CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

February 14, 2007

DOCKET
06-AFC-10
DATE FEB 14 2007
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Angela Leiba
Starwood Power – Midway LLC
URS Project Manager
1615 Murray Canyon Road, Suite 1000
Santa Ana, CA 92108

Dear Ms. Leiba,

STARWOOD POWER PROJECT DATA REQUESTS 1 THROUGH 67 (06-AFC-10)

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff requests 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 (#1-67) is being made in the areas of air quality, biological resources, cultural resources, geological resources, hazardous materials, land use, noise, project overview, traffic and transportation, socioeconomics, transmission systems engineering, waste management, and worker safety and fire prevention. Written responses to the enclosed data requests are due to the Energy Commission staff on or before March 16, 2007, or at such later date as may be mutually agreeable.

The Commission understands that Pacific Gas & Electric is in the process of revising the Systems Impact Study (March 30, 2006). The results of the revised study will clarify the scope of reconductoring required for the project. Depending on the findings of the revised study, some of the data requests may become obsolete or additional data requests may be issued.

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 Commissioner Jeffery Byron, Presiding Committee Member for the Starwood Power Project, and to me, within 10 days of receipt of this letter. 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, section 1716 (f)).

If you have any questions, please call me at (916) 651-0965, or e-mail me at cmcfarli@energy.state.ca.us.

Sincerely,

Che McFarlin, Project Manager
Energy Facilities Siting

Enclosure
cc: POS
Dockets 06-AFC-10

PROOF OF SERVICE (REVISED 1-30-07) FILED WITH
ORIGINAL MAILED FROM SACRAMENTO ON 2-14-07

Starwood Power Peaking Project
Data Requests
(06-AFC-10)

Technical Area: Air Quality
Author: William Walters

Air Quality Permit Application

BACKGROUND

The proposed project will require permits (the Preliminary Determination of Compliance and Final Determination of Compliance) from the San Joaquin Valley Air Pollution Control District (SJVAPCD or "District"). These permits are integrated into the staff analysis. Therefore, staff will need copies of all correspondence between the applicant and the District in a timely manner in order to stay up to date on any permit issues that arise prior to completion of the Preliminary or Final Staff Analysis.

DATA REQUEST

1. Please provide copies of all substantive District correspondence regarding the Starwood permit application, including e-mails, within one week of submittal or receipt. This request is in affect until the final Commission Decision has been recorded.

Operating Emissions

BACKGROUND

The emissions information provided in the Application For Certification (AFC) Appendix I Attachment C notes that "worst-case total emission rate incorporates estimated operating hours at different temperatures"; however, the staff has not found that the corresponding assumptions were provided. Staff needs this information in order to verify the project's emission estimate calculations.

DATA REQUEST

2. Please provide the estimated operating hours at each specific ambient temperature used to determine the annual emission estimate.

BACKGROUND

The emissions information provided in Appendix I Attachment C of the Application for Certification (AFC) is incomplete as it does not include an ammonia emissions estimate. Staff needs an ammonia emissions estimate to complete the air quality analysis.

DATA REQUEST

3. Please provide a table with the project's estimated quarterly and annual ammonia emissions using the same ambient temperature assumptions used to develop the other pollutant emission estimates.

Startup and Shutdown Emissions

BACKGROUND

The applicant's requested startup and shutdown emission limits shown in Table 5.2-13 of the AFC are partially based on emission testing of a legacy FT8 turbine (NOx), partially based on values provided by the turbine manufacturer (VOC and CO), or are assumed to be linear with normal operating emissions (SOx and PM10). Staff needs additional information to determine if the comparatively low requested startup and shutdown emission limits requested for NOx are reasonably achievable on a long-term basis, or if these emission limits should be based on the higher turbine manufacturer estimates.

DATA REQUEST

4. Please provide summary information for the source test(s), preferably copied from the specific source test report(s), being used to determine the requested startup and shutdown NOx emission limits.

5. Please provide a technical justification to explain why the legacy FT8 turbine that is being used to determine the NOx startup and shutdown emissions basis would be conservative in comparison with the SwiftPac FT8-3 turbines proposed for this project.

6. Please identify the approximate age and total hours of use for the legacy FT8 turbine at the time of its source test(s) and provide a description of how this would relate to this project's proposed SwiftPac turbines after 30 years and several thousand hours of service.

BACKGROUND

The requested 18 minute startup and 18 minute shutdown event duration shown in Table 5.2-13 of the AFC is based on information provided by the turbine manufacturer (Appendix I, Attachment C, Table 3.4-1A). This data indicates that the initial 17.9 minutes (approximately 18 minutes) of the 30 minute startup event period are assumed to occur before complete effectiveness of the SCR and oxidation catalyst units. Full effectiveness of the SCR and oxidation catalyst units is assumed to be the remaining 12.1 minutes. Using that basis staff cannot match the applicant's proposed 18 minute startup event CO emission rates. Staff calculates the 18 minute CO startup event emissions to be 6.54 pounds (at 114 degree Fahrenheit operating conditions, declining to 6.14 lbs at 18 degrees Fahrenheit) rather than the 3.75 lbs per 18 minute startup event proposed by the applicant.

DATA REQUEST

7. Please provide the calculations for the 18 minute startup event CO emissions based on the data provided in Appendix I, Attachment C, Table 3.4-1A.

Emissions Dispersion Modeling

BACKGROUND

The modeling methodology employed by the applicant creates separate modeling runs for different receptor grids/grid spacing, pollutant averaging periods and types, and meteorological file years, which creates an unwieldy number of input and output modeling files. All of these items can be combined to create a significantly lower volume of modeling runs and files, for example this method created 450 modeling input/output file pairs for normal operating emissions alone. Staff needs the modeling analysis redone to minimize the number of modeling runs to a few dozen at most.

DATA REQUEST

8. Please combine all of the receptor grids, the pollutant averaging periods, and annual meteorological files and then rerun the construction and operations modeling to create single run modeling files. Pollutants should also be combined for cases with similar exhaust parameter inputs. The combined modeling files should also address any other modeling issues identified in these data requests.

BACKGROUND

Modeling cases were provided on the AFC's modeling file DVD that assumed only three out of the four turbines were operating. Staff understands these turbines will only be operated at full load, and that one turbine on full load and one off is a potential operating scenario for each SwiftPac unit; however, there is no mention that this operating case could be a potential worst-case operating condition, nor do the results seem to indicate that potential. Staff needs to understand why these modeling cases were provided.

DATA REQUEST

9. Please describe why these modeling cases were provided in the normal operating runs and not ruled out during the screening modeling. It appears that none of these three turbines on/one turbine off operating cases result in a worst-case impact. If this is true, please do not include these cases again when completing the requested remodeling noted in the previous data request.

Operating Emissions Dispersion Modeling

BACKGROUND

Staff needs additional information regarding the operating cases used for the dispersion modeling analysis. Some of the modeling inputs from the modeling files do not seem to match the methodology noted to be used in the AFC. Specifically, for the one hour CO and NOx worst-case impacts it appears that both SwiftPac units (four turbines) are operating in worst-case

initial commissioning mode, rather than one SwiftPac unit (two turbines) as given in the AFC Table 5.2-18 notes.

DATA REQUEST

10. Please correct the modeling runs or correct the descriptions of the worst-case modeling scenarios as necessary for the short-term operating impacts so that they correspond to the same operating case. Please integrate revisions to the modeling runs necessary to coordinate the proper initial commissioning exhaust parameters as determined in the response to the following initial commissioning data request.

Initial Commissioning

BACKGROUND

Staff requires additional information regarding the initial commissioning tests in order to evaluate the corresponding impact analysis. Specifically, exhaust parameters for each test are needed to evaluate the determination of the worst-case initial commissioning test.

11. Please provide the expected exhaust parameters (temperature and velocity only) for the nine specific initial commissioning tests identified in Appendix I, Attachment C of the AFC.

Emission Offsets

BACKGROUND

The applicant's description of the project's emissions and resulting District offset requirements is incomplete. The applicant has noted that this project is considered a minor modification of the existing Calpeak Panoche facility. Therefore, the combined permitted emissions from the proposed Starwood project and the Calpeak Panoche facility need to be added to determine District offset requirements. However, the permitted emissions for Calpeak Panoche are not presented in the AFC. Staff needs additional emission information to understand what portion of the proposed offset package is proposed to fulfill the District's offset requirements and what portion is proposed to meet the Energy Commission's California Environmental Quality Act (CEQA) mitigation requirements of 1:1 offsetting for all nonattainment pollutants and their precursors.

DATA REQUEST

12. Please complete, and correct as necessary, the values in the following table.

		Pollutant Emissions (lbs)				
Project	Period	NOx	VOC	PM10	SOx	CO
Calpeak Panoche	1st Quarter					
Starwood Power		9,116	2,263	5,920	908	13,248
Calpeak Panoche	2nd Quarter					
Starwood Power		9,116	2,263	5,920	908	13,248
Calpeak Panoche	3rd Quarter					
Starwood Power		15,953	3,961	10,360	1,589	23,184
Calpeak Panoche	4th Quarter					
Starwood Power		11,395	2,829	7,400	1,135	16,560
Calpeak Panoche	Annual					
Starwood Power		45,580	11,317	29,600	4,540	66,240
Combined Project Emissions	Annual					
District Offset Threshold	Annual	20,000	20,000	27,200	54,750	NA
Emissions Over Threshold	Annual					NA

13. Please identify for the Calpeak Panoche facility the quantity of emission reduction credits (ERCs) that were provided for SJVAPCD permitting for each pollutant that required offsets.

BACKGROUND

The applicant's proposed offset package is currently incomplete. Based on the latest information supplied to staff in the Data Adequacy Response the project still needs to obtain all of its PM10 offsets, all of its SO2 offsets, and may still need a very small amount of NOx offsets for the second/third quarters. Staff requires information providing and justifying the proposed complete offset package to complete its analysis.

DATA REQUEST

14. a. Please provide a tabulated list showing quarterly emission and emission offset accounting indicating the proposed quantity to be used quarterly from each ERC source to fully offset the project's emissions.

    b. Please show the current updated ERC certificate number and former certificate number for all certificates that have been recently split and/or re-issued in the name of the project.

    c. Please also indicate the location, method, and date of emission reduction for each of the ERCs.

15. If the use of interpollutant offsets is proposed, such as the use of SOx or NOx ERCs for PM10 offset mitigation, please provide an analysis that justifies the proposed interpollutant offset ratio.

Construction Emission Calculations

BACKGROUND

The Urban Emissions (URBEMIS) model construction emission modeling files use assumptions that are inconsistent with those otherwise provided in the AFC documentation. Additionally, URBEMIS does properly nor completely estimate fugitive dust emissions or provide a PM2.5 emissions estimate. The construction emission calculations need to be revised and improved to include all emission causing activities and provide reasonable and consistent assumptions for the emission estimates. Please note that while the District may have identified URBEMIS as an approved method for determining construction emissions, it is the Energy Commission who will evaluate this project's construction emissions and staff prefers a more site specific estimating approach than is possible by using URBEMIS. The emission factors and estimating methods identified for onroad and offroad equipment on the SCAQMD website, along with the use of USEPA fugitive dust emission calculations for actions not included on the SCAQMD website (such as unpaved roads and paved roads) would be considered an acceptable alternative approach to updating the URBEMIS modeling runs. Staff needs additional information and a revised emission analysis to evaluate the project's construction impacts and determine appropriate mitigation measures.

DATA REQUEST

16. Please identify how many heavy haul trips will be necessary to clear the existing equipment/debris from the site, and indicate where that equipment will be shipped.

17. The Geotechnical report, Appendix L of the AFC, appears to indicate very fine soils exist at and near the surface of the site, approximately 80 percent silt content for the three sieved samples. Please describe how much of the surface soils will need to be removed, how much fill will need to be imported, and describe the final disposal for the removed soils.

18. It is assumed that emulsified diesel fuel among several other exotic diesel engine mitigation measures are used in the URBEMIS model runs. These mitigation measures are not mentioned in other areas of the AFC. Please confirm or refute that the use of emulsified diesel and the other URBEMIS identified measures can be stipulated for construction or please remove them from the analysis.

19. There are problems with the URBEMIS model that cause fugitive dust emission mitigation efficiency to be grossly overestimated. In the case of the URBEMIS model runs provided with this estimate the overall mitigation efficiency for fugitive dust control is over 87 percent even though no single fugitive dust operation would be controlled by more than 68 percent with the given inputs. Please provide an appropriate correction for the fugitive dust mitigation efficiency overestimate by URBEMIS considering the applicant's proposed fugitive dust mitigation measures.

20. Other URBEMIS model inputs appear to be problematic. For example: 1) the fugitive dust basis uses non-conservative default model values when the site is known to have particularly fine soils, 10 lbs/acre versus the worst-case 38.2 lbs/acre; and 2) the construction equipment types, numbers, horsepower differ from those presented in Appendix I, Attachment B, Table 3.8-4. Please review all of the modeling inputs, correct as necessary based on this request and other applicable data requests using URBEMIS or an alternative with a more site specific emission estimating approach and resubmit the construction emission estimates. If the URBEMIS modeling runs are revised, please also submit the electronic input files.

21. It is unclear from the simplified onroad vehicle emission calculation method whether the worst case day and annual onroad emissions are correctly estimated. There are likely to be construction periods that would require comparatively higher numbers of heavy truck trips. For this project that would likely occur during major concrete pours required for the foundation. To confirm the onroad emission estimates, please identify the maximum number of daily heavy vehicle trips and vehicle miles traveled (VMT) necessary during peak periods and the total number of heavy vehicle trips, by type and assumed round trip locations, needed for all construction activities.

22. Please provide a PM2.5 emission estimate for construction. For engine emissions please either assume 100% of particulate emissions are PM2.5 or use approved California Air Resources Board (CARB) California Emission Inventory Development and Reporting System (CEIDARS) particulate size speciation profiles. For fugitive dust emissions please use approved CEIDARS particulate size speciation profiles, or if USEPA fugitive dust emission factor calculations are used, then use the appropriate referenced procedures for those methods.

Construction Dispersion Modeling

BACKGROUND

The construction dispersion modeling files appear to have errors, there are missing files, and there are inconsistencies in the input files versus the assumptions provided elsewhere in the AFC. Staff needs these apparent errors and inconsistencies corrected or explained and needs copies of the missing modeling files.

DATA REQUEST

23. The construction schedule assumption in the emission calculations shows construction will occur eight hours a day. However, the modeling files do not use hourly emission factors and assume either emissions occur 24 hours per day at reduced hourly levels (PM10) or assume 24 hours per day emissions at the 8-hour peak levels (NOx). Neither approach is correct and will underestimate some impacts and overestimate other impacts. Additionally, the emission values provided in the model do not always quite match the construction emission levels provided in AFC Table 5.2-9 or 5.2-10.

Please rerun the model using appropriate hourly emission factors for the hours in the day assumed for construction. Also as noted previously, please combine receptors and meteorological files to reduce the number of modeling runs by a factor of ten or more.

24. The PM10 modeling was separated into fugitive and combustion emissions modeling runs. However, the location and time of the worst-case impact found for each of these two modeling runs are likely different, so the impact results for these two modeling runs cannot be added. Please remodel with the fugitive and combustion emissions in a single modeling run to properly determine the construction PM10 impacts.

25. The AFC notes that the ozone limiting method (OLM) is used for the 1-hour NO_2 impact determination. However, no NOx_OLM modeling files or simplified OLM method calculations are provided to confirm the results presented for the 1-hour NOx impacts. Please provide the NOx_OLM input/output files, including ozone input files, if NOx_OLM was used. Alternatively, provide the simplified OLM calculations and assumptions if that method was used to determine worst case 1-hour NOx impacts. Please note that other modeling corrections may be necessary based on the other data requests regarding construction emission estimates.

Cumulative Modeling Analysis

BACKGROUND

To complete the staff analysis, a cumulative modeling analysis, performed as described in the Appendix I, Attachment D modeling protocol (page 4-7) needs to be completed by the applicant and submitted prior to the staff publishing the Preliminary Staff Analysis.

DATA REQUEST

26. Please provide a copy of the District's correspondence regarding existing and planned cumulative projects located within six miles of the Starwood site. Once this correspondence is provided, then staff will work with the applicant to decide which sources to include in the cumulative analysis required for Data Request 27.

27. Please provide the cumulative modeling analysis, including the nearby, existing Calpeak and Wellhead Energy peaker facilities as proposed in the modeling protocol, the recently proposed Panoche Energy Center (06-AFC-5), as well as all District identified cumulative sources.

Technical Area: Biological Resources
Author: Heather Blair

BACKGROUND

The location for the proposed Starwood Power Project is in the historical range for the state and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*). The AFC states (Sec. 5.6.1.5.2, pg. 5.6-8) that the nearest California Natural Diversity Database (CNDDB) record of the San Joaquin kit fox is 2.4 miles west of the project area and that this species may move through the project area. Although Section 5.6.5.4 states that the U.S. Fish and Wildlife Service (USFWS) was contacted, specific contact information and consultation letters discussing potential impacts from the proposed project to the state and federally endangered San Joaquin kit fox were not included. A similar record of correspondence, including agency contact information, from the California Department of Fish and Game (CDFG) was also not provided in the AFC.

DATA REQUEST

28. Please provide any supporting documents (letter or record of conversation) that resulted from communication with USFWS and CDFG regarding potential impacts to the state and federally listed San Joaquin kit fox. Please provide contact information for the USFWS and CDFG agency personnel that were contacted.

BACKGROUND

The project's transmission System's Impact Study introduced the possibility that the project may require 11.4 miles of reconductoring along a transmission line referred to as the "Le Grand-Dairyland 115 kV Line." The scope of the reconductoring is not well defined and there is no evidence that the work area has been surveyed for biological resources.

29. Please discuss the potential for kit fox and other state and/or federally listed species being found along the 11.4 mile LeGrand-Dairyland 115 kV transmission line route.

30. Please identify any sensitive habitats along the LeGrand-Dairyland route by examining aerial photographs, conducting site visits, searching available databases (such as the Natural Diversity Database) and literature searches, etc.

31. Please provide legible mapping depicting biological resources (habitat, nesting, etc.) within 500 feet of the outside edges of the work area.

Starwood Power Peaking Project
Data Requests
(06-AFC-10)

Technical Area: Cultural Resources
Authors: Amanda C. Cannon, Michael K. Lerch, and Beverly E. Bastian

BACKGROUND

Appendix J of the AFC is the technical report for the cultural resources investigation conducted for the proposed Starwood Power Project. The "Cultural Context" (Section 4) cites a number of studies detailing the history and prehistory of the San Joaquin Valley (pp. 4-1 to 4-15). Complete citation data for these studies were not included in the Bibliography (Section 8). Staff needs to review these studies and so needs complete citation data for a complete assessment of the potential impacts to cultural and historical resources in the project area.

DATA REQUEST

32. Please provide complete citation data for the following studies:

- Bedwell 1970
- Cabezut-Ortiz 1987
- California Office of Historic Preservation 2004
- Caltrans 1999
- County of Fresno 2006
- Fredrickson 1964
- Fredrickson and Grossman 1977
- Frickstad 1955
- Hartzell 1991
- Hartzell 1992
- Hoover, Rensch, and Rensch 1990
- Latta 1949
- Lortie 1998
- Peak and Crew 1990
- Riddel and Olsen 1969
- Silverstein 1978
- Smith 2004
- Takaki 1998
- Wallace 1978a
- Wallace 1978b
- Warren and McKusick 1959

- Wedel 1941

BACKGROUND

Appendix J also states that a historic map, the USGS topographic quadrangle, "Chaney Ranch," dating to 1922, was reviewed for historic structures (p. 5-1). Staff would like to review this map, as well.

DATA REQUEST

33. Please provide a photocopy of the portion of this map relevant to the Starwood Power Project area and a photocopy of the portion of the map which includes the name, the scale, and the date.

BACKGROUND

In the AFC, the earthwork anticipated for the proposed Starwood Power Project includes (AFC p. 3-30):

- removal from the site and disposal off-site of soils unsuitable for use as fill;
- creation of a finish grade about one foot higher than existing grade and use of on-site soils to create this higher finish grade; and
- importation of fill, if necessary.

To determine whether the proposed earthwork could affect potential buried cultural resources at the site or elsewhere, staff needs to clarify from where on the site the needed fill material will come, and whether off-site disposal and borrow sites will be used.

DATA REQUEST

34. Please identify from where on the proposed site the soils which will be used for fill will be acquired, and how deep the excavations associated with acquiring fill will go below grade.

35. If removed soils will be disposed of off-site and/or new soils brought in, please provide reports of the dates, personnel, methods, and findings from any cultural resources surveys of the disposal and borrow sites, or explain why no surveys are needed. If disposal and borrow sites are not commercial operations and consequently have not been surveyed for cultural resources, please conduct such surveys and provide the personnel qualifications, survey methods, and findings to staff.

BACKGROUND

The applicant obtained contact information for four individuals or groups of Native Americans identified by the Native American Heritage Commission (NAHC) as having traditional ties to Fresno County. The AFC indicates that a letter describing the Starwood Power Project and a map showing the location of the proposed project were sent to these Native Americans and that, up to the date of filing the AFC, no responses had been received (p. 5.7-8 and Appendix J). To

ensure that the information the applicant sent was received, the NAHC requests that follow-up telephone calls be made to those Native Americans who did not respond after two weeks.

DATA REQUEST

36. To verify that they have no concerns regarding cultural resources in the Starwood Power project area, please telephone those Native American individuals or groups who have not yet responded to the informational letters that were sent out and provide summaries of the calls.

37. Please provide copies of any additional letters or summaries of any telephone calls received from Native Americans since the AFC was compiled. If the location of archaeological sites may be revealed, please provide the responses under confidential cover.

BACKGROUND

The project's transmission System's Impact Study introduced the possibility that the project may require 11.4 miles of reconductoring along a transmission line referred to as the "Le Grand-Dairyland 115 kV Line." Staff needs to know if this line has been surveyed for cultural resources.

DATA REQUEST

38. If the Le Grand-Dairyland 115 kV Line has been investigated for cultural resources, please provide the results. If the line has not been examined, please conduct cultural resource investigations, including background research and an archaeological survey, and provide the results. If cultural resources are identified, address their eligibility for inclusion in the California Register of Historic Resources (CRHR), potential construction-related impacts to any CRHR-eligible resources, and if applicable, recommended mitigation measures.

39. Please identify known cultural resource sites within ½ mile of the route based on a California Historic Resource Information System literature search and contact with the Native American Heritage Commission. This information should be provided as a legible map depicting the cultural sites, and must be submitted under confidential cover.

40. If any portion of the line is more than 45 years old, describe modifications/upgrades, if any, that have been made previously and provide any information indicative of the historic significance of the existing transmission line segment to be reconductored.

41. If an existing substation needs to be modified as a result of the proposed project, and it is more than 45 years old, describe modifications/upgrades, if any, that have been made previously, and provide any information indicative of the historic significance of the existing substation.

Technical Area: Geology
Author: Dr. Patrick Pilling, P.E., G.E.

BACKGROUND

The geotechnical investigation of a proposed site is essential in understanding the materials that underlie an area. The material properties are determined through laboratory testing and allow estimation of foundation design parameters. Typically, index tests that include grain size analyses and Atterberg limits tests are performed to classify subsurface materials. The geotechnical report for this project included in Appendix L states that significant thickness of surficial silt soils are generally present across the site; however, the classification of the material as silt has been performed without the reporting of any Atterberg limits tests.

DATA REQUEST

42. Please provide Atterberg limits test results that support the classification of site soils.

BACKGROUND

Surface clay soils can affect the performance of overlying structural improvements since such materials can be prone to expansion/shrinkage with variation in moisture content, as well as consolidation settlement when surcharged by structural loading. The geotechnical report for this project states that there are no geotechnical considerations (e.g. expansive soil) that require mitigation; however, Boring 5 indicates that sandy lean clay is present from the ground surface to a depth of 4 feet. There are no test results (e.g. Atterberg limits tests or expansion tests) that allow evaluation of this material and its potential to shrink/swell with variation in moisture content or consolidate when subjected to surcharge loading.

DATA REQUEST

43. Please provide test results that support the classification of surface clay soil in Boring 5 and its potential to shrink/swell when subjected to moisture content variation and/or consolidate when loaded.

BACKGROUND

Silt and silty sand soils that exhibit a relatively low unit weight can exhibit collapse potential when inundated with water. This collapse potential could result in adverse settlement of overlying structural improvements. The project geotechnical report contains test results that indicate the silt soils generally do not exhibit any significant collapse potential. However, the underlying silty sand soils do exhibit moderate collapse potential based on the one test result reported (Boring 5 at 11 feet). As the silty sand layers are relatively thick and exhibit dry densities that indicate a potential for collapse when inundated with water, these soils may be prone to excessive collapse potential and associated settlement.

DATA REQUEST

44. Please provide additional laboratory test results for the silty sand soils (e.g. Atterberg limits tests) that document minimal collapse potential, or discuss how the potential for collapse of such soils will be mitigated through facility design and construction.

Technical Area: Hazardous Materials Management
Author: Dr. Alvin Greenberg

BACKGROUND

Aqueous ammonia (19.5%) will be used in the SCR process to control oxides of nitrogen. Regarding the proposed delivery of aqueous ammonia, the Response to Traffic Data Adequacy 17 Rev includes a table (p. 45 of the Supplemental Information) that lists the amounts of hazardous materials delivered to and removed from the proposed Starwood project. The table indicates that three deliveries of 18,000 gallons each of aqueous ammonia would be delivered annually. Since staff is unaware that the U.S. Department of Transportation (DOT) Code MC-307 tanker truck used by vendors for the delivery of aqueous ammonia is of sufficient size to transport that volume of aqueous ammonia, staff needs further clarification.

DATA REQUEST

45. Please provide the following information regarding the transportation of aqueous ammonia:

    a. the size (capacity) of the delivery tanker trucks,

    b. the DOT certification of the vendor's proposed tanker truck, and

    c. clarification of the frequency of delivery on an annual basis.

BACKGROUND

Regarding cumulative impacts, AFC Section 5.15.3 lists several existing facilities and one proposed facility (i.e., the PG&E Substation, Wellhead Peaker Plant, CalPeak Panoche plant, and the Panoche Energy Center) that may contribute to a cumulative hazmat-related impact. However, the AFC does not provide exact information about the distance of these facilities from the proposed Starwood project (with the exception of Wellhead Peaker which is noted as the nearest public receptor at 27 meters from the ammonia tank). Figure 5.15-2, shows the concentrations of ammonia at various distances as derived from the Offsite Consequence Analysis and indicates the general location of these facilities but not exact distances. Also, the quantities of hazardous materials (and ammonia) stored at these facilities is not indicated. Staff needs this information in order to fully assess the potential for cumulative impacts.

DATA REQUEST

46. Please provide the distance to the above-identified facilities and the quantities/identities of hazardous materials stored at those facilities.

Technical Area: Land Use
Author: Amanda Stennick

BACKGROUND

As stated in the AFC, the project parcel is under a Williamson Act contract. Implementation of the project will require the applicant to submit an application to Fresno County to cancel 5.6 acres of the 128-acre parcel (contract #367) from the current Williamson Act contract.

DATA REQUEST

47. Please provide the following information:
    a. A completed copy of the Notice of Nonrenewal, signed by the property owner of record and Fresno County.
    b. A completed copy of the cancellation application to Fresno County, signed by the property owner of record and Fresno County.
    c. A schedule as to when Fresno County will process the cancellation application and when the Board of Supervisors will hear the cancellation application.

BACKGROUND

According to Section 66412.2 of the Subdivision Map Act, the cancellation would not require a subdivision of the 128-acre parcel provided the project is subject to review for local agency ordinances regulating design and improvements.

DATA REQUEST

48. To conform to the requirements of Section 66412.2 of the Subdivision Map Act, please provide a plot plan that demonstrates the project's conformance with Section 816.5 (Property Development Standards) of the Fresno County Zoning Ordinance.

BACKGROUND

The project's transmission System's Impact Study introduced the possibility that the project may require 11.4 miles of reconductoring along a transmission line referred to as the "Le Grand-Dairyland 115 kV Line." The scope of the reconductoring is not well defined and there is no evidence that the area has been surveyed.

49. Please provide a legible map(s) showing existing land uses within 500 feet of the outside edges of the right of way, including identification of any school, hospital, daycare center, other sensitive receptors, and residential and commercial areas.

Technical Area: Noise
Author: Shahab Khoshmashrab

BACKGROUND

AFC Sections 5.12.3.4 and 5.12.5.2 conclude that the project operational noise level at monitoring location ML1 (the 5-Plex) would create significant noise impact. AFC Section 5.12.5.2 further states that a signed agreement is in place between the landowner of ML1 and Starwood-Power Midway, LLC to relocate the current residences. It also states that the 5-Plex will no longer be used for residential land use.

However, in an e-mail sent from Mr. Richard H. Weiss of Starwood-Power Midway, LLC to Mr. Che Mcfarlin of the California Energy Commission, dated January 22, 2007, the applicant states that it may consider the option of converting the 5-Plex back to residential use after the project's commercial operation date, if it can demonstrate compliance with noise LORS. It also states "Even if we don't achieve the required noise levels with newly installed equipment we can add on-site mitigation to drop the noise levels down to achieve compliance." In order to evaluate the project noise impact, staff needs to know the possible mitigation measures that would be considered should the latter option require reduction of project-related noise levels.

DATA REQUEST

50. Please provide a list of possible on-site mitigation measures that the Applicant would consider in order to achieve LORS compliance at ML1.

Starwood Power Peaking Project
Data Requests
(06-AFC-10)

Technical Area: Project Decription
Author: Che McFarlin

BACKGROUND

The California Environmental Quality Act (CEQA) requires the identification and description of the direct and indirect significant effects of the project on the environment. The AFC does not include the full scope of work required for the project. The System Impact Study, March 30, 2006, the Facilities Study Plan, Sept. 26, 2006, and the Final Interconnection Approval, Nov. 7, 2006 identified two transmission network upgrades for which the proposed project would be responsible. The work scope includes:

- Possible reconductoring of the generator tie line between CB142 at the Calpeak Panoche Peaker Plant and CB 162 at Panoche Substation with 447 kcmil ACSS conductor.
- Possible reconductoring of the Le Grand – Dairyland 115 kV line.

DATA REQUEST`

51. Please provide mapping and a complete description of the scope of work required to accomplish the proposed reconductoring. The applicant should also provide a work plan for accomplishing the necessary ground surveys for cultural and biological resources, as well as considering potential impacts to these and other resources (e.g., land use and visual). More specifically please provide the following information:
    a. Identify any potentially significant impact to the environment that may occur as the result of the reconductoring, construction technologies that are available to mitigate an impact, and mitigation measures that would reduce the impact to a less than significant level, including the standard environmental mitigation measures developed generically by the transmission owner and/or the California Public Utilities Commission (CPUC) for reconductoring projects.
    b. Provide facts to support conclusions about the potential for impacts and feasible mitigation, including impact avoidance measures.
    c. Identify agencies with jurisdiction or permit approval authority over any part of the reconductoring project.
    d. Recent aerial photographs (less than 5 years old) and topographic maps of the applicable line segments (i.e., the segments that would be replaced) with the transmission towers plotted on the photographs.
    e. How access to the line and towers would be accomplished, including identifying any existing or needed access road for reaching pull sites and staging areas.
    f. If known, the location of any tower that would need to be modified or replaced, a basic description of the work that would be done to the tower, and a description of the potential impacts of that work.
    g. The location, rating and age of the line.

h. A basic, layperson's discussion of the reconductoring process for the line, identifying the techniques used, equipment required, vehicles (land and air), personnel required, any potential ground-disturbing activities, parking and staging areas needed, and time needed to complete the reconductoring. This shall include:

- Construction and/or replacement of transmission line structures.
- Candidate locations (if available) and average acreage needed for tension and pulling stations, or, alternatively, the approximate number of pulling and tension sites and the average acreage per site.
- Alteration/enlargement of any access roads
- Stringing method (slack or tension).
- Need for reel or other storage near the lines.
- Method and access (cherry picker, climbing tower, etc) to unclip the old conductor, install sheaves, and clip in the new conductor and "tension" lines.
- General methodology for any needed tree trimming and brush clearing.

Technical Area: Socioeconomics
Author: Joseph Diamond Ph. D.

BACKGROUND

Quantitative secondary economic impacts (with and without dollars) provide information on local (county), regional, and state economic benefits/economic development from the project.

DATA REQUEST

52. a. Please provide full quantitative economic impacts (direct and secondary-indirect and induced) during the construction and operation phases of the project. Utilize and indicate the economic impact model (e.g., IMPLAN, REMI or another) you used to estimate quantitatively at least the local (Fresno County) employment and income multipliers/secondary impacts. Staff recommends Type II or Type III employment and income multipliers since they show the full secondary economic impacts.

    b. Please provide the year for the economic impact analysis estimates.

BACKGROUND

The time value of money should be reflected for all economic estimates. Staff needs to know the year that corresponds to the dollar estimate.

DATA REQUEST

53. Please indicate the year for all economic estimates (e.g., construction and operation sales tax, quantitative secondary economic impacts etc.).

BACKGROUND

Substantial employment of workers for the Starwood Power Project who come from outside the study area (Fresno County) have the potential to cause a significant adverse socioeconomic impact due to effects on public services and community infrastructure.

DATA REQUEST

54. Please provide an estimate of the number and percentage of the construction workforce that would be local, from Fresno County, and non-local.

Starwood Power Peaking Project
Data Requests
(06-AFC-10)

Technical Area: Traffic and Transportation
Author: James Adams

BACKGROUND

Staff utilizes information in the AFC to assess the existing traffic and transportation system near the proposed power plant site, and analyze the potential impacts from project construction and operation. The area surrounding the Starwood site is in agricultural production (pomegranate orchards). Though not discussed in the Traffic and Transportation section of the AFC, staff need to know whether the activities include aerial application of pesticides and other agricultural materials and whether this activity has been adversely impacted or restricted by the existing power plants or transmission lines and towers.

Staff also needs to know if operation of the Starwood project and the generation of visible and thermal plumes have the potential to impact or restrict ongoing aerial application of materials. Thermal and visible plumes have the potential for creating an aviation safety hazard in flights passing over or near the proposed power plant.

DATA REQUEST

55. Please provide a discussion of existing aerial spraying of pesticides on the adjacent pomegranate orchards, and whether this practice has been altered or restricted since the construction and operation of the existing transmission lines and power plants.

56. Please discuss potential impacts on aerial spraying from the proposed Starwood power plant, reconductored transmission line, and visible and thermal plumes.

BACKGROUND

Staff is interested in reviewing the number of workers, trucks, and equipment deliveries during the construction and operation of the Starwood project. This includes both average and peak numbers. The Traffic and Transportation analysis in the AFC is focused on the peak construction impacts and does not provide average numbers for trucks and equipment deliveries. In addition, the number of truck deliveries of hazardous materials (i.e. aqueous ammonia) and equipment during operation is not identified.

57. Please provide the average number of trucks and equipment deliveries expected during the construction of the project.

58. Please provide the estimated number of hazardous materials and equipment deliveries on an annual basis during operation of the power plant.

BACKGROUND

The Mendota Unified School District operates a school bus route on West Panoche Rd. However, no information about school bus routes is provided in the AFC.

DATA REQUEST

59. a. Please identify the school bus stop locations in the vicinity of the project, and when the bus picks up and drops off students from those locations.

    b. Please discuss how potential safety impacts for school children getting on or off busses or walking along the route would be eliminated.

Starwood Power Peaking Project
Data Requests
(06-AFC-10)

Technical Area: Transmission System Engineering
Authors: Laiping Ng & Mark Hesters

BACKGROUND

The California Environmental Quality Act (CEQA) requires the identification and description of the "Direct and indirect significant effects of the project on the environment." The Application for Certification requires discussion of the "energy resource impacts which may result from the construction or operation of the power plant." For the identification of impacts on the transmission system resources and the indirect or downstream transmission impacts, staff relies on the System Impact and Facilities Studies as well as review of these studies by the agency responsible for insuring the interconnecting grid meets reliability standards, in this case, the California Independent System Operator (CAISO). 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 a violation of reliability standards, the potential mitigation or upgrades required to bring the system into compliance are identified. The mitigation measures often include the construction of downstream transmission facilities. CEQA requires the analysis of any downstream facilities for potential indirect impacts of the proposed project. Without a complete System Impact Study (SIS) or Facilities Study Report (FSR), staff is not able to fulfill the CEQA requirement to identify the indirect effects of the proposed project.

Staff needs additional documentation and information regarding the SIS and FSR in order to prepare the Staff Assessment for the Starwood Power Project.

DATA REQUEST

60. Figure 2-2 on Page 3 of the SIS, dated March 30, 2006, and Figure 2-2 on page 3 of the FSR, dated November 3, 2006 selected two different project locations and two different generation tie line locations. Please identify the correct generation facility and tie line locations.

61. Please verify the length of the generation tie line: 300 ft. as indicated in the AFC or 1000 ft. as indicated in the SIS and FSR.

62. Provide a detail drawing of the reconductoring of the transmission line from the Le Grand 115 kV Substation to the Dairyland 115 kV Substation. Information should include the number of poles required (new or existing), pole configuration, conductor type, size, and length.

63. Provide electronic copies of *.sav PSLF files used for the SIS (including N-0, N-1, and N-2).

64. Provide electronic copies of the *.drw files as listed in Appendix D of the SIS.

Technical Area: Waste Management
Author: Ellie Townsend-Hough

BACKGROUND

The Starwood Power Project is located on a 5.62 acre parcel. The parcel is currently undeveloped. However, historically the property was used for agricultural purposes. Common agricultural practices can result in residual concentrations of fertilizers, pesticides or herbicides in near-surface soil. As stated in the Phase 1 Environmental Site Assessment, there is a potential that pesticide and herbicides contamination is present on the property. To ensure that the concentrations of various chemicals do not pose a potential health risk or hazard the project owners should provide soil sampling of the parcel/project site. Because the property was used in the past for agriculture the project owner should verify that no harmful concentration of any contaminates will be encountered at the proposed project site.

DATA REQUEST

65. Using the Interim Guidance for Sampling Agricultural Fields for School Sites (Second Revision August 26, 2002) sponsored by the California Department of Toxic Substances Control (DTSC) California Environmental Protection Agency, please identify agricultural chemicals that would have been on the site, chemicals of potential concern, and metals of potential concern. Please sample the project site for concentrations of arsenic and selenium. A minimum of eight composite samples should also be taken on half-acre centers.

Starwood Power Peaking Project
Data Requests
(06-AFC-10)

Technical Area: Worker Safety/Fire Prevention
Author: Dr. Alvin Greenberg

BACKGROUND

Section 3.4.9 states that "Regardless of the water supply source, the plant will store water in three 75,000-gallon storage tanks, one for raw water and two for dematerialized water". The AFC also states on page 5.17-6 that "a water supply of sufficient volume, duration, or pressure to operate the required firefighting equipment will be provided onsite". The AFC further describes that fixed and portable CO2 fire extinguishing equipment will be located onsite but staff cannot find any mention of the proposed installation and use of water deluge, spray, or hydrant facilities during construction or operations.

Staff needs more specific information on the fire suppression systems, including what water systems (if any) will be used during the construction and operational phases.

DATA REQUEST

66. Please provide specific information on any fire suppression systems that will utilize water, including deluge systems, sprinkler systems, and hydrants, planned for the project's construction phase and operational phase. This will include information on the size (if any) of water storage tanks for use in fire suppression and the presence (if any) of fire water system pressure-maintaining pumps.

BACKGROUND

The AFC states that a hazardous materials response team will be available to the Starwood facility through contract (p. 5.17-11), but there is no indication of where the team will be located and their response time. Staff needs such information in order to evaluate the proposed use and transportation of hazardous materials at the power plant.

DATA REQUEST

67. a. Please provide information regarding the existing Calpeak facilitiy's hazardous materials response team including the name of the company, their responsibilities, their capabilities, their location, and their response time to a spill at the facility or on the highway between I-5 and the power plant (if under their purview).

    b. Please discuss whether the Calpeak facility's hazardous materials response team addressed in 67a. above, will also be serving the Starwood facility.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION FOR THE *STARWOOD POWER PLANT*	**Docket No. 06-AFC-10** **PROOF OF SERVICE**

INSTRUCTIONS: All parties shall either (1) send an original signed document plus 12 copies or (2) mail one original signed copy AND e-mail the document to the address for the Docket as shown below, AND (3) all parties shall also send a printed or electronic copy of the document, which includes a proof of service declaration to each of the individuals on the proof of service list shown below:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 06-AFC-10
1516 Ninth Street, MS-4
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docket@energy.state.ca.us

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DECLARATION OF SERVICE

I, Geoff Carter, declare that on February 14, 2007, I deposited copies of the attached Starwood Power-Midway Data Requests (#1-67), in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

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

[signature]