State Of California

The Resources Agency of California

Memorandum

Date: October 23, 2007
Telephone: (916) 654-4996

To: Jackalyne Pfannenstiel, Chairman
James D. Boyd, Vice Chair
Arthur H. Rosenfeld, Ph.D., Commissioner
John L. Geesman, Commissioner
Jeffrey D. Byron, Commissioner

From: California Energy Commission - B. B. Blevins
1516 Ninth Street Executive Director
Sacramento, CA 95814-5512

DOCKET
07-AFC-5
DATE OCT 23 2007
RECD. OCT 24 2007

Subject: **IVANPAH SOLAR ELECTRIC GENERATING SYSTEM PROJECT, REVISED DATA ADEQUACY RECOMMENDATION (07-AFC-5)**

Staff's September 28, 2007 initial data adequacy review of the Ivanpah Solar Electric Generating System (ISEGS) Application for Certification (AFC) determined that the AFC did not meet all the information requirements of the California Code of Regulations, Title 20, Section 1704, including Appendix B, for the 12-month AFC process. Specifically, the AFC was deficient in 11 of 23 areas reviewed: air quality, biological resources, cultural resources, land use, socioeconomics, soils, traffic & transportation, transmission system engineering, visual resources, waste management and water resources.

The ISEGS applicant submitted a Data Adequacy Supplement A on October 5, 2007 and Supplement B on October 19, 2007 for the AFC. Staff has determined that with the additional information submitted, the AFC now meets the information requirements listed above in all 23 technical areas. Attached is a summary table and revised data adequacy worksheets for the 11 technical disciplines previously determined to be data inadequate. This information reflects the supplemental information submitted by BrightSource Energy that achieves data adequacy for the AFC filing.

The proposed project would be constructed in three phases: two 100-megawatt (MW) phases (known as Ivanpah 1 and Ivanpah 2) and a 200-MW phase (Ivanpah 3). The three plants are collectively referred to as the Ivanpah Solar Electric Generating System (ISEGS) and would be located in San Bernardino County 4.5 miles southwest of Primm, Nevada, 3.1 miles west of the California-Nevada border.

The proposed solar facilities would share common facilities including an administration building, operations and maintenance building, substation, access road, and the reconductored transmission lines. The total area required for all three phases including the shared facilities would be approximately 3,400 acres (or 5.3 square miles). Construction of the entire project is anticipated to begin in the first quarter of 2009, with construction being completed in the last quarter of 2012.

At the Energy Commission's business meeting scheduled on October 31, 2007, staff will recommend that the Energy Commission accept the AFC as complete and ready for review. If you have any questions, please call Jack W. Caswell, staff's Project Manager, at (916) 653-0062.

Attachments

Attachment A
Overview of Energy Commission Staff's Revised Data Adequacy Worksheets
Ivanpah Solar Electric Generating System
07-AFC-5

Technical Area	Attachment B Page No.	Adequate
AIR QUALITY.....	5	YES
BIOLOGICAL RESOURCES.....	11	YES
CULTURAL RESOURCES.....	20	YES
LAND USE.....	26	YES
SOCIOECONOMICS.....	30	YES
SOILS.....	37	YES
TRAFFIC AND TRANSPORTATION.....	40	YES
TRANSMISSION SYSTEM ENG.....	44	YES
VISUAL RESOURCES	50	YES
WASTE MANAGEMENT.....	55	YES
WATER RESOURCES.....	59	YES

ATTACHMENT B

ENERGY COMMISSION STAFF'S
Revised Data Adequacy Worksheets

Ivanpah Solar Electric Generating System
07-AFC-5

October 23, 2007

Adequacy Issue: Adequate **X** Inadequate ____

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Air Quality** Project: Ivanpah Solar Electric Generating System Technical Staff: Tuan Ngo

Project Manager: Jack Caswell Docket: 07-AFC-5 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 5.1.3, pp. 5.1-17 to 27 Section 5.1.6, pp. 5.1-33 to 47 Section 5.1.6.3.1, pp. 5.1-17 to 27 Appendix 5.1F	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.	Mojave Desert AQMD's Letter of Completeness, Oct. 1, 2007. Supplement A filed 10/05/07	~~No~~ Yes	~~Please provide a copy of the application for Authority to Construct and Permit to Operate with the Mojave Desert Air Quality Management District (District).~~ ~~Please provide a copy of the District Notice of Completeness for the proposed project or communication from the district (e.g. email) stating that the application is complete.~~
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.	Table 5.1-14, pp 5.1-28 Appendix 5.1D Table 5.1D-2	Yes	
Appendix B (g) (8) (C)	A description of the control technologies proposed to limit the emission of criteria pollutants.	Section 5.1.6.1.1, pp. 5.1- 27	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.	Section 5.1.1, pp. 5.1-1	Yes	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
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.	Table 5.1-17 pp. 5.1-31 Table 5.1-28 pp. 5.1-46	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 5.1.6, pp. 5.1-28 to 31 Appendix 5.1B	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 5.1.6.3.2, pp. 5.1-30	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 5.1.5, pp. 5.1-19 to 26	Yes	
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.	Appendix 5.1D	Yes	

Adequacy Issue: Adequate X Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Air Quality** Project: Ivanpah Solar Electric Generating System Technical Staff: Tuan Ngo

Project Manager: Jack Caswell Docket: 07-AFC-5 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) (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.	Appendix 5.1D	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.	Appendix 5.1A	Yes	
Appendix B (g) (8) (I)	An evaluation of the project's direct and cumulative air quality impacts, consisting of the following:			
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 5.1.6.6, pp. 5.1-43 to 45 Appendix 5.1D	Yes	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
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 5.1.6.4, pp. 5.1-33 to 41 Appendix 5.1D	Yes	
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	Appendix 5.1H	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 $PM_{2.5}$.	Appendix 5.1D	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:	N/A	N/A	
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	N/A	N/A	

Adequacy Issue: Adequate X Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Air Quality** Project: Ivanpah Solar Electric Generating System Technical Staff: Tuan Ngo

Project Manager: Jack Caswell Docket: 07-AFC-5 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) (8) (J) (ii)	Potential offset sources, including location, and quantity of emission reductions;	N/A	N/A	
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 5.1.8 pp. 5.1-46 to 47	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 5.1-3 pp. 5.1-13 to 16	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 5.1-30 pp. 5.1-48	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 5.1-30 pp. 5.1-48	Yes	

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, pg. 5.2-9, Section 5.2.6.2 & pg. 5.2-10, Section 5.2.6.3 Vol. 2, pgs. 1-11, APPENDIX 5.2A, pgs. 5.2B-1 to 5.2B-5, APPENDIX 5.2B, Photos 1-6 APPENDIX 5.2I	Yes	
		Direct, indirect, and cumulative impacts: Vol. 1, pgs. 5.-41 to 5.2-55, Section 5.2.9.2	Yes	
		Mitigation measures: Vol. 1, pgs. 5.2-59 to 5.2-68, Section 5.2.11.1	Yes	
		Monitoring plans: Vol. 1, pgs. 5.2-57 to 5.2-59, Section 5.2.11 Vol. 2, APPENDIX 5.2J	Yes	
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: Vol. 1, pgs. 5.2-8 to 5.2-11, Section 5.2.6	Yes	
		Regional vicinity map: Vol. 1, Fig. 5.2-2 & Fig. 5.6.1	Yes	
Appendix B (g) (13) (A) (i)	species listed under state or federal Endangered Species Acts;	Vol. 1, pgs. 5.2-13 to 5.2-26, Section 5.2.7.4.1 to Section 5.2.7.4.4 Table 5.2-6 &7	Yes	

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) (A) (ii)	resources defined in sections 1702(q) and (v) of Title 20 of the California Code of Regulations;	Vol. 1, pg. 5.2-4, Section 5.2.3.7& Section 5.2.3.8, pg. 5.2-55, Section 5.2.9.3 Table 5.6-1	Yes	
Appendix B (g) (13) (A) (iii)	species identified as state Fully Protected;	Vol. 1, pgs. 5.2-20 to 5.2-26, Section 5.2.7.4.4 Table 5.2-7	Yes	
Appendix B (g) (13) (A) (iv)	species covered by Migratory Bird Treaty Act;	Vol. 1, pgs. 5.2-20 to 5.2-26, Section 5.2.7.4.4 Table 5.2-7	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	Vol. 1, pgs. 5.2-13 to 5.2-16, Section 5.2.7.4.1 & pgs. 5.2-20 to 5.2-26, Section 5.2.7.4.4 Table 5.2-6 & Table 5.2-7	Yes	
Appendix B (g) (13) (A) (vi)	fish and wildlife species that have commercial and/or recreational value.	Vol. 1, pg. 5.2-55, Section 5.2.9.2	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:	Actually observed: Vol. 1, pgs. 5.2-15 & 5.2-16, Section 5.2.7.4.1 Table 5.2-3 & Table 5.2-5 Potential to occur: Vol. 1, pgs. 5.2-19 to 5.2-27, Section 5.2.7.4.4 Table 5.2-7 & Table 5.2-6 Figs. 5.2-3, 5.2-5, 5.2-9	Yes Yes	

Adequacy Issue: Adequate **X** Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 1 Date October 23, 2007

Technical Area: **Biological Resources** Project: Ivanpah Solar Electric Generating System Technical Staff: Misa Ward

Project Manager: Jack Caswell Docket: 07-AFC-5 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) (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;	Vol. 1, Figs. 5.2-1 to 5.2-9	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		Not Applicable to Project	
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 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.	Vol. 1, pg. 5.2-10, Section 5.2.6.2.2 & pg. 5.2-12, Section 5.2.7.3, pgs. 5.2-35 to 5.2-36, Section 5.2.8.4 Figs. 5.2-6 to 5.2-8	Yes	

Adequacy Issue: Adequate **X** Inadequate ____

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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) (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:			
Appendix B (g) (13) (C) (i)	A list of all the species actually observed;	Vol. 1, pgs. 5.2-80 to 5.2-85, Table 5.2-3 & & pgs. 5.2-87 to 5.2-89, Table 5.2-5 Figs. 5.2-3, 5.2-5 & 5.2-9	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	Vol. 1, pgs. 5.2-90 to 5.2-98, Table 5.2-6 Figs. 5.2-3, 5.2-5 Vol. 1, pgs. 5.2-99 to 5.2-102, Table 5.2-7 Fig. 5.2-9	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.		Not Applicable to Project	
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:	Survey methods & results: Vol. 1, pgs. 5.2-11 to 5.2-29, Section 5.2.7 Vol. 2, APPENDIX 5.2F & APPENDIX 5.2G CNDDB records & forms: Vol. 2, APPENDIX 5.2B & APPENDIX 5.2C Resumes: Vol. 2, APPENDIX 5.2D	Yes Yes Yes	

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Cultural Resources**
Project: Ivanpah Solar Electric Generating System
Technical Staff: Beverly E. Bastian
Project Manager: Jack Caswell
Docket: 07-AFC-5
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. 1, p. 5.3-16	Yes	
		cultural resources listed under a city or county ordinance: ISEGS Supplement A, 10/5/07: p. 11	~~No~~ Yes	~~Please contact San Bernardino County and identify cultural resources listed per local ordinance that are located within a one-mile radius of the proposed plant site. Any cultural resources recognized by San Bernardino County should be plotted on confidential Figures A-1, A-2, and A-3.~~
	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 numbers 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.	cultural resources recognized by local societies: Vol. 1, p. 5.3-19	Yes	
		names/quals for lit searchers/directors: Conf. Vol. 1, App. 5.3-B, p. 2; Conf. Vol. 1, App. 5.3-B, App. C	Yes	
		DPR 523s for known resources: Conf. Vol. 1, App. 5.3-C	Yes	
		map lit search area with past surveys and CHRIS ID #s: ISEGS Supplement A, 10/5/07, confidential map and CHRIS reports filed on 10/19/07	~~No~~ Yes	~~Submitted map is a poorly reproduced B-&-W copy of what the CHRIS provided in color. Color-delineated survey coverages cannot be distinguished one from another, and handwritten annotations are illegible. Submit single-sided, photographic-quality, color copy of the CHRIS survey coverage maps, with legible report numbers. Applicant should add the boundaries of the project area, represented in some distinctive delineation, to these maps.~~
		CHRIS technical reports	~~No~~ Yes	~~Staff cannot determine whether all the required reports have been submitted until a usable map, as described above, has been received. CHRIS reports numbered 106-1219, 106-1602, and 106-2218 need to be submitted. Staff also needs a report for unnumbered survey shown as scarlet N-S linear in T16N R14E, sections 2, 11.~~

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Cultural Resources**
Project: Ivanpah Solar Electric Generating System
Technical Staff: Beverly E. Bastian
Project Manager: Jack Caswell
Docket: 07-AFC-5
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/quals for archaeological surveyors or directors: Conf. Vol. 1, App. 5.3-B, p. 2; Conf. Vol. 1,App. 5.3-B, App. C	Yes	
		names/quals for historical architecture surveyors or directors	N/A	
	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.	survey coverage, archaeology: Conf. Vol. 1, App. 5.3-B, p. 2	Yes	
	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.	survey coverage, architecture	N/A	
	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 provided and submitted (under confidential cover if archaeological site locations are included).	tech report for new archaeological survey: Conf. Vol. 1, App. 5.3-B	Yes	
		tech report for new historical architecture survey	N/A	

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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 tech report data, unless confidential: Vol. 1, §5.3	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: Conf. Vol. 1, App. 5.3-B, pp. 6-14 lit-search results: Conf. Vol. 1, App. 5.3-B, pp. 15-19	Yes 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: Conf. Vol. 1, App. 5.3-B, pp. 14-15 historical architecture methodology	Yes N/A	
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;	archaeology forms: Conf. Vol. 1, App. 5.3-B, App. B architecture forms	Yes N/A	
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 map: Conf. Vol. 1, App. 5.3-B, App. A architecture map	Yes N/A	
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/quals for archaeologists: Conf. Vol. 1, App. 5.3-B, p. 2; Conf. Vol. 1, App. 5.3-B, App. C names/quals for architectural historians	Yes N/A	

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) (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. 5.3A NAHC response: Vol. 2, App. 5.3A letters sent to Native Americans: Vol. 2, App. 5.3A responses from Native Americans: Vol. 2, App. 5.3A summary of oral responses from Native Americans: Vol. 2, App. 5.3A	Yes Yes Yes Yes Yes	
Appendix B (g) (2) (E)	Include in the discussion of proposed mitigation measures required by subdivision (g)(1):	mitigation measures for known impacts	N/A	
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. 5.3-22 to 5.3-25	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. 5.3-23	Yes	

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Cultural Resources**
Project: Ivanpah Solar Electric Generating System
Technical Staff: Beverly E. Bastian
Project Manager: Jack Caswell
Docket: 07-AFC-5
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 5.3-1 explicitly referenced pages: Vol. 1, pp. 5.3-3 to 5.3-7 discussion of applicability of LORS: Vol. 1, pp. 5.3-3 to 5.3-7	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: Table 5.3-4	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.	official within each agency who will serve as a contact person for the agency: Vol. 1, p. 5.3-25	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	N/A	

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 5.6	Yes	
Appendix B (g) (3) (A)	A discussion of existing land uses and current zoning at the site, land uses and land use patterns within one mile of the proposed site and within one-quarter mile of any project-related linear facilities. Include:	Section 5.6.3. Table 5.6-3 Figure 5.6-1	Yes	
Appendix B (g) (3) (A) (i)	An identification of residential, commercial, industrial, recreational, scenic, agricultural, natural resource protection, natural resource extraction, educational, religious, cultural, and historic areas, and any other area of unique land uses;	Section 5.6.3.2.5	Yes	
Appendix B (g) (3) (A) (ii)	A discussion of any recent or proposed zone changes and/or general plan amendments noticed by an elected or appointed board, commission, or similar entity at the state or local level;	Sections 5.6.4.1 and .2	Yes	
Appendix B (g) (3) (A) (iii)	Identification of all discretionary reviews by public agencies initiated or completed within 18 months prior to filing the application for those changes or developments identified in subsection (g)(3)(A)(ii); and	Section 5.6.5	Yes	

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Land Use**
Project Manager: Jack Caswell
Project: Ivanpah Solar Electric Generating System
Docket: 07-AFC-5
Technical Staff: Amanda Stennick
Technical Senior: Eric Knight

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (3) (A) (iv)	Legible maps of the areas identified in subsection (g)(3)(A) potentially affected by the project, on which existing land uses, jurisdictional boundaries, general plan designations, specific plan designations, and zoning have been clearly delineated.	Figure 5.6-1	Yes	
Appendix B (g) (3) (B)	A discussion of the compatibility of the proposed project with present and expected land uses, and conformity with any long-range land use plans adopted by any federal, state, regional, or local planning agencies. The discussion shall identify the need, if any, for land use decisions by another public agency or as part of the commission's decision that would be necessary to make the project conform to adopted federal, state, regional, or local coastal plans, land use plans, or zoning ordinances. Examples of land use decisions include: general plan amendments, zoning changes, lot line adjustments, parcel mergers, subdivision maps, Agricultural Land Conservation Act contracts cancellation, and Airport Land Use Plan consistency determinations.	Section 5.6.6.2 Tables 5.6-2 and -5	Yes	
Appendix B (g) (3) (C)	A discussion of the legal status of the parcel(s) on which the project is proposed. If the proposed site consists of more than one legal parcel, describe the method and timetable for merging or otherwise combining those parcels so that the proposed project, excluding linears and temporary laydown or staging area, will be located on a single legal parcel. The merger need not occur prior to a decision on the Application but must be completed prior to the start of construction.	Section 1.3	Yes	

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Land Use**
Project Manager: Jack Caswell
Project: Ivanpah Solar Electric Generating System
Docket: 07-AFC-5
Technical Staff: Amanda Stennick
Technical Senior: Eric Knight

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (3) (D)	A map at a scale of 1:24,000 and written description of agricultural land uses found within all areas affected by the proposed project. The description shall include:	Section 5.6.6.2 Figure 5.6-1	Yes	
Appendix B (g) (3) (D) (i)	Crop types, irrigation systems, and any special cultivation practices;	Section 5.6.6.2	Yes	
Appendix B (g) (3) (D) (ii)	Whether farmland affected by the project is prime, of statewide importance, or unique as defined by the California Department of Conservation; and	Section 5.6.6.2	Yes	
Appendix B (g) (3) (D) (iii)	Direct, indirect, and cumulative effects on agricultural land uses. If the proposed site or related facilities are subject to an Agricultural Land Conservation contract, provide a written copy and a discussion of the status of the expiration or canceling of such contract.	Section 5.6.6.2	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	Tables 5.6-2 and -5 The applicant's October 5, 2007 Data Adequacy Supplement A	~~No~~ Yes	~~Please discuss the project's conformance with San Bernardino County's Development Code requirements for the Resource Conservation Zoning District related to land use.~~

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Land Use**
Project Manager: Jack Caswell

Project: Ivanpah Solar Electric Generating System
Docket: 07-AFC-5

Technical Staff: Amanda Stennick
Technical Senior: Eric Knight

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.	Table 5.6-2	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 5.6-6	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.	Table 5.6-7	Yes	

Adequacy Issue: Adequate X Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Socioeconomics**
Project: Ivanpah Solar Electric Generating System
Technical Staff: Joseph Diamond Ph. D.
Project Manager: Jack Caswell
Docket: 07-AFC-5
Technical Senior: Eric Knight

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 5.10.1 Introduction, pages 5.10-1&2. Section 5.10.3 Affected Environment, pages 5.10-4 to 5.10-7. Section 5.10-4 Environmental Analysis, pages 5.10-14 to 5.10-37. Section 5.10.5 Cumulative Effects, page 5.10-37. Section 5.10.7 Mitigation Measures, page 5.10-38.	Yes	
Appendix B (g) (7) (A)	A description of the socioeconomic circumstances of the vicinity and region affected by construction and operation of the project. Include:			
Appendix B (g) (7) (A) (i)	The economic characteristics, including the economic base, fiscal resources, and a list of the applicable local agencies with taxing powers and their most recent and projected revenues;	Section 5.10.3.3 Economy and Employment, pages 5.10-7 to 9. Section 5.10.3.4 Fiscal Resources, pages 5.10-9 to 11.	Yes	
Appendix B (g) (7) (A) (ii)	The social characteristics, including population and demographic and community trends;	Section 5.10.3.1 Population, pages 5.10-4 to 5.10-6.	Yes	
Appendix B (g) (7) (A) (iii)	Existing and projected unemployment rates;	Section 5.10.3.3 Economy and Employment, pages 5.10-8&9.	Yes	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (7) (A) (iv)	Availability of skilled workers by craft required for construction and operation of the project;	Section 5.10.3.3 Economy and Employment, pages 5.10-7 to 9. Section 5.10.4.3.1 Construction Workforces, pages 5.10-15, 22&23.	Yes	
Appendix B (g) (7) (A) (v)	Availability of temporary and permanent housing and current vacancy rate; and	Section 5.10.3.2 Housing, pages 5.10-6&7. Section 5.10.4.3.3 Housing Impacts, page 5.10-23. Section 5.10.4.4.3 Housing Impacts, page 5.10-32.	Yes	
Appendix B (g) (7) (A) (vi)	Capacities, existing and expected use levels, and planned expansion of utilities (gas, water and waste) and public services, including fire protection, law enforcement, emergency response, medical facilities, other assessment districts, and school districts. For projects outside metropolitan areas with a population of 500,000 or more, information for each school district shall include current enrollment and yearly expected enrollment by grade level groupings, excluding project-related changes for the duration of the project schedule.	Section 5.10.3.5 Education, pages 5.10-11&12. Section 5.10.3.6 Public Services and Facilities, pages 5.10-12&13. Section 5.10.3.7 Utilities, pages 5.10-13&14.	Yes	
Appendix B (g) (7) (B)	A discussion of the socioeconomic impacts caused by the construction and operation of the project (note year of estimate, model, if used, and appropriate sources), including:			

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (7) (B) (i)	An estimate of the number of workers to be employed each month by craft during construction, and for operations, an estimate of the number of permanent operations workers during a year;	Section 5.10.4.3.1 Construction Workforces, page 5.10-15. Table 5.10-13 Ivanpah 1 Plant Construction by Discipline, pages 5.10-16&17. Table 5.10-14 Ivanpah 2 Plant Construction by Discipline, pages 5.10-18&19. Table 5.10-15 Ivanpah 3 Plant Construction Personnel by Discipline, pages 5.10-20&21.	Yes	
Appendix B (g) (7) (B) (ii)	An estimate of the percentage of non-local workers who will relocate to the project area to work on the project;	Section 5.10.4.3.1 Construction Workforces, page 5.10-15. Section 5.10.4.3.2 Population Impacts, page 5.10-23. Section 5.10.4.4.2 Population Impacts, pages 5.10-31&32.	Yes	
Appendix B (g) (7) (B) (iii)	An estimate of the potential population increase caused directly and indirectly by the project;	Same as above.	Yes	
Appendix B (g) (7) (B) (iv)	The potential impact of population increase on housing during the construction and operations phases;	Section 5.10.4.3.3 Housing Impacts, page 5.10-23. Section 5.10.4.4.3 Housing Impacts, page 5.10-32.	Yes	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (7) (B) (v)	The potential impacts, including additional costs, on utilities (gas, water, and waste) and public services, including fire, law enforcement, emergency response, medical facilities, other assessment districts, and school districts. Include response times to hospitals and for police, and emergency services. For projects outside metropolitan areas with a population of 500,000 or more, information on schools shall include project-related enrollment changes by grade level groupings and associated facility and staffing impacts by school district during the construction and operating phases;	Section 5.10.4.4.7 Impacts on Education, pages 5.10-36&37. Section 5.10.4.4.8 Impacts on Public Services and Facilities, page 5.10-37. Section 5.10.4.4.9 Impacts on Utilities, page 5.10-37.	Yes	
Appendix B (g) (7) (B) (vi)	An estimate of applicable school impact fees;	Section 5.10.4.4.7 Impacts on Education, page 5.10-37.	Yes	
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;	Table 5.10-19 Summary of Total Economic Impacts from Construction (million $), page 5.10-28. Table 5.10-25 Summary of Total Economic Impacts from Operations & Maintenance, page 5.10-35. Data Adequacy, Supplement A, Ivanpah Solar Electric Generation System (07-AFC-5), Section 5.10 Socioeconomics, page 15.	~~No~~ Yes	~~Please provide separate estimates of the total operation payroll for permanent and short-term (contract) operations employees.~~
Appendix B (g) (7) (B) (viii)	An estimate of the expenditures for locally purchased materials for the construction and operation phases of the project;	Same as above.	Yes	.

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (7) (B) (ix)	An estimate of the capital cost (plant and equipment) of the project;	Table 5.10-19 Summary of Total Economic Impacts from Construction (million $), page 5.10-28.	Yes	
Appendix B (g) (7) (B) (x)	An estimate of sales taxes generated during construction and separately during an operational year of the project;	Table 5.10-19 Summary of Total Economic Impacts from Construction (million $), page 5.10-28. Table 5.10-26 Summary of Economic Impacts from Operation within San Bernardino County, page 5.10-36.	Yes	
Appendix B (g) (7) (B) (xi)	An estimate of property taxes generated during an operational year of the project; and	Section 5.10.4.4.5 Fiscal Impacts, Property Taxes, page 5.10-34.	Yes	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (7) (B) (xii)	The expected direct, indirect, and induced income and employment effects due to construction, operation, and maintenance of the project.	Section 5.10.4.3.4 Impacts to the Local Economy and Employment, pages 5.10-24 to 27. Table 5.10-19 Summary of Total Economic Impacts from Construction (million $), page 5.10-28. Table 5.10-20 Summary of Economic Impacts from Construction within San Bernardino County, page 5.10-29. Table 5.10-21 Summary of Economic Impacts from Construction within Clark County, page 5.10-29. Section 5.10.4.4.4 Impacts to the Local Economy and Employment, pages 5.10-32 to 34. Table 5.10-25 Summary of Total Economic Impacts from Operations & Maintenance, page 5.10-35. Table 5.10-26 Summary of Economic Impacts from Operation within San Bernardino County, page 5.10-36. Table 5.10-27 Summary of Economic Impacts from Operation within Clark County, page 5.10-36.	Yes	

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Socioeconomics**
Project: Ivanpah Solar Electric Generating System
Technical Staff: Joseph Diamond Ph. D.
Project Manager: Jack Caswell
Docket: 07-AFC-5
Technical Senior: Eric Knight

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	Table 5.10-1 Laws, Ordinances, Regulations, and Standards Applicable to Ivanpah SEGS Socioeconomics, page 5.10-3.	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 5.10-28 Agency Contacts for Ivanpah SEGS Socioeconomics, pages 5.10-38 to 40.	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.	Same as above.	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 5.10.7 Mitigation Measures, page 5.10-38. Section 5.10.9 Permit Requirements and Permit Schedule, page 5.10-40.	Not Applicable	

Adequacy Issue: Adequate **X** Inadequate ___ **DATA ADEQUACY WORKSHEET** Revision No. 1 Date October 23, 2007

Technical Area: **Soils** Project: Ivanpah Solar Electric Generating System Technical Staff: Christopher Dennis

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Paul Richins

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.	Affected Environment, Section 5.11.3, p. 5.11-5 Environmental Analysis, Section 5.11.4, p. 5.11-7 Cumulative Effects, Section 5.11.5, p. 5.11-14 Mitigation Measures, Section 5.11.6, p. 5.11-15 AFC Data Adequacy Supplement A, p. 16	~~No~~ Yes	~~A discussion of the direct and indirect impacts due to the construction, operation and maintenance of the project is required. Also, a discussion of any monitoring plans proposed to verify the effectiveness of the mitigation is required. If no monitoring plan is proposed, please explain the rationale.~~
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:	Soils within the Study Area, Figure 5.11-1 Section 5.11.3.1, p. 5.11-5 Agricultural Use on and Around the Proposed Ivanpah SEGS Site, Section 5.11.3.2, p. 5.11-7	Yes	
Appendix B (g) (15) (A) (i)	The depth, texture, permeability, drainage, erosion hazard rating, and land capability class of the soil;	Soils within the Study Area, Section 5.11.3.1, p. 5.11-5 AFC Data Adequacy Supplement A, p. 16	~~No~~ Yes	~~The soil depth and erosion hazard rating is required. Please provide these.~~
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;	Soils within the Study Area, Section 5.11.3.1, p. 5.11-5 Environmental Analysis, Section 5.11.4, p. 5.11-7	Yes	
Appendix B (g) (15) (A) (iii)	The location of any proposed fill disposal or fill procurement (borrow) sites; and	Construction, Section 5.11.4.6, p. 5.11-13	Yes	

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Soils**
Project: Ivanpah Solar Electric Generating System
Technical Staff: Christopher Dennis
Project Manager: Jack Caswell
Docket: 07-AFC-5
Technical Senior: Paul Richins

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) (A) (iv)	The location of any contaminated soils that could be disturbed by project construction.	Construction, Section 5.11.4.6, p. 5.11-13 Affected Environment, Section 5.11.3, p. 5.11-5 Affected Environment, Section 5.14, p. 5.14-5 Volume II, Appendix 5.14A	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:	Environmental Analysis, Section 5.11.4, p. 5.11-7 Agricultural Use on and Around the Proposed Ivanpah SEGS Site, Section 5.11.3.2, p. 5.11-7	Yes	
Appendix B (g) (15) (B) (i)	The quantification of accelerated soil loss due to wind and water erosion; and	Environmental Analysis, Section 5.11.4, p. 5.11-7 Estimate of Soil Loss by Water Erosion Table 5.11-3, p. 5.11-8 Estimate of Total Suspended Particles Emitted from Grading and Wind Erosion, Table 5.11-5, p. 5.11-12	Yes	
Appendix B (g) (15) (B) (ii)	The effect of power plant emissions on surrounding soil-vegetation systems.	Effects of Generating Facility Emissions on Soil-Vegetation Systems, Section 5.11.4.8, p. 5.11-14	Yes	

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	Laws, Ordinances, Regulations, and Standards, Table 5.11-1, p. 5.11-2	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.	Laws, Ordinances, Regulations, and Standards, Table 5.11-1, p. 5.11-2 Permit Requirements and Permit Schedule, Section 5.11.8, p. 5.11-17	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.	Involved Agencies and Agency Contacts, Section 5.11.7, p. 5.11-16	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.	Permit Requirements and Permit Schedule, Section 5.11.8, p. 5.11-17	Yes	

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. 5.12-1 through 12-21 Section 5.12	Yes	
Appendix B (g) (5) (A)	A regional transportation setting, on topographic maps (scale of 1:250,000), identifying the project location and major transportation facilities. Include a reference to the transportation element of any applicable local or regional plan.	Figure 5.12-1	Yes	
Appendix B (g) (5) (B)	If the proposed project including any linear facility is to be located within 20,000 feet of an airport runway that is at least 3,200 feet in actual length, or 5,000 feet of a heliport (or planned or proposed airport runway or an airport runway under construction, that is the subject of a notice or proposal on file with the Federal Aviation Administration), discuss the project's compliance with the applicable sections of the current Federal Aviation Regulation Part 77 – Objects Affecting Navigable Airspace, specifically any potential to obstruct or impede air navigation generated by the project at operation; such as, a thermal plume, a visible water vapor plume, glare, electrical interference, or surface structure height. The discussion should include a map at a scale of 1:24,000 that displays the airport or airstrip runway configuration, the proposed power plant site and related facilities.	n/a	Yes	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (5) (C)	An identification, on topographic maps at a scale of 1:24,000, and a description of existing and planned roads, rail lines, (including light rail), bike trails, airports, bus routes serving the project vicinity, pipelines, and canals in the project area affected by or serving the proposed facility. For each road identified, include the following information, where applicable:	PP. 5.12-9 & 12-10 Section 5.12.3.2 Pg. 5.12-11 Section 5.12.3 Figure 1.3-1	Yes	
Appendix B (g) (5) (C) (i)	Road classification and design capacity;	PP. 5.12-9 and 12-10 Section 5.12.3.2 Supplement A filed on 10/05/07	~~No~~ Yes	~~Please provide road design capacity for Interstate Highway 15 (I-15).~~
Appendix B (g) (5) (C) (ii)	Current daily average and peak traffic counts;	Figures 5.12-3 & 12-4 Supplement B filed on 10/19/07	~~No~~ Yes	~~Please provide current daily average traffic counts (I-15).~~
Appendix B (g) (5) (C) (iii)	Current and projected levels of service before project development, during construction, and during project operation;	PP. 5.12-10 & 12-11 Figure 5.12-3 Section 5.12.3.2 PP. 5.12 1-3 through 12-17 Section 5.12.4.1	Yes	
Appendix B (g) (5) (C) (iv)	Weight and load limitations;	Pg. 5.12-9 Section 5.12.3.1	Yes	
Appendix B (g) (5) (C) (v)	Estimated percentage of current traffic flows for passenger vehicles and trucks; and	Pg. 5.12-10 Section 5.12.3.2 Supplement A filed on 10/05/07	~~No~~ Yes	~~Please provide estimated percentage of current traffic flows for passenger vehicles and trucks (I-15).~~
Appendix B (g) (5) (C) (vi)	An identification of any road features affecting public safety.	Pg. 5.12-12 Section 5.12.3.8	Yes	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (5) (D)	An assessment of the construction and operation impacts of the proposed project on the transportation facilities identified in subsection (g)(5)(C). Also include anticipated project-specific traffic, estimated changes to daily average and peak traffic counts, levels of service, and traffic/truck mix, and the impact of construction of any facilities identified in subsection (g)(5)(C).	PP. 5.12-15 through 12-17 Section 5.12.4.3	Yes	
Appendix B (g) (5) (E)	A discussion of project-related hazardous materials to be transported to or from the project during construction and operation of the project, including the types, estimated quantities, estimated number of trips, anticipated routes, means of transportation, and any transportation hazards associated with such transport.	Pg. 5.12-17 & 12-18 Section 5.12.4.4.2	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 5.12.2 Section 5.12.2	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 5.12-7 Section 5.12.7	Yes	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
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 5.12-7 Section 5.12.7	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 5.12-8 Section 5.12.8	Yes	

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Transmission System Eng.**
Project: Ivanpah Solar Electric Generating System
Technical Staff: Sudath Arachchige
Project Manager: Jack Caswell
Docket: 07-AFC-5
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 3.1,3.2 (Transmission System Engineering) Pages 3-1 to 3-6 Figure 3.1-1 (proposed 115kV transmission line routing) Figure 3.1-2 Layout of proposed 220/115kV inter tie equipment. Figure 3.2-1, 3.2-2 115kV single circuit structure elevation and 115kV double circuit structure elevation Appendix 2D (Electrical Engineering Design criteria) Section 2D-3.1 and 2D-3.2 pages 2D-1 to 2D-2 Switchyard and transformers.	Yes	

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Transmission System Eng.**
Project Manager: Jack Caswell

Project: Ivanpah Solar Electric Generating System
Docket: 07-AFC-5

Technical Staff: Sudath Arachchige
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) (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 3.1,3.2 (Transmission System Engineering) Pages 3-1 to 3-6 Figure 3.1-1 (proposed 115kV transmission line routing Ivanpah units 1, 2 and 3) Figure 3.1-2 Layout of proposed 220/115kV inter tie equipment. Figure 3.2-1, 3.2-2 115kV single circuit structure elevation and 115kV double circuit structure elevation Appendix 2D (Electrical Engineering Design criteria) Section 2D-3.1 and 2D-3.2 pages 2D-1 to 2D-2 Switchyard and transformers.	Yes	

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Transmission System Eng.**
Project Manager: Jack Caswell

Project: Ivanpah Solar Electric Generating System
Docket: 07-AFC-5

Technical Staff: Sudath Arachchige
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) (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 3.1,3.2 (Transmission System Engineering) Pages 3-1 to 3-6 Section 2.2.5 (major Electrical Equipment and System), Pages 2-6 to 2-7 Data adequacy, Supplement A, section 3.0 submitted by the applicant on October –05-2007	~~No~~ Yes	1. ~~Provide a complete electrical one-line diagram (or resubmit Figure 3.1-1 and 2.2-3b) of Ivanpah Solar Electric Generating System (Ivanpah SEGS) 1, 2 and 3 switchyards showing all equipment for generator interconnection with the switchyard including any bus duct connectors or cables, 4.16 kV switchgear & breakers on the low side (19kV), generator step-up transformers, short overhead line or conductors with its configuration, buses, breakers and disconnect switches on the 115 kV side and their respective ratings.~~
		Figure 3.1-1 (proposed 115kV transmission line routing Ivanpah units 1, 2 and 3) *Information has been provided by SCE.	~~No~~ Yes	2. ~~Provide a complete electrical one-line diagram for proposed SCE 115/230kV substation with its configuration, buses, breakers, disconnect switches, 115/230kV step-up transformer and their respective ratings.~~
		Figure 3.1-2 Layout of proposed 220/115kV inter tie equipment.		
		Figure 3.2-1, 3.2-2 115kV single circuit structure elevation and 115kV double circuit structure elevation		
		Appendix 2D (Electrical Engineering Design criteria) Section 2D-3.1 and 2D-3.2 pages 2D-1 to 2D-2 Switchyard and transformers.		

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Transmission System Eng.**
Project Manager: Jack Caswell

Project: Ivanpah Solar Electric Generating System
Docket: 07-AFC-5

Technical Staff: Sudath Arachchige
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) (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.	Section 3.1,3.2 (Transmission System Engineering) Pages 3-1 to 3-6 Figure 3.1-1 (proposed 115kV transmission line routing Ivanpah units 1, 2 and 3) Figure 3.1-2 Layout of proposed 220/115kV inter tie equipment. Appendix 2D (Electrical Engineering Design criteria) Section 2D-3.1 and 2D-3.2 pages 2D-1 to 2D-2 Switchyard and transformers.	Yes	

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 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 3.2.3 (Transmission Interconnection System Impact Studies)	Yes	
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, and permits applicable to the proposed project, and a discussion of the applicability of 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;	Section 3.4 (Applicable laws, ordinances, regulations, and Standards) Table 3.4-1 (Design and construction laws)	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits 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 3.4.7 Jurisdictional Agencies Table3.4-7(Jurisdictional Agencies for Transmission System Engineering related LORS)	Yes	

Adequacy Issue: Adequate X Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Transmission System Eng.**

Project: Ivanpah Solar Electric Generating System

Technical Staff: Sudath Arachchige

Project Manager: Jack Caswell

Docket: 07-AFC-5

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) (2)	The name, title, phone number, and address, if known, of an official within each agency who will serve as a contact person for the agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Appendix 1.0.B	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 3.2.3 Data adequacy, Supplement A section 3.0 submitted by the applicant on October-05-2007	~~No~~ Yes	~~Indicate when the project will receive preliminary approval from the California ISO, and when a copy of updated System Impact Study (SIS) will be available provided to the California Energy Commission~~..

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Visual Resources**
Project: Ivanpah Solar Electric Generating System
Technical Staff: Mark R. Hamblin
Project Manager: Jack Caswell
Docket: 07-AFC-5
Technical Senior: Eric Knight

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.	Pg. 5.13-22 – 37, sect. 5.13.3.10 -5.13.6	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:	Pg. 5.13-19 -21, sect. 5.13.3.2 - 7	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 5.13-1, Figure 5.13-2	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.	Pg. 5.13-19-20, sect. 5.13.3.2.	Yes	
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.	Pg. 5.13-30, sect. 5.13.4.5	Yes	

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) (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.	Pg. 5.13-4 -5, sect. 5.13.2.2 – 5.13.2.3 Pg. 5.13-21-22, sect. 5.13.3.9. Pg. 5.13-24-27, sect. 5.13.3.12 – 5.13.3.12.2	Yes	
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.	Table 5.13-6, pg. 5.13-18-19, sect. 5.13.3.1. Pg. 2-4-5, sect. 2.2.4. Figure 2.2-3c	Yes	

Adequacy Issue: Adequate X Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Visual Resources**

Project: Ivanpah Solar Electric Generating System

Technical Staff: Mark R. Hamblin

Project Manager: Jack Caswell

Docket: 07-AFC-5

Technical Senior: Eric Knight

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) (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).	Pg. 5.13-30, sect. 5.13.4.4.7. Pg. 5.13-32, sect. 5.13.4.5.7	Yes	

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Visual Resources**
Project: Ivanpah Solar Electric Generating System
Technical Staff: Mark R. Hamblin
Project Manager: Jack Caswell
Docket: 07-AFC-5
Technical Senior: Eric Knight

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 5.13-3 -8. Figures 5.13-9a – 5.13-10b. Data Response Supplement A page 20 figures; 5.13-9a,5.13-9b, 5.13-10a, 5.13-10b.	~~No~~ Yes	~~Please provide individual life-size photos of Figure 5.13-9a, Figure 5.13-9b, Figure 5.13-10a and Figure 5.13-10b. The purpose behind the use of a life-size (approximately tabloid size) photo is that if an individual extended it to a normal reading range and lined it up with the horizon at the KOP location, the photo simulation if accurate will lineup/match the actual physical setting providing a true to life view of the proposed power plant.~~
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.	Pg. 5.13-30-34, sect. 5.13.4.5	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.	Pg. 5.13-29, sect. 5.13.4.4.5 Data Response Supplement A page 20 figures; VR-2, 2a, 2b, 2c.	~~No~~ Yes	~~It states in the AFC that landscaping is to be installed at the Primm Valley Golf Course as a mitigation measure. A conceptual landscaping plan(s) was not provided in the AFC. Please provide a conceptual landscaping plan at a 1:40 scale or other legible scale pre-approved by staff.~~

Adequacy Issue: Adequate **X** Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 1 Date October 23, 2007

Technical Area: **Visual Resources** Project: Ivanpah Solar Electric Generating System Technical Staff: Mark R. Hamblin

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Eric Knight

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	Table 5.13-3 Table 5.13-5	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 5.13-1	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.	Table 5.13-1	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.	Pg. 5.13-37, sect. 5.13.8	Yes	

Adequacy Issue: Adequate **X** Inadequate ___

DATA ADEQUACY WORKSHEET

Revision No. 1 Date October 23, 2007

Technical Area: **Waste Management**
Project: Ivanpah Solar Electric Generating System
Technical Staff: Christopher Dennis
Project Manager: Jack Caswell
Docket: 07-AFC-5
Technical Senior: Paul Richins

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (b) (1) (C)	A detailed description of the design, construction and operation of the facilities, specifically including the power generation, cooling, water supply and treatment, waste handling and control, pollution control, fuel handling, and safety, emergency and auxiliary systems, and fuel types and fuel use scenarios; and	Introduction, Section 2.1, p. 2-1 Generating Facility Description, Design, and Operation, Section 2.2, p. 2-3 Water Supply and Use, Section 2.2.7, p. 2-8 Waste Management, Section 2.2.9, p. 2-10 Facility Safety, Section 2.3.1.1, p. 2-18 Fuel Systems, Section 2.2.6, p. 2-8 Management of Hazardous Waste, Section 2.2.10, p. 2.4.1	Yes	
Appendix B (e) (1)	A discussion of how facility closure will be accomplished in the event of premature or unexpected cessation of operations.	Facility Closure, Section 2.4, p. 2-24 Temporary Facility Closure, Section 2.4.1, p. 2.-25 Permanent Closure, Section 2.4.2, p. 2-25	Yes	
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.	Affected Environment, Section 5.14.3, p. 5.14-5 Cumulative Effects, Section 5.14.5, p. 5.1415 Mitigation Monitoring Section 5.14.6, p. 5.14-16 AFC Data Adequacy Supplement A, p. 30	~~No~~ Yes	~~A discussion of the indirect impacts due to the project on facilities such as landfills etc. from construction, operation and maintenance of the project is required.~~

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (12) (A)	A Phase I Environmental Site Assessment (ESA) for the proposed power plant site using methods prescribed by the American Society for Testing and Materials (ASTM) document entitled "Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process" (Designation: E 1527-93, May 1993), which is incorporated by reference in its entirety; or an equivalent method agreed upon by the applicant and the CEC Staff that provides similar documentation of the potential level and extent of site contamination. The Phase I ESA shall have been completed no earlier than one year prior to the filing of the AFC.	Affected Environment, Section 5.14, p. 5.14-5 Volume II, Appendix 5.14A	Yes	
Appendix B (g) (12) (B)	A description of each waste stream estimated to be generated during project construction and operation, including origin, hazardous or nonhazardous classification pursuant to Title 22, California Code of Regulations, § 66261.20 et seq., chemical composition, estimated annual weight or volume generated, and estimated frequency of generation.	Project Waste Generation, Section 5.14.4.1, p. 5.14-6 Potential Wastes Generated during the Construction Phase, Table 5.14-2, p. 5.14-6 Potential Wastes Generated during the Operations, Table 5.14-3, p. 5.14-9	Yes	
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 taken by local or state agencies due to waste disposal activities at the site.	Waste Disposal Sites, Section 5.14.4.2, p. 5.14-10 Nonhazardous Waste, Section 5.14.4.2.1, p. 5.14-10 Hazardous Waste, Section 5.14.4.2.2, p. 5.14-11 Solid Waste Disposal Sites, Table 5.14-4, p. 5.14-4	Yes	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (12) (D)	A description of management methods for each waste stream, including methods used to minimize waste generation, length of on- and off-site waste storage, re-use and recycling opportunities, waste treatment methods used, and use of contractors for treatment.	Waste Management Methods and Mitigation, Section 5.14.4.3, p. 5.14-12 Construction Phase, Section 5.14.4.3.1, p. 5.14-12 Operation Phase, Section 5.14.4.3.2, p. 5.14-13	Yes	
Appendix B (h) (1) (B)	A discussion of any measures proposed to improve adverse site conditions.	Waste Management Methods and Mitigation, Section 5.14.4.3, p. 5.14-12	Yes	
Appendix B (h) (1) (D) (v)	The waste disposal system and on-site disposal sites;	Waste Management Methods and Mitigation, Section 5.14.4.3, p. 5.14-12 Construction Phase, Section 5.14.4.3.1, p. 5.14-12 Operation Phase, Section 5.14.4.3.2, p. 5.14-13	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	Laws, Ordinances, Regulations, and Standards, Table 5.14-1, p. 5.14-2	Yes	

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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.	Laws, Ordinances, Regulations, and Standards, Table 5.14-1, p. 5.14-2	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.	Involved Agencies and Agency Contacts, Section 5.14.7, p. 5.14-16	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.	Permits Required and Permit Schedule, Section 5.14.8, p. 5.14-16	Yes	

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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.	Environmental Analysis, Section 5.15.4, p. 5.15-15 Cumulative Effects, Section 5.15.5, p. 5.15-20 Mitigation Measures, Section 5.15.6, p. 5.15-21	Yes	
Appendix B (g) (14) (A)	All the information required to apply for the following permits, if applicable, including:	Permits Requirements and Permit Schedule, Section 5.145.8, p.5.15-23	Yes	
Appendix B (g) (14) (A) (i)	Waste Discharge Requirements; National Pollutant Discharge Elimination System Permit; and/or a Section 401 Certification or Waiver from the appropriate Regional Water Quality Control Board (RWQCB);	Federal LORS, Section 5.15.2.1, p. 5.15-3 State LORS, Section 5.15.2.2, p. 5.15-4	Yes	
Appendix B (g) (14) (A) (ii)	Construction and Industrial Waste Discharge and/or Industrial Pretreatment permits from wastewater treatment agencies;	Permits Required and Permit Schedule, Section 7.14.7, p. 7.14-30	Yes	
Appendix B (g) (14) (A) (iii)	Nationwide Permits and/or Section 404 Permits from the U.S. Army Corps of Engineers; and	Federal LORS, Section 5.15.2.1, p. 5.15-3 Federal LORS, Section 5.2.3, p. 5.2-3	Yes	
Appendix B (g) (14) (A) (iv)	Underground Injection Control Permit(s) from the U.S. Environmental Protection Agency, California Division of Oil and Gas, and RWQCB.	Not Applicable	NA	

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Appendix B (g) (14) (B)	A detailed description of the hydrologic setting of the project. The information shall include a narrative discussion and on maps at a scale of 1:24,000 (or appropriate scale approved by staff), describing the chemical and physical characteristics of the following nearby water bodies that may be affected by the proposed project:	Hydrologic Setting, Section 5.15.3.1, p. 5.15-7 Ivanpah Valley Watershed, Figure 5.15-1 Major Hydrogeology Features In and Near the Project Site, Figure 5.15-2 Ivanpah Valley Groundwater Basin, Figure 5.15-3 Existing (2005) Groundwater Levels in the Ivanpah Groundwater Basin, Figure 5.15-4 Principal Production Wells in the Ivanpah Groundwater Basin, Figure 5.15-5 Area of Drawdown, Figure 5.15-6 Groundwater Availability Report, Appendix 5.15C	Yes	
Appendix B (g) (14) (B) (i)	Ground water bodies and related geologic structures;	Groundwater, Section 5.15.3.1.2, p. 5.15-8 Groundwater Availability Report, Appendix 5.15C	Yes	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (14) (B) (ii)	Surface water bodies;	Surface Water, Section 5.15.3.1.1, p. 5.15-7 Groundwater Availability Report, Appendix 5.15C	Yes	
Appendix B (g) (14) (B) (iii)	Water inundation zones, such as the 100-year flood plain and tsunami run-up zones;	Flooding Potential, Section 5.15.3.1.3, p. 5.15-12	Yes	
Appendix B (g) (14) (B) (iv)	Flood control facilities (existing and proposed); and	Drainage, Section 5.15.4.1.1, p. 5.15-15 Flooding Potential, Section 5.15.4.2.5, p. 5.15-19 Construction SWPPP/Industrial SWPPP, Appendix 5.15A	Yes	
Appendix B (g) (14) (B) (v)	Groundwater wells within ½ mile if the project will include pumping.	Principal Production Wells in the Ivanpah Groundwater Basin, Figure 5.15-5	Yes	
Appendix B (g) (14) (C)	A description of the water to be used and discharged by the project. This information shall include:	Water Use, Section 5.15.3.3.2, p. 5.15-14 Wastewater Discharge and Disposal, Section 5.15.3.3.3, p. 5.15-14	Yes	
Appendix B (g) (14) (C) (i)	Source(s) of the primary and back-up water supplies and the rationale for their selection;	Water Supply and Use, Section 2.2.7, p. 2-8 Water Use, Section 5.15.3.3.2, p. 5.15-14	Yes	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (14) (C) (ii)	The expected physical and chemical characteristics of the source and discharge water(s) including identification of both organic and inorganic constituents before and after any project-related treatment. For source waters with seasonal variation, provide seasonal ranges of the expected physical and chemical characteristics. Provide copies of background material used to create this description (e.g., laboratory analysis);	Groundwater Quality Data for Primm Golf Course Wells, Table 5.15-3, p. 5.15-11 Groundwater, Section 5.15.3.1.2, p. 5.15-8 Waste Discharge Requirements, Section 5.15.4.2.3, p. 5.15-17 AFC Data Adequacy Supplement A, p. 31	~~No~~ Yes	~~1. Please provide copies of the analytical data used to create the Tables for the Colosseum wells #1 and #2~~ ~~2. Provide and discuss data on the chemical and physical characteristics of the wastewater to be discharged to landscaping after treatment by the package sewage treatment system.~~
Appendix B (g) (14) (C) (iii)	Average and maximum daily and annual water demand and waste water discharge for both the construction and operation phases of the project;	Water Supply and Use, Section 2.27, p. 2-8 Water Supply and Use, Section 5.15.3.3, p. 5.15-14	Yes	
Appendix B (g) (14) (C) (iv)	A detailed description of all facilities to be used in water conveyance (from primary source to the power plant site), water treatment, and wastewater discharge. Include a water mass balance diagram;	Water Supply and Use, Section 2.27, p. 2-8 Water Supply and Use, Section 5.15.3.3, p. 5.15-14 Water Treatment, Section 2.2.7, p. 2-9 Wastewater Discharge and Disposal, Section 5.15.3.3.3, p. 5.15-14 Wastewater Discharge Requirements, Section 5.15.4.2.3, p. 5.15-17 100 MW Water Balance Diagram, Figure 2.2-6	Yes	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (14) (C) (v)	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;	Not Applicable	NA	
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);	Not Applicable	NA	
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 reduce water demand; and	100 MW Heat Balance, 100% Solar, Figure 2.2-5 100 MW Water Balance Diagram, Figure 2.2-6	Yes	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (14) (C) (viii)	For all projects which have a discharge, provide a copy of the will-serve letter, permit or contract with the public or private entity that will be accepting the wastewater and contact storm water from the project. The letter, permit or contract, if possible, shall identify the discharge volumes and the chemical or physical characteristics under which the wastewater and contact storm water will be accepted. In the event that a will-serve letter, permit, or contract cannot be provided, identify the most likely wastewater/storm water entity and discuss why the applicant was unable to secure the necessary assurances to serve the project's wastewater/storm water needs. Also, discuss the term of the wastewater service to the project, whether the wastewater entity has adequate permit capacity for the volume of wastewater from the project and has adequate permit levels for the chemical/physical characteristics of the project's wastewater and storm water for the life of the project, and any issues or conditions/restrictions the wastewater entity may impose on the project.	Not Applicable	NA	
Appendix B (g) (14) (D)	Identify all project elements associated with stormwater drainage, including a description of the following:	Drainage, Section 5.15.4.1.1, p. 5.15-15 Drainage, Section 5.15.4.2.1, p. 5.15-15	Yes	
Appendix B (g) (14) (D) (i)	Monthly and/or seasonal precipitation and stormwater runoff and drainage patterns for the proposed site and surrounding area that may be affected by the project's construction and operation;	Precipitation , Stormwater Runoff, and Drainage, Section 5.15.3.2, p. 5.15-13	Yes	

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Appendix B (g) (14) (D) (ii)	Drainage facilities and the design criteria used for the plant site and ancillary facilities, including but not limited to capacity of designed system, design storm, and estimated runoff;	Drainage, Section 5.15.4.1.1, p. 5.15-15 Drainage, Section 5.15.4.2.1, p. 5.15-15 Construction SWPPP/Industrial SWPPP, Appendix 5.15A	Yes	
Appendix B (g) (14) (D) (iii)	All assumptions and calculations used to calculate runoff and to estimate changes in flow rates between pre- and post construction; and	Precipitation , Stormwater Runoff, and Drainage, Section 5.15.3.2, p. 5.15-13 Construction SWPPP/Industrial SWPPP, Appendix 5.15A Preliminary Stormwater Calculations, Appendix 5.15D	Yes	
Appendix B (g) (14) (D) (iv)	A copy of applicable regional and local requirements regulating the drainage systems, and a discussion of how the project's drainage design complies with these requirements.	Laws, Ordinances, Regulations, and Standards, Table 5.15-1, p. 5.15-2	Yes	
Appendix B (g) (14) (E)	An impacts analysis of the proposed project on water resources and a discussion of conformance with water-related LORS and policy. This discussion shall include:	Laws, Ordinances, Regulations, and Standards, Table 5.15-1, p. 5.15-2 Environmental Analysis, Section 5.15.4, p. 5.15-15 Cumulative Effects, Section 5.15.5, p. 5.15-20	Yes	

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Appendix B (g) (14) (E) (i)	The effects of project demand on the water supply and other users of this source, including, but not limited to, water availability for other uses during construction or after the power plant begins operation, consistency of the water use with applicable RWQCB basin plans or other applicable resource management plans, and any changes in the physical or chemical conditions of existing water supplies as a result of water use by the power plant;	Groundwater, Section 5.15.3.1.2, p. 5.15-8 Cumulative Effects, Section 5.15.5, p. 5.15-20 Groundwater Availability, Appendix 5.15C	Yes	
Appendix B (g) (14) (E) (ii)	If the project will pump groundwater, an estimation of aquifer drawdown based on a computer modeling study shall be conducted by a professional geologist and include the estimated drawdown on neighboring wells within 0.5 mile of the proposed well(s), any effects on the migration of groundwater contaminants, and the likelihood of any changes in existing physical or chemical conditions of groundwater resources shall be provided;	Groundwater, Section 5.15.3.1.2, p. 5.15-8 Groundwater Availability, Appendix 5.15C AFC Data Adequacy Supplement A, p. 32	~~No~~ Yes	~~Please provide the name and California license number of the Professional Geologist who wrote the Groundwater Availability report.~~
Appendix B (g) (14) (iii)	The effects of construction activities and plant operation on water quality and to what extent these effects could be mitigated by best management practices;	Environmental Analysis, Section 5.15.4, p. 5.15-15 Cumulative Effects, Section 5.15.5, p. 5.15-20 Mitigation Measures, Section 5.15.6, p. 5.15-21 Construction SWPPP/Industrial SWPPP, Appendix 5.15A	Yes	

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Appendix B (g) (14) (iv)	If not using a zero liquid discharge project design for cooling and process waters, include the effects of the proposed wastewater disposal method on receiving waters, the feasibility of using pre-treatment techniques to reduce impacts, and beneficial uses of the receiving waters. Include an explanation why the zero liquid discharge process is "environmentally undesirable," or "economically unsound;	Waste Management, Section 2.2.9, p. 2-10 100 MW Water Balance Diagram, Figure 2.2-6 Operation Phase, Section 5.14.4.3.2, p. 5.15-13 Wastewater Discharge Requirements, Section 5.15.4.2.3, p. 5.15-17	Yes	
Appendix B (g) (14) (v)	If using fresh water, include a discussion of the cumulative impacts, alternative water supply sources and alternative cooling technologies considered as part of the project design. Include an explanation of why alternative water supplies and alternative cooling are "environmentally undesirable," or "economically unsound;	Water Requirements, Section 2.2.7.1, p. 2-7 Water Use, Section 5.15.3.3.2, p. 51.5-14 Cumulative Effects, Section 5.15.5, p. 5.15-20	Yes	
Appendix B (g) (14) (vi)	The effects of the project on the 100-year flood plain, flooding potential of adjacent lands or water bodies, or other water inundation zones; and	Flooding Potential, Section 5.15.4.2.5, p. 5.15-19	Yes	
Appendix B (g) (14) (vii)	All assumptions, evidence, references, and calculations used in the analysis to assess these effects.	Flooding Potential, Section 5.15.4.2.5, p. 5.15-19	Yes	

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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	Laws, Ordinances, Regulations, and Standards, Table 5.15-1, p. 5.15-2	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.	Laws, Ordinances, Regulations, and Standards, Table 5.15-1, p. 5.15-2	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.	Included Agencies and Agency Contacts, Section 5.15.7, p. 5.15-21	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.	Permits Requirements and Permit Schedule, Section 5.15.8, p. 5.15-23	Yes	