



DOCKET 07-AFC-3	
DATE	AUG 27 2007
RECD.	AUG 28 2007

August 27, 2007

Dockets Unit
California Energy Commission
1516 Ninth Street, MS 4
Sacramento, CA 95814

RE: CPV Sentinel Energy Project
Application for Certification 07-AFC-3

On behalf of CPV Sentinel, LLC, a limited liability company and the applicant for the above-referenced CPV Sentinel Energy Project, we are pleased to submit the enclosed documents:

- Seventy five hard copies of the CPV Sentinel Energy Project Supplement in Response to CEC Data Adequacy Review
- Fifty copies of the CPV Sentinel Energy Project Supplement in Response to CEC Data Adequacy Review on CD

These documents are being submitted to the CEC for docketing.

URS Corporation

Dale Shileikis
Vice President

Enclosures



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SUPPLEMENT

In Response to CEC Data Adequacy Review

Application for Certification

(07-AFC-3)

for

CPV Sentinel Energy Project

Riverside County, California

July 2007



Prepared for:

CPV Sentinel, LLC

Prepared by:

URS

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Adequacy Issue: Adequate Inadequate **DATA ADEQUACY RESPONSE** Revision No. 0 Date July 23, 2007
 Technical Area: Air Quality Project: CPV Sentinel Energy Project Technical Staff: Joe Loyer
 Project Manager: Bill Pfanner Docket: 07-AFC-03 Technical Senior: Keith Golden

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
1	Appendix B (g) (8) (A)	The information necessary for the air pollution control district where the project is located to complete a Determination of Compliance.	Please provide a South Coast Air Quality Management District written notification that the project application is sufficient to complete a Determination of Compliance.	While the Applicant does not believe that the cited data adequacy provision requires a written notification from the air district where the project is located, the Applicant has requested that the South Coast Air Quality Management District (SCAQMD) provide written notification to the CEC. The application was delivered to the SCAQMD on July 25, 2007, and it is anticipated that written notification of completeness will be provided to the CEC prior to the August 15, 2007 CEC business meeting.
2	Appendix B (g) (8) (H) (ii)	The data shall include quarterly wind tables and wind roses, ambient temperatures, relative humidity, stability and mixing heights, upper atmospheric air data, and an analysis of whether this data is representative of conditions at the project site.	Please provide the quarterly wind tables and wind roses for the meteorological data used in the AFC.	Quarterly wind tables and wind roses are provided in Appendix A.
3	Appendix B (g) (8) (J) (ii)	Potential offset sources, including locations, and quantity of emission reductions;	Provide a list of ERC holders (including the locations of these potential ERCs) that have been contacted to enter negotiations for the VOC, PM10 and SO2 ERCs and/or for the NOx RTCs. You may submit this information with a request for confidential status.	Given the limited availability of PM10 and SOX ERCs on the market, it is anticipated that the project will obtain necessary offsets for these two pollutants from the SCAQMD Priority Reserve. Nevertheless, Applicant has made market inquiries in order to satisfy the due diligence requirement for obtaining offsets from the Priority Reserve. It is anticipated that VOC ERCs will be acquired on the open market, and Applicant has also made market inquiries regarding this pollutant. Given the relatively plentiful supply of NOx RTCs on the

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 Technical Area: **Air Quality** Project: CPV Sentinel Energy Project Technical Staff: Joe Loyer
 Project Manager: Bill Pfanner Docket: 07-AFC-03 Technical Senior: Keith Golden

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
				<p>open market, Applicant has been in contact with emission credit brokers regarding RTCs, but has not yet contacted any potential sellers of RTCs. Applicant will submit under confidential cover, a record of its discussions with ERCs holders and emission brokers to date.</p>

Adequacy Issue: Adequate Inadequate **X** **DATA ADEQUACY RESPONSE** Revision No. 0 Date July 23, 2007
 Technical Area: **Alternatives** Project: CPV Sentinel Projects Technical Staff: Felicia Miller
 Project Manager: Bill Pfanner Docket: 07AFC-3 Technical Senior:

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
4	Appendix B (b) (1) (D)	A description of how the site and related facilities were selected and the consideration given to engineering constraints, site geology, environmental impacts, water, waste and fuel constraints, electric transmission constraints, and any other factors considered by the applicant.	Discuss the site selection process with respect to engineering constraints, site geology, environmental impacts, water and waste constraints.	A discussion of the site selection process is provided in Appendix B.

DATA ADEQUACY RESPONSE

Revision No. 0 Date July 23, 2007
 Technical Staff: Amanda Stennick
 Technical Senior: Eric Knight

Adequacy Issue: Adequate Inadequate **X**
 Project: CPV Sentinel Projects
 Docket: 07AFC-3

Technical Area: **Land Use**
 Project Manager: Bill Pfanner

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
6	Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and deferral land use plans, leases, and permits, applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Please discuss the project's conformance with Riverside County's and the City of Palm Springs' municipal code requirements related to land use.	The project's conformance with Riverside County's and City of Palm Springs' zoning and general plan designations is discussed in Table 7.4-2 of the AFC. In addition, a list of the project's conformance with Riverside County's and City of Palm Springs' municipal code development standards and lighting requirements is provided in Appendix D.

Adequacy Issue: Adequate Inadequate **DATA ADEQUACY RESPONSE** Revision No. 0 Date July 23, 2007

Technical Area: **Project Overview** Project: CPV Sentinel Projects Technical Staff: Felicia Miller

Project Manager: Bill Pfanner Docket: 07-AFC-3 Technical Senior:

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
7	Appendix B (a) (3) (C)	A description of the legal relationship between the applicant and each of the persons or entities specified in subsections (a)(3)(A) and (B).	Provide a description of legal relationship between applicant and entities included in section. Please discuss who will own the proposed linear facilities and relationship between CPV and VPS Sentinel, LLC.	<p>The applicant, CPV Sentinel, LLC (CPV Sentinel), is a subsidiary of Competitive Power Ventures, Inc (CPV) and GEL Funding Inc., a 100 percent owned subsidiary of General Electric Company. Other than the contractual relationships described below, neither CPV Sentinel or CPV has any legal relationship with any other entities mentioned in Chapter 2 of the AFC, including Southern California Edison (SCE), Southern California Gas Company (SoCalGas), the Mission Springs Water District (MSWD), D&F Land Co., and Wintec Properties, LLC.</p> <p>CPV Sentinel has a power purchase agreement with SCE for five of the units. CPV Sentinel will also enter into contractual arrangements with SCE for the development, design, construction and operation of the CPV Sentinel electric generation interconnection with the Devers substation. SCE will build, own, operate and maintain the electric generation interconnection.</p> <p>CPV Sentinel expects to enter into agreements with SoCalGas for the design, construction, operation, and maintenance of the gas interconnection. SoCalGas will build, own, operate, and maintain the natural gas supply interconnection to the project site. CPV Sentinel will also enter into a gas transportation</p>

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
8	Appendix B (b) (1) (D)	A description of how the site and related facilities were selected and the consideration given to engineering constraints, site geology, environmental impacts, water, water and fuel constraints, electric transmission constraints, and any other factors considered by the applicant.	Discuss the site selection process with respect to engineering constraints, site geology, environmental impacts, water and waste constraints.	<p>agreement with SoCalGas for the gas supply to the CPV Sentinel project.</p> <p>CPV Sentinel expects to enter into agreements with MSWD for the project's water supply. Linear facilities for offsite water supply will be built, owned operated and maintained by the MSWD.</p> <p>CPV Sentinel has entered into an Option to Lease agreement with D&F Land Co and Wintec Properties, LLC for the project site. The agreement is described in Section 2.2 of the AFC.</p> <p>The site selection process is discussed in Appendix B.</p>
9	Appendix B (b) (2) (C)	A detailed description of the design, construction, and operation of any electric transmission facilities, such as power lines, substations, switchyards, or other transmission equipment, which will be constructed or modified to transmit electrical power from the proposed power plant to the load centers to be served by the facility. Such description shall include the width of right-of-way and the physical and electrical characteristics of electrical transmission facilities such as towers, conductors, and insulators.	Provide a physical description of rights-of-way.	<p>The transmission line right-of-way will be 75 feet wide for construction, and 25 feet wide for operations. The length of the right-of-way will be approximately 3,250 feet.</p> <p>The transmission line right-of-way is currently primarily undeveloped, as shown on Figure 2.3-1 in the AFC.</p> <p>The transmission line also transects an existing east-west trending SCE transmission line corridor and two associated unpaved roads (Powerline Roads North and South). These unpaved roads are primarily for</p>

Adequacy Issue: Adequate Inadequate **DATA ADEQUACY RESPONSE** Revision No. 0 Date July 23, 2007
 Technical Area: **Project Overview** Project: CPV Sentinel Projects Technical Staff: Felicia Miller
 Project Manager: Bill Pfanner Docket: 07-AFC-3 Technical Senior:

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
				<p> maintenance of the existing SCE lines and are used infrequently. The residence nearest to the proposed transmission line is currently located approximately 1,300 feet to the east. The natural habitat found along the undisturbed areas of the proposed transmission line is Sonoran creosote bush scrub. The soil substrate of the transmission line route is a combination of Carsitas gravelly sand and Carsitas fine sand. The Sonoran creosote bush scrub and Carsitas sands are further described in Section 7.2 of the AFC. The transmission line is within unincorporated Riverside County and the City of Desert Hot Springs Sphere-of-Influence, and directly north of Palm Springs city limits. </p>

Adequacy Issue: Adequate Inadequate **X** **DATA ADEQUACY RESPONSE** Revision No. 0 Date July 23, 2007
 Technical Area: **Socioeconomics** Project: CPV Sentinel Projects Technical Staff: Joseph Diamond Ph.D.
 Project Manager: Bill Pfanner Docket: 07AFC-3 Technical Senior: Eric Knight

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
10	Appendix B (g) (7) (B) (vii)	An estimate of the total construction payroll and separate estimates of the total operation payroll for permanent and short-term (contract) operations employees;	Please provide separate estimates of the total operation payroll for permanent and short-term (Contract) operations employees.	The \$1.322 million estimated annual payroll for operations will be allocated as \$1.122 million annually for the 10 full-time employees and \$200,000 annually for the 4 part-time technicians (May through September).

Adequacy Issue: Adequate Inadequate **X** **DATA ADEQUACY RESPONSE** Revision No. 0 Date July 23, 2007
 Technical Area: **Transmission System Engineering** Project: CPV Sentinel Projects Technical Staff: Ajoy Guha, P.E.
 Project Manager: Bill Pfanner Docket: 07-AFC-3 Technical Senior: Mark Hesters

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
11	Appendix B (b) (2) (E)	<p>A completed System Impact Study or signed System Impact Study Agreement with the California Independent System Operator (CA ISO) and proof of payment. When not connecting to the California Independent System Operator controlled grid, provide the executed System Impact Study agreement and proof of payment to the interconnecting utility.</p> <p>If the interconnection and operation of the proposed project will likely impact a transmission system that is not controlled by the interconnecting utility (or California Independent System Operator), provide evidence of a System Impact Study or agreement and proof of payment (when applicable) with/to the impacted transmission owner or provide evidence that there are no system impacts requiring mitigation.</p>	<p>Staff observes that the submitted Application for Certification (AF) indicated the interconnection on-line dates for the proposed CPV Sentinel generation plant units from March, 2010 to May, 2010. But the System Impact Study (SIS) dated April 6, 2005 and the Facilities Study (FS) dated January 6, 2006 were performed by Southern California Edison (SCE) with 2008 summer peak and spring system conditions based on May 1, 2008 on-line date.</p> <p>In order to demonstrate conformance or non-conformance with the NERC/WECC, CA ISO and/or from the SCE confirming the validity of the above SIS and FS reports with regard to the proposed on-line dates in 2010. Alternately, submit a signed SIS agreement with the CA ISO and its proof of payment of a new competed SIS report based on studies for the 2010 summer peak and spring system conditions.</p>	<p>As the CEC acknowledges, the AFC contains the System Impact Study required by CEC regulations. CEC Siting Regulations Appendix B at (b)(2)(E). Thus, the CEC staff's comments do not address the adequacy of the AFC, but rather the studies. On February 9, 2007, the CAISO tendered a draft Large Generation Interconnection Agreement (LGIA), which should be finalized and executed in the next several weeks. Under the terms of the CAISO's tariff, the CAISO would not have tendered the LGIA were it not satisfied with the adequacy of the interconnection studies. CPV has requested that a representative of the CAISO contact the CEC to confirm this fact.</p>
12	Appendix B (i) (3)	<p>A schedule indication when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.</p>	<p>Inform the expected dates when the preliminary and final interconnection approvals from the CA ISO would be obtained.</p>	<p>Under the applicable tariff, the CAISO does not issue "preliminary and final interconnection approvals." (The CAISO provided such approvals under the tariff prior to introduction of the Large Generator Interconnection Protocol.) Rather, it tenders the draft Large Generator Interconnection Agreement ("LGIA") when it is satisfied that all interconnection studies have been satisfactorily</p>

Adequacy Issue: Adequate Inadequate **DATA ADEQUACY RESPONSE** Revision No. 0 Date July 23, 2007
 Technical Area: **Transmission System Engineering** Project: CPV Sentinel Projects Technical Staff: Ajoy Guha, P.E.
 Project Manager: Bill Pfanner Docket: 07-AFC-3 Technical Senior: Mark Hesters

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
				<p> completed. As previously noted, the CAISO tendered the draft LGIA to CPV on February 9, 2007. Having done so, CAISO has implicitly provided the approvals that it provided when the Participating Transmission Owner were responsible under the prior tariff provisions for conducting the interconnection studies. CPV has requested that a representative of the CAISO contact the CEC to confirm this fact. In the meantime, if CEC representatives have questions about the status of the LGIA or other interconnection issues, they may wish to contact the ISO or SCE directly. The ISO contacts are: Judy Nichols ((916) 608-7062) or Dennis Peters, Lead Interconnection Services Engineer ((916) 351-4400) at 151 Blue Ravine Road, Folsom, CA 95630. The SCE contact is Nathan Smith, Project Manager, Grid Interconnection and Contract Development ((626) 302-1148), 2244 Walnut Grove Avenue, Rosemead, CA 91770. </p>

Adequacy Issue: Adequate Inadequate **DATA ADEQUACY RESPONSE** Revision No. 0 Date July 23, 2007
 Technical Area: **Visual** Project: CPV Sentinel Projects Technical Staff: David Flores
 Project Manager: Bill Pfanner Docket: 07AFC-3 Technical Senior: Eric Knight

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
13	Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and deferral land use plans, leases, and permits, applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Please include the Riverside County Zoning Code in Table 7.11-6 and discuss project's conformance with applicable standards related to visual resources.	A Revised Table 7.11-6 is included as Appendix E. Zoning code restrictions related to height added to the previous Table 7.11-6. The table also includes a discussion of project's conformance to these standards.

Adequacy Issue: Adequate Inadequate **DATA ADEQUACY RESPONSE** Revision No. 0 Date July 23, 2007
 Technical Area: **Waste Management** Project: CPV Sentinel Projects Technical Staff: Christopher Dennis
 Project Manager: Bill Pfanner Docket: 07AFC-3 Technical Senior: Paul Richins

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
14	Appendix B (g) (12) (C)	A description of all waste disposal sites which may feasibly be used for disposal of project wastes. For each site, include the name, location, classification under Title 23, California Code of Regulations, §2530 et seq., the daily or annual permitted capacity, daily or annual amounts of waste currently being accepted, the estimated closure date and remaining capacity, and a description of any enforcement action take by local or state agencies due to waste disposal activities at the site.	Please provide a description of any government action or enforcement taken (or lack thereof) due to waste disposal activities for all proposed waste disposal sites.	<p>A list of the proposed waste disposal sites is provided in Appendix F, including the proposed landfills as well as the recycling/transfer centers.</p> <p>The list shows that none of the proposed landfills are currently subject to government action or enforcement action.</p> <p>The Coachella Valley Transfer Station is the only recycling/transfer center with a current violation on file with the California Integrated Waste Management Board. These violations are related to litter control, cleaning, and maintenance activities.</p>

Adequacy Issue: Adequate Inadequate **X** **DATA ADEQUACY RESPONSE** Revision No. 0 Date July 23, 2007
 Technical Area: **Water Resources** Project: CPV Sentinel Projects Technical Staff: Christopher Dennis
 Project Manager: Bill Pfanner Docket: 07-AFC-3 Technical Senior: Paul Richins

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
15	<p>Appendix B (g) (14) (C) (v)</p>	<p>For all water supplies intended for industrial uses to be provided from public or private water purveyors, a letter of intent or will-serve letter indicating that the purveyor is willing to serve the project, has adequate supplies available for the life of the project, and any conditions or restrictions under which water will be provided. In the event that a will-serve letter or letter of intent can not be provided, identify the most likely water purveyor and discuss the necessary assurances from the water purveyor to serve the project;</p>	<p>There are several potential transfers and exchanges proposed in this application. Each of these transfers or exchanges require either a will-serve letter or a letter of intent indicating: (1) that the purveyor is willing to serve the project; (2) that the purveyor has adequate water supplies available for the life of the project; and (3) any conditions or restrictions the purveyor has made in order to provide the water. Please provide a will-serve letter or letter of intent for each transfer or exchange.</p> <p>If a will-serve letter or letter of intent cannot be provided, then the most likely water purveyor needs to be identified and necessary assurance from the purveyor to serve the project need to be discussed.</p>	<p>CPV Sentinel and the most likely water purveyor, Mission Springs Water District (MSWD), intend to enter into a comprehensive agreement covering all aspects of MSWD's supply of water to the project. The nature of the proposed water supply plan requires an agreement that is more comprehensive than a simple will-serve letter, and therefore, MSWD has not issued a will-serve letter. MSWD has issued a letter of intent to supply water to the project subject to final negotiation of a mutually acceptable agreement. That letter is attached as Appendix G.</p> <p>Discussions between CPV Sentinel and MSWD have been ongoing since November 2006, with over a dozen face-to-face meetings and several email and letter exchanges. Discussions and communications have occurred between CPV Sentinel and the MSWD Staff as well as between CPV Sentinel and the MSWD Board members. The pace of the discussions leading to a mutual agreement are not as fast as CPV Sentinel would like, but both the MSWD Staff and Board have indicated that it typically takes the district a minimum of six months and usually much longer to complete evaluations and negotiations for this type of agreement. Progress has</p>

Adequacy Issue: Adequate Inadequate **X** **DATA ADEQUACY RESPONSE** Revision No. 0 Date July 23, 2007
 Technical Area: **Water Resources** Project: CPV Sentinel Projects Technical Staff: Christopher Dennis
 Project Manager: Bill Pfanner Docket: 07-AFC-3 Technical Senior: Paul Richins

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
				<p> been made towards an agreement, and the majority of the Staff and the Board appear to support the project and the supply of water for industrial cooling. In the March 15, 2007 MSWD Study Session, the Board directed the General Manager to work with CPV Sentinel towards an agreement. </p> <p> The comprehensive agreement under discussion will include provisions for the installation of tertiary water treatment at the Horton Wastewater Treatment Plant (WWTP), the sale of a fixed quantity of recycled water to CPV Sentinel, and the discharge and percolation by MSWD of the recycled water at the Horton WWTP into the Basin for later use by the project. The agreement will further include the installation by CPV Sentinel of onsite wells for accessing the water stored in the Basin and the terms and conditions for the payment to MSWD for the extracted water. The agreement also contains provisions covering timing of key actions, events of default, and so forth. Payment terms proposed by CPV Sentinel offer a significant net benefit to the MSWD ratepayers, and the Board is expected to approve the agreement once it is finalized and presented to the Board. </p> <p> Regarding the adequacy of water supply, the Horton WWTP currently processes 1,500 acre feet per year </p>

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
16	Appendix B (g) (14) (C) (vi)	For all water supplied which necessitates transfers and/or exchanges at any point, identify all parties and contracts/agreements involved, the primary source for the transfer and/or exchange water (e.g., surface water, groundwater), and provide the status of all appropriate agencies' approvals for the proposed use, environmental impact analysis on the specific transfers and/or exchanges required to obtain the proposed supplies, a copy of any agency regulations that govern the use of the water, and an explanation of how the project complies with the agency regulation(s);	For all water proposed for transfer or exchange, please provide the status of all agency approvals as may be required as well as any contracts or agreements involved.	(AFY), and this is expected to increase as the District's population expands. CPV Sentinel is expected to consume a maximum of 1,100 AFY, and the lifetime average consumption of the project is half that amount, or 550 AFY. In addition, all water that is extracted from the Basin is replenished with imported water via a well metering fee that is charged each customer. Thus, adequate water exists for the service to CPV Sentinel. The only agency approval expected for the water transfers/exchanges is for the MSWD Board to approve the final agreement, as discussed in the response to the prior question.
17	Appendix B (g) (14) (C) (vii)	Provide water mass balance and heat balance diagrams for both average and maximum flows that include all process and/or ancillary water supplies and wastewater streams. Highlight any water conservation measures on the diagram and the amount that they	Water mass balance and heat balance diagrams are provided, but they do not show the average and maximum flows. Water mass balance and heat balance diagrams that show the average and maximum flows are required.	Revised tables and figures responding to this request are provided in Appendix H. For the Heat and Mass Balance Diagram, Figure 2.4-4, average and maximum flows for each stream are provided on Revised Table 2.4-3. For

Adequacy Issue: Adequate Inadequate **DATA ADEQUACY RESPONSE** Revision No. 0 Date July 23, 2007
 Technical Area: **Water Resources** Project: CPV Sentinel Projects Technical Staff: Christopher Dennis
 Project Manager: Bill Pfanner Docket: 07-AFC-3 Technical Senior: Paul Richins

ID	SITING REGULATIONS	INFORMATION	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS	RESPONSE
		reduce water demand; and		<p>the Water Balance Diagram, Figure 2.4-6, average and maximum flows for each stream are provided on Revised Table 2.4-5.</p> <p>In addition, Figure 2.4-6 provided in the AFC should have referred to Table 2.4-5, not 2.4-4; therefore, a revised Figure 2.4-6 has been provided with the correct Table reference. Revised Tables 2.4-6 and 7.14-7 have also been provided in Appendix H to be consistent with Revised Table 2.4-5.</p>

Appendix A
Quarterly Wind Tables and Wind Roses

APPENDIX A
QUARTERLY WIND TABLES AND WIND ROSES
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Wind Frequency Distribution Tables	1
Wind Roses.....	9

STATION ID: 12345
 YEARS: 1988 1988 1988 1989 1989 1989 1990 1990 1990 1991 1991 1991
 START DATE: January 1
 START TIME: Midnight

RUN ID: Wintec 1988-91 Winter
 END DATE: December 31
 END TIME: 11 PM

FREQUENCY DISTRIBUTION							
Direction	SPEED (KNOTS)						Total
	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	> 21	
N	.027460	.041310	.044080	.005420	.001084	.002168	.121522
NNE	.014212	.016741	.016018	.010478	.003372	.001807	.062628
NE	.008069	.009394	.009876	.009394	.001325	.000602	.038661
ENE	.004938	.008310	.008792	.005540	.000843	.000120	.028544
E	.008672	.009033	.008069	.004215	.000723	.000000	.030712
ESE	.013610	.017343	.009033	.002288	.000000	.000000	.042274
SE	.026015	.060942	.025172	.004095	.000000	.000000	.116223
SSE	.020956	.033000	.012526	.002529	.000000	.000000	.069011
S	.010237	.005420	.002409	.001445	.000000	.000000	.019511
SSW	.004095	.001566	.001084	.000241	.000000	.000000	.006985
SW	.004336	.003131	.003131	.000602	.000120	.000120	.011442
WSW	.002650	.004336	.005781	.004215	.000482	.000361	.017825
W	.006865	.008792	.008912	.020836	.018668	.022522	.086595
WNW	.012766	.017343	.010117	.024931	.031916	.041913	.138986
NW	.031916	.046369	.005901	.004577	.003372	.002168	.094303
NNW	.035168	.049018	.029507	.000843	.000241	.000000	.114778
Total	.231964	.332049	.200409	.101650	.062146	.071781	
FREQUENCY CALM WINDS: .000000							

NOTE: The input wind directions measured to the nearest 10 degrees have been randomized to 1-degree increments.

STATION ID: 12345
 YEARS: 1988 1988 1988 1989 1989 1989 1990 1990 1990 1991 1991 1991
 START DATE: January 1
 START TIME: Midnight

RUN ID: Wintec 1988-91 Winter
 END DATE: December 31
 END TIME: 11 PM

FREQUENCY DISTRIBUTION							
Direction	SPEED (KNOTS)						Total
	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	> 21	
N	228	343	366	45	9	18	1009
NNE	118	139	133	87	28	15	520
NE	67	78	82	78	11	5	321
ENE	41	69	73	46	7	1	237
E	72	75	67	35	6	0	255
ESE	113	144	75	19	0	0	351
SE	216	506	209	34	0	0	965
SSE	174	274	104	21	0	0	573
S	85	45	20	12	0	0	162
SSW	34	13	9	2	0	0	58
SW	36	26	26	5	1	1	95
WSW	22	36	48	35	4	3	148
W	57	73	74	173	155	187	719
WNW	106	144	84	207	265	348	1154
NW	265	385	49	38	28	18	783
NNW	292	407	245	7	2	0	953
Total	1926	2757	1664	844	516	596	
FREQUENCY CALM WINDS: 0							

NOTE: The input wind directions measured to the nearest 10 degrees have been randomized to 1-degree increments.

STATION ID: 12345
 YEARS: 1988 1989 1990 1991
 START DATE: March 1
 START TIME: Midnight

RUN ID: Wintec 1988-91 Spring
 END DATE: May 31
 END TIME: 11 PM

FREQUENCY DISTRIBUTION							
Direction	SPEED (KNOTS)						Total
	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	> 21	
N	.003899	.008861	.008034	.001418	.000236	.000000	.022448
NNE	.002717	.002599	.003663	.004135	.002009	.000827	.015950
NE	.002599	.003544	.003781	.005553	.001654	.000236	.017368
ENE	.001654	.003781	.004726	.001890	.000000	.000000	.012051
E	.001536	.002363	.001772	.000473	.000000	.000000	.006144
ESE	.003190	.006380	.002836	.000709	.000000	.000000	.013114
SE	.005080	.025165	.023866	.003426	.000118	.000000	.057656
SSE	.004371	.016068	.014060	.000591	.000000	.000000	.035090
S	.001772	.005198	.001890	.000118	.000000	.000000	.008979
SSW	.001063	.003072	.001063	.000118	.000000	.000000	.005317
SW	.001181	.004490	.002481	.000827	.000236	.000000	.009216
WSW	.000945	.003781	.007916	.007325	.003899	.003072	.026938
W	.001536	.005907	.013233	.053048	.074551	.179820	.328095
WNW	.002954	.009334	.016541	.050685	.077268	.202741	.359523
NW	.007680	.020912	.006262	.004726	.004017	.007207	.050803
NNW	.008979	.016659	.005435	.000236	.000000	.000000	.031309
Total	.051158	.138114	.117557	.135279	.163989	.393904	
FREQUENCY CALM WINDS: .000000							

NOTE: The input wind directions measured to the nearest 10 degrees have been randomized to 1-degree increments.

STATION ID: 12345
 YEARS: 1988 1989 1990 1991
 START DATE: March 1
 START TIME: Midnight

RUN ID: Wintec 1988-91 Spring
 END DATE: May 31
 END TIME: 11 PM

FREQUENCY DISTRIBUTION							
Direction	SPEED (KNOTS)						Total
	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	> 21	
N	33	75	68	12	2	0	190
NNE	23	22	31	35	17	7	135
NE	22	30	32	47	14	2	147
ENE	14	32	40	16	0	0	102
E	13	20	15	4	0	0	52
ESE	27	54	24	6	0	0	111
SE	43	213	202	29	1	0	488
SSE	37	136	119	5	0	0	297
S	15	44	16	1	0	0	76
SSW	9	26	9	1	0	0	45
SW	10	38	21	7	2	0	78
WSW	8	32	67	62	33	26	228
W	13	50	112	449	631	1522	2777
WNW	25	79	140	429	654	1716	3043
NW	65	177	53	40	34	61	430
NNW	76	141	46	2	0	0	265
Total	433	1169	995	1145	1388	3334	
FREQUENCY CALM WINDS							
0							

NOTE: The input wind directions measured to the nearest 10 degrees have been randomized to 1-degree increments.

STATION ID: 12345
 YEARS: 1988 1989 1990 1991
 START DATE: June 1
 START TIME: Midnight

RUN ID: Wintec 1988-91 Summer
 END DATE: August 31
 END TIME: 11 PM

FREQUENCY DISTRIBUTION							
Direction	SPEED (KNOTS)						Total
	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	> 21	
N	.002717	.004135	.000827	.000118	.000118	.000000	.007916
NNE	.003072	.003190	.000709	.000354	.000118	.000000	.007443
NE	.002009	.001654	.000473	.000827	.000118	.000000	.005080
ENE	.001890	.001654	.000236	.000000	.000000	.000000	.003781
E	.002009	.001772	.000236	.000000	.000000	.000000	.004017
ESE	.002836	.006498	.004608	.001063	.000236	.000000	.015241
SE	.002954	.028710	.041706	.007680	.000118	.000000	.081167
SSE	.004253	.018785	.022212	.002363	.000000	.000000	.047613
S	.003190	.004371	.003544	.000473	.000000	.000000	.011578
SSW	.001418	.004017	.003072	.000591	.000000	.000118	.009216
SW	.002127	.002954	.004017	.003072	.000473	.000236	.012878
WSW	.001300	.004135	.010633	.015714	.008152	.002954	.042888
W	.002717	.007089	.017250	.081522	.115784	.174858	.399220
WNW	.003899	.012760	.021267	.053757	.088847	.130080	.310610
NW	.006380	.011697	.006616	.004371	.002599	.000591	.032254
NNW	.003899	.004135	.000709	.000354	.000000	.000000	.009097
Total	.046668	.117557	.138114	.172259	.216564	.308837	
FREQUENCY CALM WINDS .000000							

NOTE: The input wind directions measured to the nearest 10 degrees have been randomized to 1-degree increments.

STATION ID: 12345
 YEARS: 1988 1989 1990 1991
 START DATE: June 1
 START TIME: Midnight

RUN ID: Wintec 1988-91 Summer
 END DATE: August 31
 END TIME: 11 PM

FREQUENCY DISTRIBUTION							
Direction	SPEED (KNOTS)						Total
	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	> 21	
N	23	35	7	1	1	0	67
NNE	26	27	6	3	1	0	63
NE	17	14	4	7	1	0	43
ENE	16	14	2	0	0	0	32
E	17	15	2	0	0	0	34
ESE	24	55	39	9	2	0	129
SE	25	243	353	65	1	0	687
SSE	36	159	188	20	0	0	403
S	27	37	30	4	0	0	98
SSW	12	34	26	5	0	1	78
SW	18	25	34	26	4	2	109
WSW	11	35	90	133	69	25	363
W	23	60	146	690	980	1480	3379
WNW	33	108	180	455	752	1101	2629
NW	54	99	56	37	22	5	273
NNW	33	35	6	3	0	0	77
Total	395	995	1169	1458	1833	2614	
FREQUENCY CALM WINDS: 0							

NOTE: The input wind directions measured to the nearest 10 degrees have been randomized to 1-degree increments.

STATION ID: 12345
 YEARS: 1988 1989 1990 1991
 START DATE: September 1
 START TIME: Midnight

RUN ID: Wintec 1988-91 Fall
 END DATE: November 31
 END TIME: 11 PM

FREQUENCY DISTRIBUTION							
Direction	SPEED (KNOTS)						Total
	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	> 21	
N	.014572	.019350	.021859	.001911	.000836	.000597	.059126
NNE	.006331	.007286	.010392	.007406	.002031	.000478	.033923
NE	.004658	.006570	.011347	.009317	.000836	.000000	.032728
ENE	.003344	.006928	.008122	.002150	.000119	.000000	.020664
E	.005495	.005375	.004778	.001433	.000119	.000000	.017200
ESE	.008003	.010870	.006928	.000717	.000000	.000000	.026517
SE	.012064	.046942	.043359	.004778	.000000	.000000	.107143
SSE	.009436	.032370	.024128	.002508	.000000	.000000	.068442
S	.005733	.006211	.003703	.000478	.000000	.000000	.016125
SSW	.004300	.003703	.001911	.000717	.000000	.000000	.010631
SW	.003225	.005614	.003464	.002031	.000119	.000000	.014453
WSW	.002269	.003703	.005733	.008122	.003583	.000717	.024128
W	.004897	.007047	.013139	.045031	.058290	.057095	.185499
WNW	.008122	.024367	.021859	.045031	.054945	.066770	.221094
NW	.017081	.051362	.010989	.002986	.001911	.003583	.087912
NNW	.023650	.034400	.015409	.000717	.000239	.000000	.074415
Total	.133182	.272097	.207119	.135332	.123029	.129240	
FREQUENCY CALM WINDS: .000000							

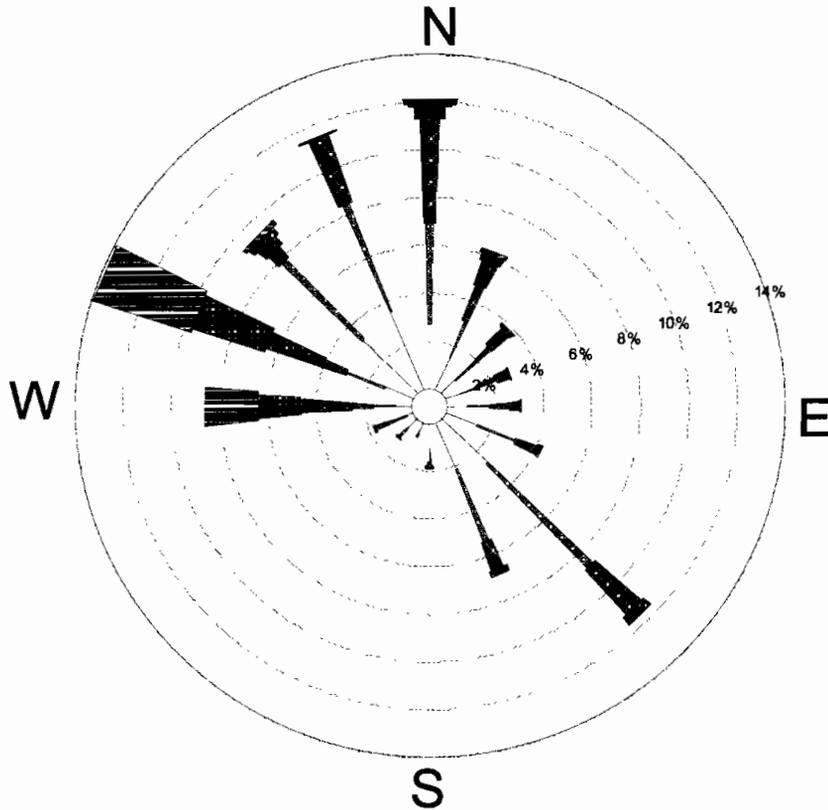
NOTE: The input wind directions measured to the nearest 10 degrees have been randomized to 1-degree increments.

STATION ID: 12345
 YEARS: 1988 1989 1990 1991
 START DATE: September 1
 START TIME: Midnight

RUN ID: Wintec 1988-91 Fall
 END DATE: November 31
 END TIME: 11 PM

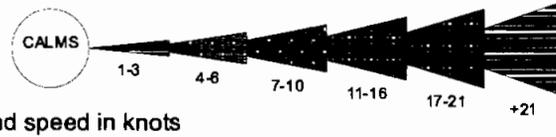
FREQUENCY DISTRIBUTION							
Direction	SPEED (KNOTS)						Total
	1 - 3	4 - 6	7 - 10	11 - 16	17 - 21	> 21	
N	122	162	183	16	7	5	495
NNE	53	61	87	62	17	4	284
NE	39	55	95	78	7	0	274
ENE	28	58	68	18	1	0	173
E	46	45	40	12	1	0	144
ESE	67	91	58	6	0	0	222
SE	101	393	363	40	0	0	897
SSE	79	271	202	21	0	0	573
S	48	52	31	4	0	0	135
SSW	36	31	16	6	0	0	89
SW	27	47	29	17	1	0	121
WSW	19	31	48	68	30	6	202
W	41	59	110	377	488	478	1553
WNW	68	204	183	377	460	559	1851
NW	143	430	92	25	16	30	736
NNW	198	288	129	6	2	0	623
Total	1115	2278	1734	1133	1030	1082	
FREQUENCY CALM WINDS: 0							

NOTE: The input wind directions measured to the nearest 10 degrees have been randomized to 1-degree increments.

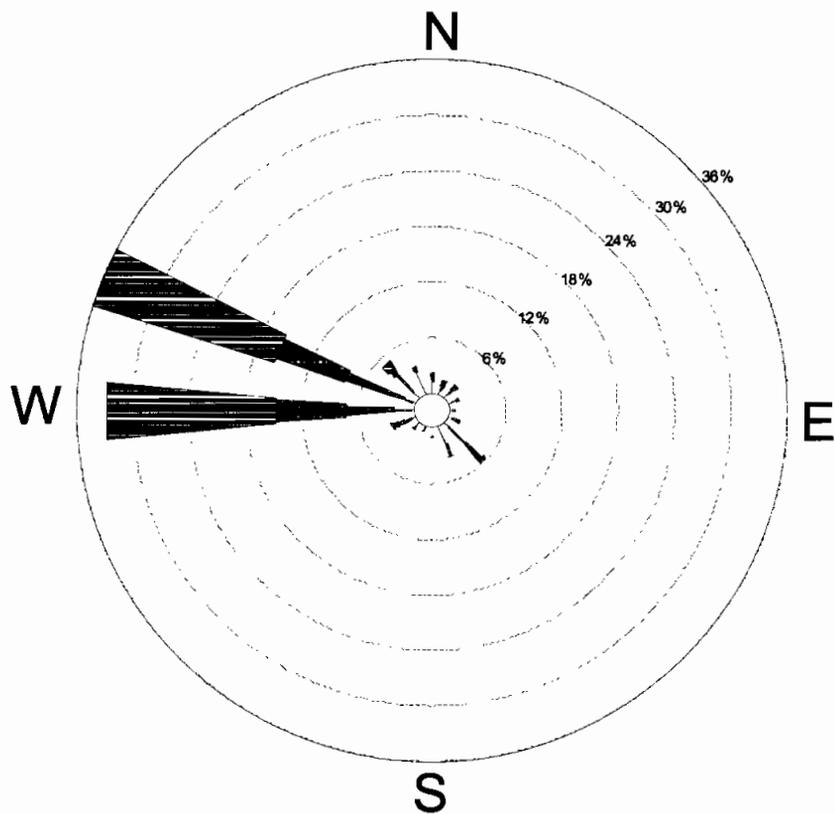


NOTE: Frequencies
 indicate direction
 from which the
 wind is blowing.

CALM WINDS 0.00%



Winter 1988-91 Wintec Windrose

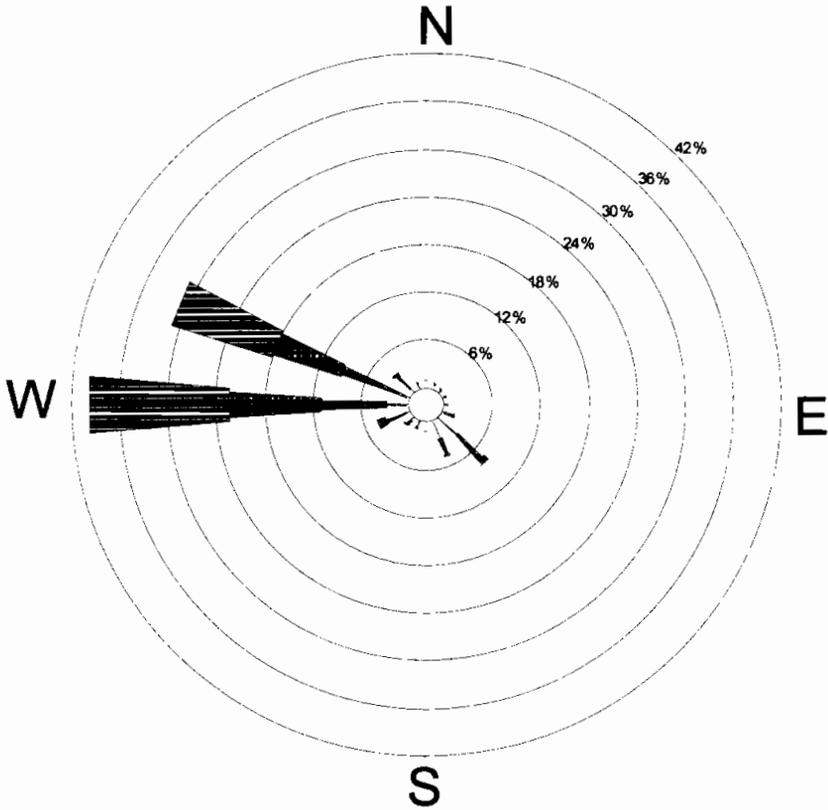


NOTE: Frequencies
indicate direction
from which the
wind is blowing.

CALM WINDS 0.00%

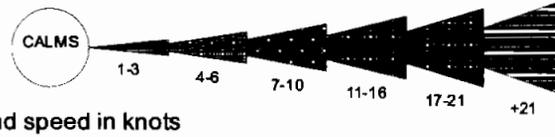


Spring 1988-91 Wintec Windrose

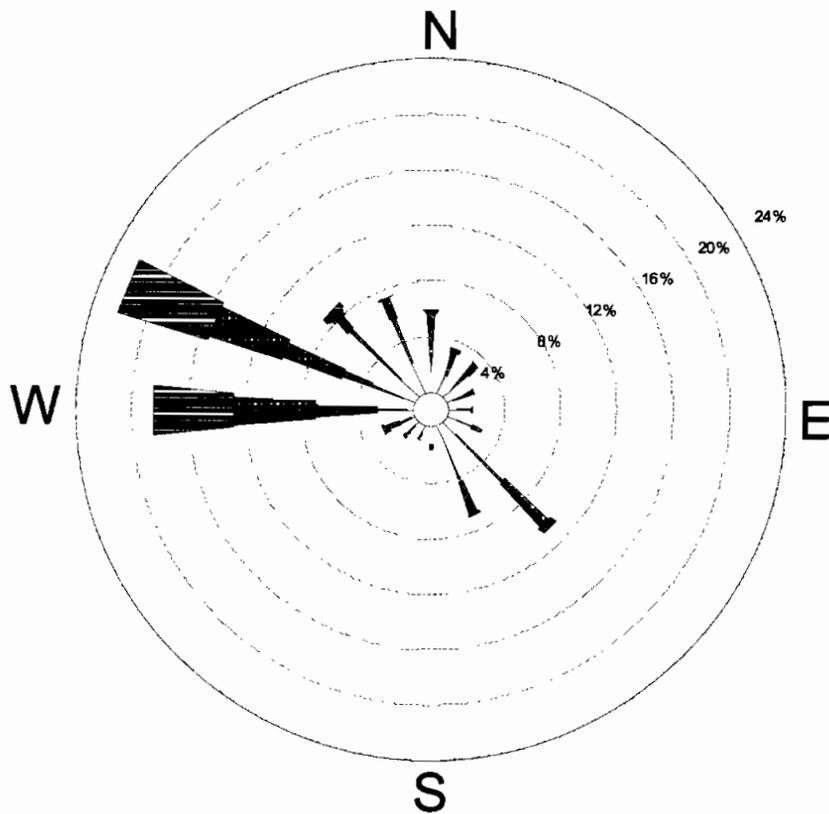


NOTE: Frequencies indicate direction from which the wind is blowing.

CALM WINDS 0.00%

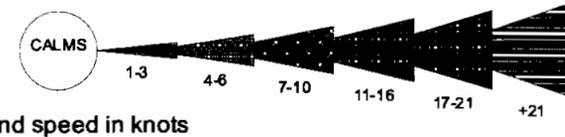


Summer 1988-91 Wintec Windrose



NOTE: Frequencies indicate direction from which the wind is blowing.

CALM WINDS 0.00%



Fall 1988-91 Wintec Windrose

Appendix B
Site Selection Process

APPENDIX B SITE SELECTION PROCESS

Given the project objective of providing power to the Los Angeles Basin Local Capacity Requirements area, it is critical to site the project near the Devers substation, which is one of the principal substations within the SCE system for delivering power to customers in the area. Importantly, the interconnection of CPV Sentinel at Devers substation requires significantly less physical upgrades to the SCE transmission system than at other locations, minimizing impacts and costs to SCE ratepayers (system upgrade costs are ultimately born by the SCE ratepayers as upgrade costs are reimbursed to the project within five years). If CPV Sentinel were to interconnect at a substation other than Devers, it would lose its favorable queue position at the CAISO and would no longer be capable of meeting the expected on-line date in 2010 in the PPA with SCE. As a peaking facility, the CPV Sentinel was also seen as an excellent complement to existing wind generation also interconnecting at Devers, capable of being dispatched quickly should the wind generation not be available when demand is high. Therefore, site selection focused on areas near the Devers substation. Factors such as engineering constraints, site geology, environmental impacts, water and waste constraints were considered in the site selection process, as detailed in the sections below. As discussed in Chapter 8 of the AFC, land availability and compliance with local regulations were also considered in selecting a site.

Engineering Constraints

Engineering constraints were considered in the site selection process, which focused on finding a site which had adequate acreage and topography to accommodate eight combustion turbines, associated equipment as well as a retention basin. An objective of the site selection process was to minimize the length of or eliminate the project's linear facilities, including gas and water supply lines, discharge lines, and transmission interconnections. This approach minimizes both potential offsite environmental impacts and the cost of construction. The Applicant considered potential peaking power sites located around Devers substation based on the following criteria:

- Sufficient area to accommodate the project, including construction laydown.
- Site control (lease or ownership) feasibility.
- Adjacent to or near an existing substation where additional peaking capacity would serve markets and provide system stability as well as peaking energy.
- Adjacent to or near high-pressure natural gas transmission line(s).
- Adjacent to or near recycled water supply for cooling purposes to maximize efficiency.
- Industrial land use designation with consistent zoning.
- Minimal construction impacts to existing residences and businesses.

The project site meets all of these objectives. Areas to the north, west, south, and directly east of the Devers substation were eliminated for various reasons as discussed in Section 8.4 of the AFC.

Site Geology

Site geology was considered in the site selection for the proposed power plant and associated linear facilities, particularly with regard to soils, topography, and the avoidance of fault zones and other geological hazards. The soils at the project site are considered nonswelling, and the potential for soil expansion at the site and its linear features is negligible. The project site is also

generally flat and there are no surface features of significant relief near the site that could develop a landslide hazard.

In addition, although portions of the proposed water and gas line transect the Banning Fault, no faults are mapped at the proposed power plant site (see Figure 7.15-6 in Section 7.15 of the AFC). The proposed project site is in the seismically active Southern California portion of the San Andreas Fault system. All sites in the region would be subject to potential ground shaking hazards. The project site is considered optimally located because it was one of the few available sites near the Devers substation that avoids fault zones. Although the proposed linear facilities could not be located outside of the fault zone, this was not considered a fatal flaw in the selection process because final design for the proposed project will incorporate features that consider the strong shaking hazard and surface rupture potential to gas and water utilities crossing the Banning Fault.

Environmental Impacts

Environmental impacts were considered in the selection of the project site and associated linear facilities. The project site is located only 700 feet from the Devers substation, which minimizes potential impacts from land disturbance when compared to other sites located farther from the substation. The site is also primarily undeveloped, with the exception of a vacant dwelling unit on the southeastern corner, which avoids impacts that would occur if the site were more heavily developed.

The power plant site and proposed linear rights of way do not contain any special-status plant species, special-status wildlife species, significant cultural resources, or surface water bodies. No wetlands were identified within the power plant site or associated linear facilities. Garnet Wash is approximately 1.3 miles south of the project site (see Figure 7.2-1 in the AFC). An unnamed desert wash runs northwest-southeast near the intersection of Diablo Road and 16th Avenue. The project site as well as the associated linear facilities avoid these washes. Siting the proposed gas line to the north of Indigo Energy Facility, rather to the west and then north, avoids both of these washes. The project site and linear facilities as currently sited were identified as the environmentally superior alternative to other available sites near the Devers substation that may have transected the washes or had other sensitive biological resources or significant cultural resources on the site.

Water

Water was considered in the selection of the project site and proposed water line. As stated above under Environmental Impacts, the project site was selected because it would avoid the Garnet Wash and other washes in the area.

With respect to water supply, the project site was selected because it is located within the same groundwater basin in which the Mission Springs Water District (MSWD) percolates reclaimed water. MSWD has some of the only reclaimed water in the area that is not currently committed to other users, and MSWD will provide water for power plant operations. The tertiary-treated reclaimed water will be discharged to existing percolation ponds adjacent to the Horton Wastewater Treatment Plant (WWTP), where it will percolate into the underlying Coachella Valley Groundwater Basin (Basin) and be banked for later use by the proposed project. The proposed project will access its banked water supply in the Basin via onsite wells. Potential impacts to the Basin will be minimized because the amount of water percolated into the Basin on behalf of the project will be equal to or more than the amount of water extracted from the Basin.

The project site is close to an existing potable water supply line along Dillon Road. As such, potential impacts associated with construction of the interconnection are minimized.

Waste Constraints

Waste constraints were considered in the selection of the project site due to the need to demolish the existing vacant dwelling unit and garage on the site. Additional sites directly north and west of the Devers substation would not require demolition of existing structures. However, as indicated in Section 8.4 of the AFC, other overriding factors eliminated these sites from further consideration, including the recent approval of a wind farm at the site west of Devers substation, procurement/control issues of multiple lots north of the substation, and the longer transmission lines and gas lines needed for sites north of the substation.

The only recognized environmental condition found in the Phase I Environmental Site Assessment for the site was that historical records indicated the presence of an abandoned oil or gas well on or in the vicinity of the project site. The Phase II investigation on the site then showed that the California Division of Oil, Gas and Geothermal Resources file search and geophysical survey performed did not find an onsite oil and gas well. Therefore, there were no fatal flaws with regards to waste constraints on the project site.

Appendix C
Correspondence about Cultural Resources

APPENDIX C
CULTURAL RESOURCES CORRESPONDENCE
TABLE OF CONTENTS

Record of Telephone Conversation dated July 25, 2007, between Ken Lyon, City of Palm Springs, and C. Hacking, URS Corporation

Record of Telephone Conversation dated July 25, 2007, between Jay Olivas, Riverside County, and C. Hacking, URS Corporation

Email dated July 26, 2007, sent to Jay Olivas, Riverside County, from C. Hacking, URS Corporation

Record of Telephone Conversation dated July 30, 2007, between Leslie Mouriquand, Riverside County, and C. Hacking, URS Corporation

TELEPHONE CONVERSATION RECORD (TelCon)

URS Corporation
1333 Broadway, Suite 800, Oakland, CA 94612

(Environmental Planning and Permitting Group)

COPIES TO:

File:

URS Corp., Oakland, CA

DATE 7/25/07 TIME 1620

VIA _____ WITH Ken Lyon

COMPANY City of Palm Springs

ADDRESS _____ PHONE NO. 760.323.8245

PROJ NAME Ocotillo Power Plant PROJ/TASK NO. Ocotillo Power Plant - 28067168

Mr. Lyon was not aware of any cultural resources in the project area.

TELEPHONE CONVERSATION RECORD (TelCon)

URS Corporation

1333 Broadway, Suite 800, Oakland, CA 94612

(Environmental Planning and Permitting Group)

COPIES TO:

File:

URS Corp., Oakland, CA

DATE 7/25/07 TIME 1620
VIA _____ WITH Jay Olivas
COMPANY Riverside County
ADDRESS _____ PHONE NO. 760.863.7579
PROJ NAME Ocotillo Power Plant PROJ/TASK NO. Ocotillo Power Plant - 28067168

Left message

TELEPHONE CONVERSATION RECORD (TelCon)

**Dean
Martorana/Oakland/URSCorp**
07/26/2007 11:50 AM

To jolivas@rctlma.org
cc
bcc

Files Attached: 0	Total Email Size: 3 kb
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Subject Ocotillo Power Plant - Known Cultural Resources

Mr. Olivas:

URS is conducting cultural resource studies for the proposed Ocotillo Power Plant in North Palm Springs and we have been seeking information from knowledgeable individuals on any cultural resources that may exist within the project area. If you know of any cultural resources (e.g. prehistoric, historic, or traditional property) within this project area, please let me know. Please see the attached Google map of the project area.

<http://maps.google.com/maps/ms?ie=UTF8&hl=en&msa=0&ll=33.92221,-116.55344&spn=0.045297,0.080338&t=h&z=14&om=1&msid=101282861816805718951.0004362ef34f42d8f29cd>

Thank you,

Dean Martorana, RPA
URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612
Tel: 510.893.3600 | Direct: 510.874.3121
Fax: 510.874.3268
dean_martorana@urscorp.com

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TELEPHONE CONVERSATION RECORD (TelCon)

URS Corporation

1333 Broadway, Suite 800, Oakland, CA 94612

(Environmental Planning and Permitting Group)

COPIES TO:

File:

URS Corp., Oakland, CA

DATE 7/30/07 TIME 1410
VIA _____ WITH Leslie Mouriquand
COMPANY Riverside County
ADDRESS _____ PHONE NO. 760-863-8277
PROJ NAME Ocotillo Power Plant PROJ/TASK NO. Ocotillo Power Plant - 28067168

Ms. Mouriquand called and said she didn't have any specific information on the project area, but recommended that we check with the Aqua Caliente Tribal office and the Palm Springs Historical Society for information on locally listed or known properties. [Note: These resources have already been checked.] She stated that the County of Riverside doesn't maintain an active database of historical resources locally listed. The Eastern Information Center at UC Riverside still maintains the most comprehensive database of historical resource information.

Appendix D
Land Use: Municipal Code Development Standards and
Lighting Requirements

Appendix D
Land Use: Municipal Code Development Standards and Lighting Requirements

AFC Section	Municipal Code	Jurisdiction	Applicability	Project Conformance
7.4.5.2	City of Palm Springs- Zoning Code, Section 92.17.2.03	City of Palm Springs Community Preservation Department	<p>Defines property development standards in "E-I" energy industrial zone.</p> <p>None of the development standards for this zoning district apply to the project, since the proposed project will not place any building or structure within the E-I zone.</p>	Project conforms to permitted uses in this zone, as shown on Table 7.4-2 of the AFC. The proposed project will not place any building or structure within the E-I zone, and therefore, development standards are not applicable.
7.4.5.2	City of Palm Springs- Zoning Code, Section 92.14.1.03	City of Palm Springs Community Preservation Department	<p>Defines property development standards within the "H-C" energy industrial zone.</p> <p>None of the development standards for this zoning district apply to the project, since the proposed project will not place any building or structure within the H-C zone.</p>	The proposed project will not place any building or structure within the H-C zone, and therefore, development standards are not applicable.
7.4.5.2	City of Palm Springs- Zoning Code, Section 92.17.1.03	City of Palm Springs Community Preservation Department	<p>Defines property development standards within the "M-2" energy industrial zone.</p> <p>None of the development standards for this zoning district apply to the project, since the proposed project will not place any building or structure within the M-2 zone.</p>	The proposed project will not place any building or structure within the M-2 zone, and therefore, development standards are not applicable.
7.4.5.2	City of Palm Springs- Zoning Code, Section 92.16.03	City of Palm Springs Community Preservation Department	<p>Defines property development standards within the "M-I-P" energy industrial zone.</p> <p>None of the development standards for this zoning district apply to the project, since the proposed project will not place any building or structure within the M-I-P zone.</p>	The proposed project will not place any building or structure within the M-I-P zone, and therefore, development standards are not applicable.

Appendix D
Land Use: Municipal Code Development Standards and Lighting Requirements

AFC Section	Municipal Code	Jurisdiction	Applicability	Project Conformance
7.4.5.1	Riverside County Municipal Code Title 17 Chapter 17.144.020	Riverside County Department of Building and Safety	<p>Defines development standards within the W-2 Controlled Development Area Zone.</p> <p>“Lot size shall not be less than twenty thousand (20,000) square feet, with a minimum average lot width of one hundred (100) feet and a minimum average lot depth of one hundred fifty (150) feet, unless larger minimum lot area and dimensions are specified for a particular area or use. No other building or structure shall exceed fifty (50) feet in height, unless a greater height is approved pursuant to Section 17.172.230. In no event, however, shall a building exceed 75 feet in height or any other structure exceed 105 feet in height, unless a variance is approved pursuant to Chapter 17.196.”</p> <p>There are no setback requirements in the W-2 zone.</p>	<p>The proposed project has a lot size of 1,611,720 square feet, an average lot width of 804 feet and an average lot depth of 1,916 feet. Therefore, the project conforms with the lot size, width, and depth for the W-2 zone. The eight LMS100 stacks proposed at the power plant site will be 90 feet tall each and will be placed in the W-2 zone. In addition, an estimated 9 transmission line poles (85 to 115 feet tall) would be installed. These structures would exceed the height limitations for the W-2 zone. However, height variance is subsumed within the CEC permitting process, and this is not considered a significant impact.</p>

Appendix D
Land Use: Municipal Code Development Standards and Lighting Requirements

AFC Section	Municipal Code	Jurisdiction	Applicability	Project Conformance
7.4.5.1	Riverside County Municipal Code Title 17 Chapter 17.164.030	Riverside County Department of Building and Safety	<p>Defines development standards within the W-E Wind Energy Resource Zone.</p> <p>None of the development standards for this zoning district apply to the project, since the proposed project will not place any building or structure within the W-E zone.</p>	Project conforms to permitted uses in this zone, as shown on Table 7.4-2 of the AFC. The proposed project will not place any building or structure within the W-E zone, and therefore, development standards are not applicable.
7.4.5.1	Riverside County Municipal Code Title 17 Chapter 17.100.040	Riverside County Department of Building and Safety	<p>Defines development standards within the M-SC Manufacturing Service Commercial Zone.</p> <p>None of the development standards for this zoning district apply to the project, since the proposed project will not place any building or structure within the M-SC zone.</p>	The proposed project will not place any building or structure within the M-SC zone, and therefore, development standards are not applicable.
7.4.5.1	Riverside County Municipal Code Title 17 Chapter 17.24.020	Riverside County Department of Building and Safety	<p>Defines development standards within the R-1 One Family Dwelling Zone.</p> <p>None of the development standards for this zoning district apply to the project, since the proposed project will not place any building or structure within the R-1 zone.</p>	The proposed project will not place any building or structure within the R-1 zone, and therefore, development standards are not applicable.
7.4.5.1	Riverside County Municipal Code Title 17 Chapter 17.16.020	Riverside County Department of Building and Safety	<p>Defines development standards within the R-R Rural Residential Zone.</p> <p>None of the development standards for this zoning district apply to the project, since the proposed project will not place any building or structure within the R-R zone.</p>	The proposed project will not place any building or structure within the R-R zone, and therefore, development standards are not applicable.

Appendix D
Land Use: Municipal Code Development Standards and Lighting Requirements

AFC Section	Municipal Code	Jurisdiction	Applicability	Project Conformance
7.4.5.1	Riverside County Municipal Code Title 17 Chapter 17.160.040	Riverside County Department of Building and Safety	<p>Defines structures height within the W-1 Watercourse, Watershed, and Conservation Areas Zone.</p> <p>None of the development standards for this zoning district apply to the project, since the proposed project will not place any building or structure within the W-1 zone.</p>	The proposed project will not place any building or structure within the W-1 zone, and therefore, development standards are not applicable.
7.4.5.1	Riverside County Municipal Code Title 17 Chapter 17.72	Riverside County Department of Building and Safety	<p>Defines uses permitted and development standards within the C-1 and C-P General Commercial Zones.</p> <p>None of the development standards for this zoning district apply to the project, since the proposed project will not place any building or structure within the C-1 or C-P zone.</p>	The proposed project will not place any building or structure within the C-1 or C-P zone, and therefore, development standards are not applicable.
N/A	Riverside County Municipal Code Title 8 Chapter 8.80.40	Riverside County Department of Building and Safety	<p>Lists definitions for Chapter 8.80.</p> <p>The requirements for Class II lighting pertain to outdoor lighting used to illuminate walkways, private roadway, equipment yards, and parking lots. Zone B applies to the area that falls within 45 miles of Palomar Observatory. Class II and Zone B lighting requirements apply to the proposed project.</p>	The proposed project lighting falls under Class II lighting. The proposed project site is approximately 43.18 miles from the Palomar Observatory and therefore falls under Zone B.

Appendix D
Land Use: Municipal Code Development Standards and Lighting Requirements

AFC Section	Municipal Code	Jurisdiction	Applicability	Project Conformance								
N/A	Riverside County Municipal Code Title 8 Chapter 8.80.50	Riverside County Department of Building and Safety	<p>Defines lighting general requirements and hour of operation.</p> <p>“These standards apply in Zone B. Preferred Source. Low-pressure sodium lamps are the preferred illuminating source. Shielding. All nonexempt outdoor light fixtures, shall be shielded as required in Section 8.80.060. Hours of Operation. All nonexempt outdoor light fixtures are subject to the provisions of Section 8.80.080 regarding hours of operation. All Class II lighting in Zone B may remain on all night.”</p>	The proposed project will comply with the County’s lighting requirements.								
N/A	Riverside County Municipal Code Title 8 Chapter 8.80.060	Riverside County Department of Building and Safety	<p>Defines lighting requirements for lamp source and shielding.</p> <p>The requirements for lamp source and shielding of light emissions for outdoor light fixtures in Zone B shall be as follows:</p> <p>Lamp Type and Shielding Requirements Per Fixture Class II—Parking Lots, Walkways, Security</p> <table border="1"> <thead> <tr> <th>Lamp Type</th> <th>Zone B</th> </tr> </thead> <tbody> <tr> <td>Low Pressure Sodium</td> <td>allowed</td> </tr> <tr> <td>Others above 4050 lumens</td> <td>prohibited</td> </tr> <tr> <td>Others 4050 lumens & below</td> <td>allowed</td> </tr> </tbody> </table>	Lamp Type	Zone B	Low Pressure Sodium	allowed	Others above 4050 lumens	prohibited	Others 4050 lumens & below	allowed	The proposed project will comply with the County’s lighting requirements.
Lamp Type	Zone B											
Low Pressure Sodium	allowed											
Others above 4050 lumens	prohibited											
Others 4050 lumens & below	allowed											
N/A	Riverside County Municipal Code Title 8 Chapter 8.80.080	Riverside County Department of Building and Safety	<p>Defines lighting prohibitions.</p> <p>“A. The installation of other than low pressure sodium street lights on private roadways and streets is prohibited within Zone B. C. All Class II lighting in Zone B may remain on all night.”</p>	The proposed project will comply with the County’s lighting requirements.								

Appendix D
Land Use: Municipal Code Development Standards and Lighting Requirements

AFC Section	Municipal Code	Jurisdiction	Applicability	Project Conformance
N/A	City of Palm Springs- Zoning Code, Section 93.21.00	City of Palm Springs Community Preservation Department	Defines outdoor lighting standards. These standards apply to the construction laydown area.	The proposed project will comply with the City's lighting requirements.

Appendix E
Revised Table 7.11-6 Laws, Ordinances, Regulations, and
Standards

Table 7.11-6 (Revised)
Laws, Ordinances, Regulations, and Standards
(Page 1 of 3)

Local

Laws, Ordinances, Regulations, and Standards	Policy Description	Basis for Compliance
<p>County of Riverside General Plan – Chapter 3: Land Use Elements – Scenic Corridors – LU 13.3</p>	<p>Ensure that the design and appearance of new landscaping, structures, equipment, signs, or grading within Designated and Eligible State and County scenic highway corridors are compatible with the surrounding scenic setting or environment.</p>	<p>SR 62, I-10, and Dillon Road are all considered scenic corridors in the Riverside County General Plan. Considering the view distance and the viewing context with the existing wind turbines, transmission lines, and SCE Devers substation, the project would be discernable but not substantially noticeable. The existing visual quality is already low and visual impacts, while potentially adverse, would not be significant. Therefore, the project is consistent with the existing landscape character.</p>
<p>County of Riverside General Plan – Chapter 3: Land Use Elements – Scenic Corridors – LU 13.4</p>	<p>Maintain at least a 50-foot setback from the edge of the right-of-way for new development adjacent to Designated and Eligible State and County Scenic Highways.</p>	<p>The proposed project is not immediately adjacent to any scenic corridor.</p>
<p>County of Riverside General Plan – Chapter 3: Land Use Elements – Scenic Corridors – LU 13.5</p>	<p>Require new or relocated electric or communication distribution lines, which would be visible from Designated and Eligible State and County Scenic Highways, to be placed underground.</p>	<p>The proposed interconnection would not be discernable from SR 62, I-10, or Dillon Road due to the context of the existing facilities, including wind turbines, transmission lines, and SCE Devers substation.</p>

Table 7.11-6 (Revised) Laws, Ordinances, Regulations, and Standards (Page 2 of 3)		
Laws, Ordinances, Regulations, and Standards	Policy Description	Basis for Compliance
County of Riverside General Plan – Chapter 3: Land Use Elements – Scenic Corridors – LU 13.7	Require that the size, height, and type of on-premise signs visible from Designated and Eligible State and County Scenic Highways be the minimum necessary for identification. The design, materials, color, and location of the signs shall blend with the environment, using natural materials where possible.	The proposed project will comply with Riverside County and Western Coachella Valley Area Plan signage requirements.
County of Riverside General Plan – Chapter 3: Land Use Elements – Scenic Corridors – LU 13.8	Avoid the blocking of public views by solid walls.	The proposed project is far enough from scenic routes (between 0.6 and 1.7 miles) that it is not necessarily in any scenic corridors and solid walls, if used, would not result in significant view impairment.
County of Riverside General Plan – Chapter 4: Circulation – Scenic Corridors – C 19.1	Preserve scenic routes that have exceptional or unique visual features in accordance with Caltrans’ Scenic Highways Plan.	The proposed project will not adversely affect views from scenic corridors due the combination of view distance and the view context of existing wind turbines, transmission lines, and SCE Devers substation.
Chapter 5: Multipurpose Open Space Element – Scenic Corridors – OS 22.1	Design developments within designated scenic highway corridors to balance the objectives of maintaining scenic resources with accommodating compatible land uses.	The applicant will comply with this requirement through the proper review process with Riverside County.
Western Coachella Valley Area Plan – Industrial Uses – WCVAP 12.4	Require the screening and/or landscaping of outdoor storage areas, such as contractor storage yards and similar uses.	The proposed project will comply with required outdoor storage provisions.

Table 7.11-6 (Revised) Laws, Ordinances, Regulations, and Standards (Page 3 of 3)		
Laws, Ordinances, Regulations, and Standards	Policy Description	Basis for Compliance
Western Coachella Valley Area Plan – Land Use – Light Pollution – WCVAP 15.1	Where outdoor lighting is proposed, require the inclusion of outdoor lighting features that would minimize the effects on the nighttime sky and wildlife habitat areas.	Project lighting will be consistent with the Riverside County Lighting Ordinance, and comply with CPUC requirements. See also AFC Section 7.11.2.2.4.
Western Coachella Valley Area Plan – Land Use – Light Pollution – WCVAP 15.2	Adhere to the lighting requirements of the County Ordinance Regulating Light Pollution for standards that are intended to limit light leakage and spillage that may interfere with the operations of the Palomar Observatory.	The proposed project is within Zone B (within 45 miles) of the Palomar Observatory. The project design will incorporate the requirements from the county lighting ordinance consistent with Class II lighting in Zone B.
Riverside County Municipal Code Title 8 Chapter 8.80 Light Pollution	Defines restrictions on the permitted use of certain light fixtures that emit into the night sky light that may effect astronomical observation and research.	Project lighting will be consistent with the Riverside County Lighting Ordinance, and comply with the California Public Utilities Commission requirements. See also AFC Section 7.11.2.2.4.
Riverside County Municipal Code Title 17 Chapter 17.144 W-2 Controlled Development Areas Zone	Defines uses permitted and development standards within the W-2 Controlled Development Area Zone.	Although the zoning code establishes general height limitations for structures within the W-2 Zone, the height of the proposed project facilities are substantially less than the heights of the surrounding wind turbines and have some similarity in height to the adjacent SCE Devers substation. This standard allows for buildings up to seventy-five (75) feet and other structures up to one hundred five (105) feet. Pending approval pursuant to Section 17.172.230. See AFC Section 7.4 (Land Use) for additional discussion concerning compliance with zoning codes.

Appendix F
Revised Table 7.13-2 Landfills, TSDFs, and Transfer Stations

**Table 7.13-2 (Revised)
Landfills, TSDFs, and Transfer Stations**

Landfill/Transfer Station	Phone Number	Location	Class	Materials Accepted	Permitted Capacity	Annual Usage (cu yd)	Remaining Capacity (cu yd)	Estimated Closure Date	Approximate Distance from Site (in miles)	Comments	Enforcement Action Status*
Lamb Canyon Sanitary Landfill	(951) 486-3200	16411 State Highway 79 Beaumont, CA 92223	Class III	Solid Class III only	34 million cubic yards	750,000 tons	20,908,171	2023	32	Mixed municipal, construction/demolition, sludge (biosolids)	No current violations or enforcement actions on record with CIWMB
Badlands Sanitary Landfill	(951) 486-3200	31125 Ironwood Avenue Moreno Valley, CA 92373	Class III	Solid	30.4 million cubic yards	1,000,000 tons	21,866,092	2016	40	Agricultural, construction/demolition, dead animals, industrial, inert, mixed municipal, sludge (biosolids)	No current violations or enforcement actions on record with CIWMB
California Street Landfill	(909) 798-7698	2151 Nevada Street Redlands, CA 92373	Class III	Solid Class III only	10 million cubic yards	207,250 tons	6,800,000	2031	50	Mixed municipal, construction/demolition, sludge (biosolids)	No current violations or enforcement actions on record with CIWMB
Clean Harbors Buttonwillow Landfill	(661) 762-6200	2500 Lokem Road Buttonwillow, CA 93206	Class I and II	Solid & liquid ^a	11 million cubic yards	351,000 tons	8,500,000	2030	238	Will accept RCRA hazardous waste, California hazardous waste and nonhazardous waste	No current violations or enforcement actions on record with CIWMB
Clean Harbors Westmorland Landfill	(760) 344-9400	5295 Garvery Road Westmorland, CA 92281	Class I	Solid & liquid ^a	NA	NA	NA	NA	90	Not accepting waste at this time; working on new cells.	NA

**Table 7.13-2 (Revised)
Landfills, TSDFs, and Transfer Stations**

Landfill/Transfer Station	Phone Number	Location	Class	Materials Accepted	Permitted Capacity	Annual Usage (cu yd)	Remaining Capacity (cu yd)	Estimated Closure Date	Approximate Distance from Site (in miles)	Comments	Enforcement Action Status*
Chemical Waste Management Kettleman Hills Landfill	(559) 386-9711	35251 Old Skyline Road Kettleman City, CA 93239	Class I, II, III	Solid & liquid ^a	10.7 million cubic yards (hazardous)	1 million tons	16,000,000	2013	282	Class III municipal waste	No current violations or enforcement actions on record with CIWMB
Clean Harbors Wilmington	(310) 835-9998	1737 East Denni Street Wilmington, CA 90744	TSDF/ recycle center	Solvents for fuel blending; solids and liquids	NA	NA	Unlimited	None	110	Handles all profiled wastes, mostly Class I.	NA

Notes:
 cu yd = cubic yards
 NA = not available
 TSDF = treatment, storage, and disposal facility
 CIWMB = California Integrated Waste Management Board
^a Liquid wastes require treatment/stabilization and solidification prior to landfilling

Source: The California Integrated Waste Management Board Solid Waste Information System website at <http://www.ciwmb.ca.gov/SWIS/Search.asp> was referenced on July 25, 2007 for each facility for inspections and actions in 2007. If no violations occurred within the last two inspections, this was considered "no current violations".

**Table 7.13-3 (Revised)
Recycling/Transfer Centers**

Recycling Center	Phone Number	Location	Class	Materials Accepted	Permitted Capacity	Annual Usage	Remaining Capacity (cu yd)	Estimated Closure Date	Approximate Distance from Site (in miles)	Comments	Enforcement Action Status*
Southern California Recycling	(760) 343-0499	29250 Rio Del Sol Road Thousand Palms, CA 92276	TSDF /recycle center	Solid Class III only	326,720 tons/year	3,040 tons/year	71,500,000	None	14	Mixed municipal, construction/demolition, industrial, tires	No current violations or enforcement actions on record with CIWMB
Coachella Valley Transfer Station	none	87011-A Landfill Road Coachella, CA 92236	TSDF /recycle center	Solid Class III only	3,171,250 tons/year	275,000 tons/year	N/A	None	31	Agricultural, Construction/demolition, Green Materials, Industrial, Inert, Metals, Mixed municipal, Tires	May and June 2007 inspections revealed violations (17408.1-Litter Control; 17407.2-Cleaning; and 17408.6-Maintenance Program). No enforcement actions on record with CIWMB
Inland Regional MRF & TS	(866) 238-3301	2059 East Steel Road Colton, CA 92324	Large Volume TSDF center	Class III	24,667 cubic yards/year	Not known	N/A	None	48	Construction/demolition, Green Materials, Industrial, Mixed municipal, Wood waste	No current violations or enforcement actions on record with CIWMB
California Bio-Mass Inc. Victor Valley Regional Composting Facility	(760) 246-7946	20055 Shay Rd. Victorville, CA 92392	Composting	Class III	700 tons per day	NA	270,000 Cubic Yards	None	100	Agricultural, construction/demolition, food wastes, liquid waste, manure, mixed municipal	No current violations or enforcement actions are on record with CIWMB
Clean Harbors Wilmington	(310) 835-9998	1737 East Denni Street Wilmington, CA 90744	TSDF/ recycle center	Solvents for fuel blending; solids and liquids	NA	NA	Unlimited	None	110	Handles all profiled wastes, mostly Class I	NA

**Table 7.13-3 (Revised)
Recycling/Transfer Centers**

Recycling Center	Phone Number	Location	Class	Materials Accepted	Permitted Capacity	Annual Usage	Remaining Capacity (cu yd)	Estimated Closure Date	Approximate Distance from Site (in miles)	Comments	Enforcement Action Status*
Clean Harbors Los Angeles	(323) 277-2500	5756 Alba Street Los Angeles, CA 90058	TSDF	Small Quantity Class I, II Profiled Wastes	NA	NA	NA	NA	105	Inorganic cleaning solutions, oils, flammable solvents, organic and inorganic chemicals, paint residues, toxic/reactive debris, off-spec commercial products.	NA

Notes:

cu yd = cubic yards

NA = not available

TSDF = treatment, storage, and disposal facility

* Liquid wastes require treatment/stabilization and solidification prior to landfilling

Source: The California Integrated Waste Management Board Solid Waste Information System website at <http://www.ciwmb.ca.gov/SWIS/Search.asp> was referenced on July 25, 2007 for each facility for inspections and actions in 2007. If no violations occurred within the last two inspections, this was considered "no current violations".

Appendix G
Correspondence from Mission Springs Water District



66575 Second Street, Desert Hot Springs, CA 92240 • www.mswd.org • p 760.329.6448 • f 760.329.2482

July 27, 2007

Mr. Bill Pfanner
Project Manager
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814

Re: CPV Sentinel Energy Project
Docket Number 07-AFC-03

Dear Mr. Pfanner:

Mission Springs Water District (District) staff and Competitive Power Venture (CPV) staff are in the process of discussing various options regarding the water supply needs of their "Sentinel Energy Project". These discussions have gone on since late last year and have considered several options. Presently, we are discussing an option that considers the use of effluent from our Horton wastewater treatment plant which is currently used to replenish the Mission Creek Basin. The Horton plant currently processes approximately 1.3 million gallons per day of waste water, or approximately 1,500 acre feet per year. We understand that the Sentinel project will consume a maximum of 1,100 acre feet per year, and the estimated lifetime average consumption of water at Sentinel is expected to be 550 acre feet per year.

This option is something we intend to present to the District Board for consideration. However, the use of water for any purpose in this valley requires extensive evaluation and the terms and conditions to move forward with this proposal requires further attention. This latest option may have some merit and I will work with CPV staff to resolve our issues and formulate an agreement that is acceptable to everyone.

It is the District's practice to enter into comprehensive bilateral agreements in complex situations like this, rather than issuing a will-serve letter, so that the interests of both parties can be clearly defined. Some of the commercial terms and conditions under current negotiation include funding of waste water treatment upgrades, the timing of the upgrades, the funding, location, ownership and specifications for wells and infrastructure, and provisions covering default conditions.

The District's mission is to insure that water is available for our current and future uses. Negotiations between the District Staff and CPV Sentinel have progressed on these



matters, and we intend to be good stewards of the water resources in our basin. I will do everything I can to be sure we have something to the District Board as quickly as possible.

If you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Arden Wallum". The signature is fluid and cursive, with the first name "Arden" being more prominent than the last name "Wallum".

Arden Wallum
General Manager

cc: Mark Turner, CPV
Bob Hren, CPV
MSWD Board of Directors

Appendix H
Revised Heat and Water Balance and Consumption
Information

APPENDIX H
REVISED HEAT AND WATER BALANCE AND CONSUMPTION INFORMATION
TABLE OF CONTENTS

Revised Table 2.4-3	Heat and Mass Balance
Revised Table 2.4-5	Water Balances
Revised Table 2.4-6	Daily and Annual Average Water Consumption Requirements
Revised Table 7.14-7	Daily and Annual Average Water Consumption Requirements
Revised Figure 2.4-6	Water Balance Diagram

Table 2.4-3 (Revised)
Heat and Mass Balance

No. of Combustion Turbines: 8		Heat and Mass Balance Data Table (Reference Figure 2.4-4 for graphic and stream identification)																				Maximums (1)	Est. Annual Avg. Based on Expected 15% Dispatch (2)	Est. Annual Avg. Based on 34% Capacity (3)	
Stream (4)	Description	Units	111	112	100	100	113	114	115	116	117	118	103	119	120	121	107	122	123	varies	varies	varies			
---	Case Number	---	111	112	100	100	113	114	115	116	117	118	103	119	120	121	107	122	123	---	---	---			
---	Ambient Temperature	°F	0	10	17	20	30	30	40	50	60	70	72	80	90	100	107	110	120	varies	90	90			
---	Ambient Relative Humidity	%	80	80	80	60	60	60	62.7	49	41.5	40	35.6	30.2	21.7	18.4	16.8	12.7	varies	30.2	30.2				
Per Combustion Turbine																									
101	Inlet Air	klb/hr	1,635	1,630	1,632	1,622	1,614	1,613	1,602	1,574	1,574	1,570	1,550	1,524	1,508	1,494	1,490	1,474	1,635	229	518				
102	Natural Gas	MMBtu/hr	787	792	790	798	806	806	810	796	794	792	781	767	759	752	750	742	810	115	261				
103	Fog/Evapor Water	klb/hr	38.2	38.4	38.3	38.8	39.1	39.1	39.3	38.6	38.6	38.4	37.9	37.2	36.8	36.5	36.4	36.0	39.3	5.6	12.7				
104	NOx Inject Water	klb/hr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	4.6	5.5	6.9	9.0	10.3	10.9	12.9	12.9	1.0	2.3				
105	Fog/Evapor Drain	klb/hr	34.2	34.4	34.1	35.0	35.3	34.8	34.6	34.6	31.7	31.4	30.0	29.1	28.7	28.3	28.1	27.7	35.3	4.4	9.9				
106	Intercooler Drain	klb/hr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	0.8	1.0	1.3	1.5	1.6	1.9	1.9	0.2	0.4				
107	VBV Vent	klb/hr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	4.3	6.1	6.5	8.6	8.6	0.4	1.0				
108	Cooling Water Supply	klb/hr	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	0.0	0.0				
109	Cooling Water Return	klb/hr	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	590	1,336				
110	Cooling Tower Duty	MMBtu/hr	75	80	79	85	90	90	94	97	96	96	97	100	102	104	105	107	107	15	34				
111	Combustion Turbine Exhaust	klb/hr	1,708	1,703	1,705	1,696	1,688	1,687	1,676	1,646	1,644	1,639	1,618	1,590	1,573	1,559	1,554	1,538	1,708	239	541				
112	SCR Purge Air	klb/hr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
113	Aqueous Ammonia	klb/hr	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0				
114	SCR Transport Air	klb/hr	TBD																						
115	Not Used	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---				
115	Stack Exhaust	klb/hr	1,708	1,703	1,705	1,696	1,688	1,687	1,676	1,646	1,644	1,640	1,618	1,590	1,574	1,559	1,554	1,538	1,708	239	541				
Total All Combustion Turbines																						803	803	119	270
---	Plant Net Power	MA	789	792	791	795	800	800	801	782	782	779	766	747	769	726	723	712	801	112	254				
---	Plant Net Heat Rate (LHV)	Btu/kwh	7,978	7,998	7,988	8,030	8,060	8,057	8,088	8,140	8,123	8,129	8,160	8,215	8,250	8,282	8,292	8,330	8,330	1,232	2,793				
---	Plant Fuel Consumption	MMBtu/re	6,990	7,030	7,014	7,090	7,153	7,154	7,195	7,064	7,052	7,031	6,935	6,813	6,741	6,677	6,657	6,585	7,195	1,022	2,316				
101	Inlet Air	klb/hr	13,082	13,040	13,057	12,977	12,909	12,907	12,814	12,589	12,590	12,557	12,400	12,190	12,064	11,954	11,918	11,792	13,082	1,828	4,145				
102	Natural Gas	MMBtu/hr	6,298	6,334	6,318	6,387	6,444	6,446	6,482	6,364	6,354	6,335	6,247	6,138	6,073	6,016	5,998	5,933	6,482	921	2,087				
103	Fog/Evapor Water	klb/hr	305.7	307.5	306.7	310.1	312.8	312.9	314.7	308.9	308.4	307.5	303.3	298.0	294.8	292.0	291.1	288.0	314.7	44.7	101.3				
104	NOx Inject Water	klb/hr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.44	3.64	4.41	5.2	7.18	8.20	8.69	103.2	103.2	8.3	18.8				
105	Fog/Evapor Drain	klb/hr	273.7	275.4	272.4	279.8	282.3	278.5	276.7	268.3	253.7	251.2	239.8	232.8	229.2	226.1	225.1	221.5	282.3	34.9	79.2				
106	Intercooler Drain	klb/hr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	5.5	6.6	8.3	10.8	12.3	13.0	15.5	15.5	1.2	2.8				
107	VBV Vent	klb/hr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.0	34.6	49.0	51.8	69.1	69.1	3.5	7.8				
108	Cooling Water Supply	klb/hr	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	4,716	10,690				
109	Cooling Water Return	klb/hr	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	31,440	4,716	10,690				
110	Cooling Tower Duty	MMBtu/hr	598	640	629	680	719	719	756	773	767	768	774	802	819	835	840	859	859	120	273				
111	Combustion Turbine Exhaust	klb/hr	13,662	13,623	13,636	13,566	13,505	13,498	13,405	13,167	13,153	13,116	12,943	12,721	12,588	12,472	12,434	12,302	13,662	1,908	4,325				
112	SCR Purge Air	klb/hr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
113	Aqueous Ammonia	klb/hr	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.2	0.2	0.4				
114	SCR Transport Air	klb/hr	TBD																						
115	Not Used	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---				
115	Stack Exhaust	klb/hr	13,663	13,624	13,637	13,568	13,506	13,500	13,407	13,168	13,154	13,117	12,944	12,722	12,589	12,473	12,435	12,303	13,663	1,908	4,325				
SCR = selective catalytic reduction		°F	739	746	743	756	767	768	779	784	785	785	789	794	797	799	800	803	803	119	270				

Notes:
 1. Maximums are calculated from ambient spread and do not coincide (combustion turbine inlet air and exhaust flows peak at low ambient, fuel use peaks in 50°F case, and water use peaks at high ambient).
 2. For comparison, annual average is also calculated based on 34% capacity factor and the typical summer operation (90°F case above).
 3. For comparison, annual average is also calculated based on 34% capacity factor and the typical summer operation (90°F case above).
 4. Streams correspond to those streams shown on Figure 2.4-4, Heat and Mass Balance Diagram.

Table 2.4-5 (Revised)
Water Balances

Stream (5)	No. of Combustion Turbines:	8	Description	Units	Water Balance Data Table Reference Figure 2.4-6 for graphic and stream identification)								Comments
					SCE-Test	Typical Summer Operation Average Daily Flow, GPM	Maximum Daily Flow, GPM	Est. Annual Avg. Flow Based on Expected 15% Dispatch, GPM (1)	Est. Annual Total Use Based on Expected 15% Dispatch, AFY (2)	Est. Annual Avg. Flow Based on 34% Capacity, GPM (3)	Est. Annual Total Use Based on 34% Capacity, AFY (4)		
1			Water Supply	gpm	2,022	1,975	2,059	296	478	671	1,083		
2			Raw Water Makeup To Cooling Tower, MDS, & Service Water	gpm	2,022	1,975	2,059	296	478	671	1,083		
3			Potable Water / Sanitary Waste	gpm	4.00	4.00	4.00	0.6	1.0	1.4	2.2	Estimate	
4			Service Water	gpm	1.00	1.00	1.00	0.2	0.2	0.3	0.5	Estimate	
5			Service Water Wastewater	gpm	1.00	1.00	1.00	0.2	0.2	0.3	0.5		
6			OWS Sludge Water	gpm	0.00	0.00	0.00	0.0	0.0	0.0	0.0	Assume average is negligible	
7			OWS Wastewater	gpm	1.00	1.00	1.00	0.2	0.2	0.3	0.5		
8			OWS Recovered Wastewater	gpm	1.00	1.00	1.00	0.2	0.2	0.3	0.5		
9			Raw Water Makeup To Cooling Tower & DM System	gpm	2,021	1,974	2,058	296	478	671	1,083		
10			Raw Water Makeup to Mobile DI	gpm	599.5	559.5	633.1	84	135	190	307		
11			Cooling Tower Makeup	gpm	1,765	1,706	1,808	256	413	580	936		
12			Cooling Tower Evaporation	gpm	1,503	1,444	1,546	217	349	491	792		
13			Cooling Tower Drift	gpm	0.31	0.31	0.31	0.05	0.08	0.11	0.17		
14			Cooling Tower Blowdown to Wastewater Collection	gpm	262.0	262.0	262.0	39	63	89	144		
15			Wastewater Feed to MF	gpm	262.0	262.0	262.0	39	63	89	144		
16			Total Feed to MF (excludes high rate feed recirculation - internal loop)	gpm	363.6	363.6	363.6	55	88	124	199		
17			MF Filtrate (RO Feed)	gpm	362.4	362.4	362.4	54	88	123	199		
18			MF Reject Stream	gpm	10.1	10.1	10.1	2	2	3	6		
19			Recovered Thickener Decant	gpm	4.04	4.04	4.04	1	1	1	2		
20			Filter Press Feed	gpm	6.06	6.06	6.06	1	1	2	3	Assume 3% solids thickened to 5% solids	
21			Filter Press Filtrate	gpm	4.95	4.95	4.95	1	1	2	3	Assume 5% solids to 25% solids	
22			Filter Press Solids	gpm	1.21	1.21	1.21	0	0	0	1	Assume 25% dry solids	
23			RO Product (Recovered to Cooling Tower)	gpm	242.8	242.8	242.8	36	59	83	133	67% Recovery	
24			RO Reject	gpm	119.6	119.6	119.6	18	29	41	66		
25			RO Reject Feed to Crystallizer	gpm	20.0	20.0	20.0	3	5	7	11	Approx 4% dry solids	
26			RO Reject Recirculated	gpm	99.6	99.6	99.6	15	24	34	55		
27			Crystallizer Distillate (to mobile DI)	gpm	19.0	19.0	19.0	3	5	6	10		
28			Crystallizer Sludge (Centrifuge feed)	gpm	2.93	2.93	2.93	0	1	1	2	Assume 30% dry solids	
29			Centrifuge Solids	gpm	0.98	0.98	0.98	0	0	0	1	Assume 90% dry solids	
30			Centrifuge Liquid (Recover to crystallizer)	gpm	1.95	1.95	1.95	0	0	1	1		
31			Mobile DI System Feed	gpm	643.3	595.3	683.3	89	144	202	326		
32			DM Water Storage Tank Feed	gpm	643.3	595.3	683.3	89	144	202	326		
33			DM IE rinse water (out)	gpm	2.00	2.00	2.00	0.3	0.5	0.7	1.1		
34			DM rinse wastewater to Cooling Tower	gpm	2.00	2.00	2.00	0.3	0.5	0.7	1.1		
35			WFI Feed	gpm	452.0	465.6	443.2	70	113	158	255		
36			Inlet Fogger Feed	gpm	188.8	127.2	237.6	19	31	43	70	Estimate	
37			Misc. DM Water Use	gpm	0.50	0.50	0.50	0.1	0.1	0.2	0.3	Estimate	
38			DM Rinse Water (in)	gpm	2.00	2.00	2.00	0.3	0.5	0.7	1.1	Estimate	

Table 2.4-5 (Revised)
Water Balances

No. of Combustion Turbines: 8		Water Balance Data Table										Comments
Stream (5)	Description	Units	Reference Figure 2.4-6 for graphic and stream identification)									
---	Case Number	---	107	120	123	120	120	120	120	120		
---	Ambient Temperature	°F	107	90	120	90	90	90	90	90		
---	Ambient Relative Humidity	%	18.4%	30.2%	12.7%	30.2%	30.2%	30.2%	30.2%	30.2%		
Total-All Combustion Turbines												
39	Fogger Evaporation	gpm	164.0	110.4	206.4	17	27	38	61			
40	Fogger Mist Eliminator Drains	gpm	24.8	16.8	31.2	3	4	6	9			
41	Condensed Moisture from Intercooler	gpm	98.0	46.0	138.0	7	11	16	25			
42	Combined Feed to Crystallizer	gpm	22.0	22.0	22.0	3	5	7	12			

Reference: Aquagenics, Inc.
 Note:
 1 Estimated annual average (GPM) based on expected 15% dispatch and the typical summer operation (90°F case above).
 2 Total annual usage (AFY) based on expected 15% dispatch and the typical summer operation (90°F case above).
 3 For comparison, annual average (GPM) is also calculated based on 34% capacity factor and the typical summer operation (90°F case above).
 4 For comparison, total annual usage (AFY) is also calculated based on 34% capacity factor and the typical summer operation (90°F case above).
 5 Streams correspond to those shown on Figure 2.4-6, Water Balance.

Table 2.4-6 (Revised)
Daily and Annual Average Water Consumption Requirements

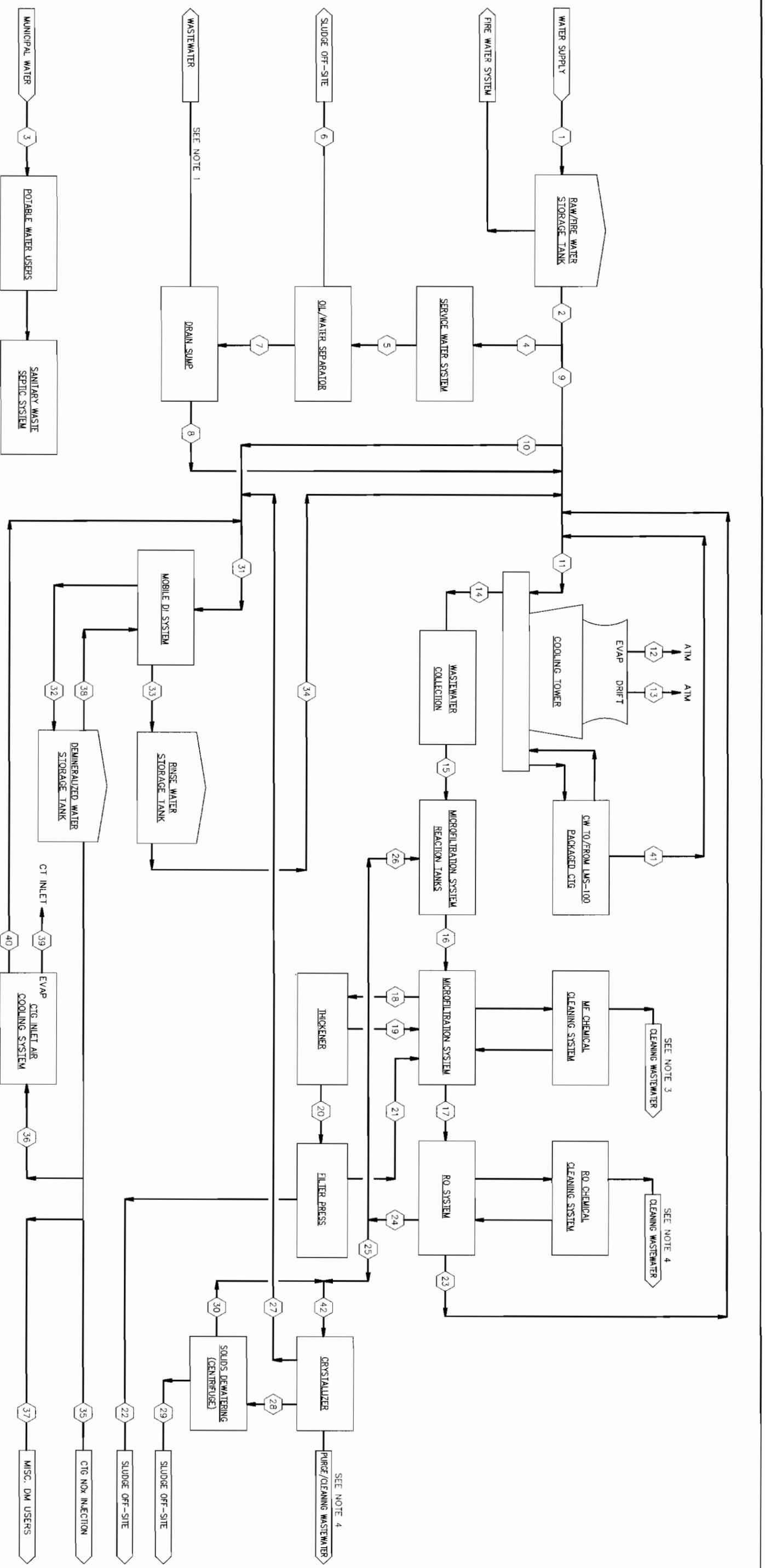
Stream Name	Maximum Daily Flow¹ (gpm)	Estimated Annual Avg. Flow at 15% Dispatch² (gpm)	Estimated Annual Usage at 15% Dispatch³ acre ft/year	Annual Avg. Flow at 34% Capacity⁴ (gpm)	Maximum Annual Usage at 34% Capacity⁵ acre ft/year
Plant Water Usage:					
CTG Inlet Air Cooling System	238	19	31	43	70
CTG NO _x Injection	443	70	113	158	255
Miscellaneous DM users	0.5	0.1	0.1	0.2	0.3
CTG Cooler Evaporation	1,546	217	349	491	572
Cooling Tower Drift	0.3	0.05	0.08	0.1	0.2
Cooling Tower Blowdown	262	39	63	89	144
Service Water	1.0	0.2	0.2	0.3	0.5
Recovered Water:					
Recovered Water from Intercooler	138	7	11	16	25
Recovered Water from RO	243	36	59	83	133
Recovered Water from Crystallizer	19	3	5	6	10
Recovered Water from Inlet Air Cooling System	31	3	4	6	9
Total Plant Water Usage Requirements	2,059	291	478	671	1,083
Potable Water/Sanitary Waste	4	1	2	1	2

Notes:

- ¹ Maximum daily flow rates based on 120°F ambient condition.
- ² Estimated annual average flow based on typical summer operation (90°F ambient) and expected 15% dispatch.
- ³ Estimated annual usage based on typical summer operation (90°F ambient) and expected 15% dispatch.
- ⁴ For comparison, annual average flow is also calculated based on based on typical summer operation (90°F ambient) and assumed 34% capacity factor.
- ⁵ For comparison, annual average usage is also calculated based on based on typical summer operation (90°F ambient) and assumed 34% capacity factor.

Table 7.14-7 (Revised)
Daily and Annual Average Water Consumption Requirements

Stream Name	Average Annual Flow ¹ (gpm)	Maximum Daily Flow ² (gpm)	Maximum Annual Usage ³ (acre ft/year)
Plant Water Usage:			
CTG Inlet Air Cooling System	43	238	70
CTG NO _x Injection	158	443	255
Miscellaneous DM users	0.2	0.5	0
CTG Cooler Evaporation	491	1,546	572
Cooling Tower Drift	0.1	0.3	0.2
Cooling Tower Blowdown	89	262	144
Service Water	0.3	1.0	0.5
Recovered Water:			
Recovered Water from Interecooler	16	138	25
Recovered Water from RO	83	243	133
Recovered Water from Crystallizer	6	19	10
Recovered Water from Inlet Air Cooling System	6	31	9
Total Plant Water Usage Requirements	671	2,059	1,083
Potable Water/Sanitary Waste	1	4	2
<p>Notes:</p> <p>¹ Average annual usage based on average summer operating condition at 34% capacity factor.</p> <p>² Maximum daily flow based on a peak ambient summer day (120°F, 12.7 percent RH).</p> <p>³ Maximum annual usage based on maximum permitted annual hours of operation. However, the plant is expected to be dispatched, on a lifetime average basis, approximately half of the maximum annual permitted capacity. Therefore, the long-term average annual water usage is estimated to be 550 afy (i.e., half of approximately 1,100 afy).</p> <p>CTG = combined turbine generator DM = demineralized water gpm = gallons per minute NO_x = oxides of nitrogen RO = reverse osmosis</p>			



- NOTES:
1. Alternate line to wastewater collection or emergency storage may be used.
 2. Stormwater collection not shown.
 3. To be recovered in the microfiltration system.
 4. To offsite disposal.

Refer to Table 2.4-5

Source:
Spectrum Energy, Inc.
Water Balance Diagram (CPV_M-WMB-001-1)
Rev. A, 4/26/07

WATER BALANCE DIAGRAM

CPV Sentinel Energy Project
CPV Sentinel, LLC
Riverside County, California
July 2007
28067168
URS
FIGURE 2.4-6 (REVISED)