

CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET
SACRAMENTO, CA 95814-5512

May 14, 2004

Stephen H. Badgett
Utilities Assistant Director, Energy Delivery
Riverside Public Utilities
3900 Main Street
Riverside, CA 92522

Dear Mr. Badgett,

**RIVERSIDE ENERGY RESOURCE CENTER
1st ROUND DATA REQUESTS**

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 (#1-72) is being made in the areas of air quality, biological resources, cultural resources, energy resources, geology, land use, socioeconomics, soil and water resources, traffic and transportation, transmission systems engineering, visual resources, and waste management. Written responses to the enclosed data requests are due to the Energy Commission staff on or before June 14, 2004, or at such later date as may be mutually agreed.

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 Jackalyne Pfannenstiel, Presiding Committee Member for the Riverside Energy Resource Center, and to me, within 10 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, section 1716 (f)).

If you have any questions, please call me at (916) 653-1245, or E-mail me at jreede@energy.state.ca.us.

Sincerely,

James W. Reede, Jr., Ed.D.
Energy Facility Siting Project Manager

Enclosure
cc: POS

**Riverside Energy Resource Center
Data Requests
(04-SPPE-01)**

Technical Area: Air Quality

Author: William Walters and Lisa Blewitt

Project Operational Basis

BACKGROUND

In the SPPE Application (SPPE) project description (Section 2.5, pp. 14) it is stated that the plant will be permitted for approximately 2,700 hours in total from both units. This amounts to 1,350 hours per turbine. However, in the Air Quality discussion (Section 6.1.7.3, pp. 77) it states that the City of Riverside proposed to limit annual operations to 1,330 hours per year for each turbine, including 200 startup/shutdown hours and 20 hours of maintenance operations per year for each turbine leaving 910 hours for normal operation. Furthermore, the discussion of the Air Quality Modeling (Section 6.1.9.1, pp. 89) states that annual emission estimates were adjusted to “reflect the proposed operating schedule of 1,300 hours per year.” Staff believes the basis for calculating emissions should be consistent with the proposed project description.

DATA REQUEST

1. Please confirm the design basis hours of operation (permitted hours and maximum operating hours) for the proposed turbines. Please revise emissions calculations and modeling, as required to make the operation basis consistent.

Transmission Line Construction Emission Calculations

BACKGROUND

The construction emissions for the transmission line are provided in the SPPEA text, Tables 6.1-30 and 6.1-31 (pp. 88). Additional supporting calculations are provided in Appendix 6.1-E. The disturbed soil wind erosion PM₁₀ emissions provided in the tables do not appear to match the basis provided in Appendix 6.1-E. Please update the tables in the text or provide updated calculations in the Appendix.

DATA REQUEST

2. Table 6.1-30 shows daily transmission line construction Soil Wind Erosion PM Emissions of 0.1110 lbs/day, whereas Appendix 6.1-E Wind Erosion Daily PM₁₀ emissions (1 site per day @0.1 acres/site) are shown as 0.0008 lbs/day. Please confirm that the daily wind erosion emission value listed in Appendix 6.1-E is the correct value.
3. Table 6.1-31 shows transmission line total construction Soil Wind Erosion PM Emissions of 0.001 lbs, whereas Appendix 6.1-E Wind Erosion Project PM₁₀ emissions (55 sites total) are shown as 0.45 lbs. However, based on 0.0008

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lbs/day/site the correct total transmission line construction value would seem to be 0.045 lbs. Please correct the calculations and provided updated results.

Cooling Tower Modeling

BACKGROUND

SPPE Table 6.1-14 provides the cooling tower dimensions and operational parameters, which include the dimensions (71'8"L x 13'11.25"W x 18'3.5"H), exhaust diameter (3-cells each 13 feet), air flow (613,000 ACFM), and exhaust temperature (90°F). However, Table 6.1-33, which provides the summary of the cooling tower parameters used in the air quality analysis, does not show these same parameters. Additionally, some parameters are missing in this table and others have been converted from English units to metric units incorrectly. Staff believes the basis for calculating emissions should be consistent with the equipment summary, and that the above inconsistencies will affect the air quality modeling results.

DATA REQUEST

4. Please update the cooling tower height, exhaust temperature, exhaust flow rate, and exhaust velocity (English units and metric units) both in Table 6.1-33 and in the air quality modeling. Please provide electronic copies of any new or revised modeling, and update tables, as necessary.
5. Please update the cooling tower air quality (PM) modeling to reflect a 3-cell cooling tower with each cell being modeled individually using an appropriate estimate for the cell exhaust velocity (note: the existing modeling files show an inappropriately high exhaust velocity of over 23 m/s). Please provide electronic copies of any new or revised modeling runs.

Normal Operations Modeling

BACKGROUND

SPPE Table 6.1-32 shows the turbine exhaust velocity of 22.0 m/s (72.3 ft/s); however in Appendix 6.1-F, the 24-Hour PM Run shown in file RiversideERC02.dat used a velocity of 23.38624 m/s. Staff requires additional information to understand the basis for the velocity used in this 24-Hour PM Run. Also while parts of this modeling and output (.lst) file were included in the Appendix of the AFC, it was not included in the electronic modeling files; and it would seem that it was replaced by the file named RiversideCEC(C)02.dat and .lst. Further this file given in the Appendix does not include the cooling tower

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6. Please provide the basis for using a velocity of 23.38624 m/s for the 24-Hour PM Run, or confirm that we should revise the PM10 impacts shown in Table 6.1-35 using the results from the RiversideCEC02.lst file, or any revised modeling files needed to respond to other data requests. Please confirm if any other values in Table 6.1-35 need to be revised based on differences between the modeling provided in the Appendix and the electronic modeling files.

BACKGROUND

SPPE Table 6.1-35 shows the summary of air quality impacts for normal year operations. This information appears to be based on Table 6.1-23 (Criteria Pollutant Emissions Summary Facility Total RERC), Table 6.1-34 (Air Dispersion Modeling Results Summary RERC), as well as additional information provided in Section 6.1.9.2 for normal facility operations. Appendix 6.1-F also presents emission rates on a per unit basis; however, the turbine rates are twice as much as what is shown in Tables 6.1-18 through 6.1-21 (also per unit rates). Based on this information, the project impacts presented in Table 6.1-35 do not appear to be consistent. As such, project impacts for several pollutants appear to be twice as much as calculated. For others (e.g. NO₂ annual, Sulfate 24-Hour) the basis is unclear, especially considering that the air quality basis is for 8760 hours, whereas the project will operate for only 1,330 hours (See DR #1 above). It should also be noted that startup emissions are used for 1-hour NO_x and CO emissions, with the assumption that this is “the most conservative estimate.” Based on the information presented in Table 6.1-23, maintenance operation appears to provide the highest hourly emissions for both NO_x and CO.

DATA REQUEST

7. Please provide detailed calculations for determining the project normal operational impacts, including determination of average emissions rates (8-hour, 24-hour, and annual), as presented in Table 6.1-35. Update Table 6.1-35 as necessary.
8. Annual emission estimates are said to be adjusted to reflect the proposed operating schedule of 1,300 hours per year (See DR #1). Please provide detailed calculations to show how emissions and emission factors are adjusted.

Construction Emissions and Dispersion Modeling

BACKGROUND

In the SPPE, PM₁₀ impacts of the construction project are estimated to be 16.97 µg/m³ based upon a maximum 24-hour average and 0.41 µg/m³ based upon an annual arithmetic mean” (Section 6.1.9.4, pp. 98 and Table 6.1-39). Additionally, in the SPPE

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(pp. 98) it is stated that “model output for the annual mean concentrations [for PM₁₀] were scaled to reflect lower average hourly emissions over the course of the project (154 days). The uncorrected air dispersion model results reflect 154 construction days with emission rates equal to the maximum November daily emission rate.” Staff requires additional information to understand the reasoning and scaling calculation used for PM₁₀.

DATA REQUEST

9. Appendix 6.1-H shows annual PM emissions of 2.33196 $\mu\text{g}/\text{m}^3$, which does not match the value of 0.41 $\mu\text{g}/\text{m}^3$ provided in the text and presented in Table 6.1-39 and Appendix 6.1-I. Please provide the reasoning and scaling methodology used to determine the annual construction emission PM₁₀ impacts.

BACKGROUND

The construction modeling files use distributed volume sources to model the construction equipment engine exhaust and non-wind erosion fugitive dust emissions. However, the methodology of how the volume source size and emission rates were determined was not provided. While staff understands the general rationale used in creating these volume sources we need additional information to complete our review of the construction modeling input files. For example, the emission values attributed to each volume source are different and the magnitude for each point does not match our understanding of the site layout (staff would have assumed that the highest emissions should have been attributed to the volume source located near the main turbine complex construction area; however, that is not the case). Additionally, staff cannot balance the PM₁₀ emission rates in the construction modeling file inputs to the construction fugitive dust emission estimates provided in Table 6.1-26 and Appendix 6.1-D.

DATA REQUEST

10. Please describe the methodology for the construction volume source location and size selection and emission rate determination for each volume source. Please use the modeling file RiversideCEC04.dat as an example of how volume source input parameters were determined.

Turbine Commissioning

BACKGROUND

Table 6.1-18 (pp. 75) presents the initial commissioning emission estimates for each gas turbine and notes that commissioning is expected to last 24 hours per day for a total of 200 hours per turbine. Appendix 6.1-B provides a spreadsheet entitled “Facility Total Potential to Emit – Commissioning Year”, which shows commissioning emissions for the project. Staff has additional questions regarding initial commissioning.

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11. For the commissioning spreadsheet in Appendix 6.1-B, the normal operational emissions are stated to last 730 hours with commissioning lasting 200 hours. If we assume 200 hours for startup, 200 hours for shutdown, and 20 hours for maintenance (total of 1,350), the limit of 1,330 hours per year per turbine would be exceeded (see DR #1 above). Additionally, the “normal” emissions do not appear to match (see the calculation below for NO_x). If we reduce the number of “normal” operational hours to 714 hours (*shown in italics*), the values provided in Appendix 6.1-B appear to match more closely. Please provide additional explanation as to the basis for determining first year facility emissions.

NOx - 1st year	Operation Hrs	MHC, lbs/hr	MHC for 2 turbines	APTE, tpy	Table in App 6.1-B	AHC, lbs/hr	MHU for 2 turbines	AA, lbs/yr	Table in App 6.1-B
Normal	730	4.49	8.98	3.2777	3.2	4.27	8.54	6234.2	6098
<i>Normal (revised)</i>	<i>714</i>	<i>4.49</i>	<i>8.98</i>	<i>3.20586</i>	3.2	4.27	<i>8.54</i>	<i>6097.56</i>	6098
Commissioning	200	44.93	89.86	8.986	9	31.45	62.9	12580	12580
Startup	200	16.47	32.94	3.294	3.3	11.53	23.06	4612	4612.7
Shutdown	200	6.6	13.2	1.32	1.3	4.62	9.24	1848	1849.1
Maintenance	20	44.93	89.86	0.8986	0.9	31.45	62.9	1258	1258
Total	1350			17.7763	17.71			26532.2	26398
<i>Total (Revised)</i>	<i>1334</i>			<i>17.704</i>				26,396	

12. Please provide a breakdown of turbine commissioning activities, emission factors, and emissions associated with each activity. See example table below from the Modesto Irrigation District Electric Generating Station (MEGS) Project, which is a simple-cycle plant also using General Electric LM6000 SPRINT turbines.

MID MEGS Project Commissioning Schedule Example Table

Commissioning Activities	Operation Duration ^a	Fuel Use ^b	NO _x	CO	VOC	PM ₁₀	SO _x
(per CTG)	(Hours)	(MMBtu/h, HHV)	Hourly Emissions, lb/hr				
Full Speed, No Load Test	4	100	36.24	39.72	3.75	3.00	0.1
20% Load Test, no SCR or oxidation catalyst	20	100	15.22	22.51	2.00	3.00	0.1
Full Speed, No Load Test (if necessary)	24	100	36.24	22.51	2.00	3.00	0.1
Multiple Load Test, full SCR and oxidation catalyst	48	500	29.45	6.62	1.25	3.00	0.5
Total, lbs (2 CTGs)	192	---	5,465	2,934	326	576	58

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13. Please confirm whether or not the initial commissioning for the two turbines will be performed in parallel.

BACKGROUND

SPPE Table 6.1-36 shows the summary of air quality impacts for commissioning operations. This information appears to be based on Table 6.1-23 (Criteria Pollutant Emissions Summary Facility Total RERC), Table 6.1-34 (Air Dispersion Modeling Results Summary RERC), as well as additional information provided in Section 6.1.9.2 for commissioning operations. Appendix 6.1-G also presents emission rates on a per unit basis; however, the turbine rates are twice as much as what is shown in Tables 6.1-18 through 6.1-21. Based on this information, the project impacts presented in Table 6.1-36 do not appear to be consistent. As such, project impacts for several pollutants appear to be twice as much as calculated. For others, the basis is unclear. For example, it is stated that 8-hour CO emissions are an average of typical startup, shutdown, and normal operation. This does not include commissioning, which would be expected to last over an 8-hour period (200 hours per year for commissioning).

DATA REQUEST

14. Please provide detailed calculations for determining the project commissioning impacts, including determination of average emissions rates for 8-hour, 24-hour, and annual periods, as presented in Table 6.1-36.

Air Quality Documentation

BACKGROUND

In reviewing Appendix 6.1 of the SPPE, it was discovered that several pages have illegible data due to color copies being printed as black and white copies; and this is also true of the scanned electronic version.

15. Please resend the following information in color, or without color (shading), or provide the original unscanned electronic files: A) Appendix 6.1-B: El Colton Turbine Shutdown Emissions (11/26/2002). Column headings are unreadable; B) Appendix 6.1-D: Tables entitled, "Construction Equipment Summary of Typical Weights", "Monthly Site Construction Equipment Use", and "Site Daily Combustion Equipment Operating Schedule"; and C) Appendix 6.1-E: "Transmission Line Construction Combustion Emissions."

Turbine Startup/Shutdown

BACKGROUND

The SPPE (pp. 75) states that turbine startup hourly emissions reflect a 10-minute process. It is noted that if the SCR system is initiated in advance of turbine startup, full

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operation and effectiveness of the SCR system may be achieved in the tenth minute of operation. Emissions assumed for the purpose of this application, reflect the possibility that turbine startup cannot be delayed until the vaporization skid is initiated. The resulting estimated startup emissions reflect an additional 30-minute period during which SCR and CO oxidation systems become fully effective. Daily emissions reflect 4 startup events per turbine, per day. Annual emissions reflect 200 startup hours per turbine, per year. For turbine shutdown, turbine vendor estimates show that the shutdown process takes approximately 8 minutes. Normal operating emission rates are assumed to occur the preceding 52 minutes of the shutdown hour. Daily emissions reflect 4 shutdown events per turbine, per day. Annual emissions reflect 200 shutdown hours per turbine per year. Staff needs additional information and clarification to complete the review of the air quality impact analysis.

DATA REQUEST

16. Please identify the maximum number of startup and shutdown events that theoretically could occur in one hour; and please identify an acceptable limitation on the maximum number of startup and shutdown events that may occur in one hour per turbine. Please provide revised maximum hourly startup/shutdown emissions and modeling information, as necessary.

RTC Information

BACKGROUND

The SPPEA states that offsets will be required for all potential NO_x emissions, including emissions from emergency equipment, per SCAQMD Rule 2005. The City of Riverside agrees to secure adequate RECLAIM Trading Credits (RTCs) to offset the first year's operations, which amounts to 39,464 pounds. The applicant has not submitted enough information to demonstrate that it can obtain the necessary first year RTCs.

DATA REQUEST

17. Please provide a list of the RTCs to be used by the City of Riverside to offset the proposed project for the first year of operation.

Non-Attainment Pollutant Offsets

BACKGROUND

It is Energy Commission staff policy that in order to make a finding of no significant air quality impacts a project needs to offset, at a minimum 1:1 ratio, all of its nonattainment pollutants (including precursors). The South Coast Air Basin is an extreme ozone non-attainment area (1-hour standard), a severe ozone non-attainment area (8-hour standard), and a serious PM₁₀ non-attainment area. The finding of no significant impacts is required for the Energy Commission to grant a SPPE. However, the SPPE application has only proposed the use of NO_x RTCs to offset NO_x emissions. In order to

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make a finding of no significant impacts staff needs to understand how the applicant proposes to mitigate its other operating emissions of non-attainment pollutants and precursors (VOC, PM₁₀, and SO₂).

DATA REQUEST

18. Please discuss how the applicant proposes to mitigate all of its operational nonattainment pollutants and precursor emissions.

Cumulative Impacts Assessment

BACKGROUND

It is staff's understanding that, with assistance from Energy Commission air quality personnel, no significant new sources of air pollution were identified within 6 miles of the proposed RERC facility; therefore, no cumulative impact modeling analysis was performed. However, the SPPE application did not detail these findings or provide any mention of cumulative air quality impacts, so the results of this cumulative impacts assessment have not been made public. The applicant must provide a summary of their cumulative impacts assessment findings and identify sensitive receptors within 6 miles of the proposed project.

DATA REQUEST

19. Please provide a short discussion of the methods and findings of the air quality cumulative impacts assessment.
20. Please identify sensitive receptors within 6 miles of the proposed project. This listing shall at minimum include the addresses of schools, hospitals, senior citizen facilities, and day care centers together with their respective distances from the project site.

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Technical Area: Biological Resources

Author: Melinda Dorin

BACKGROUND

The Application for the Riverside Energy Resource Center (RERC) Small Power Plant Exemption (SPPE) Section 6.3 page 143 discusses the Western Riverside County Multispecies Habitat Conservation Plan (WRC MSHCP). There are several sections cited (1.5.1-1.5.4) that describe mitigation measures, but it is unclear whether they are sections in the MSHCP or the SPPE Application. Staff could not find the appropriate sections. On the California Department of Fish and Game (CDFG) website it says that permits for the WRC MSHCP have not been issued yet.

DATA REQUESTS

21. Please provide the sections that were cited and clarify in which document they can be found. Additionally, please provide a copy of the MSHCP.
22. Please provide confirmation from the CDFG and the U.S. Fish and Wildlife Service that the MSHCP can be used. If it can not be used provide an alternate schedule and process to obtain the necessary permits or confirmation that no take permits are required for special status species

BACKGROUND

The SPPE Application contains information about the transmission line in Section 4. Raptors that are protected by LORS identified in Section 6.3.2 can be adversely affected by colliding with transmission lines or electrocution while perching on power poles. Red-tailed hawks were observed over the area during the staff site visit and are also included in the species list in Appendix 6.3.

DATA REQUESTS

23. Please provide additional information on the proposed transmission line spacing, the pole design, and grounding measures that the RERC is implementing. The information can be provided in writing and/or in a figure. Measures should be consistent with the Avian Power Line Interaction Committee *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996* (1996).

BACKGROUND

The SPPE Application, Section 6.3 page 147 lists several mitigation measures for burrowing owls. One of the measures includes constructing artificial burrows adjacent to the site, with the locations identified on the final landscaping plan.

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DATA REQUEST

24. Please provide the potential locations for the artificial burrows on the landscaping plan and a description of the habitat around the potential burrow sites. Include in the description any future changes to the habitat due to landscaping.

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Technical Area: Cultural Resources

Author: Dorothy Torres

NOTE: If a response reveals archaeological site locations, please submit it under confidential cover.

BACKGROUND

Public Resources Code § 5020.1 (j), identifies the term “historical resource” as including but not limited to, any object, building, structure, site, area, place, record , or manuscript which is historically or archaeologically significant. Cultural material that fits into these categories needs to be considered for eligibility to the California Register of Historical Resources (CRHR) (significance), if it is more than 45 years old. An evaluation of the potential cultural resource will accomplish that purpose. An existing 69kV transmission line (a structure) will be the tie-in for new transmission from the project. The tie is an alteration to the potential cultural resource.

DATA REQUEST

25. How old is the existing transmission line that will be impacted by the project?
26. How old is the existing transmission line that will be replaced by the project? If either of these lines is more than 45 years old, please evaluate them for eligibility to the California Register of Historical Resources.

BACKGROUND

The application for exemption only provided a discussion of compliance with county cultural resources law. The project is located in the City of Riverside and must comply with City ordinances.

DATA REQUEST

27. Please identify City of Riverside cultural resources ordinances, and describe how the project will comply with them.

BACKGROUND

It is necessary to identify all cultural resources that may be impacted by the project. At times local historical or archaeological societies may have knowledge of cultural resources that have not been recorded elsewhere. In addition, the city and county may have listings of archaeological or historic resources in the vicinity of the project.

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DATA REQUEST

28. Please contact local historic and archaeological associations or societies and request information regarding any cultural resources within one mile of the project. Please provide copies or summaries of any information obtained from these sources.
29. Please contact the City and County of Riverside to determine whether they have identified any cultural resources within one mile of the project.

BACKGROUND

The SPPE Application Page 168, states that biologist Brian Arnold assisted in walking transects across the 12-acre parcel. A biologist may fail to recognize cultural resources during an archaeological survey. A biologist is not the appropriate specialist to conduct an archaeological field survey.

DATA REQUEST

30. Please have someone qualified in archaeology walk transects that were walked by Brian Arnold and report the findings.
31. If historian James Steely participated in the archaeological field survey and does not also have a degree and a minimum of one year experience in field archaeology please have someone who is qualified in archaeology conduct the portions of the field work that he completed. Findings may be reported in the archaeological technical report requested in DR31.

BACKGROUND

The discussion of field survey findings includes the statement that the survey did not identify any significant cultural resources within the project area, on the proposed power plant location, the waste water treatment facility or the proposed transmission line. In addition, the discussion provided the information that nine possibly historic resources were recorded on DPR 523 forms. The discussion also stated that the Riverside Water Quality Control Plant was built in 1942. To complete an analysis, staff needs a thorough understanding of potential cultural resources in the area.

DATA REQUEST

32. Please provide copies of the cultural resources survey (technical) report(s) that document the field surveys conducted by the applicant for this project. These reports should be prepared following the portions of the Office of Historic Preservation guidelines for "Archaeological Resource Management Reports" that pertain to survey reports. The report should contain a copy of relevant portions of USGS quads at 1:24,000 scale showing the project site and all linear routes and identifying areas that were surveyed. Please also place the locations of all

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cultural resources, both historic and prehistoric, previously recorded and identified during surveys that are over 45 years of age on the map. Cultural resources that will be impacted by the project need to be evaluated and the evaluations or appropriate forms provided in the technical report(s). Necessary additional recording needs to be completed prior to exemption.

33. Page 170 references DPR 523 forms and a location map. These documents were not provided in Appendix 64-C as referenced. Please provide completed DPR 523 forms in an appendix to the report for cultural resources, identified as a result of the survey. Please include a DPR 523 form for the bedrock mortar that was identified at Riverside Water Quality Control Plant. Add another appendix to include resumes for cultural resources specialists that contributed to the report requested in DR 31.
34. Please have an architectural historian or a specialist in industrial or architectural history or public history, conduct a survey of the potential project area and write a historic technical report. If the historian who participated in the cultural resources survey previously conducted for this project meets these requirements, then he may write the report. Please include the following information in the historic technical report requested above.
35. Please provide descriptions of buildings, features and structures around the project area that could be affected (directly or indirectly) by the proposed project. The survey may be limited to an area one property deep, unless there is an obvious potential historic resource, not within the specified one property limit that may be impacted.
36. Please provide a characterization of the areas in the vicinity of the project and linears (how old, industrial, residential etc.).
37. Record buildings, structures features etc. that may be greater than 45 years old on an unmodified Department of Parks and Recreation (DPR) Form 523 and provide a copy of that form. The recording may be limited to an area one property deep, unless there is an obvious feature recognized. For any properties that appear to be potentially eligible for either the California Register of Historic Resources (CRHR) or the National Register of Historic Places (NRHP), complete and record the evaluation portion of the form and provide a copy in your response.
38. Please describe the location for the reclaimed water line tie in. If the water line will tie into the portion of the Riverside Water Quality Control Plant that was built in 1942, please evaluate this cultural resource for eligibility to the CRHR and provide the information in the historic resources technical report.

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BACKGROUND

In certain situations, projects need to complete geotechnical borings to examine soils below the surface of the project.

DATA REQUEST

39. If geotechnical borings are necessary for this project, please have an archaeologist examine soils excavated as a result of geotechnical surveys or boring for evidence of human occupation. Provide a report that discusses the findings of the examination, and if necessary, provide recommendations for mitigation.

BACKGROUND

In order for staff to adequately assess the potential for impacts to cultural resources, more information on the construction methods to be used for the project is necessary.

DATA REQUEST

40. Please provide a discussion of the construction methods to be used for installing the water and gas pipelines necessary for the project. If trenching will be used, what will be the width and depth of the trenches? What sort of equipment will be used?
41. Please provide a discussion of the construction methods to be used for installing the electrical transmission lines and transmission line poles. Please provide a discussion of potential ground disturbance that may result from power pole installation.

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Technical Area: Energy Resources

Author: Kevin Robinson

BACKGROUND

As designated in the AFC, the applicant states that Sempra will supply natural gas to RERC (RERC 2004a, SPPE §§ 1.2.5, 2.6).

DATA REQUEST

42. Please provide documentation from Sempra confirming its ability and readiness to supply adequate quantities of natural gas to the RERC for the life of the project.

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Technical Area: Geology and Paleontology

Author: Dal Hunter, Ph.D., C.E.G.

BACKGROUND

The Geologic Resources and Hazards Section (6.5.3.3) of the SPPE states in the first paragraph: "As observed within 6 of 29 exploration borings placed across the site...." A preliminary geotechnical investigation by the LOR Geotechnical Group (2004) is also mentioned in Section 6.6.4.1.

DATA REQUEST

43. Typically the geotechnical data, and often a preliminary geotechnical report, is provided as an appendix to the application. Please provide the geotechnical data identified in the application.

BACKGROUND

Since the site is underlain by shallow bedrock, we can assume that there will be no amplification of ground motion through the soils profile. However, no estimate of peak ground acceleration is provided for the site.

DATA REQUEST

44. Please provide a deterministic peak ground acceleration value for the project.

BACKGROUND

Section 6.6.6 references "Marshal, 1976 and Fisk and Spencer, 1994."

DATA REQUEST

45. Please provide full references in section 6.6.11 - References.

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Technical Area: Land Use

Author: Amanda Stennick

BACKGROUND

Pages 112 and 115 of the Small Power Plant Exemption Application discuss the Jurupa Area Land Use Plan and its relationship to the proposed project. In order to more fully assess the project's consistency with the plan, please provide the following.

DATA REQUEST

46. Please provide Appendix L (and it's summarized version in Table 5) of the Jurupa Area Plan.

47. Please provide Figure 5 of the Jurupa Area Plan.

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Technical Area: Water & Soil Resources

Author: Antonio Mediati

BACKGROUND

Much of the project site vicinity was historically used to produce agricultural crops. The native soil materials have been removed from the Project site. The current site surface consists primarily of a thin layer of fill material. Quartz diorite bedrock outcrops along with loose boulders occupy approximately 10 percent of the site surface. The fill material consists primarily of silty sands that are light brown, dry and loose. Fill material is typically 1.5 feet thick. Below the fill material is slightly to moderately weathered quartz diorite bedrock.

DATA REQUEST

48. When was the most recent use of the site for agricultural purposes? What was the crop?
49. What is the permeability of the project site and retention/infiltration basin area?

BACKGROUND

The RERC project proposes to discharge storm water to an on-site storm water retention/infiltration basin. The water discharged to this pond will percolate through to the ground water beneath the site. No storm water will be directed to a ZLD system.

DATA REQUEST

50. What is the depth to ground water?
51. Is construction dewatering anticipated? If so, how will the testing for contaminants and discharge be handled?
52. What is the estimated annual volume of potable and recycled water needed for the project?
53. What is the volume of the retention/infiltration basin and how was adequate sizing determined? Please show calculations and discuss assumptions.
54. How often is the storm water expected to exceed the capacity of the retention basin?
55. What is the estimated volume of water that will be percolated by the retention/infiltration basin?

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56. Please provide a description of the measures being taken to ensure that contaminated water is not discharged to the retention basin during operation of the power plant. This description should include any mechanical devices such as oil/water separators or filters and any detention and monitoring of the water prior to release to the storm water retention basin.
57. Please provide a description of the ZLD system.

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Technical Area: Traffic and Transportation

Author: David Flores

BACKGROUND

Page 117 of the Small Power Plant Exemption Application states that the Riverside Municipal Airport is approximately .5 miles to the south of the proposed Riverside Energy Resource Center project site. The Riverside Municipal Airport is a city maintained and operated facility. The Airport is a general aviation facility that services the Los Angeles/Riverside areas as a reliever airport. The airport maintains a 5,400-foot x 100-foot runway and a 2,851-foot x 48-foot runway that allow it to handle general aviation and business/corporate jets. The airport has been approved by the Federal Aviation Administration (FAA) for instrument approach landings, and therefore requires a substantial clearance area above tall structures, including transmission line towers.

DATA REQUEST

58. Staff requests that the applicant provide the following items: a copy of the FAA's written determination on the applicant's filing of an FAA Form 7460 - "Notice of Proposed Construction or Alteration" for the project.
59. Provide a description of the amount of light to be generated into the airspace by the proposed project.
60. Provide a description of the amount/level of electromagnetic interference that may be generated during plant operations that could affect aircraft communication and navigational systems during take-off or landing at the Riverside Municipal Airport.
61. Provide a detailed discussion of the height, length, width and seasonal occurrence of any visible or thermal plumes that may be generated by the proposed facility into the airspace.
62. Provide a copy of the current FAA approved "Approach and Clear Zone Plan" for the Riverside Municipal Airport, with the exact location of the proposed power generation facility and transmission towers clearly marked.

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Technical Area: Transmission System Engineering

Author: Demy Bucaneg, Jr., PE and Sudath Arachige

BACKGROUND

Staff needs additional information for the interconnection study to analyze the reliability impacts and to be confident of identifying the interconnection facilities and any downstream facilities necessary to support interconnection of the Riverside Energy Resource Center (RERC). Such interconnection should comply with utility Reliability and Planning Criteria, North American Electric Reliability Council (NERC) Planning Standards, Western Electric Coordinating Council (WECC) Reliability Criteria, and California Independent System Operator (Cal-ISO) Reliability Criteria.

After reviewing the Small Power Plant Exemption (SPPE) application for RERC, the one-line diagram, the short circuit study and the single-page power flow diagram, staff observed the following:

1. Power flow diagrams were not provided for n-2 contingency studies where post project overload criteria violations have occurred.
2. Pre-project power flow diagram was not submitted where existing system conditions are shown before the addition of RERC.
3. Submitted post-project power flow diagram at n-0 contingency was conducted using ASPEN power flow software as per RPU Electric System Power Flow, Base Case 530 MW at Vista, (Acn100Spg40_pf530.olr).

DATA REQUEST

63. Please provide power flow diagrams (MW, percent loading and per unit voltage) for n-2 contingency studies where post project overload criteria violations have occurred.
64. Please provide power diagram for pre-project (MW, percent loading and per unit voltage) condition
65. Please provide electronic copies of complete line, substation and generating station electrical parameters for power flow calculation in a tabulated format. These electrical parameters should be consistent with the initially provided power flow diagram – RPU Electric System Power Flow, Base Case 530 MW at Vista, (Acn100Spg40_pf530.olr). Items will be added in a GE PSLF format power flow model for ENERGY COMMISSION Staff analysis.

**Riverside Energy Resource Center
Data Requests
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Technical Area: Visual Resources

Author: Mark R. Hamblin

BACKGROUND

The description of the transmission route along Sheppard Street needs to be clarified in order to determine if the proposed 80 foot transmission line poles cause a significant visual effect to single family residences fronting Sheppard Street. The transmission route descriptions in the SPPE are confusing.

On SPPE page 26, it states that the transmission line route “would turn east at Jurupa Avenue, and follow along the south side of Jurupa Avenue for approximately 7,000 feet to Sheppard Street where it will turn southeast and run along the **southwest side** of Sheppard Street for approximately 800 feet until it reaches the Mt. View Substation.” Several single family residences front along the southwest side of Sheppard Street. [Bold added]

An SPPE figure in the land use section titled Riverside Energy Resource Center Zoning Classification (page 113) shows the proposed transmission line route being on the **west** side of Sheppard Street.

However on SPPE page 44 it states “The lines will cross the railroad tracks on Sheppard Street and will be routed along the **east** side of Sheppard Street to Jurupa Avenue (approximately 600 feet)” on the opposite side of the street from the single family residences. [Bold added]

DATA REQUEST

66. Please describe the project’s transmission route along Sheppard Street. Are transmission line poles to be installed along the east (railroad track) side of Sheppard Street?
67. Please describe the view from the front yard of single family residences on Sheppard Street and, near Jurupa Avenue between Chester and Florence Streets looking outward to the proposed 80 foot tall self-supporting galvanized steel or wood transmission poles to be used along the route.
68. What is the diameter at the base of the 80 foot tall transmission poles to be used along the route?

BACKGROUND

The City of Riverside’s Wastewater Treatment Plant contains buildings and structures that maintain a consistent architectural and color theme, and a property that has been landscaped and planted with trees.

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The proposed area where the power plant is to be constructed is not developed, contains no landscaping or trees, and currently contains underbrush, rocks and other debris.

The proposed project is to be owned by the City of Riverside and located on City owned land. The staff understands that the City has an adopted design review process for a public project that may be applicable to this project.

DATA REQUEST

69. Please clarify if the proposed Riverside Energy Center is subject to the City's adopted design review procedures and standards.

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Data Requests
(04-SPPE-01)**

Technical Area: Waste Management

Author: Ellie Townsend-Hough

BACKGROUND

Staff's analysis will include issues associated with managing wastes generated from constructing and operating the proposed RERC project. Staff will evaluate the proposed waste management plans and mitigation measures designed to reduce the risks and environmental impacts associated with handling, storing, and disposing of project-related hazardous and non-hazardous wastes. The technical scope of staff's analysis encompasses wastes generated during facility construction and operation.

Based on the California Environmental Quality Act (CEQA) Checklist, staff must determine if there will be any environmental risk to the public or environment from managing wastes at the site. It is the responsibility of staff to determine that the site has not been used as a disposal site and/or that hazardous waste have not been disposed of at this location.

DATA REQUESTS

70. Please provide a description of any historical and current land use activities that may have resulted in hazardous waste contamination of soils and groundwater at the proposed project site. Staff requires substantiating documentation regarding historical and current hazardous substance management at this site. Historical documentation should be in the form of a Phase I Environmental Site Assessment using methods prescribed by the American Society for Testing and Materials (ASTM) document entitled "Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process" (Designation: E 1527-00, May 2000) or equivalent.
71. Please provide names of potential waste haulers and locations of hazardous and non-hazardous waste disposal sites and landfills the proposed project will utilize. Please provide information that each landfill has sufficient capacity for the project's proposed disposal. Also, provide information on the remaining life of landfills proposed to be used by the project.
72. On page 341 of the Small Power Plant Exemption application it is noted that liquid waste would be transported to non-hazardous waste disposal sites. Please clarify that the liquid waste from the ZLD units would be taken to a treatment facility and specify the possible locations.