State Of California

Memorandum

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The Resources Agency of California

Date: October 2, 2008
Telephone: (916) 654-3794

To: Jackalyne Pfannenstiel, Chairman
James D. Boyd, Vice Chair
Arthur H. Rosenfeld, Ph.D., Commissioner
Jeffrey Byron, Commissioner
Karen Douglas, Commissioner

From: California Energy Commission – Melissa Jones
1516 Ninth Street
Sacramento, CA 95814-5512
Executive Director

Terry O'Brien for

Subject: **WILLOW PASS GENERATING STATION, REVISED DATA ADEQUACY RECOMMENDATION (08-AFC-6)**

On June 30, 2008, the California Energy Commission received an Application for Certification (AFC) from Mirant Willow Pass, LLC to construct and operate a dry-cooled, natural gas-fired electric power facility located on a 26 acre brown-field site within the existing 1900 MW Pittsburg Power Plant adjacent to the City of Pittsburg in Contra Costa County, California. The proposed project will replace four retired oil fired turbine generators, a fuel oil storage tank and associated stacks.

The Carquinez Strait region of Contra Costa County has a number of existing large industrial and energy facilities, such as oil refineries, petrochemical manufacturing, and electric power plants. Within the Pittsburg/Antioch area, Mirant Delta LLC owns two gas-fired power plants, the Pittsburg facility noted above, and the 680 MW Contra Costa plant in eastern Antioch. Mirant has filed a separate AFC (08-AFC-3) for its proposed 930 MW Marsh Landing Generating Station, adjacent to the Contra Costa power plant. Since 1998, the Commission has licensed three gas-fired power plants in this area: the 555 MW Los Medanos facility in Pittsburg, the 887 MW Delta Energy Center in Antioch, and the 530 MW Gateway facility in Antioch.

Staff's July 30, 2008 initial data adequacy review of the proposed 550 megawatt (MW) Willow Pass Generating Station (Willow Pass) Application for Certification (AFC) determined that it did not meet all the requirements listed in Title 20, section 1704, and Division 2, Chapter 5, Appendix B of the California Code of Regulations for the 12-month process. Specifically, the AFC was deficient in 7 of 23 areas, Air Quality, Biological Resources, Cultural Resources, Paleontological Resources, Transmission System Design, Soils, and Visual Resources.

The applicant provided an AFC Supplement on September 26, 2008. Staff has reviewed the supplemental information and believes the AFC now meets the above listed requirements in all 23 technical disciplines. Attached is a summary table and revised data adequacy worksheets for the seven (7) technical disciplines previously determined to be data inadequate reflecting that the supplemental information submitted by the applicant achieves AFC data adequacy.

At the Energy Commission's Business Meeting on October 8, 2008, Staff will now recommend that the Energy Commission accept the Willow Pass Generating Station AFC with the supplemental information as data adequate and request that a Committee be appointed. If you have any questions, please call Ivor Benci-Woodward, staff Project Manager, at 654-3911.

Attachments

ATTACHMENT A

OVERVIEW OF ENERGY COMMISSION STAFF'S
Revised Data Adequacy Determination
Willow Pass Generating Station Project
08-AFC-6

Technical Area	Attachment B Page No.	Adequate ?
AIR QUALITY	7	YES
BIOLOGICAL RESOURCES	14	YES
CULTURAL RESOURCES	26	YES
PALEONTOLOGICAL RESOURCES	32	YES
SOILS	35	YES
TRANSMISSION SYSTEM DESIGN	37	YES
VISUAL RESOURCES	41	YES

ATTACHMENT B

ENERGY COMMISSION STAFF'S
Data Adequacy Determination
Revised to Reflect AFC Supplement

Willow Pass Generating Station Project
08-AFC-6

October 2, 2008

Adequacy Issue:	Adequate **X** Inadequate ___	**DATA ADEQUACY WORKSHEET**		Revision No. 1	Date October 2, 2008
Technical Area:	**Air Quality**	Project:	Willow Pass Generating Station	Technical Staff:	Tuan Ngo
Project Manager:	Ivor Benci-Woodward	Docket:	08-AFC-6	Technical Senior:	Matthew Layton

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 7.1 pp. 7.1-1 to 7.1-23 App. J3, J4	Yes	
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.	Section 7.1 pp. 7.1-21 to 7.1-27 Tables 7.1-27 and 28 Bay Area Air Quality Management District completeness letter dated July 17, 2008	~~No~~ Yes	~~Please submit an application for Authority to Construct and Permit to Operate to the Bay Area Air Quality Management District.~~
Appendix B (g) (8) (B)	The heating value and chemical characteristics of the proposed fuels, the stack height and diameter, the exhaust velocity and temperature, the heat rate and the expected capacity factor of the proposed facility.	Tables 5-1, 7.1-12 and 13	Yes	
Appendix B (g) (8) (C)	A description of the control technologies proposed to limit the emission of criteria pollutants.	Section 7.1-5 pp. 7.1-22 Table 7.1-30	Yes	
Appendix B (g) (8) (D)	A description of the cooling system, the estimated cooling tower drift rate, the rate of water flow through the cooling tower, and the maximum concentrations of total dissolved solids.	N/A	N/A	

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Appendix B (g) (8) (E)	The emission rates of criteria pollutants and greenhouse gases (CO2, CH4, N2O, and SF6) from the stack, cooling towers, fuels and materials handling processes, delivery and storage systems, and from all on-site secondary emission sources.	Section 7.1.2.2 p. 7.1-8 Tables 7.1-13, 17 and 17	Yes	
Appendix B (g) (8) (F)(i)	A description of typical operational modes, and start-up and shutdown modes for the proposed project, including the estimated frequency of occurrence and duration of each mode, and estimated emission rate for each criteria pollutant during each mode.	Section 7.1.2.2 p. 7.1-9 Tables 7.1-12, 13, 14, 16 and 17	Yes	
Appendix B (g) (8) (F)(ii)	A description of the project's planned initial commissioning phase, which is the phase between the first firing of emissions sources and the commercial operations date, including the types and durations of equipment tests, criteria pollutant emissions, and monitoring techniques to be used during such tests.	Section 7.1.2.2 pp. 7.1-10 to 7.1-11 Table 7.1-18	Yes	
Appendix B (g) (8) (G)	The ambient concentrations of all criteria pollutants for the previous three years as measured at the three Air Resources Board certified monitoring stations located closest to the project site, and an analysis of whether this data is representative of conditions at the project site. The applicant may substitute an explanation as to why information from one, two, or all stations is either not available or unnecessary.	Section 7.1.1.2 pp. 7.1-3 to 7.1-7 Table 7.1-2 to 7.1-8	Yes	

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Appendix B (g) (8) (H)	One year of meteorological data collected from either the Federal Aviation Administration Class 1 station nearest to the project or from the project site, or meteorological data approved by the California Air Resources Board or the local air pollution control district.	Air Quality modeling files compact disk	Yes	
Appendix B (g) (8) (H) (i)	If the data is collected from the project site, the applicant shall demonstrate compliance with the requirements of the U.S. Environmental Protection Agency document entitled "On-Site Meteorological Program Guidance for Regulatory Modeling Applications" (EPA - 450/4-87-013 (August 1995)), which is incorporated by reference in its entirety.	Section 7.1.2.3 pp. 7.1-13 to 7.1-14	Yes	
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.	Air Quality modeling files compact disk	Yes	
Appendix B (g) (8) (I)	An evaluation of the project's direct and cumulative air quality impacts, consisting of the following:			

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Appendix B (g) (8) (I) (i)	A screening level air quality modeling analysis, or a more detailed modeling analysis if so desired by the applicant, of the direct criteria pollutant impacts of project construction activities on ambient air quality conditions, including fugitive dust (PM_{10}) emissions from grading, excavation and site disturbance, as well as the combustion emissions [nitrogen oxides (NO_x), sulfur dioxide (SO_2), carbon monoxide (CO), and particulate matter less than 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter (PM2.5)] from construction-related equipment;	Section 7.1.2.4 p. 7.1-17 Air Quality modeling files compact disk App. J1	Yes	
Appendix B (g) (8) (I) (ii)	A screening level air quality modeling analysis, or a more detailed modeling analysis if so desired by the applicant, of the direct criteria pollutant (NO_x, SO_2, CO, PM_{10}, and $PM_{2.5}$) impacts on ambient air quality conditions of the project during typical (normal) operation, and during shutdown and startup modes of operation. Identify and include in the modeling of each operating mode the estimated maximum emissions rates and the assumed meteorological conditions;	Section 7.1.2.4 p. 7.1-17 Air Quality modeling files compact disk App. J1	Yes	

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Appendix B (g) (8) (I) (iii)	A protocol for a cumulative air quality modeling impacts analysis of the project's typical operating mode in combination with other stationary emissions sources within a six mile radius which have received construction permits but are not yet operational, or are in the permitting process. The cumulative inert pollutant impact analysis should assess whether estimated emissions concentrations will cause or contribute to a violation of any ambient air quality standard; and	Section 7.1.3 p. 7.1-21 App. J1	Yes	
Appendix B (g) (8) (I) (iv)	An air dispersion modeling analysis of the impacts of the initial commissioning phase emissions on state and federal ambient air quality standards for NO_X, SO_2, CO, PM_{10}, and $PM_{2.5}$.	Section 7.1.2.4 p. 7.1-19 Table 7.1-18 and 7.1-26	Yes	
Appendix B (g) (8) (J)	If an emission offset strategy is proposed to mitigate the project's impacts under subsection (g)(1), provide the following information:			
Appendix B (g) (8) (J) (i)	The quantity of offsets or emission reductions that are needed to satisfy air permitting requirements of local permitting agencies (such as the air district), state and federal oversight air agencies, and the California Energy Commission. Identify by criteria air pollutant, and if appropriate, greenhouse gas; and	Section 7.1.4 p. 7.1-21 Table 7.1-28	Yes	
Appendix B (g) (8) (J) (ii)	Potential offset sources, including location, and quantity of emission reductions;	Tables 71.-27 and 28	Yes	

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Appendix B (g) (8) (K)	A detailed description of the mitigation, if any, which an applicant may propose, for all projects impacts from criteria pollutants that currently exceed state or federal ambient air quality standards, but are not subject to offset requirements under the district's new source review rule.	Section 7.1.4 p. 7.1-21	Yes	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal 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	Section 7.1.6 p. 7.1-24 Table 7.1-35	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Section 7.1.8 p. 7.1-32 Table 7.1-37	Yes	

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Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Section 7.1.7 p. 7.1-32 Table 7.1-36		
Appendix B (i) (3)	A schedule indicating 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.	Section 7.1.8 p. 7.1-32 Table 7.1-37	Yes	

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Project Manager:	Ivor Benci-Woodward	Docket:	08-AFC-6	Technical Senior:	Rick York

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Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	**Existing site conditions:** Section 7.2 pgs 7.2-1 to 7.2-2 Section 7.2.1.1 pgs 7.2-2 to 7.2-5	Yes	
		Direct, indirect, and cumulative impacts: Section 7.2.2.1 pgs 7.2-18 to 7.2-23 Section 7.2.2.2 pgs 7.2-23 to 7.2-25 Section 7.2.3 pgs 7.2-25 to 7.2-26	Yes	
		Mitigation measures: Section 7.2.2.1 pgs 7.2-18 to 7.2-23 Section 7.2.2.2 pgs 7.2-23 to 7.2-25 Section 7.2.3 pgs 7.2-25 to 7.2-26 Section 7.2.4.1 pg 7.2-26	Yes	
		Monitoring plans: Section 7.2.2.1 pgs 7.2-18 to 7.2-23 Section 7.2.2.2 pgs 7.2-23 to 7.2-25 Section 7.2.3 pgs 7.2-25 to 7.2-26 Section 7.2.4 pgs 7.2-26 to 7.2-30	Yes	

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Appendix B (g) (13) (A)	A regional overview and discussion of terrestrial and aquatic biological resources, with particular attention to sensitive biological resources within ten (10) miles of the project. Include a map at a scale of 1:100,000 (or other suitable scale) showing sensitive biological resource location(s) in relation to the project site and related facilities and any boundaries of a local Habitat Conservation Plan or similar open space land use plan or designation. Sensitive biological resources include the following:	**Regional overview:** Section 7.2.1.1 pgs 7.2-3 to 7.2-5 Section 7.2.1.2 pgs 7.2-5 to 7.2-6 **Regional vicinity maps:** Figure 7.2-1 Figure 7.2-2 Figure 7.2-3 Figure 7.2-4 Supplemental Filing for Biological Resources Appendix B	Yes ~~No~~ Yes	~~Please provide a map of biological resources within 10 miles of the project site.~~
Appendix B (g) (13) (A) (i)	species listed under state or federal Endangered Species Acts;	**Federal and state Endangered Species:** Table 7.2-1 pgs 7.2-36 to 7.2-55 Section 7.2.1.5 pgs 7.2-8 to 7.2-9 Section 7.2.1.6 pgs 7.2-9 to 7.2-18 Appendix K1	Yes	
Appendix B (g) (13) (A) (ii)	resources defined in sections 1702(q) and (v) of Title 20 of the California Code of Regulations;	**Areas of critical concern and species of special concern:** Table 7.2-1 pgs 7.2-36 to 7.2-55 Section 7.2.1.5 pgs 7.2-8 to 7.2-9 Section 7.2.1.6 pgs 7.2-9 to 7.2-18	Yes	

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Appendix B (g) (13) (A) (iii)	species identified as state Fully Protected;	**State Fully Protected species:** Table 7.2-1 pgs 7.2-36 to 7.2-55 Section 7.2.1.5 pgs 7.2-8 to 7.2-9 Section 7.2.1.6 pgs 7.2-9 to 7.2-18	Yes	
Appendix B (g) (13) (A) (iv)	species covered by Migratory Bird Treaty Act;	**Migratory Bird Act species:** Table 7.2-1 pgs 7.2-36 to 7.2-55 Section 7.2.1.6 pgs 7.2-9 to 7.2-18	Yes	
Appendix B (g) (13) (A) (v)	species and habitats identified by local, state, and federal agencies as needing protection, including but not limited to those identified by the California Natural Diversity Database, or where applicable, in Local Coastal Programs or in relevant decisions of the California Coastal Commission; and	**Species and habitats identified in the California Natural Diversity Database:** Table 7.2-1 pgs 7.2-36 to 7.2-55 Section 7.2.1.5 pgs 7.2-8 to 7.2-9 Section 7.2.1.6 pgs 7.2-9 to 7.2-18	Yes	
Appendix B (g) (13) (A) (vi)	fish and wildlife species that have commercial and/or recreational value.	**Fish and wildlife of commercial or recreational value:** Section 7.2.1.6 pg 7.2-9 to 7.2-18	Yes	
Appendix B (g) (13) (B)	Include a list of the species actually observed and those with a potential to occur within 1 mile of the project site and 1,000 feet from the outer edge of linear facility corridors. Maps or aerial photographs shall include the following:	**List of species observed:** Table 7.2-2 pgs 7.2-56 to 7.2-59 Table 7.2-3 pg 7.2-60	Yes	

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Appendix B (g) (13) (B) (i)	Detailed maps at a scale of 1:6,000 or color aerial photographs taken at a recommended scale of 1 inch equals 500 feet (1:6,000) with a 30 percent overlap that show the proposed project site and related facilities, biological resources including, but not limited to, those found during project-related field surveys and in records from the California Natural Diversity Database, and the associated areas where biological surveys were conducted. Label the biological resources and survey areas as well as the project facilities;	**Map of proposed project site:** Figure 7.2-1 Figure 7.2-2 Figure 7.2-3 Figure 7.2-4 **Map of biological resources:** Figure 7.2-1 Figure 7.2-2 Figure 7.2-3 Figure 7.2-4 **Map of survey area:** Figure 7.2-1 Figure 7.2-2 Figure 7.2-3 Figure 7.2-4	Yes Yes Yes	
Appendix B (g) (13) (B) (ii)	A depiction of the extent of the thermal plume at the surface of the water if cooling water is proposed to be discharged to a water source. Provide the location for the intake and discharge structures on an aerial photograph(s) or detailed maps. Water sources include, but are not limited to, waterways, lakes, impoundments, oceans, bays, rivers, and estuaries; and	**Depiction of the thermal plume:** Not applicable **Location of intake and discharge structures:** Not Applicable	N/A N/A	

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Appendix B (g) (13) (B) (iii)	An aerial photo or wetlands delineation maps at a scale of (1:2,400) showing any potential jurisdictional and non-jurisdictional wetlands delineated out to 250 feet from the edge of disturbance if wetlands occur within 250 feet of the project site and/or related facilities that would be included with the US Army Corps of Engineers (USACE) Section 404 Permit application. For projects proposed to be located within the coastal zone, also provide aerial photographs or maps as described above that identify wetlands as defined by the Coastal Act.	**Potential jurisdictional or non-jurisdictional wetlands map:** Figure 7.2-1 Figure 7.2-3 **Coastal zone wetlands map:** Not applicable	Yes N/A	
Appendix B (g) (13) (C)	A discussion of the biological resources at the proposed project site and related facilities. Related facilities include, but are not limited to, laydown and parking areas, gas and water supply pipelines, transmission lines, and roads. The discussion shall address the distribution of vegetation community types, denning or nesting sites, population concentrations, migration corridors, breeding habitats, and other appropriate biological resources including the following:	**Discussion of biological resources at project site:** Section 7.2.1.1 pgs 7.2-3 to 7.2-5 Section 7.2.1.2 pgs 7.2-5 to 7.2-6 Section 7.2.1.3 pgs 7.2-6 to 7.2-7 Section 7.2.1.4 pgs 7.2-7 to 7.2-8 Section 7.2.1.5 pgs 7.2-8 to 7.2-9 Section 7.2.1.6 pgs 7.2-9 to 7.2-18	Yes	

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		Discussion of biological resources at related facilities: Section 7.2.1.1 pgs 7.2-3 to 7.2-5 Section 7.2.1.2 pgs 7.2-5 to 7.2-6 Section 7.2.1.3 pgs 7.2-6 to 7.2-7 Section 7.2.1.4 pgs 7.2-7 to 7.2-8 Section 7.2.1.5 pgs 7.2-8 to 7.2-9 Section 7.2.1.6 pgs 7.2-9 to 7.2-18	Yes	
Appendix B (g) (13) (C) (i)	A list of all the species actually observed;	**List of species observed:** Table 7.2-2 pgs 7.2-56 to 59 Table 7.2-3 pg 7.2-60	Yes	
Appendix B (g) (13) (C) (ii)	A list of sensitive species and habitats with a potential to occur (as defined in (A) above); and	**Sensitive species and habitats with potential to occur:** Section 7.2.1.6 pgs 7.2-9 to 7.2-18 Appendix K1	Yes	

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Appendix B (g) (13) (C) (iii)	If cooling water is taken directly from or discharged to a surface water feature source, include a description of the intake structure, screens, water volume, intake velocity hydraulic zone field of influence, and the thermal plume dispersion area as depicted in response to B(ii) above. Describe the thermal plume size and dispersion under high and low tides, and in response to local currents and seasonal changes. Provide a discussion of the aquatic habitats, biological resources, and critical life stages found in these affected waters. For repower projects that anticipate no change in cooling water flow, this information shall be provided in the form of the most recent federal Clean Water Act 316(a) and (b) studies of entrainment and impingement impacts that has been completed within the last five (5) years. For new projects or repower projects proposing to use once-through cooling and anticipating an increase in cooling water flow, provide a complete impingement and entrainment analysis per guidance in (D)(ii), below.	**Intake structure charactieristics:** Not applicable **Thermal plume description:** Not applicable **Aquatic habitat and biological resources affected:** Not applicable **Impingement and entrainment analysis:** Not applicable	N/A N/A N/A N/A	
Appendix B (g) (13) (D)	A description and results of all field studies and seasonal surveys used to provide biological baseline information about the project site and associated facilities. Include copies of the California Natural Diversity Database records and field survey forms completed by the applicant's biologist(s). Identify the date(s) the surveys were completed, methods used to complete the surveys, and the name(s) and qualifications of the biologists conducting the surveys. Include:	**Description of field studies:** Section 7.2 pgs 7.2-1 to 7.2-2 **Copies of CNDDB records and field survey forms:** Appendix K2 **Qualifications of biologists:** Section 7.2 pg 7.2-2	Yes Yes Yes	

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Appendix B (g) (13) (D) (i)	Current biological resources surveys conducted using appropriate field survey protocols during the appropriate season(s). State and federal agencies with jurisdiction shall be consulted for field survey protocol guidance prior to surveys if a protocol exists;	**Current biological surveys:** Section 7.2 pgs 7.2-1 to 7.2-2	Yes	
Appendix B (g) (13) (D) (ii)	If cooling water is proposed to be taken directly from or discharged to a surface water feature source, seasonal aquatic resource studies and surveys shall be conducted. Aquatic resource survey data shall include, but is not limited to, fish trawls, ichthyoplankton and benthic sampling, and related temperature and water quality samples. For new projects or repower projects anticipating a change in cooling water flows, sampling protocols shall be provided to the Energy Commission staff for review and concurrence prior to the start of sampling. For repower projects not anticipating a change in cooling water flows, this information shall be provided in the form of the most recent federal Clean Water Act 316(b) impingement and entrainment impact study completed within five (5) years of the AFC filing date; and	**Aquatic resource studies and surveys:** Not appplicable **Aquatic resource survey data or impingement and entrainment impact study:** Not applicable	N/A N/A	
Appendix B (g) (13) (D) (iii)	If the project or any related facilities could impact a jurisdictional or non-jurisdictional wetland, provide completed Army Corps of Engineers wetland delineation forms and/or determination of wetland status pursuant to Coastal Act requirements, name(s) and qualifications of biologist(s) completing the delineation, the results of the delineation and a table showing wetland acreage amounts to be impacted.	**Impacts to jurisdictional or non-jurisdictional wetlands:** Section 7.2.2.1 pgs 7.2-18 to 7.2-23 Section 7.2.2.2 pgs 7.2-23 to 7.2-25	Yes	
Appendix B (g) (13) (E)	Impacts discussion of the following:			

Adequacy Issue:	Adequate **X** Inadequate	**DATA ADEQUACY WORKSHEET**		Revision No. 1	Date October 2, 2008
Technical Area:	**Biological Resources**	Project:	Willow Pass Generating Station (WPGS)	Technical Staff:	Laurel Cordonnier
Project Manager:	Ivor Benci-Woodward	Docket:	08-AFC-6	Technical Senior:	Rick York

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (13) (E) (i)	all impacts (direct, indirect, and cumulative) to biological resources from project site preparation, construction activities, plant operation, maintenance, and closure. Discussion shall also address sensitive species habitat impacts from cooling tower drift and air emissions;	**Project site impacts:** Section 7.2.2.1 pgs 7.2-18 to 7.2-23 Section 7.2.2.2 pgs 7.2-23 to 7.2-25 Section 7.2.3 pgs 7.2-25 to 7.2-26	Yes	
		Air emission impacts on sensitive species: Supplemental Filing for Biological Resources	~~No~~ Yes	~~Please discuss the impacts the sensitive species habitat impacts from air emissions. Section 7.2.3 pg 7.2-26 only mentions that there will be impacts but does not state what the impacts are expected to be.~~
Appendix B (g) (13) (E) (ii)	facilities that propose to take water directly from, and/or discharge water to surface water features, daytime and nighttime impacts from the intake and discharge of water during operation, water velocity at the intake screen, the intake field of influence, impingement, entrainment, and thermal discharge. Provide a discussion of the extent of the thermal plume, effluent chemicals, oxygen saturation, intake pump operations, and the volume and rate of cooling water flow at the intake and discharge location; and	**Intake impacts:** Not applicable	N/A	
		Thermal plume impacts: Not applicable	N/A	
Appendix B (g) (13) (E) (iii)	Methods to control biofouling and chemical concentrations, and temperatures that are currently being discharged or will be discharged to receiving waters.	**Biofouling and chemical concentration controls:** Not applicable	N/A	
		Discharge temperatures: Not applicable	N/A	
Appendix B (g) (13) (F)	A discussion of all feasible mitigation measures including, but not limited to the following:			
Appendix B (g) (13) (F) (i)	All measures proposed to avoid and/or reduce adverse impacts to biological resources;.	**Avoidance and minimization:** Section 7.2.4 pgs 7.2-26 to 7.2-30	Yes	

Adequacy Issue:	Adequate **X** Inadequate ___	**DATA ADEQUACY WORKSHEET**		Revision No. 1	Date October 2, 2008
Technical Area:	**Biological Resources**	Project:	Willow Pass Generating Station (WPGS)	Technical Staff:	Laurel Cordonnier
Project Manager:	Ivor Benci-Woodward	Docket:	08-AFC-6	Technical Senior:	Rick York

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (13) (F) (ii)	All off-site habitat mitigation and habitat improvement or compensation, and an identification of contacts for compensation habitat and management;	**Habitat mitigation:** Supplemental Filing for Biological Resources **Contacts for compensation habitat:** Supplemental Filing for Biological Resources	~~No~~ Yes ~~No~~ Yes	~~Please discuss the need for offsite habitat mitigation or habitat improvement or compensation.~~ ~~Please provide contacts regarding the offsite habitat mitigation.~~
Appendix B (g) (13) (F) (iii)	Design features to better disperse or eliminate a thermal discharge;	**Design features to eliminate thermal discharge:** Not applicable	N/A	
Appendix B (g) (13) (F) (iv)	All measures proposed to avoid or minimize adverse impacts of cooling water intake. This shall include a Best Technology Available (BTA) discussion. If BTA is not being proposed, the rationale for not selecting BTA must be provided; and	**Measures to minimize impacts of cooling water intake:** Not applicable	N/A	
Appendix B (g) (13) (F) (v)	Educational programs to enhance employee awareness during construction and operation to protect biological resources.	**Employee biological resource awareness training:** Section 7.2.4.1 pg 7.2-26	Yes	
Appendix B (g) (13) (G)	A discussion of compliance and monitoring programs to ensure the effectiveness of impact avoidance and mitigation measures incorporated into the project.	**Monitoring compliance effectiveness:** Section 7.2.2.1 pgs 7.2-18 to 7.2-23 Section 7.2.2.2 pgs 7.2-23 to 7.2-25 Section 7.2.3 pgs 7.2-25 to 7.2-26 Section 7.2.4 pgs 7.2-26 to 7.2-30	Yes	

Adequacy Issue:	Adequate **X** Inadequate ___	**DATA ADEQUACY WORKSHEET**		Revision No. 1	Date October 2, 2008
Technical Area:	**Biological Resources**	Project:	Willow Pass Generating Station (WPGS)	Technical Staff:	Laurel Cordonnier
Project Manager:	Ivor Benci-Woodward	Docket:	08-AFC-6	Technical Senior:	Rick York

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (13) (H)	Submit copies of any preliminary correspondence between the project applicant and state and federal resource agencies regarding whether federal or state permits from other agencies such as the U. S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), and the Regional Water Quality Control Board (RWCB) will be required for the proposed project.	**Contact with state and federal agencies regarding permits:** Section 7.2.6 pg 7.2-33 Appendix K1 Appendix K3 Appendix K4	Yes	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal 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	**TABLE IDENTIFIYING APPLICABLE BIOLOGICAL RESOUCES LAWS, ORDINANCES, REGULATIONS, AND STANDARDS:** Table 7.2-4 pgs 7.2-61 to 7.2-62	**YES**	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	**TABLES IDENTIFIYING AGENCIES WITH JURISDICTION:** Table 7.2-5 pg 7.2-63	**YES**	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	**AGENCY CONTACT INFORMATION:** **SECTION 7.2.6 PG 7.2-33** Table 7.2-5 pg 7.2-63	**YES**	

Adequacy Issue:	Adequate **X** Inadequate ___	**DATA ADEQUACY WORKSHEET**			Revision No. 1	Date	October 2, 2008
Technical Area:	**Biological Resources**	Project:	Willow Pass Generating Station (WPGS)		Technical Staff:		Laurel Cordonnier
Project Manager:	Ivor Benci-Woodward	Docket:	08-AFC-6		Technical Senior:		Rick York

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (3)	A schedule indicating 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.	**Permit schedule:** Section 7.2.7 pg 7.2-33 Table 7.2-6 pg 7.2-64	Yes	

Adequacy Issue: Adequate **X** Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 1 Date October 2, 2008

Technical Area: **Cultural Resources** Project: Willow Pass AFC Technical Staff: Amanda Blosser

Project Manager: Ivor Benci-Woodward Docket: 08-AFC-6 Technical Senior: Rick York

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Existing site conditions: Vol. 1, p. 7.3-1	Yes	
		Impacts due to project: Vol. 1, p. 7.3-15	Yes	
		Mitigation measures for known impacts	N/A	
		Effectiveness of the proposed mitigation	N/A	
		Any monitoring plans proposed to verify the effectiveness of the mitigation	N/A	
Appendix B (g) (2) (A)	A summary of the ethnology, prehistory, and history of the region with emphasis on the area within no more than a 5-mile radius of the project location.	Summary of the ethnology, prehistory, and history: Vol. 1, pp. 7.3.-2—7.3-7; Vol. 2, App. L1, pp. 8-12	Yes	

Adequacy Issue: Adequate **X** Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 1 Date October 2, 2008

Technical Area: **Cultural Resources** Project: Willow Pass AFC Technical Staff: Amanda Blosser

Project Manager: Ivor Benci-Woodward Docket: 08-AFC-6 Technical Senior: Rick York

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (2) (B)	The results of a literature search to identify cultural resources within an area not less than a 1-mile radius around the project site and not less that than one-quarter (0.25) mile on each side of the linear facilities. Identify any cultural resources listed pursuant to ordinance by a city or county, or recognized by any local historical or archaeological society or museum. Literature searches to identify the above cultural resources must be completed by, or under the direction of, individuals who meet the Secretary of the Interior's Professional Standards for the technical area addressed.	Literature searches: Vol. 2, App. L3	Yes	
		Cultural resources listed under a city or county ordinance: Vol. 1, pp. 7.3-8—7.3-10	Yes	
		Cultural resources recognized by local societies: Vol. 1, pp. 7.3-8—7.3-10, Vol.	Yes	
		Names/qualifications for literature searchers/directors: Data Adequacy Supp. Vol. Appendix C	~~No~~ Yes	~~The applicant needs to provide the qualifications for the literature searches/directors.~~
	Copies of California Department of Parks and Recreation (DPR) 523 forms (Title 14 CCR §4853) shall be provided for all cultural resources (ethnographic, architectural, historical, and archaeological) identified in the literature search as being 45 years or older or of exceptional importance as defined in the National Register Bulletin Guidelines, (36CFR60.4(g)). A copy of the USGS 7.5' quadrangle map of the literature search area delineating the areas of all past surveys and noting the California Historical Resources Information System (CHRIS) identifying number shall be provided. Copies also shall be provided of all technical reports whose survey coverage is wholly or partly within .25 mile of the area surveyed for the project under Section (g)(2)(C), or which report on any archaeological excavations or architectural surveys within the literature search area.	DPR523s for known resources: Vol. 2, App. L3	Yes	
		Map of literature search area with past surveys and CHRIS #s: Vol. 2, App. L3-2—4	Yes	~~The applicant needs to provide copies, under confidential cover, of all technical reports whose survey coverage is wholly or partly within the .25 mile of the area surveyed for the project or copies of any studies reporting on any archeological excavations or architectural surveys within the literature search area. The technical reports that appeared to be missing are: S-009095, 009214,009583, 010268, 013256, 013831, 017890, 017993, 018352,~~
		CHRIS reports:	Yes	

Adequacy Issue: Adequate **X** Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 1 Date October 2, 2008

Technical Area: **Cultural Resources** Project: Willow Pass AFC Technical Staff: Amanda Blosser

Project Manager: Ivor Benci-Woodward Docket: 08-AFC-6 Technical Senior: Rick York

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (2) (C)	The results of new surveys or surveys less than 5 years old shall be provided if survey records of the area potentially affected by the project are more than five (5) years old. Surveys to identify new cultural resources must be completed by (or under the direction of) individuals who meet the Secretary of the Interior's Professional Standards for the technical area addressed.	Names/qualifications for archaeological surveyors or directors:	~~No~~ Yes	~~. The applicant needs to provide the qualifications for the archeological surveyors or directors. 018440,022464, 022929, 022930, 024322, 024323, 024986, 030387, 030579, 031375, 032182, 034164, 034182.~~
	New pedestrian archaeological surveys shall be conducted inclusive of the project site and project linear facility routes, extending to no less than 200' around the project site, substations and staging areas, and to no less than 50' to either side of the right-of-way of project linear facility routes. New historic architecture field surveys in rural areas shall be conducted inclusive of the project site and the project linear facility routes, extending no less than .5 mile out from the proposed plant site and from the routes of all above-ground linear facilities. New historic architecture field surveys in urban and suburban areas shall be conducted inclusive of the project site, extending no less than one parcel's distance from all proposed plant site boundaries. New historic architecture field reconnaissance ("windshield survey") in urban and suburban areas shall be conducted along the routes of all linear facilities to identify, inventory, and characterize structures and districts that appear to be older than 45 years or that are exceptionally significant, whatever their age.	Names/qualifications for historical architecture surveyors or directors: Vol. 2, App. L2, p. 30	Yes	
		Survey coverage, archaeology: Vol. 2, App. L1, p. 15, Fig. 1	Yes	
		Survey coverage, architecture: Vol. 2, App. L2, pp. 4-5, Fig. 3	Yes	
	A technical report of the results of the new surveys, conforming to the Archaeological Resource Management Report format (CA Office of Historic Preservation Feb 1990), which is incorporated by reference, shall be separately	Technical report for new archaeological survey: Vol. 2, L1	Yes	
		Technical report for new historical architectural survey: Vol. 2, App. L2	Yes	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
	provided and submitted (under confidential cover if archaeological site locations are included).			
Appendix B (g) (2) (C) cont.	Information included in the technical report shall also be provided in the Application for Certification, except that confidential information (archaeological sites or areas of religious significance) shall be submitted under a request for confidentiality pursuant to Title 20, California Code of Regulations, § 2501 et seq. At a minimum, the technical report shall include the following:	AFC includes technical repot data, unless confidential: Vol. 1, Section 7.3	Yes	
Appendix B (g) (2) (C) (i)	The summary from Appendix B (g)(2)(A) and the literature search results from Appendix B (g)(2)(B);	Summary: Vol. 2, App. L1, pp. 14-15, Table 1	Yes	
Appendix B (g) (2) (C) (ii)	The survey procedures and methodology used to identify cultural resources and a discussion of the cultural resources identified by the survey;	Archaeological methodology: Vol. 2, App. L2, pp. 14-16 Historical architectural methodology: Vol. 2, App. L2, pp. 4-6	Yes Yes	
Appendix B (g) (2) (C) (iii)	Copies of all new and updated DPR 523(A) forms. If a cultural resource may be impacted by the project, also include the appropriate DPR 523 detail form for each such resource;	Archaeological forms: Architecture forms: Vol. 2, App. L2, App. B	N/A Yes	
Appendix B (g) (2) (C) (iv)	A map at a scale of 1:24,000 U.S. Geological Survey quadrangle depicting the locations of all previously known and newly identified cultural resources compiled through the research required by Appendix B (g)(2)(B) and Appendix B (g)(2)(C) (ii); and	Archaeology and architecture map: Vol. 2, App. L1, Fig. 1	Yes	

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Technical Area: **Cultural Resources** Project: Willow Pass AFC Technical Staff: Amanda Blosser

Project Manager: Ivor Benci-Woodward Docket: 08-AFC-6 Technical Senior: Rick York

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (2) (C) (v)	The names and qualifications of the cultural resources specialists who contributed to and were responsible for literature searches, surveys, and preparation of the technical report.	Names/qualifications for archaeologists: Names/qualifications for architectural historians: Vol. 2, App. L2, p. 30	~~No~~No Yes Yes	~~The applicant needs to provide the qualifications for the literature searches, surveys, and preparation of the technical reports. The applicant needs to provide the qualifications for the literature searches, surveys, and preparation of the technical reports~~.
Appendix B (g) (2) (D)	Provide a copy of your request to the Native American Heritage Commission (NAHC) for information on Native American sacred sites and lists of Native Americans interested in the project vicinity, and copies of any correspondence received from the NAHC. Notify the Native Americans on the NAHC list about the project, including a project description and map. Provide a copy of all correspondence sent to Native American individuals and groups listed by the NAHC and copies of all responses. Provide a written summary of any oral responses.	NAHC request: Vol. 2, App. L1, App. B NAHC response: Vol. 2, App. L1, App. B Letters sent to Native Americans: Vol. 2, App. L1, App. B Native American Consultation: Vol. 1, p. 7.3-10 Summary of oral responses from Native Americans:	Yes Yes Yes Yes N/A	
Appendix B (g) (2) (E)	Include in the discussion of proposed mitigation measures required by subdivision (g)(1):			
Appendix B (g) (2) (E) (i)	A discussion of measures proposed to mitigate project impacts to known cultural resources;	Mitigation measures for known impacts:	N/A	
Appendix B (g) (2) (E) (ii)	A set of contingency measures proposed to mitigate potential impacts to previously unknown cultural resources and any unanticipated impacts to known cultural resources; and	Contingency mitigation measures: Vol. 1, pp. 7.3-15—7.3-16	Yes	
Appendix B (g) (2) (E) (iii)	Educational programs to enhance employee awareness during construction and operation to protect cultural resources.	Worker education: Vol. 1, p. 7.3-16	Yes	

Adequacy Issue: Adequate **X** Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 1 Date October 2, 2008

Technical Area: **Cultural Resources** Project: Willow Pass AFC Technical Staff: Amanda Blosser

Project Manager: Ivor Benci-Woodward Docket: 08-AFC-6 Technical Senior: Rick York

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal 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	Tables identifying applicable LORS: Vol. 1, Table 7.3-3 Explicitly referenced pages: Vol. 1, Table 7.3-3 Discussion of applicability of LORS: Vol. 1, Table 7.3-3	Yes Yes Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Tables identifying agencies: Vol. 1, Table 7.3-3	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Official within each agency who will serve as contact person for agency: Vol. 1, Table 7.3-4	Yes	
Appendix B (i) (3)	A schedule indicating 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.	Schedule indicating when outside permits will be obtained: Vol. 1, p. 7.3-19	Yes	

Adequacy Issue:	Adequate **X** Inadequate ___	**DATA ADEQUACY WORKSHEET**		Revision No. 1	Date October 2, 2008
Technical Area:	**Paleontological Resources**	Project:	Willow Pass Generating Station	Technical Staff:	Patrick Pilling, Ph.D., P.E.
Project Manager:	Ivor Benci-Woodward	Docket:	08-AFC-6	Technical Senior:	Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 2.2 Section 7.16.1 Section 7.16.2 Section 7.16.3 Section 7.16.4 Appendix S	Yes	None
Appendix B (g) (16) (A)	Identification of the physiographic province and a brief summary of the geologic setting, formations, and stratigraphy of the project area. The size of the paleonotological study area may vary depending on the depositional history of the region.	Section 7.16.1.1 Section 7.16.1.2 Section 7.15.1	Yes	None
Appendix B (g) (16) (B)	A discussion of the sensitivity of the project area described in subsection (g)(16)(A) and the presence and significance of any known paleontologic localities or other paleontologic resources within or adjacent to the project. Include a discussion of sensitivity for each geologic unit identified on the most recent geologic map at a scale of 1:24,000. Provide rationale as to why the sensitivity was assigned.	Section 7.16.1.5 Appendix S Data Adequacy response dated September 25, 2008	~~No~~ Yes	~~Needs discussion of sensitivity of each individual geologic unit, and why the sensitivity was assigned.~~
Appendix B (g) (16) (C)	A summary of all local museums, literature searches and field surveys used to provide information about paleontologic resources in the project area described in subsection (g)(16)(A). Identify the dates of the surveys, methods used in completing the surveys, and the names and qualifications of the individuals conducting the surveys.	Section 7.16 Appendix S Data Adequacy response dated September 25, 2008	~~No~~ Yes	~~List or otherwise discuss museums, literature resources and field surveys that were conducted. Identify the dates of the surveys.~~

Adequacy Issue:	Adequate **X** Inadequate ___	**DATA ADEQUACY WORKSHEET**		Revision No. 1	Date October 2, 2008
Technical Area:	**Paleontological Resources**	Project:	Willow Pass Generating Station	Technical Staff:	Patrick Pilling, Ph.D., P.E.
Project Manager:	Ivor Benci-Woodward	Docket:	08-AFC-6	Technical Senior:	Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (16) (D)	Information on the specific location of known paleontologic resources, survey reports, locality records, and maps at a scale of 1:24,000, showing occurrences of fossil finds, if known, within a one-mile radius of the project and related facilities shall be included in a separate appendix to the Application and submitted to the Commission under a request for confidentiality, pursuant to Title 20, California Code of Regulations, s 2501 et seq.	Appendix S	Yes	None
Appendix B (g) (16) (E)	A discussion of any educational programs proposed to enhance awareness of potential impacts to paleontological resources by employees, measures proposed for mitigation of impacts to known paleontologic resources, and a set of contingency measures for mitigation of potential impacts to currently unknown paleontologic resources.	Section 7.16.4	Yes	None
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal 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	Section 7.16.5 Table 7.16-1	Yes	None

Adequacy Issue:	Adequate **X** Inadequate ___	**DATA ADEQUACY WORKSHEET**		Revision No. 1	Date October 2, 2008
Technical Area:	**Paleontological Resources**	Project:	Willow Pass Generating Station	Technical Staff:	Patrick Pilling, Ph.D., P.E.
Project Manager:	Ivor Benci-Woodward	Docket:	08-AFC-6	Technical Senior:	Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Section 7.16.5 Table 7.16-1 Table 7.16-2 Appendix S	Yes	None
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Section 7.16.6 Table 7.16-2	Yes	None
Appendix B (i) (3)	A schedule indicating 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.	Section 7.16.7	Yes	None

Adequacy Issue:	Adequate **X**	Inadequate ___	**DATA ADEQUACY WORKSHEET**		Revision No. 1	Date	October 2, 2008
Technical Area:	**Soils**		Project:	Willow Pass Generating Station	Technical Staff:		Richard Latteri
Project Manager:	Ivor Benci-Woodward		Docket:	08-AFC-6	Technical Senior:		Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 7.9	Yes	
Appendix B (g) (15) (A)	A map at a scale of 1:24,000 and written description of soil types and all agricultural land uses that will be affected by the proposed project. The description shall include:	___	___	
Appendix B (g) (15) (A) (i)	The depth, texture, permeability, drainage, erosion hazard rating, and land capability class of the soil;	Section 7.9.1.1 Table 7.9-1	Yes	
Appendix B (g) (15) (A) (ii)	An identification of other physical and chemical characteristics of the soil necessary to allow an evaluation of soil erodibility, permeability, re-vegetation potential, and cycling of pollutants in the soil-vegetation system;	Section 7.9.1.1 Table 7.9-1	Yes	
Appendix B (g) (15) (A) (iii)	The location of any proposed fill disposal or fill procurement (borrow) sites; and	Section 7.9.2.1	Yes	
Appendix B (g) (15) (A) (iv)	The location of any contaminated soils that could be disturbed by project construction.	Section 7.9.1.2	Yes	
Appendix B (g) (15) (B)	An assessment of the effects of the proposed project on soil resources and agricultural land uses. This discussion shall include:	___	___	
Appendix B (g) (15) (B) (i)	The quantification of accelerated soil loss due to wind and water erosion; and	Section 7.9.2.1	Yes	

Adequacy Issue:	Adequate **X** Inadequate ___	**DATA ADEQUACY WORKSHEET**		Revision No. 1	Date October 2, 2008
Technical Area:	**Soils**	Project:	Willow Pass Generating Station	Technical Staff:	Richard Latteri
Project Manager:	Ivor Benci-Woodward	Docket:	08-AFC-6	Technical Senior:	Paul Marshall

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (15) (B) (ii)	The effect of power plant emissions on surrounding soil-vegetation systems.	AFC Supplement Appendix E	~~No~~ Yes	~~Please provide a discussion of the effects of power plant emissions such as NOx and SOx on the surrounding soil-vegetation system regardless of site and adjacent land uses~~.
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal 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	Table 7.9-2	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 7.9-4	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 7.9-3	Yes	
Appendix B (i) (3)	A schedule indicating 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.	Table 7.9-4	Yes	

Adequacy Issue: Adequate **X** Inadequate

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 2, 2008

Technical Area: **Transmission System Design** Project: Willow Pass Generating Station Technical Staff: Ajoy Guha, P.E.

Project Manager: Ivor Benci-Woodward Docket: 08-AFC-6 Technical Senior: Mark Hesters

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (h) (2) (A)	A discussion of the need for the additional electric transmission lines, substations, or other equipment, the basis for selecting principal points of junction with the existing electric transmission system, and the capacity and voltage levels of the proposed lines, along with the basis for selection of the capacity and voltage levels.	Section 1.10, Page 1-5. Section 2.5.4.1, Page 2-8.	Yes	
Appendix B (h) (2) (B)	A discussion of the extent to which the proposed electric transmission facilities have been designed, planned, and routed to meet the transmission requirements created by additional generating facilities planned by the applicant or any other entity.	Section 2.5.4.1, Page 2-8. Section 4.1, Page 4-1. Figure 4-1.	~~No~~ Yes	~~Provide a physical layout drawing (or resubmit Figure 4-1) showing the route of the proposed 230 kV overhead interconnection line between the proposed Willow Pass Generating Station (WPGS) 230 kV switchyard and existing Pittsburg Power Plant PG&E 230 kV switchyard.~~

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
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 rights of way and the physical and electrical characteristics of electrical transmission facilities such as towers, conductors, and insulators.	Section 2.5.4.1, Page 2-8. Section 4.1, Page 4-1. Section 4.2, Pages 4-1 to 4-2. Figures 2.3-1, 2.5-1 and 2.5-4.	~~No~~ Yes	~~Provide a complete electrical one-line diagram (or resubmit Figure 2.5-4) of the proposed WPGS 230 kV switchyard showing all equipment for all new generators' interconnection with the switchyard including any bus duct connectors or cables, 13.8/16.5 kV switchgear & breakers on the low side, generator step-up transformers, short overhead conductors and/or cables from the transformers to the switchyard with the configurations for buses, breakers, disconnect switches on the 230 kV side, and their respective sizes and/or ratings, along with the proposed transmission outlet from the switchyard.~~ ~~Provide a one-line electrical diagram showing the pre-project Pittsburg Power Plant PG&E 230 kV switchyard with existing generator units and transmission outlets with the configurations for buses, breakers and disconnect switches and their respective ratings. Also provide a one-line electrical diagram showing the post-project Pittsburg Power Plant PG&E 230 kV switchyard with the proposed 230 kV tie line interconnection facilities for buses, breakers and disconnect switches and their respective ratings.~~ ~~Provide physical layout drawings of the pre and post-project Pittsburg Power Plant Switchyard showing all major equipment and transmission outlets.~~
Appendix B (b) (2) (D)	A description of how the route and additional transmission facilities were selected, and the consideration given to engineering constraints, environmental impacts, resource conveyance constraints, and electric transmission constraints.	Sections 4.1 & 4.2, Pages 4-1 to 4-2. Figure 4-1.	~~No~~ Yes	~~Describe how the route of the proposed 230 kV tie line within the Pittsburg Power Plant switchyard is selected by comparing with any alternate routes and their environmental impacts.~~

Adequacy Issue:	Adequate **X** Inadequate	**DATA ADEQUACY WORKSHEET**		Revision No. 1	Date October 2, 2008
Technical Area:	**Transmission System Design**	Project:	Willow Pass Generating Station	Technical Staff:	Ajoy Guha, P.E.
Project Manager:	Ivor Benci-Woodward	Docket:	08-AFC-6	Technical Senior:	Mark Hesters

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (b) (2) (E)	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. If the interconnection and operation of the proposed project will likely impact an 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.	Section 4.5, Pages 4-3 to 4-4. Appendix H.	~~No~~ Yes	~~Submit a signed System Impact Study (SIS) agreement with the CA ISO and its proof of payment with a study plan or a completed SIS report based on studies for the 2012 summer peak and spring system conditions.~~
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal 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	Section 2.10, Page 2-37. Table 2.10-1.	Yes	

Adequacy Issue: Adequate **X** Inadequate ____

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 2, 2008

Technical Area: **Transmission System Design** Project: Willow Pass Generating Station Technical Staff: Ajoy Guha, P.E.

Project Manager: Ivor Benci-Woodward Docket: 08-AFC-6 Technical Senior: Mark Hesters

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Section 4.8, Page 4-6. Section 2.11, Page 2-38. Table 2.11-1.	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Section 4-9, Page 4-6.	Yes	
Appendix B (i) (3)	A schedule indicating 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.	Section 4.5, Pages 4-3 to 4-4. Appendix H.	Yes	

Adequacy Issue: Adequate **X** Inadequate ____

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 2, 2008

Technical Area: **Visual Resources** Project: Willow Pass Generating Station Technical Staff: James Adams

Project Manager: Ivor Benci-Woodward Docket: 08-AFC-6 Technical Senior: Paula David

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	PP. 7.11-1 through 11-39 Section 7.11 Figures 7.11-1 through 20	Yes	
Appendix B (g) (6) (A)	Descriptions of the existing visual setting of the vicinity of the proposed project site and the proposed routes for any project-related linear facilities. Include:	PP. 7.11-1 & 11-2 Section 7.11.1	Yes	
Appendix B (g) (6) (A) (i)	Topographic maps at a scale of 1:24,000 that depict directions from which the project would be seen, the view areas most sensitive to the potential visual impacts of the project, and the locations where photographs were taken for (g)(6)(C); and	Figure 7.11-1	Yes	
Appendix B (g) (6) (A) (ii)	Description of the existing visual properties of the topography, vegetation, and any modifications to the landscape as a result of human activities, including existing water vapor plumes, above-ground electrical transmission lines, and nighttime lighting levels in the project viewshed.	PP. 7.11-1 & 11-2 Section 7.11.1	Yes	

Adequacy Issue:	Adequate **X** Inadequate ___	**DATA ADEQUACY WORKSHEET**			Revision No. 1	Date October 2, 2008	
Technical Area:	**Visual Resources**	Project:	Willow Pass Generating Station		Technical Staff:	James Adams	
Project Manager:	Ivor Benci-Woodward	Docket:	08-AFC-6		Technical Senior:	Paula David	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (6) (B)	An assessment of the visual quality of those areas that would be affected by the proposed project. For projects proposed to be located within the coastal zone, the assessment should also describe how the proposed project would be sited to protect views to and along the ocean and scenic coastal areas, would minimize the alteration of natural land forms, would be visually compatible with the character of surrounding areas.	PP. 7.11-4 & 11-5 Sections 7.11.1.4	Yes	
Appendix B (g) (6) (C)	In consultation with Energy Commission staff, identify: i) any designated scenic roadways or scenic corridors and any visually sensitive areas that would be affected by the proposed project, including recreational and residential areas; and ii) the locations of the key observation points to represent the most critical viewing locations from which to conduct detailed analyses of the visual impacts of the proposed project. Indicate the approximate number of people using each of these sensitive areas and the estimated number of residences with views of the project. Also identify any major public roadways and trails of local importance that would be visually impacted by the project and indicate the types of travelers (e.g., local residents, recreationists, workers, commuters, etc.) and the approximate number of vehicles, bicyclists, and/or hikers per day.	PP. 7.11-1 & 11-2 Section 7.11.1.1 PP. 7.11-5 through 11-7 Section 7.11.1.5 Pg. 7.11-20 Section 7.11.5.2	Yes	

Adequacy Issue:	Adequate **X** Inadequate ___	**DATA ADEQUACY WORKSHEET**		Revision No. 1	Date October 2, 2008
Technical Area:	**Visual Resources**	Project:	Willow Pass Generating Station	Technical Staff:	James Adams
Project Manager:	Ivor Benci-Woodward	Docket:	08-AFC-6	Technical Senior:	Paula David

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (6) (D)	A table providing the dimensions (height, length, and width, or diameter) and, proposed color(s), materials, finishes, patterns, and other proposed design characteristics of each major component visible from off the project site, including any project-related electrical transmission line and/or offsite aboveground pipelines and metering stations.	PP. 7.11-27 & 28 Table 7.11-5	Yes	
Appendix B (g) (6) (E)	Provide the cooling tower and heat recovery steam generator (HRSG) exhaust design parameters that affect visible plume formation. For the cooling tower, data shall include heat rejection rate, exhaust temperature, exhaust mass flow rate, liquid to gas mass flow ratio, and, if the tower is plume-abated, moisture content (percent by weight) or plume-abated fogging curve(s). The parameters shall account for a range of ambient conditions (temperature and relative humidity) and proposed operating scenarios, such as duct firing and shutting down individual cells. For the heat recovery steam generator exhausts, data shall include moisture content (percent by weight), exhaust mass flow rate, and exhaust temperature. The parameters must correspond to full-load operating conditions at specified ambient conditions, and shall account for proposed operating scenarios, such as power augmentation (i.e., evaporative coolers, inlet foggers, or steam injection) and duct firing, or proposed HRSG visible plume abatement, such as the use of an economizer bypass. For simple-cycle projects, provide analogous data for the exhaust stack(s).	PP. 7.11-13 & 14 Section 7.11.2.5 Supplemental Filing September 2008	~~No~~ Yes	~~For the heat recovery steam generator exhausts, please provide data that shall include moisture content (percent by weight), exhaust mass flow rate, and exhaust temperature. The parameters must correspond to full-load operating conditions at specified ambient conditions, and shall account for proposed operating scenarios, such as power augmentation (i.e., evaporative coolers, inlet foggers, or steam injection) and duct firing, or proposed HRSG visible plume abatement, such as the use of an economizer bypass.~~

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (6) (F)	Provide: i) full-page color photographic reproductions of the existing site, and ii) full-page color simulations of the proposed project at life-size scale when the picture is held 10 inches from the viewer's eyes, including any project-related electrical transmission lines, in the existing setting from each key observation point. If any landscaping is proposed to comply with zoning requirements or to mitigate visual impacts, include the landscaping in simulation(s) representing sensitive area views, depicting the landscaping five years after installation; and estimate the expected time until maturity is reached.	Figures 7.11-2 through 11-20	Yes	
Appendix B (g) (6) (G)	An assessment of the visual impacts of the project, including light, glare, and any modeling of visible plumes. Include a description of the method and identify any computer model used to assess the impacts. Provide an estimate of the expected frequency and dimensions (height, length, and width) of the visible cooling tower and/or exhaust stack plumes. Provide the supporting assumptions, meteorological data, operating parameters, and calculations used.	PP. 7.11-12 through 11-17 Section 7.11.2.5 PP. 7.11-29 through 11-32 Table 7.11-6	Yes	
Appendix B (g) (6) (H)	If any landscaping is proposed to reduce the visual impacts of the project, provide a conceptual landscaping plan at a 1:40 scale (1"=40'). Include information on the type of plant species proposed, their size, quantity, and spacing at planting, expected heights at 5 years and maturity, and expected growth rates.	n/a	Yes	

Adequacy Issue:	Adequate **X** Inadequate ___	**DATA ADEQUACY WORKSHEET**		Revision No. 1	Date October 2, 2008
Technical Area:	**Visual Resources**	Project:	Willow Pass Generating Station	Technical Staff:	James Adams
Project Manager:	Ivor Benci-Woodward	Docket:	08-AFC-6	Technical Senior:	Paula David

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal 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	PP. 7.11-33 through 11-38 Table 7.11-7	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Pg. 7.11-39 Table 7.11-8 Supplemental Filing September 2008	~~No~~ Yes	~~Please provide a table which identifies each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.~~
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Pg. 7.11-39 Table 7.11-8 Supplemental Filing September 2008	~~No~~ Yes	~~Please provide the name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.~~
Appendix B (i) (3)	A schedule indicating 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.	Pg. 7.11-23 Section 7.11.7	Yes	