as if one were viewing a 120 watt incandescent electric lamp at a distance of one meter. Staff finds that this requires additional explanation.

DATA REQUESTS

148. If the luminance of the receiver is the same as that of a 120 watt incandescent electric lamp, does this imply that this is the cumulative luminance or does it mean that any given point on the receiver will produce this luminance; that is, as if the 100 foot receiver were covered with 120 watt lamps?

149. Staff finds that domestic lamp catalogues list only two types of 120 watt lamps; reflector lamps and parabolic aluminized reflector (PAR) lamps.

    a. Which lamp type was used in the comparison?

    b. What is lumen rating of the 120 watt incandescent electric lamp used in the comparison?

BACKGROUND

The applicant describes the heliostats as focusing total solar energy on the receiver. Each heliostat reflects and concentrates an image of one sun, which is a significant amount of energy. If a heliostat were to malfunction and project its beam laterally across the solar plant it would presumably pass beyond the plant boundary and present an actinic hazard, including retinal damage, to observers on the ground, including plant operating personnel. Systems controlling the heliostats are described in some detail, but concentrate on operational issues rather than heliostat malfunctions.

DATA REQUEST

150. Please describe the range of movement (beginning and ending positions) for the heliostats during normal and emergency operation modes and during malfunction including the following (and any others) as applicable:

    a. Night stowage position

    b. Morning startup

    c. Evening shutdown

    d. Load (power output) reduction

    e. Reducing solar input to avoid overheating the receiver

    f. Loss of AC Station Power

    g. Mirror washing

151. Please address potential solar radiation exposure hazards (in terms of total reflected solar energy (kW/m^2) and the reflected luminance in lux) and mitigation measures for normal and emergency operation modes as applicable for both humans (<u>including</u> <u>in aircraft, vehicles, and as pedestrians)</u> and wildlife.

152. Please describe the control mechanisms, including availability of on-site maintenance personnel, which will avoid heliostat movements or malfunctions that may produce hazards to humans and wildlife.

BACKGROUND

The applicant states that in event of a salt flow system failure the heliostats will be directed away from the receiver to avoid over heating the pipes and manifolds. This stow position is described as horizontal meaning that the reflected beams of sunlight are directed into the sky.

The AFC further states that the heliostats will be focused at one of “four target points” when such a failure mode occurs. Staff has taken into account that 4,300 heliostats will be focused at one of these target points creating what staff presumes will be a point of excessive reflected energy and a serious potential hazard to aviation. The applicant has not submitted sufficient detail (such as beam focal lengths, percent reflectivity of the proposed mirrors, or a total divergence angle from the heliostats) for staff to determine the effect of this stow focusing.

DATA REQUEST

153. Please state the amount of reflected energy that will occur at each of the “four target points” which might impact a plane passing over the plant both in terms of total reflected solar energy (kW/m²) and the reflected luminance in lux.

Technical Area: Transmission System Engineering
Author: Ajoy Guha, P. E. and Mark Hesters

INTRODUCTION

Staff needs to determine the system reliability impacts of the project interconnection and to identify the interconnection facilities including downstream facilities needed to support the reliable interconnection of the proposed Rice Solar Energy Project (RSEP). The interconnection must comply with the Utility Reliability and Planning Criteria, North American Electric Reliability Council (NERC) Planning Standards, NERC/Western Electricity Coordinating Council (WECC) Planning Standards, California Independent System Operator (California ISO) Planning Standards and Western Area Power Administration (Western) Planning Standards. In addition the California Environmental Quality Act (CEQA) requires the identification and description of the "Direct and indirect significant effects of the project on the environment."

For the compliance with planning and reliability standards and the identification of indirect or downstream transmission impacts, staff relies on the System Impact Study (SIS) and Facilities Study (FS) as well as review of these studies by the agencies responsible for insuring the interconnecting grid meets reliability standards. In this case, Western is the responsible agency according to their current Large Generator Interconnection Procedures (LGIP). The studies analyze the effect of the proposed project on the ability of the transmission network to meet reliability standards. When the studies determine that the project will cause the transmission to violate reliability requirements, the potential mitigation or upgrades required to bring the system into compliance are identified. The mitigation measures often include modification and construction of downstream transmission facilities. The CEQA requires environmental analysis of any downstream facilities for potential indirect impacts of the proposed project.

BACKGROUND

Staff has received a copy of the signed Interconnection SIS Agreement dated October 9, 2009 between Solar Reserve, LLC and Western, and proof of payment. According to the AFC, the SIS should be completed by Western in 90 days and thus was expected to be available as early as January, 2010. The applicant's timely submission of the SIS report is important for the Energy Commission's Application of Certification (AFC) process.

DATA REQUESTS

154. Please provide the SIS report prepared by Western according to the current LGIP, which will assess the interconnection of the proposed RSEP new generation to Western's Parker-Blythe No. 1 161 kV line through a new 161/230 kV substation. The SIS Report should include the following:

    a. Power flow analysis for normal (N-0) system conditions with all facilities in service, and for Category B (N-1) and Category C (N-2 or more) contingencies;

b. Mitigation plan for any identified reliability criteria violations in the Western grid or any adjacent systems;

c. A list of contingencies studied and the study results of the analysis in a table format with pre- and post-project(s) data;

d. A list of all major assumptions in the base case including major path flows, major generators including generation projects in the Western queue (as applicable) & hydroelectric generators and loads in the area systems;

e. The reliability and planning criteria utilized to determine the reliability criteria violations;

f. Power flow diagrams (units in MW, percentage loading and per unit voltage) with and without the RSEP and other queue project generators (as applicable) for the base cases;

g. Power flow diagrams for all overloads or voltage criteria violations under normal system (N-0) or contingency (N-1 & N-2) conditions;

h. Transient stability analysis for critical Category B (N-1) and Category C (N-2) contingencies of the Western (230 & 161 kV) transmission lines/transformers and for full load rejection of the proposed RSEP and outage of other generators including queue projects (as applicable) with monitoring of voltages, frequencies and generator rotor angles;

i. Short circuit analysis for three line-to-ground faults; Analysis for single line-to-ground faults should be performed, if necessary data is available.

j. Post-transient voltage analysis with governor power flow for selected single and double contingencies;

k. Reactive power deficiency analysis with reactive MVAR output (if possible) for selected single and double contingencies;

l. Electronic copies of *.sav, *.drw, *.dyd and *.swt GE PSLF files and EPCL contingency files in a CD, if available.

155. Please provide the generator Facilities Study.

Technical Area: Visual Resources
Authors: William Kanemoto

BACKGROUND

To independently evaluate visual and glare effects of the heliostat field, staff requires a better understanding of the physical components.

DATA REQUEST

156. Please provide scaled plans and elevations of individual proposed heliostat units.

BACKGROUND

Staff is unclear about why the heliostat field is not visible in either of the simulations on Highway 62 provided in the AFC. For example, Character Photo #2 (Figure 5.13-4) seems to suggest that the mirror fields could be visible from Highway 62.

DATA REQUEST

157. To allow staff to better understand the AFC simulations and the visual exposure conditions of the site, please prepare a second GIS viewshed map of the heliostat field as follows:

    Please prepare a composite viewshed map to at least 5 miles from the edge of the heliostat field, from a representative sample of projection points in the heliostat field, using USGS 10 meter DEM data. These should include, at a minimum, four cardinal points at the outer boundary of the field, and additional points near the center of the field. The object of the mapping is to provide some understanding of whether the heliostats could be visible off-site and, if so, which portions of the field, and from which locations. The projections should be made from the greatest anticipated height of the heliostats, as seen by viewers at typical motorist eye-level.

    If the viewshed mapping indicates visibility of the mirror field from any portion of Highway 62, please prepare a simulation showing the mirror field from that highway segment using a ‘normal’ lens (roughly 40 degree horizontal angle of view).

BACKGROUND

To facilitate preparation of the Staff Assessment, and to conduct its analysis, staff requires high-resolution image files of photographs in the AFC visual analysis.

DATA REQUEST

158. Please provide high-resolution image files of individual photos in the AFC visual discussion, including simulations and character photos, in jpg or tif format. Please do not provide ‘paired’ before and after page layouts, but rather the individual photo image files at a resolution suitable for printing in ledger-size format.

Technical Area: Waste Management
Author: Ellie Townsend-Hough

BACKGROUND

The Integrated Waste Management Act of 1989 (AB 939) established landfill waste diversion goals of 50 percent by the year 2000 for state and local jurisdictions. To meet the solid waste diversion goals, many local jurisdictions have implemented Construction and Demolition Waste Diversion Programs.

DATA REQUESTS

159. Please indicate whether the county of Riverside operates a Construction and Demolition Waste Diversion Program.

160. Please provide information on how the Rice Solar Energy Project (RSEP) will meet each of the requirements of the program cited in any Construction and Demolition Waste Diversion Program the county of Riverside may have.

BACKGROUND

The Department of Homeland Security has identified the Chemicals of Interest for preliminary screening based on the belief that these chemicals if released, stolen or diverted, and/or contaminated, have the potential to create significant human life and/or health consequences. Thirty-five thousand tons of salt will be melted, blended and loaded into the liquid salt storage tanks. Salt spills from the thermal storage systems or salt samples as discussed in Section 2.2.7.6 of the Application for Certification (AFC) are not hazardous waste. However, salt is a controlled substance and the applicant will have to comply with Homeland Security regulations.

The applicant proposes to provide a Top-Screen application, referred to on page 5.5-37 of the AFC, to assist the Department of Homeland Security determine whether the Rice Solar Energy facility presents a high level of security risk. In addition, the AFC indicates that in accordance with Title 6 Code of Federal Regulation Part 27 (6 CFR Part 27), Security Vulnerability Assessments, Site Security Plans, or an Alternate Security Program is required when chemicals of concern are above screening threshold quantities (STQ). The STQ for both potassium nitrate and sodium nitrate salts are 400 pounds. The quantity of the nitrate salts at the project site will exceed the STQs. Staff needs additional information on how these plans and assessments apply to the project and what measures are required to protect public health and safety.

DATA REQUESTS

161. Please explain what a Top-Screen consists of, the screening process, and estimated time period for review and approval of the screening document.

162. Please discuss how the Top-Screen application will be evaluated and what agencies are responsible for review.

163. Please identify what documents (Vulnerability Assessments, Site Security Plans or Alternate Security Program) the applicant expects to file in accordance with and discuss why they are necessary.

164. Please describe if any additional security measures would be required around the thermal storage tank and the salt storage area as a result of these filings and program requirements.

BACKGROUND

Approximately 5 miles of the RESP's 10-mile long generator tie-in line and its access road are within the boundaries of the Rice Valley Sand Dunes area. The Rice Valley Sand Dunes area is associated with California Arizona Maneuver Area (CAMA). The CAMA was an area in southern California and western Arizona used to train soldiers and mechanized infantry in desert combat and survival techniques and to aid in the development of improved desert equipment. The site was used for artillery range and firing range for small arms, and the potential for munitions and explosives of concern, including unexploded ordnance, and soil contamination from lead. The northwestern third of the site is believed to be contaminated with subsurface unexploded ordnance. The site is listed as having active cleanup status with the Department of Toxic Substance Control, which is also the lead agency for the cleanup program.

DATA REQUEST

165. Please discuss the status of the cleanup for Rice Valley Sand Dunes, when it will be completed, and how it will affect the RSEP construction schedule.

166. Please provide copies of documentation on the process and/or procedures associated with the cleanup of the Rice Valley Sand Dunes site.

BACKGROUND

The proposed project site and five miles of the generator tie-in are located in the historical Rice Valley Training Area associated with the California Arizona Maneuver Area. The two Phase I Environmental Site Assessments (ESAs), the Phase II ESA and the Limited Site Investigation discuss munitions, and elevated concentrations of aluminum and lead that are present in the soil throughout the historic Rice Airfield. There is also a proposed Remedial Investigation/Feasibility Study recommended for the Rice Valley Sand Dunes site which is situated in the historic Rice Valley Training Area. Various construction activities and housing will be located on the project site. To better evaluate potential hazards to workers and the environment one map that shows the location of the soil mound, the workforce camp, the Rice Valley Sand Dunes, and the portions of generator tie-in line located in the Rice Valley Sand Dunes should be provided.

DATA REQUESTS

167. Please provide a map and aerial photograph of the site showing the following features at a minimum. The map should be at a minimum scale of one inch equal to 500 to 1000 feet.

    a) Rice Valley Sand Dunes;
    b) Rice Valley Training Area;
    c) Limits of the linears and the project site;
    d) A soil mound that may have been used as a place where aircraft could taxi to test their nose and wing guns without taking off (AFC page 5.14-2);

e) A 20-acre workforce camp site (AFC page 2-14); and
f) Five miles of generator tie-in line in the Rice Valley Sand Dunes (Section 5.14.1.1).

BACKGROUND

The RSEP Application for Certification discusses the possibility of a workforce camp for the construction workers. The workforce camp will have up to 300 hundred spaces for RVs/trailers. The workforce camp will have electrical hookups, and mobile water and sanitary sewer service for the trailers and RVs. The AFC does not discuss how the solid and liquid wastes generated at the camp would be managed.

DATA REQUESTS

168. Please identify and discuss the arrangements the applicant would make, or has made, with Riverside County for solid and liquid waste management at the workforce camp.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION FOR THE *RICE SOLAR ENERGY POWER PLANT PROJECT*

Docket No. 09-AFC-10

PROOF OF SERVICE
(Revised 2/4/2010)

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DECLARATION OF SERVICE

I, Hilarie Anderson, declare that on February 16, 2010 , I served and filed copies of the attached, Data Requests Set 1 (#'s 1-168) . The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: **[http://www.energy.ca.gov/sitingcases/ricesolar].**

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(*Check all that Apply*)

FOR SERVICE TO ALL OTHER PARTIES:

✔ sent electronically to all email addresses on the Proof of Service list;

✔ by personal delivery or by depositing in the United States mail at Sacramento, CA with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

AND

FOR FILING WITH THE ENERGY COMMISSION:

✔ sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (***preferred method***);

OR

_____ depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 09-AFC-10
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.

Original Signature in Dockets
Hilarie Anderson