State Of California — The Resources Agency of California

Memorandum

Date: September 28, 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

Terry O'Brien for

DOCKET
07-AFC-5
DATE SEP 2 8 2007
RECD. SEP 2 8 2007

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

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

Staff has completed its data adequacy review of the Ivanpah Solar Electric Generating System project (ISEGS) electrical power plant Application for Certification (AFC) submitted on August 31, 2007. Staff has determined that the AFC does not contain all the information required by California Code of Regulations, Title 20, Section 1704, including Appendix B, for the 12-month AFC process. Of the 23 technical disciplines reviewed, 11 technical areas are inadequate. The sections of the AFC that require additional information to meet data adequacy for the 12-month process are: air quality, biological resources, cultural resources, land use, socioeconomics, soils, traffic & transportation, transmission system design, visual resources, waste management and water resources.

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:

- southern California's Mojave Desert, near the Nevada border, to the west of Ivanpah Dry Lake
- San Bernardino County 4.5 miles southwest of Primm, Nevada, 3.1 miles west of the California-Nevada border
- Township 17N, Range 14E, and Township 16N, Range 14E

The proposed project includes three solar concentrating thermal power plants, based on distributed power tower and heliostat mirror technology, in which heliostat (mirror) fields focus solar energy on power tower receivers near the center of each heliostat array. Each 100-MW site would require approximately 850-acres (or 1.3 square miles) and would have three tower receivers and arrays; the 200-MW site would require approximately 1,600 acres (or 2.5 square miles) and would have 4 tower receivers and arrays. Given that the three plants would be developed in concert, the proposed solar facilities would share common facilities including an administration building, operations and maintenance building, substation, access road, and the reconductored transmission lines for all three phases. 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.

Attachment A contains an overview of whether each technical discipline evaluated is adequate or inadequate. Attachment B contains detailed data adequacy worksheets that describe staff's findings for each information requirement for the 12-month AFC process. We have not received written comments from other agencies.

At the Energy Commission's business meeting on October 10, 2007, staff will recommend that the Energy Commission not accept the AFC until all the additional information specified in Attachment B is supplied. Pursuant to California Code of Regulations, Title 20, Section 1709 (c), if the Energy Commission accepts staff's recommendation, the Energy Commission may use the attached Data Adequacy worksheets to indicate in writing those parts of the AFC that fail to meet the information requirements and the manner in which it can be made complete.

If you have any questions, please call Jack W. Caswell, staff's Project Manager, at (916) 653-0062.

Attachment

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

Technical Area	Attachment B Page No.	Adequate ?
AIR QUALITY	5	NO
ALTERNATIVES	11	YES
BIOLOGICAL RESOURCES	12	NO
CULTURAL RESOURCES	22	NO
EFFICIENCY	28	YES
FACILITY DESIGN	30	YES
GEOLOGICAL HAZARDS	33	YES
HAZARDOUS MATERIALS HANDLING	35	YES
LAND USE	38	NO
NOISE	42	YES
PALEONTOLOGICAL RESOURCES	46	YES
PROJECT OVERVIEW	48	YES
PUBLIC HEALTH	51	YES
RELIABILITY	54	YES
SOCIOECONOMICS	56	NO
SOILS	63	NO
TRAFFIC AND TRANSPORTATION	66	NO
TRANSMISSION LINE SAFETY AND NUISANCE	70	YES
TRANSMISSION SYSTEM ENGINEERING	72	NO
VISUAL RESOURCES	78	NO
WASTE MANAGEMENT	83	NO
WATER RESOURCES	87	NO
WORKER SAFETY	98	YES

ATTACHMENT B

ENERGY COMMISSION STAFF'S
Data Adequacies Worksheets

Ivanpah Solar Electric Generating System
07-AFC-5

September 28, 2007

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 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.		No	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	

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Appendix B (g) (8) (E)	The emission rates of criteria pollutants and greenhouse gases (CO2, CH4, N2O, and SF6) from the stack, cooling towers, fuels and materials handling processes, delivery and storage systems, and from all on-site secondary emission sources.	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	

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Appendix B (g) (8) (H)	One year of meteorological data collected from either the Federal Aviation Administration Class 1 station nearest to the project or from the project site, or meteorological data approved by the California Air Resources Board or the local air pollution control district.	Appendix 5.1D	Yes	
Appendix B (g) (8) (H) (i)	If the data is collected from the project site, the applicant shall demonstrate compliance with the requirements of the U.S. Environmental Protection Agency document entitled "On-Site Meteorological Program Guidance for Regulatory Modeling Applications" (EPA - 450/4-87-013 (August 1995)), which is incorporated by reference in its entirety.	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:			

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Appendix B (g) (8) (I) (i)	A screening level air quality modeling analysis, or a more detailed modeling analysis if so desired by the applicant, of the direct criteria pollutant impacts of project construction activities on ambient air quality conditions, including fugitive dust (PM_{10}) emissions from grading, excavation and site disturbance, as well as the combustion emissions [nitrogen oxides (NO_x), sulfur dioxide (SO_2), carbon monoxide (CO), and particulate matter less than 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter (PM2.5)] from construction-related equipment;	Section 5.1.6.6, pp. 5.1-43 to 45 Appendix 5.1D	Yes	
Appendix B (g) (8) (I) (ii)	A screening level air quality modeling analysis, or a more detailed modeling analysis if so desired by the applicant, of the direct criteria pollutant (NO_x, SO_2, CO, PM_{10}, and $PM_{2.5}$) impacts on ambient air quality conditions of the project during typical (normal) operation, and during shutdown and startup modes of operation. Identify and include in the modeling of each operating mode the estimated maximum emissions rates and the assumed meteorological conditions;	Section 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	

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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) (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	
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	

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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 (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	
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 5.1.10 pp. 5.1-48	Yes	

Adequacy Issue: Adequate **X** Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Alternatives** Project: Ivanpah Solar Electric Generating System Technical Staff: Susan Lee

Project Manager: Jack Caswell Docket: **07-AFC-05** Technical Senior: Eileen Allen

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) (D)	A description of how the site and related facilities were selected and the consideration given to engineering constraints, site geology, environmental impacts, water, waste and fuel constraints, electric transmission constraints, and any other factors considered by the applicant.	p. 7-17 Section 6.3 p. 6-18 Table 6.3-1	Yes	
Appendix B (f) (1)	A discussion of the range of reasonable alternatives to the project, or to the location of the project, including the no project alternative, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and an evaluation of the comparative merits of the alternatives. In accordance with Public Resources Code section 25540.6(b), a discussion of the applicant's site selection criteria, any alternative sites considered for the project, and the reasons why the applicant chose the proposed site.	p. 1-9 Section 1.7 p. 6-1 Section 6	Yes	
Appendix B (f) (2)	An evaluation of the comparative engineering, economic, and environmental merits of the alternatives discussed in subsection (f) (1).	p. 6-20 Section 6.5 p. 6-21 Section 6.6	Yes	

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Technical Area: **Biological Resources** Project: Ivanpah Solar Electric Generating System Technical Staff: Marc Sazaki

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Rick York

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Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Existing site conditions: 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 Direct, indirect, and cumulative impacts: Vol. 1, pgs. 5.-41 to 5.2-55, Section 5.2.9.2 Mitigation measures: Vol. 1, pgs. 5.2-59 to 5.2-68, Section 5.2.11.1 Monitoring plans: Vol. 1, pgs. 5.2-57 to 5.2-59, Section 5.2.11 Vol. 2, APPENDIX 5.2J	Yes Yes Yes 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 Regional vicinity map: Vol. 1, Fig. 5.2-2 & Fig. 5.6.1	Yes Yes	

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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	
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	

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Appendix B (g) (13) (B) (i)	Detailed maps at a scale of 1:6,000 or color aerial photographs taken at a recommended scale of 1 inch equals 500 feet (1:6,000) with a 30 percent overlap that show the proposed project site and related facilities, biological resources including, but not limited to, those found during project-related field surveys and in records from the California Natural Diversity Database, and the associated areas where biological surveys were conducted. Label the biological resources and survey areas as well as the project facilities;	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	

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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:	Vol. 1 pgs. 5.2-3 to 5.2-11 Figs. 5.2-3,5.2-4, 5.2-5, 5.2-9	Yes	
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	

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Appendix B (g) (13) (D) (i)	Current biological resources surveys conducted using appropriate field survey protocols during the appropriate season(s). State and federal agencies with jurisdiction shall be consulted for field survey protocol guidance prior to surveys if a protocol exists;	Protocol surveys: Vol. 1, pgs. 5.2-17 to 5.2-29, Section 5.2.7.4 & pg. 5.2-45, Section 5.2.9.2.2 Vol. 2, APPENDIX 5.2F & APPENDIX 5.2G Appropriate season: Vol. 1, pg. 5.2-18, Section 5.2.7.4.3	Yes Yes	
Appendix B (g) (13) (D) (ii)	If cooling water is proposed to be taken directly from or discharged to a surface water feature source, seasonal aquatic resource studies and surveys shall be conducted. Aquatic resource survey data shall include, but is not limited to, fish trawls, ichthyoplankton and benthic sampling, and related temperature and water quality samples. For new projects or repower projects anticipating a change in cooling water flows, sampling protocols shall be provided to the Energy Commission staff for review and concurrence prior to the start of sampling. For repower projects not anticipating a change in cooling water flows, this information shall be provided in the form of the most recent federal Clean Water Act 316(b) impingement and entrainment impact study completed within five (5) years of the AFC filing date; and		Not Applicable to Project	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Biological Resources** Project: Ivanpah Solar Electric Generating System Technical Staff: Marc Sazaki

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) (D) (iii)	If the project or any related facilities could impact a jurisdictional or non-jurisdictional wetland, provide completed Army Corps of Engineers wetland delineation forms and/or determination of wetland status pursuant to Coastal Act requirements, name(s) and qualifications of biologist(s) completing the delineation, the results of the delineation and a table showing wetland acreage amounts to be impacted.	Wetland status: Vol. 1, pgs. 5.2-35 & 5.2-36, Section 5.2.8.4, Table 5.2-1 Forms: Vol. 1, Figs. 5.2-6 to 5.2-8	Yes Yes	
Appendix B (g) (13) (E)	Impacts discussion of the following:	--	--	
Appendix B (g) (13) (E) (i)	All impacts (direct, indirect, and cumulative) to biological resources from project site preparation, construction activities, plant operation, maintenance, and closure. Discussion shall also address sensitive species habitat impacts from cooling tower drift and air emissions;	Impacts: pgs. 5.2-41 to 5.2-56, Section 5.2.9.2 Air emissions impacts:	Yes No	A discussion of Air emissions and potential sensitive species habitat impacts in the local area surrounding the power plant should be included in the AFC.
Appendix B (g) (13) (E) (ii)	Facilities that propose to take water directly from, and/or discharge water to surface water features, daytime and nighttime impacts from the intake and discharge of water during operation, water velocity at the intake screen, the intake field of influence, impingement, entrainment, and thermal discharge. Provide a discussion of the extent of the thermal plume, effluent chemicals, oxygen saturation, intake pump operations, and the volume and rate of cooling water flow at the intake and discharge location; and		Not Applicable to Project	

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Technical Area: **Biological Resources** Project: Ivanpah Solar Electric Generating System Technical Staff: Marc Sazaki

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) (E) (iii)	Methods to control biofouling and chemical concentrations, and temperatures that are currently being discharged or will be discharged to receiving waters.		Not Applicable to Project	
Appendix B (g) (13) (F)	A discussion of all feasible mitigation measures including, but not limited to the following:	--	--	
Appendix B (g) (13) (F) (i)	All measures proposed to avoid and/or reduce adverse impacts to biological resources;	Vol. 1, pgs. 5.2-57 to 5.2-68, Section 5.2.11	Yes	
Appendix B (g) (13) (F) (ii)	All off-site habitat mitigation and habitat improvement or compensation, and an identification of contacts for compensation habitat and management;	Vol. 1, pg. 5.1-65, Section 5.2.11.3.2	Yes	
Appendix B (g) (13) (F) (iii)	Design features to better disperse or eliminate a thermal discharge;		Not Applicable to Project	
Appendix B (g) (13) (F) (iv)	All measures proposed to avoid or minimize adverse impacts of cooling water intake. This shall include a Best Technology Available (BTA) discussion. If BTA is not being proposed, the rationale for not selecting BTA must be provided; and		Not Applicable to Project	
Appendix B (g) (13) (F) (v)	Educational programs to enhance employee awareness during construction and operation to protect biological resources.	Vol. 1, pg. 5.2-58, Section 5.2.11 & pg. 5.2-63, Section 5.2.11.3.2 Vol. 2, APPENDIX 5.2J	Yes	
Appendix B (g) (13) (G)	A discussion of compliance and monitoring programs to ensure the effectiveness of impact avoidance and mitigation measures incorporated into the project.	Vol. 1, pg. 5.2-58, Section 5.2.11 Vol. 2, APPENDIX 5.2J	Yes	

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Technical Area: **Biological Resources** Project: Ivanpah Solar Electric Generating System Technical Staff: Marc Sazaki

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) (H)	Submit copies of any preliminary correspondence between the project applicant and state and federal resource agencies regarding whether federal or state permits from other agencies such as the U. S. Fish and Wildlife Service, the National Marine Fisheries Service, the U.S. Army Corps of Engineers, the California Department of Fish and Game, and the Regional Water Quality Control Board will be required for the proposed project.	Vol. 1, pg. 5.2-12, Section 5.2.7.4, pg. 5.2-14, Section 5.2.7.4.1 & pg. 5.2-22, Section 5.2.7.4.4	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	Vol. 1, pgs. 5.2-77 to 5.2-78, Table 5.2-1	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.	Vol. 1, pgs. 5.2-77 to 5.2-78, Table 5.2-1	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.	Vol. 1, pg. 5.2-110, Table 5.2-14	Yes	

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Technical Area: **Biological Resources** Project: Ivanpah Solar Electric Generating System Technical Staff: Marc Sazaki

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) (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.	Vol. 1, pg. 5.2-111, Table 5.2-15	Yes	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 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) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	existing site conditions: Vol. 1, p. 5.3-7 impacts due to project: Vol. 1, p. 5.3-22 mitigation measures for known impacts effectiveness of the proposed measures any monitoring plans proposed to verify the effectiveness of the mitigation	YES YES N/A N/A N/A	
Appendix B (g) (2) (A)	A summary of the ethnology, prehistory, and history of the region with emphasis on the area within no more than a 5-mile radius of the project location.	summary of the ethnology, prehistory, and history: Vol. 1, pp. 5.3-7 to 5.3-15	YES	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 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	NO	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.
		cultural resources recognized by local societies: Vol. 1, p. 5.3-19	YES	
	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.	names/quails 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	NO	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 reports	NO	Staff cannot determine whether all the required reports have been submitted until a usable map, as described above, has been received.

Adequacy Issue:	Adequate	Inadequate	X	**DATA ADEQUACY WORKSHEET**	Revision No.	0	Date	September 28, 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. 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, archaeology: Conf. Vol. 1, App. 5.3-B, p. 2	YES	
		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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 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) 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 method-ology: 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	

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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) (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	
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 ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 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	

Adequacy Issue: Adequate X Inadequate ___ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Efficiency** Project: Ivanpah Solar Electric Generating System Technical Staff: Shahab Khoshmashrab

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	§§ 1.1, 1.2.2, 2.1, 2.3, 2.3.1.1.1 Appendices 2.0, 5.4A	Yes	
Appendix B (h) (4) (A)	Heat and mass balance diagrams for design conditions for each mode of operation.	§ 2.2.3 Figure 2.2-5	Yes	
Appendix B (h) (4) (B)	Annual fuel consumption in BTUs for each mode of operation, including hot restarts and cold starts.	§ 5.1.6 Table 5.1-13	Yes	
Appendix B (h) (4) (C)	Annual net electrical energy produced in MWh for each mode of operation including starts and shutdowns.	Table 2.1-1	Yes	
Appendix B (h) (4) (D)	Number of hours the plant will be operated in each design condition in each year.	Table 2.1-1	Yes	
Appendix B (h) (4) (E)	If the project will be a cogeneration facility, calculations showing compliance with applicable efficiency and operating standards.	N/A	N/A	
Appendix B (h) (4) (F)	A discussion of alternative generating technologies available for the project, including the projected efficiency of each, and an explanation why the chosen equipment was selected over these alternatives.	§ 6.6	Yes	

Adequacy Issue: Adequate X Inadequate

DATA ADEQUACY WORKSHEET

Revision No. 0 Date September 28, 2007

Technical Area: **Efficiency**
Project Manager: Jack Caswell

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

Technical Staff: Shahab Khoshmashrab
Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (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	§ 2.5 Appendix 2.0	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.	N/A	N/A	
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.	N/A	N/A	
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.	N/A	N/A	

Adequacy Issue: Adequate X Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Facility Design** Project: Ivanpah Solar Electric Generating System Technical Staff: Shahab Khoshmashrab

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (h) (1) (A)	A description of the site conditions and investigations or studies conducted to determine the site conditions used as the basis for developing design criteria. The descriptions shall include, but not be limited to, seismic and other geologic hazards, adverse conditions that could affect the project's foundation, adverse meteorological and climatic conditions, and flooding hazards, if applicable.	§§ 1.1, 1.2.2, 2.1, 2.3, 2.3.1.1.1 Appendices 2.0, 5.4A	Yes	
Appendix B (h) (1) (B)	A discussion of any measures proposed to improve adverse site conditions.	§ 2.3 Appendices 2.0, 5.4A	Yes	
Appendix B (h) (1) (C)	A description of the proposed foundation types, design criteria (including derivation), analytical techniques, assumptions, loading conditions, and loading combinations to be used in the design of facility structures and major mechanical and electrical equipment.	§ 2.3 Appendix 2.0	Yes	
Appendix B (h) (1) (D)	For each of the following facilities and/or systems, provide a description including drawings, dimensions, surface-area requirements, typical operating data, and performance and design criteria for protection from impacts due to adverse site conditions.	Appendix 2.0	Yes	
Appendix B (h) (1) (D) (i)	The power generation system;	§§ 1.1, 1.2, 2.1, 2.2 Figures 2.2-1b, 2.2-1c, 2.2-2b, 2.2-3b, 2.2-3c	Yes	
Appendix B (h) (1) (D) (ii)	The heat dissipation system;	§§ 1.2, 2.1, 2.2.8, 2.3.1 Appendix 2C	Yes	
Appendix B (h) (1) (D) (iii)	The cooling water supply system, and, where applicable, pre-plant treatment procedures;	§§ 1.2, 1.7.5, 2.2.7 Chapter 5.15	Yes	

Adequacy Issue: Adequate X Inadequate

DATA ADEQUACY WORKSHEET

Revision No. 0 Date September 28, 2007

Technical Area: **Facility Design** Project: Ivanpah Solar Electric Generating System Technical Staff: Shahab Khoshmashrab

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (h) (1) (D) (iv)	The atmospheric emission control system;	§§ 1.7.1, 2.2.11 Chapter 5.1	Yes	
Appendix B (h) (1) (D) (v)	The waste disposal system and on-site disposal sites;	§ 2.2.9 Chapter 5.14	Yes	
Appendix B (h) (1) (D) (vi)	The noise emission abatement system;	§ 2.3.1 Chapter 5.7	Yes	
Appendix B (h) (1) (D) (vii)	The geothermal resource conveyance and re-injection lines (if applicable);	N/A	N/A	
Appendix B (h) (1) (D) (viii)	Switchyards/transformer systems; and	§§ 1.2, 2.2.2, 2.2.5, 2.2.14 Chapter 3.0	Yes	
Appendix B (h) (1) (D) (ix)	Other significant facilities, structures, or system components proposed by the applicant.	§ 2.2	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	§ 2.5 Appendix 2.0	Yes	

Adequacy Issue: Adequate X Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Facility Design** Project: Ivanpah Solar Electric Generating System Technical Staff: Shahab Khoshmashrab

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	§ 5.4.7	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.	§ 5.4.7	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.	§ 5.4.8	Yes	

Adequacy Issue: Adequate X Inadequate

DATA ADEQUACY WORKSHEET

Revision No. 0 Date September 28, 2007

Technical Area: **Geological Hazards** Project: Ivanpah Solar Electric Generating System Technical Staff: Patrick Pilling, Ph.D., P.E.

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 5.4.3, Pages 5.4-4 through 5.4-7; Section 5.4.5, Pages 5.4-8 through 5.4-9; Section 5.4.6, Page 5.4-9; and Appendix 5.4.	Yes	
Appendix B (g) (17) (A)	A summary of the geology, seismicity, and geologic resources of the project site and related facilities;	Section 5.4.3, Pages 5.4-4 through 5.4-7; Figures 5.4-1 and 5.4-2; and Appendix 5.4.	Yes	
Appendix B (g) (17) (B)	A map at a scale of 1:24,000 and description of all recognized stratigraphic units, geologic structures, and geomorphic features within 2 miles of the project site. Include an analysis of the likelihood of ground rupture, seismic shaking, mass wasting and slope stability, liquefaction, subsidence, and expansion or collapse of soil structures.	Figure 5.4-1; Section 5.4.3, Pages 5.4-4 through 5.4-7; and Appendix 5.4.	Yes	
Appendix B (g) (17) (C)	A map and description of geologic resources of recreational, commercial, or scientific value which may be affected by the project. Include a discussion of the techniques used to identify and evaluate these resources.	Figure 5.4-2 and Section 5.4.3.5, Page 5.4-7.	Yes	
Appendix B (h) (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 5.4.2, Pages 5.4-2 through 5.4-4 and Table 5.4-1.	Yes	

Adequacy Issue: Adequate X Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Geological Hazards** Project: Ivanpah Solar Electric Generating System Technical Staff: Patrick Pilling, Ph.D., P.E.

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (h) (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 5.4.8, Page 5.4-10.	Yes	
Appendix B (h) (2)	A discussion of the conformity of the project with the requirements listed in subsection (h)(1)(A).	Section 5.4.2, Pages 5.4-2 and 5.4-3.	Yes	
Appendix B (h) (3)	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.	Section 5.4.7, Page 5.4-9 and Section 5.4.8, Page 5.4-10.	Yes	

Adequacy Issue: Adequate X Inadequate **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Hazardous Materials Handling** Project: Ivanpah Solar Electric Generating System Technical Staff: Rick Tyler

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Rick Tyler

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (e) (1)	A discussion of how facility closure will be accomplished in the event of premature or unexpected cessation of operations.	Section 2.4	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.	Section 5.5	Yes	
Appendix B (g) (10) (A)	A list of all materials used or stored on-site which are hazardous or acutely hazardous, as defined in Title 22, California Code of Regulations, § 66261.20 et seq., and a discussion of the toxicity of each material.	Table 5.5-3	Yes	
Appendix B (g) (10) (B)	A map at a scale of 1:24,000 depicting the location of schools, hospitals, day-care facilities, emergency response facilities and long-term health care facilities, within the area potentially affected by any release of hazardous materials.	Section 5.5.3	Yes	
Appendix B (g) (10) (C)	A discussion of the storage and handling system for each hazardous material used or stored at the site.	Section 5.5	Yes	
Appendix B (g) (10) (D)	The protocol that will be used in modeling potential consequences of accidental releases that could result in off site impacts. Identify the model(s) to be used, a description of all input assumptions, including meteorological conditions. The results of the modeling analysis can be submitted after the AFC is complete.	Section 5.5	Yes	

Adequacy Issue: Adequate X Inadequate **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Hazardous Materials Handling** Project: Ivanpah Solar Electric Generating System Technical Staff: Rick Tyler

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Rick Tyler

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (10) (E)	A discussion of whether a risk management plan (Health and Safety Code § 25531 et seq.) will be required, and if so, the requirements that will likely be incorporated into the plan.	Section 5.5.6.4.3	Yes	
Appendix B (g) (10) (F)	A discussion of measures proposed to reduce the risk of any release of hazardous materials.	Section 5.5.6	Yes	
Appendix B (g) (10) (G)	A discussion of the fire and explosion risks associated with the project.	Section 5.5.4.3	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 5.5-1	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 5.5.1	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 5.5-5	Yes	

Adequacy Issue: Adequate X Inadequate

DATA ADEQUACY WORKSHEET

Revision No. 0 Date September 28, 2007

Technical Area: **Hazardous Materials Handling** Project: Ivanpah Solar Electric Generating System Technical Staff: Rick Tyler

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Rick Tyler

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Section 5.5.8	Yes	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Land Use** Project: Ivanpah Solar Electric Generating System Technical Staff: Amanda Stennick

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 5.6	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 ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Land Use** Project: Ivanpah Solar Electric Generating System Technical Staff: Amanda Stennick

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) (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 ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Land Use** Project: Ivanpah Solar Electric Generating System Technical Staff: Amanda Stennick

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) (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	No	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 ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Land Use** Project: Ivanpah Solar Electric Generating System Technical Staff: Amanda Stennick

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) (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. 0 Date September 28, 2007

Technical Area: **Noise** Project: Ivanpah Solar Electric Generating System Technical Staff: Steve Baker

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	§§ 1.1, 1.2, 1.3, 1.4, 1.5, 2.2.1, 2.5.2; Chapter 5.7	Yes	
Appendix B (g) (4) (A)	A land use map which identifies residences, hospitals, libraries, schools, places of worship, or other facilities where quiet is an important attribute of the environment within the area impacted by the proposed project. The area potentially impacted by the proposed project is that area where, during either construction or operation, there is a potential increase of 5 dB(A) or more, over existing background levels.	N/A	N/A	

Adequacy Issue: Adequate X Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Noise** Project: Ivanpah Solar Electric Generating System Technical Staff: Steve Baker

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (4) (B)	A description of the ambient noise levels at those sites identified under subsection (g)(4)(A) which the applicant believes provide a representative characterization of the ambient noise levels in the project vicinity, and a discussion of the general atmospheric conditions, including temperature, humidity, and the presence of wind and rain at the time of the measurements. The existing noise levels shall be determined by taking noise measurements for a minimum of 25 consecutive hours at a minimum of one site. Other sites may be monitored for a lesser duration at the applicant's discretion, preferably during the same 25-hour period. The results of the noise level measurements shall be reported as hourly averages in Leq (equivalent sound or noise level), Ldn (day-night sound or noise level) or CNEL (Community Noise Equivalent Level) in units of dB(A). The L10, L50, and L90 values (noise levels exceeded 10 percent, 50 percent, and 90 percent of the time, respectively) shall also be reported in units of dB(A).	N/A	N/A	
Appendix B (g) (4) (C)	A description of the major noise sources of the project, including the range of noise levels and the tonal and frequency characteristics of the noise emitted.	§§ 1.2, 2.1, 2.2.2, 2.2.3, 5.7.4.1; Tables 5.7-5, 5.7-6, 5.7-7	Yes	
Appendix B (g) (4) (D)	An estimate of the project noise levels, during both construction and operation, at residences, hospitals, libraries, schools, places of worship or other facilities where quiet is an important attribute of the environment, within the area impacted by the proposed project.	§§ 5.7.4.1, 5.7.5.2.2, 5.7.5.3.2; Tables 5.7-5, 5.7-6	Yes	

Adequacy Issue: Adequate **X** Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Noise** Project: Ivanpah Solar Electric Generating System Technical Staff: Steve Baker

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (4) (E)	An estimate of the project noise levels within the project site boundary during both construction and operation and the impact to the workers at the site due to the estimated noise levels.	§§ 5.7.4.1, 5.7.5.2.1, 5.7.5.2.2, 5.7.5.3.1; Tables 5.7-5, 5.7-6, 5.7-7	Yes	
Appendix B (g) (4) (F)	The audible noise from existing switchyards and overhead transmission lines that would be affected by the project and estimates of the future audible noise levels that would result from existing and proposed switchyards and transmission lines. Noise levels shall be calculated at the property boundary for switchyards and at the edge of the rights-of-way for transmission lines.	§ 5.7.5.3.5	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	§§ 5.7.2.1.2, 5.7.2.2.1, 5.7.2.3.1; Tables 5.7-1, 5.7-2	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 5.7-8	Yes	

Adequacy Issue: Adequate **X** Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Noise** Project: Ivanpah Solar Electric Generating System Technical Staff: Steve Baker

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Steve Baker

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Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Table 5.7-8	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.	N/A	N/A	

Adequacy Issue: Adequate X Inadequate **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Paleontological Resources** Project: Ivanpah Solar Electric Generating System Technical Staff: Patrick Pilling, Ph.D., P.E.

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 5.8.3, Pages 5.8-5 through 5.8-7; Section 5.8.4.2, Pages 5.8-8 through 5.8-9; Section 5.8.5.2, Pages 5.8-12 and 5.8-13; Section 5.8.6, Page 5.8-13; Section 5.8.7, Pages 5.8-13 and 5.8-14; and Appendix 5.4.	Yes	
Appendix B (g) (16) (A)	Identification of the physiographic province and a brief summary of the geologic setting, formations, and stratigraphy of the project area. The area may vary depending on the depositional history of the area.	Section 5.8.3, Pages 5.8-5 through 5.8-7; Section 5.8.4.2, Pages 5.8-8 through 5.8-9; and Appendix 5.4.	Yes	
Appendix B (g) (16) (B)	A discussion of the sensitivity of the project area described in subsection (g)(16)(A) and the presence and significance of any known paleontologic localities or other paleontologic resources within or adjacent to the project.	Section 5.8.4.3, Pages 5.8-10 and 5.8-11, and Appendix 5.8.	Yes	
Appendix B (g) (16) (C)	A summary of all literature searches and field surveys used to provide information about paleontologic resources in the project area described in subsection (g)(16)(A). Identify the dates of the surveys, methods used in completing the surveys, and the names and qualifications of the individuals conducting the surveys.	Section 5.8.4.1, Page 5.8-8, and Appendix 5.8.	Yes	
Appendix B (g) (16) (D)	Information on the specific location of known paleontologic resources, survey reports, locality records, and maps at a scale of 1:24,000, shall be included in a separate appendix to the Application and submitted to the Commission under a request for confidentiality, pursuant to Title 20, California Code of Regulations, § 2501 et seq.	Appendix 5.8.	Yes	

Adequacy Issue: Adequate X Inadequate **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Paleontological Resources** Project: Ivanpah Solar Electric Generating System Technical Staff: Patrick Pilling, Ph.D., P.E.

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (16) (E)	A discussion of any educational programs proposed to enhance awareness of potential impacts to paleontological resources by employees, measures proposed for mitigation of impacts to known paleontologic resources, and a set of contingency measures for mitigation of potential impacts to currently unknown paleontologic resources.	Section 5.8.7, Pages 5.8-13 and 5.8-14.	Yes	
Appendix B (h) (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;	Table 5.Section 5.8.2, Pages 5.8-2 through 5.8-5, and Table 5.8-1.	Yes	
Appendix B (h) (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 5.8.8, Page 5.8-14, and Table 5.8-2, Page 5.8-14.	Yes	
Appendix B (h) (2)	A discussion of the conformity of the project with the requirements listed in subsection (h)(1)(A).	Section 5.8.2, Pages 5.8-2 through 5.8-5, and Section 5.8.5.3, Page 5.8-13.	Yes	
Appendix B (h) (3)	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.	Table 5.8-2, Page 5.8-14.	Yes	
Appendix B (h) (4)	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 5.8.9, Pages 5.8-14 and 5.8-15.	Yes	

Adequacy Issue: Adequate X Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Project Overview** Project: Ivanpah Solar Electric Generating System Technical Staff: Jack Caswell

Project Manager: Jack W. Caswell Docket: 07-AFC-5 Technical Senior: Eileen Allen

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Cal. Code Regs. tit. 20, § 1704, (a) (3) (A)	Descriptions of all significant assumptions, methodologies, and computational methods used in arriving at conclusions in the document.	Throughout the AFC	N/A	Please see the individual technical areas for a determination regarding the adequacy of this item.
Cal. Code Regs. tit. 20, § 1704, (a) (3) (B)	Descriptions, including methodologies and findings, of all major studies or research efforts undertaken and relied upon to provide information for the document; and a description of ongoing research of significance to the project (including expected completion dates).	Throughout the AFC	N/A	Please see the individual technical areas for a determination regarding the adequacy of this item.
Cal. Code Regs. tit. 20, § 1704, (a) (3) (C)	A list of all literature relied upon or referenced in the documents, along with brief discussions of the relevance of each such reference.	Throughout the AFC	N/A	Please see the individual technical areas for a determination regarding the adequacy of this item.
Cal. Code Regs. tit. 20, § 1704, (a) (4)	Each principal subject area covered in a notice or application shall be set forth in a separate chapter or section, each of which shall identify the person or persons responsible for its preparation.	Appendix 1B	Yes	
Appendix B (a) (1) (A)	A general description of the proposed site and related facilities, including the location of the site or transmission routes, the type, size and capacity of the generating or transmission facilities, fuel characteristics, fuel supply, water supply, pollution control systems, and other general characteristics.	Section 2.0, pages 2-1 thru 2-25 Figures 2.1-1 thru 2.2-7	Yes	
Appendix B (a) (1) (B)	Identification of the location of the proposed site and related facilities by section, township, range, county and assessors parcel numbers.	Section 2.2.1, page 2-3	Yes	
Appendix B (a) (1) (C)	A description of and maps depicting the region, the vicinity, and the site and its immediate surroundings.	Section 2.2.1 page 2-2, 2-6 Figures 2.1-1 2.2-3, 2.2-4 Section 5.6, page 5.6-1 thru 5.6-9 Figure 5.6-1	Yes	

Adequacy Issue: Adequate X Inadequate

DATA ADEQUACY WORKSHEET

Revision No. 0 Date September 28, 2007

Technical Area: **Project Overview**
Project Manager: Jack W. Caswell
Project: Ivanpah Solar Electric Generating System
Docket: 07-AFC-5
Technical Staff: Jack Caswell
Technical Senior: Eileen Allen

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (a) (1) (D)	A full-page color photographic reproduction depicting the visual appearance of the site prior to construction, and a full-page color simulation or artist's rendering of the site and all project components at the site, after construction.	Figures 1-3-2, 1.3-3, 1.3-4	Yes	
Appendix B (a) (1) (E)	In an appendix to the application, a list of current assessor's parcel numbers and owners' names and addresses for all parcels within 500 feet of the proposed transmission line and other linear facilities, and within 1000 feet of the proposed powerplant and related facilities.	Appendix 1A	Yes	
Appendix B (a) (2)	Project Schedule: Proposed dates of initiation and completion of construction, initial start-up, and full-scale operation of the proposed facilities.	Section 2.2.15, 2.2. 16 Pages 2-15, 2-17	Yes	
Appendix B (a) (3) (A)	A list of all owners and operators of the site(s), the power plant facilities, and, if applicable, thermal host, the geothermal leasehold, the geothermal resource conveyance lines, and the geothermal re-injection system, and a description of their legal interest in these facilities.	Section 1.1, page 1-1 Section 2.1, page 2-1	Yes	
Appendix B (a) (3) (B)	A list of all owners and operators of the proposed electric transmission facilities.	Section 3.1, 3.2, 3.2.2 pages 3-1, 3-2, 3-3, 3-4	Yes	
Appendix B (a) (3) (C)	A description of the legal relationship between the applicant and each of the persons or entities specified in subsections (a)(3)(A) and (B).	Section 1.1, page 1-1 page 1-1 Section 3.1, 3.2.2 pages 3-3, 3-4	Yes	

Adequacy Issue: Adequate X Inadequate

DATA ADEQUACY WORKSHEET

Revision No. 0 Date September 28, 2007

Technical Area: **Project Overview**
Project Manager: Jack W. Caswell
Project: Ivanpah Solar Electric Generating System
Docket: 07-AFC-5
Technical Staff: Jack Caswell
Technical Senior: Eileen Allen

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) (A)	Maps at a scale of 1:24,000 (1" = 2000'), along with an identification of the dedicated leaseholds by section, township, range, county, and county assessor's parcel number, showing the proposed final locations and layout of the power plant and all related facilities.	Figure 1.3-1, 6.8-2 Appendix 1A	Yes	
Appendix B (b) (1) (B)	Scale plan and elevation drawings depicting the relative size and location of the power plant and all related facilities.	Figures 2.1-2, 2.2-1a, 2.2-2a-b, 2.2-3a-c	Yes	
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.	Section 2.1 pages 2-3 thru 2-17 Section 2.3, page 2-17	Yes	
Appendix B (b) (2) (A)	Maps at a scale of 1:24,000 of each proposed transmission line route, showing the settled areas, parks, recreational areas, scenic areas, and existing transmission lines within one mile of the proposed route(s).	Figure 3.1-1 5.13-1, 5.13-2	Yes	
Appendix B (b) (2) (B)	A full-page color photographic reproduction depicting a representative above ground section of the transmission line route prior to construction and a full-page color photographic simulation of that section of the transmission line route after construction.	Figure 1.3-2, 1.3-3 5.13-1, 5.13-13-10a, 5.13-10b	Yes	
Appendix B (e) (1)	A discussion of how facility closure will be accomplished in the event of premature or unexpected cessation of operations.	Section 2.4 page 2-25	Yes	

Adequacy Issue: Adequate **X** Inadequate **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Public Health** Project: Ivanpah Solar Electric Generating System Technical Staff: Alvin Greenberg

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Matt 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 5.9.3 Section 5.9.4 Section 5.1.6.3.5 Section 5.1.6.6 Section 5.9.5 Section 5.9.6 Appendix 5.1B Appendix 5.1E Appendix 5.1F	Yes	
Appendix B (g) (9) (A)	An assessment of the potential risk to human health from the project's hazardous air emissions using the Air Resources Board Hotspots Analysis and Reporting Program (HARP) (HSC §§44360-44366) or its successor and Approved Risk Assessment Health Values. These values should include the cancer potency values and noncancer reference exposure levels approved by the Office of Environmental Health Hazard Assessment (OEHHA Guidelines, Cal-EPA 2005).	Section 5.9.4.4 Appendix 5.1E	Yes	
Appendix B (g) (9) (B)	A listing of the input data and output results, in both electronic and print formats, used to prepare the HARP health risk assessment.	Appendix 5.1E	Yes	
Appendix B (g) (9) (C)	Identification of available health studies through the local public health department concerning the potentially affected population(s) within a six-mile radius of the proposed power plant site related to respiratory illnesses, cancers or related diseases.	None identified.	Yes	
Appendix B (g) (9) (D)	A map showing sensitive receptors within the area exposed to the substances identified in subsection (g)(9)(A).	Figure 5.9-1 (nearest resident)	Yes	
Appendix B (g) (9) (E)	For purposes of this section, the following definitions apply:	-	-	

Adequacy Issue: Adequate X Inadequate **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Public Health** Project: Ivanpah Solar Electric Generating System Technical Staff: Alvin Greenberg

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Matt 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) (9) (E) (i)	A sensitive receptor refers to infants and children, the elderly, and the chronically ill, and any other member of the general population who is more susceptible to the effects of the exposure than the population at large.	-	-	
Appendix B (g) (9) (E) (ii)	An acute exposure is one which occurs over a time period of less than or equal to one (1) hour.	-	-	
Appendix B (g) (9) (E) (iii)	A chronic exposure is one which is greater than twelve (12) percent of a lifetime of seventy (70) years.	-	-	
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.	Table 5.9-1 Section 5.9.2	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 5.9-1	Yes	

Adequacy Issue: Adequate **X** Inadequate

DATA ADEQUACY WORKSHEET

Revision No. 0 Date September 28, 2007

Technical Area: **Public Health** Project: Ivanpah Solar Electric Generating System Technical Staff: Alvin Greenberg

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Matt Layton

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 5.9-5	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 5.9.8	Yes	

Adequacy Issue: Adequate X Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Reliability** Project: Ivanpah Solar Electric Generating System Technical Staff: Shahab Khoshmashrab

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	§§ 1.1, 1.2.2, 2.1, 2.3, 2.3.1.1.1 Appendices 2.0, 5.4A	Yes	
Appendix B (h) (3) (A)	A discussion of the sources and availability of the fuel or fuels to be used over the estimated service life of the facilities.	§§ 1.2, 2.2.6 Chapter 4.0	Yes	
Appendix B (h) (3) (B)	A discussion of the anticipated service life and degree of reliability expected to be achieved by the proposed facilities.	—	—	
Appendix B (h) (3) (B) (i)	Expected overall availability factor, and annual and lifetime capacity factors.	§§ 2.2.16, 2.3.2.1	Yes	
Appendix B (h) (3) (B) (ii)	The demonstrated or anticipated feasibility of the technologies, systems, components, and measures proposed to be employed in the facilities, including the power generation system, the heat dissipation system, the water supply system, the reinjection system, the atmospheric emission control system, resource conveyance lines, and the waste disposal system.	§§ 1.2, 2.2.2, 2.2.3, 2.2.4, 2.2.7, 2.2.8, 2.2.9, 2.2.11, 2.3.2	Yes	
Appendix B (h) (3) (B) (iii)	Geologic and flood hazards, meteorologic conditions and climatic extremes, and cooling water availability.	§§ 2.2.7, 2.3.2.4, 2.3.1.1.1, 5.15.3.1.3, 5.15.3.2	Yes	
Appendix B (h) (3) (B) (iv)	Special design features adopted by the applicant or resource supplier to ensure power plant reliability including equipment redundancy.	§ 2.3.2	Yes	
Appendix B (h) (3) (B) (v)	For technologies not previously installed and operated in California, the expected power plant maturation period.	N/A	N/A	

Adequacy Issue: Adequate X Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Reliability** Project: Ivanpah Solar Electric Generating System Technical Staff: Shahab Khoshmashrab

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Steve Baker

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (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.	§ 2.5 Appendix 2.0	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.	N/A	N/A	
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.	N/A	N/A	
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.	N/A	N/A	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 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) (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;	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:			

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

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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) (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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

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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) (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.	No	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	.
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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 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) (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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 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) (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 ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 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 ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

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

Project Manager: Jack Caswell Docket: 07-AFC-05 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	No	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	No	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 ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

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

Project Manager: Jack Caswell Docket: 07-AFC-05 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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

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

Project Manager: Jack Caswell Docket: 07-AFC-05 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 (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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Traffic and Transportation** Project: Ivanpah Solar Electric Generating System Technical Staff: James Adams

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.	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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Traffic and Transportation** Project: Ivanpah Solar Electric Generating System Technical Staff: James Adams

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) (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	No	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	No	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	No	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	
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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Traffic and Transportation** Project: Ivanpah Solar Electric Generating System Technical Staff: James Adams

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) (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	
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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Traffic and Transportation** Project: Ivanpah Solar Electric Generating System Technical Staff: James Adams

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) (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. 0 Date September 28, 2007

Technical Area: **Trans. Line Safety & Nuisance** Project: Ivanpah Solar Electric Generating System Technical Staff: Obed Odoemelam

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Matt 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 1.0, pages 1-3 and 1-4. Section 2.0, pages 2-4, 2-6, 2-15 and Section 3.0, pages 3-1 and 3-2.	Yes	
Appendix B (g) (18) (A)	The locations and a description of the existing switchyards and overhead and underground transmission lines that would be affected by the proposed project.	Section 3.0, pages 3-2 through 3-4.	Yes	
Appendix B (g) (18) (B)	An estimate of the existing electric and magnetic fields from the facilities listed in (A) above and the future electric and magnetic fields that would be created by the proposed project, calculated at the property boundary of the site and at the edge of the rights of way for any transmission line. Also provide an estimate of the radio and television interference that could result from the project.	Section 3.0, pages 3-9 through 3-10.	Yes	
Appendix B (g) (18) (C)	Specific measures proposed to mitigate identified impacts, including a description of measures proposed to eliminate or reduce radio and television interference, and all measures taken to reduce electric and magnetic field levels.	Section 3.0, page 3-12.	Yes	

Adequacy Issue: Adequate X Inadequate **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Trans. Line Safety & Nuisance** Project: Ivanpah Solar Electric Generating System Technical Staff: Obed Odoemelam

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Matt Layton

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	Section 3.0, pages 3-14 through 3-17.	Yes	
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Section 3.0, page 3-18	Yes	
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Section 3.0, page 3-18	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 3.0, pages 3-13 and 3-14.	Yes	

Adequacy Issue:	Adequate	Inadequate	X	**DATA ADEQUACY WORKSHEET**	Revision No.	0	Date	September 28, 2007
Technical Area:	**Transmission System Engineering**			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	Inadequate	X	**DATA ADEQUACY WORKSHEET**	Revision No.	0	Date	September 28, 2007
Technical Area:	**Transmission System Engineering**			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) (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	Inadequate	X	**DATA ADEQUACY WORKSHEET**	Revision No. 0	Date	September 28, 2007
Technical Area:	**Transmission System Engineering**		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 (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 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.	No	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. 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.

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Transmission System Engineering** 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 (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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Transmission System Engineering** 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 (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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Transmission System Engineering** 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) (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	
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	No	Indicate when the project will receive preliminary approval from the California ISO, and when a copy of an updated System Impact Study (SIS) will be available and provided to the California Energy Commission.

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

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

Project Manager: Jack Caswell Docket: 07-AFC-05 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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

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

Project Manager: Jack Caswell Docket: 07-AFC-05 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) (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	
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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

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

Project Manager: Jack Caswell Docket: 07-AFC-05 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) (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	
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 ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

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

Project Manager: Jack Caswell Docket: 07-AFC-05 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.	No	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	No	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 ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

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

Project Manager: Jack Caswell Docket: 07-AFC-05 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 ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

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

Project Manager: Jack Caswell Docket: 07-AFC-05 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	No	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.

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Technical Area:	**Waste Management**			Project:	Ivanpah Solar Electric Generating System		Technical Staff:	Christopher Dennis
Project Manager:	Jack Caswell			Docket:	07-AFC-05		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) (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	

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

Project Manager: Jack Caswell Docket: 07-AFC-05 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) (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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

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

Project Manager: Jack Caswell Docket: 07-AFC-05 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 (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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Technical Area: **Water Resources** Project: Ivanpah Technical Staff: Christopher Dennis

Project Manager: Jack Caswell Docket: 07-AFC-05 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.	**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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Project Manager: Jack Caswell Docket: 07-AFC-05 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) (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	

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Technical Area: **Water Resources** Project: Ivanpah Technical Staff: Christopher Dennis

Project Manager: Jack Caswell Docket: 07-AFC-05 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) (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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Water Resources** Project: Ivanpah Technical Staff: Christopher Dennis

Project Manager: Jack Caswell Docket: 07-AFC-05 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) (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	
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	No	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	

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Technical Area: **Water Resources** Project: Ivanpah Technical Staff: Christopher Dennis

Project Manager: Jack Caswell Docket: 07-AFC-05 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) (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	
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	

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Technical Area: **Water Resources** Project: Ivanpah Technical Staff: Christopher Dennis

Project Manager: Jack Caswell Docket: 07-AFC-05 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) (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	

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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) (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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Water Resources** Project: Ivanpah Technical Staff: Christopher Dennis

Project Manager: Jack Caswell Docket: 07-AFC-05 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) (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	No	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	

Adequacy Issue: Adequate ___ Inadequate X **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Water Resources** Project: Ivanpah Technical Staff: Christopher Dennis

Project Manager: Jack Caswell Docket: 07-AFC-05 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 (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	

Adequacy Issue: Adequate X Inadequate

DATA ADEQUACY WORKSHEET

Revision No. 0 Date September 28, 2007

Technical Area: **Worker Safety** Project: Ivanpah Solar Electric Generating System Technical Staff: Rick Tyler

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Rick Tyler

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.	5.16	Yes	
Appendix B (g) (11) (A)	A description of the safety training programs which will be required for construction and operation personnel.	Section 5.16.4.3	Yes	
Appendix B (g) (11) (B)	A complete description of the fuel handling system and the fire suppression system.	Section 4.1	Yes	
Appendix B (g) (11) (C)	Provide draft outlines of the Construction Health and Safety Program and the Operation Health and Safety Program, as follows:	Section 5.16.4.4.1	Yes	
	Construction Health and Safety Program: * Injury and Illness Prevention Plan (8 Cal. Code Regs., § 1509);	Section 5.16.4.4.1	Yes	
	* Fire Protection and Prevention Plan (8 Cal. Code Regs., § 1920);	Section 5.16.4.	Yes	
	* Personal Protective Equipment Program (8 Cal. Code Regs., §§ 1514-1522)		Yes	
	Operation Health and Safety Program: * Injury and Illness Prevention Program (8 Cal. Code Regs., § 3203);	Section 5.16.4.4.2	Yes	
	* Fire Prevention Plan (8 Cal. Code Regs., § 3221);	Section 5.16.4.4.2	Yes	
	* Emergency Action Plan (8 Cal. Code Regs., § 3220);	Section 5.16.4.4.2	Yes	
	Personal Protective Equipment Program (8 Cal. Code Regs., §§ 3401-3411).	Section 5.16.4.4.2	Yes	

Adequacy Issue: Adequate X Inadequate ____ **DATA ADEQUACY WORKSHEET** Revision No. 0 Date September 28, 2007

Technical Area: **Worker Safety** Project: Ivanpah Solar Electric Generating System Technical Staff: Rick Tyler

Project Manager: Jack Caswell Docket: 07-AFC-5 Technical Senior: Rick Tyler

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 5.16-1	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 5.16-7	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 5.16-7	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 5.16-8	Yes	