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DOCKET	
11-AFC-4	
DATE	Nov.18 2011
RECD.	Nov.18 2011

November 18, 2011

Pierre Martinez
Project Manager
Systems Assessment & Facility Siting Division
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814

SUBJECT: Supplement to the Application for Certification
Rio Mesa Solar Energy Generating Facility (11-AFC-4)

Dear Mr. Martinez:

Rio Mesa Solar I, LLC, Rio Mesa Solar II, LLC, and Rio Mesa Solar III, collectively the "Applicant" for the Rio Mesa Solar Electric Generating Facility project ("Rio Mesa SEGF"), are pleased to provide the attached Supplement in response to the Data Adequacy Review of the Application for Certification for RMS SEGF. As set forth in the Executive Director's Data Adequacy Review, the Application is Data Adequate in 18 of the 23 technical areas. Of the five areas deemed to be incomplete, Air Quality and Project Overview each have a single item to be addressed. The remaining Data Adequacy items identified in the Executive Directors Data Adequacy Review are in the areas of Biological, Cultural, and Water Resources. Responses to the outstanding issues are provided in the attached Supplement to the AFC.

The Applicant has completed comprehensive cultural and biological field resource surveys for 8,679 acres (97.4%) of the 8,908 total project area. The Applicant is in the process of securing a right of entry to the remaining 229 acres, and anticipates completing the cultural resource field studies for this very small portion of the project area by mid-February. The biological resource field studies for this small portion of the project area will be completed during the next appropriate seasonal window.

The standard that the Commission applies in determining data adequacy of an Application is not whether every last question has been answered or whether every last acre has been surveyed. The question is whether "the AFC has enough information so that a meaningful analysis may begin."[1]

[1] See CEC Statement of Opposition in Case No.: S109258, p. 6 (Aug. 23, 2002); § 25520, 25522; Cal. Code Regs., tit. 20, § 1709, Appendix B.)

BrightSource Energy, Inc.
1999 Harrison St.
Suite 2150
Oakland, CA 94612

www.BrightSourceEnergy.com

In this instance, we respectfully submit that the comprehensive cultural and biological field resource surveys for 8,679 acres, 97.4% of the project area certainly provides information so that meaningful analysis may begin. Given that there is no reason to believe that the survey results for the remaining 229 acres will deviate substantially from the results of the surveys for the other 8,679 acres, the Commission should find this Application to be data adequate at this time.

With the information in the Application and this Supplement, the Application fully satisfies all of the informational requirements set forth in Appendix B.

Sincerely,

Todd Stewart
Senior Director of Project Development

BrightSource

Response to Data Adequacy Review
of the APPLICATION FOR CERTIFICATION for the Rio Mesa Solar Electric Generating Facility

(11-AFC-04)

Submitted to:

CALIFORNIA ENERGY COMMISSION
1516 9th Street, MS15
Sacramento, CA 95814-5504

Submitted by:

RIO MESA SOLAR I, LLC
RIO MESA SOLAR II, LLC
RIO MESA SOLAR III, LLC
1999 Harrison Street, Suite 2150
Oakland, CA 94612

NOVEMBER 2011

BrightSource

November 18, 2011

Pierre Martinez
Project Manager
Systems Assessment & Facility Siting Division
California Energy Commission
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Sacramento, CA 95814

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Sincerely,

Todd Stewart
Senior Director of Project Development

Supplement

Response to Data Adequacy Review

of the

Application for Certification

for the

Rio Mesa Solar Electric Generating Facility (Rio Mesa SEGF)

(11-AFC-04)

Submitted to the
California Energy Commission

Submitted by
Rio Mesa Solar I, LLC,
Rio Mesa Solar II, LLC,
and Rio Mesa Solar III, LLC

November 2011

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Introduction

This Supplement to the Rio Mesa Solar Electric Generating Facility (Rio Mesa SEGF) Application for Certification (AFC) (11-AFC-04) responds to comments that California Energy Commission (CEC) Staff have made as a result of their data adequacy review of the AFC. This Supplement provides all additional information necessary for Staff to find that the AFC contains sufficient and adequate data to begin a 12-month power plant site certification proceeding under Title 20, California Code of Regulations and the Warren-Alquist Energy Resources Conservation and Development Act.

The CEC Staff Data Adequacy Recommendation for the Rio Mesa SEGF AFC identified five technical areas where further information is needed in order for Staff to deem the AFC complete. This Supplement provides additional information in the areas of Project Overview, Air Quality, Biological Resources, Cultural Resources, and Water Resources. For each item requested, the following information is provided: (1) the Data Adequacy requirement as stated in the relevant worksheet; (2) the information required for the AFC to conform with regulations as set forth by Staff; and (3) the Applicant's response to the information request. If the response calls for additional appended material, it is included at the end of each subsection.

2.0 Project Overview

1. *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 routes and facilities, water supply routes and facilities, pollution control systems, and other general characteristics. [Appendix B(a)(1)(A)]*

Information required for the AFC to conform to the regulations:

Please provide a description of the length and location of the proposed gas lines from each power block to the proposed metering station as well as map showing the proposed locations of the gas lines.

Response: The natural gas supply pipelines from the proposed metering station will all be buried until they reach the power blocks of the three individual plants. The individual natural gas supply for Rio Mesa Solar III will start from the tee off of the common pipeline (see Figure 2-4) and follow the main access road to the power block. The individual natural gas supply for Rio Mesa Solar II will start from the tee off of the common (to Plants RMS I and RMS II) gas pipeline (see Figure 2-3) and follow the main access road to the power block. The individual natural gas supply for Rio Mesa Solar I starts from where RMS II's gas supply pipeline tees off and then follows the main access road to the power block (See Figure 2-1). The specific gas pipeline runs will be as follows:

Gas Pipeline Common – all (Figure 2-2): This underground leg is a common natural gas pipeline for all three plants from the gas metering station to the point at which the gas pipeline for Rio Mesa Solar III tees off. The new gas meter station which is to be constructed, owned, and operated by TransCanada Gas Transmission Company (TGTC) is located in the extreme northeastern corner of the Rio Mesa Solar I solar field. The common natural gas pipeline to Rio Mesa Solar I, II, and III follows the common paved access road for a distance of approximately 2,380 feet.

Gas Pipeline Common – RMS I and RMS II (Figure 2-3): This underground leg is a common natural gas pipeline for Rio Mesa Solar I and Rio Mesa Solar II, and runs from the point where the common pipeline tees off at Rio Mesa Solar III to the point where the pipeline for Rio Mesa Solar II tees off. This gas pipeline is buried and follows the paved common access road for Rio Mesa Solar I and Rio Mesa Solar II and is approximately 4,835 feet in length.

Gas Pipeline to Rio Mesa Solar I (Figure 2-1). This underground leg is a natural gas supply pipeline for Rio Mesa I only. It follows the main access road from the point where Rio Mesa Solar II natural gas pipeline tees off and terminates above ground in the power block of Rio Mesa Solar I. The length of this pipeline is approximately 6,315 feet.

Gas Pipeline to Rio Mesa Solar II (Figure 2-3). This underground leg is a natural gas supply pipeline for Rio Mesa II only. It follows the main access road for Rio Mesa Solar II from the point where the Rio Mesa Solar II natural gas supply pipeline tees off the from the Rio Mesa Solar I and Rio Mesa Solar II common gas pipeline described above, and terminates above ground in the power block of Rio Mesa Solar II. The length of this pipeline is approximately 6,065 feet.

Gas Pipeline to Rio Mesa Solar III (Figure 2-4). This underground leg is a natural gas supply pipeline for Rio Mesa III only. It follows the main access road for Rio Mesa Solar III from the point where the Rio Mesa Solar III natural gas supply pipeline tees off the from the Natural Gas Pipeline Common – all, described above, and terminates above ground in the power block of Rio Mesa Solar III. The length of this pipeline is approximately 5,485 feet.

Attached are the following four location maps:

Figure 2-1 – Rio Mesa Unit 1 Underground Gas Line Location Plan
Figure 2-2 – Rio Mesa Unit 1 Area (Part) and Common Area Underground Gas Line Location Plan
Figure 2-3 – Rio Mesa Unit 2 Underground Gas Line Location Plan
Figure 2-4 – Rio Mesa Unit 3 Underground Gas Line Location Plan

2. *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. [Appendix B(a)(1)(D)]*

Information required for the AFC to conform to the regulations:

Provide an artist's rendering representative of one of the power blocks and the surrounding facilities/components.

Response: The attached figures represent typical close up views of the power block and surrounding facilities/components at Rio Mesa SEGF.

Figure 2-5 – Typical View of Power Block from the northeast facing southwest
Figure 2-6 – Typical View of Power Block from the northwest facing southeast
Figure 2-7 – Typical View of Power Block from the south facing north
Figure 2-8 – Typical View of Power Block and Power Tower from northeast facing southwest

3. *Scale plan and elevation drawings depicting the relative size and location of the power plant and all related facilities to establish the accuracy of the photo simulations required in Sections (a)(1)(D) and (g)(6)(F); [Appendix B(b)(1)(B)]*

Information required for the AFC to conform to the regulations:

Provide scaled plans and elevation drawings (all four sides) of the power plant and all related facilities (e.g. power block area with associated buildings and facilities, common area with associated buildings and facilities, a heliostat, etc.).

Response: Attached are the following scaled plans and elevation drawings representing the power plant and all related facilities.

Figure 2-9 – Common Area Elevation Views looking north and south
Figure 2-10 – Common Area Elevation Views looking east and west
Figure 2-11 – Common Area 220kV Switchyard – Bay Section
Figure 2-12 – Heliostat Dimensions
Figure 2-13 – Power Block Elevation View looking north
Figure 2-14 – Power Block Elevation View looking south
Figure 2-15 – Power Block Elevation View looking east
Figure 2-16 – Power Block Elevation View looking west

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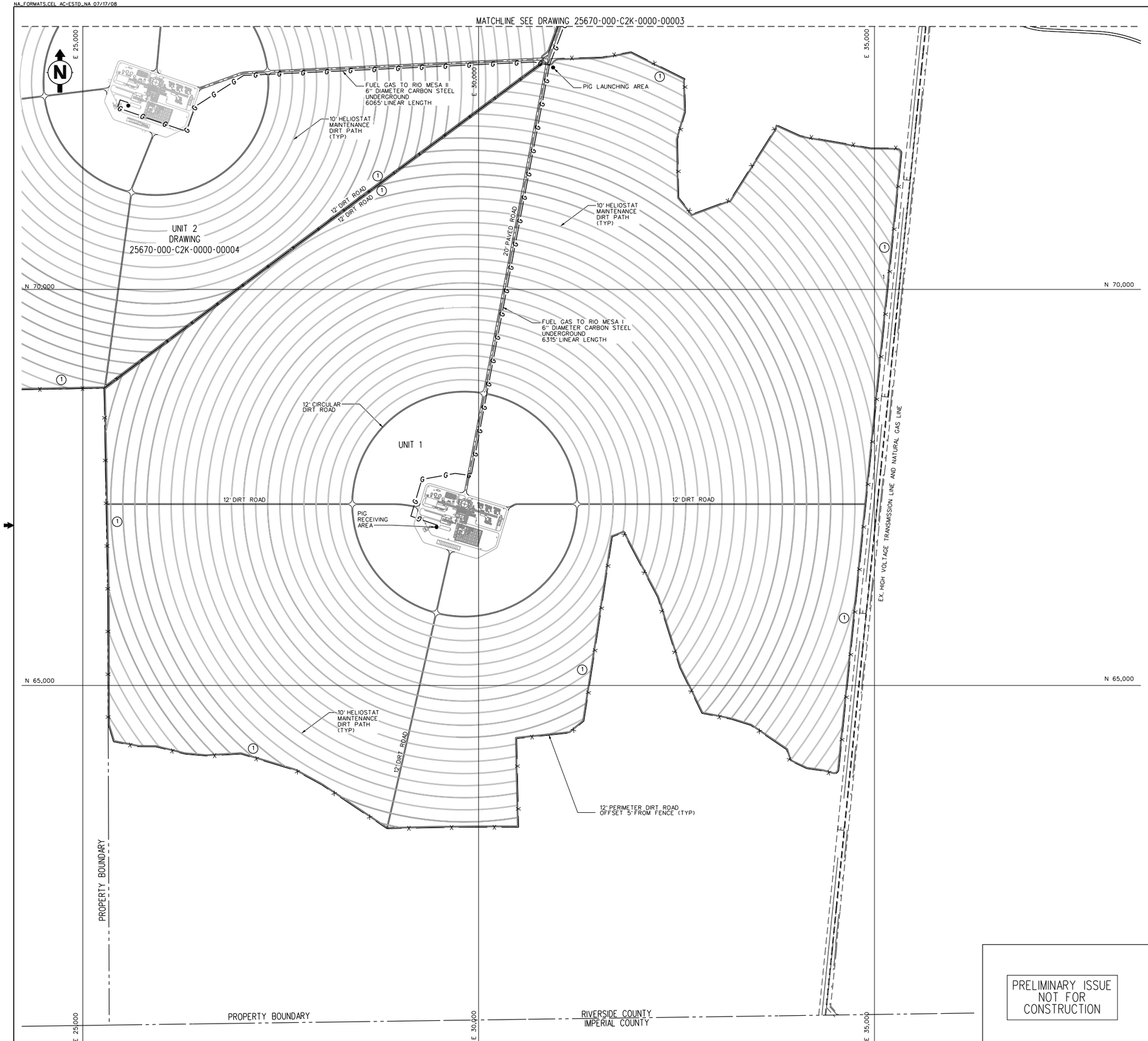

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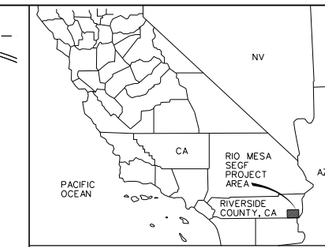

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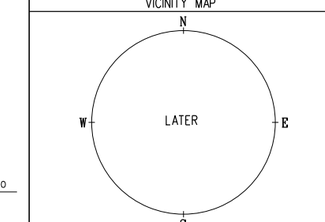

ANNUAL WIND ROSE

NOTES:

1. FOR COORDINATE SYSTEM, COORDINATES OF PROJECT BOUNDARY & VERTICAL DATUM, SEE SITE PLAN DRAWING 000-C2-0000-00001.
2. FOR STANDARD FENCING TYPES, DETAILS AND NOTES, SEE DWG. 000-C0-0090-00003 & 000-C0-0090-00006.
3. FOR GROUNDING DETAILS, SEE BECHTEL ENGINEERING DESIGN STANDARD FOR GROUNDING NOTES, SYMBOLS AND DETAILS NO. 000-EGJ-0000-LATER.
4. ALL GATES WITH AN OPENING 8' OR LARGER SHALL BE DOUBLE SWING GATES.
5. SEE DRAWING NOS. 000-EG-0000-00001 AND 000-EG-0000-00002 FOR CONNECTION DETAILS BETWEEN FENCING AND THE ELECTRICAL GROUNDING SYSTEM.

LEGEND:

—x—x—x—(1) 8' PERMANENT SECURITY FENCE

—G—G—G—G— GAS LINE

0 400 800 1200
1" = 400'

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FREDERICK, MARYLAND

RIO MESA
SOLAR ELECTRIC GENERATING FACILITY

RIO MESA UNIT 1
UNDERGROUND GAS LINE
LOCATION PLAN

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OWNER DRAWING NO.
Figure 2-1

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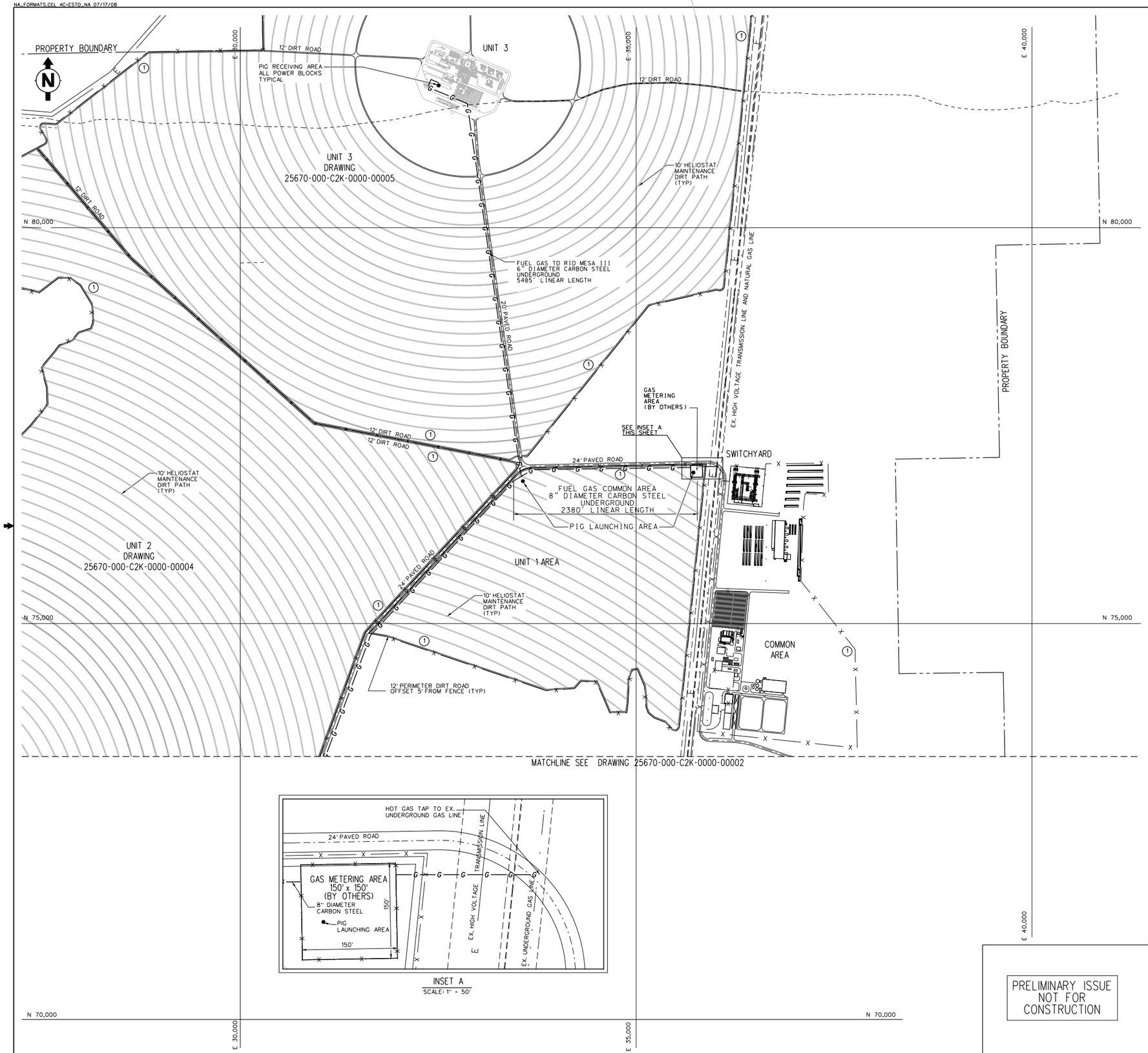

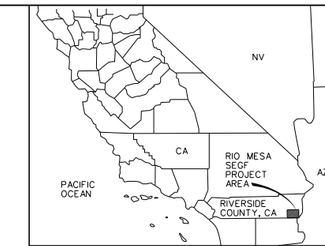

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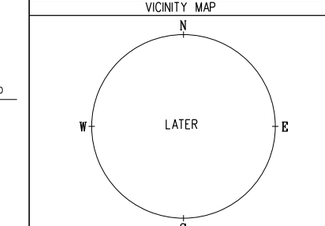

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0 400 800 1200

1" = 400'

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FREDERICK, MARYLAND

RIO MESA
SOLAR ELECTRIC GENERATING FACILITY

RIO MESA UNIT 1 AREA (PART) AND COMMON AREA UNDERGROUND GAS LINE LOCATION PLAN

BSII (Ltd.) | OWNER DRAWING NO. Figure 2-2

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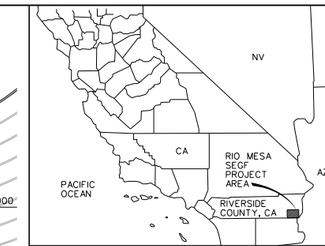

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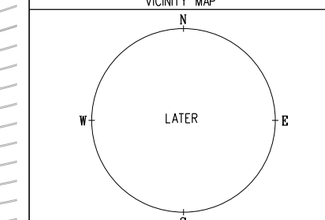

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RIO MESA
SOLAR ELECTRIC GENERATING FACILITY

RIO MESA UNIT 2
UNDERGROUND GAS LINE
LOCATION PLAN

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OWNER DRAWING NO.

Figure 2-3

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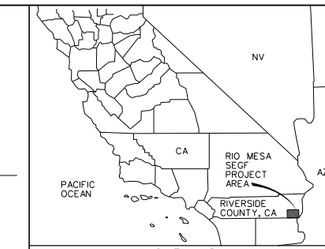

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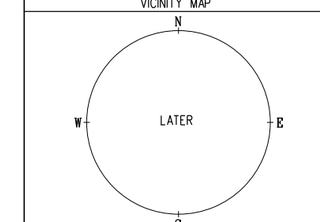

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0 500 1000 1500
1" = 500'

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RIO MESA
SOLAR ELECTRIC GENERATING FACILITY

RIO MESA UNIT 3
UNDERGROUND GAS LINE
LOCATION PLAN

BSII (Ltd.)

OWNER DRAWING NO.
Figure 2-4

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TYPICAL VIEW OF POWER BLOCK FROM THE NORTHEAST FACING SOUTHWEST
RIO MESA SOLAR
ELECTRIC GENERATING FACILITY

URS	SOURCES: URS 2011 NOT TO SCALE	CHECKED BY: CM	DATE: 11/9/2011	FIG. NO: **2-5**
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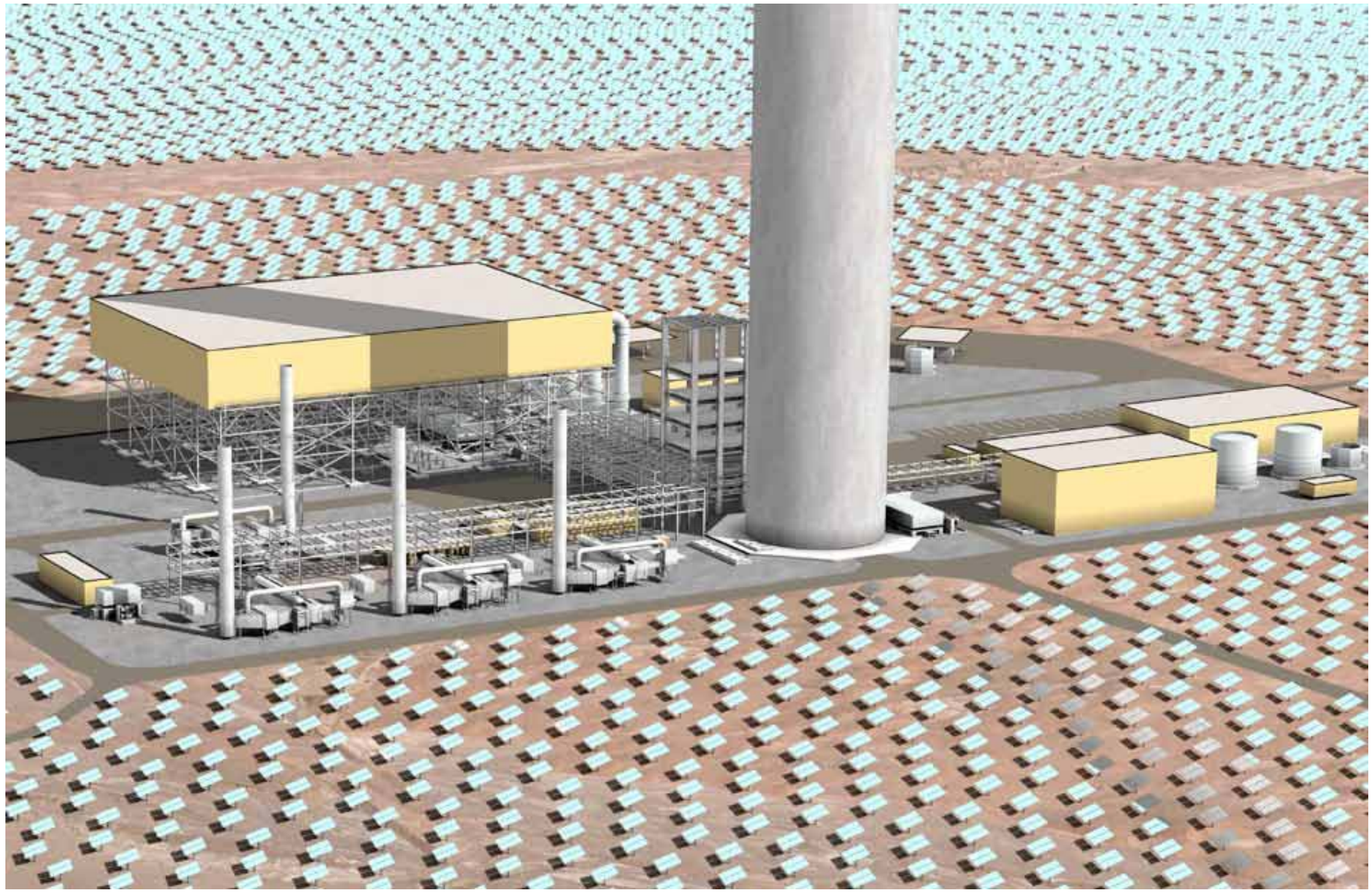

TYPICAL VIEW OF POWER BLOCK FROM THE NORTHWEST FACING SOUTHEAST
RIO MESA SOLAR
ELECTRIC GENERATING FACILITY

URS	SOURCES: URS 2011 NOT TO SCALE	CHECKED BY: CM	DATE: 11/9/2011	FIG. NO: **2-6**
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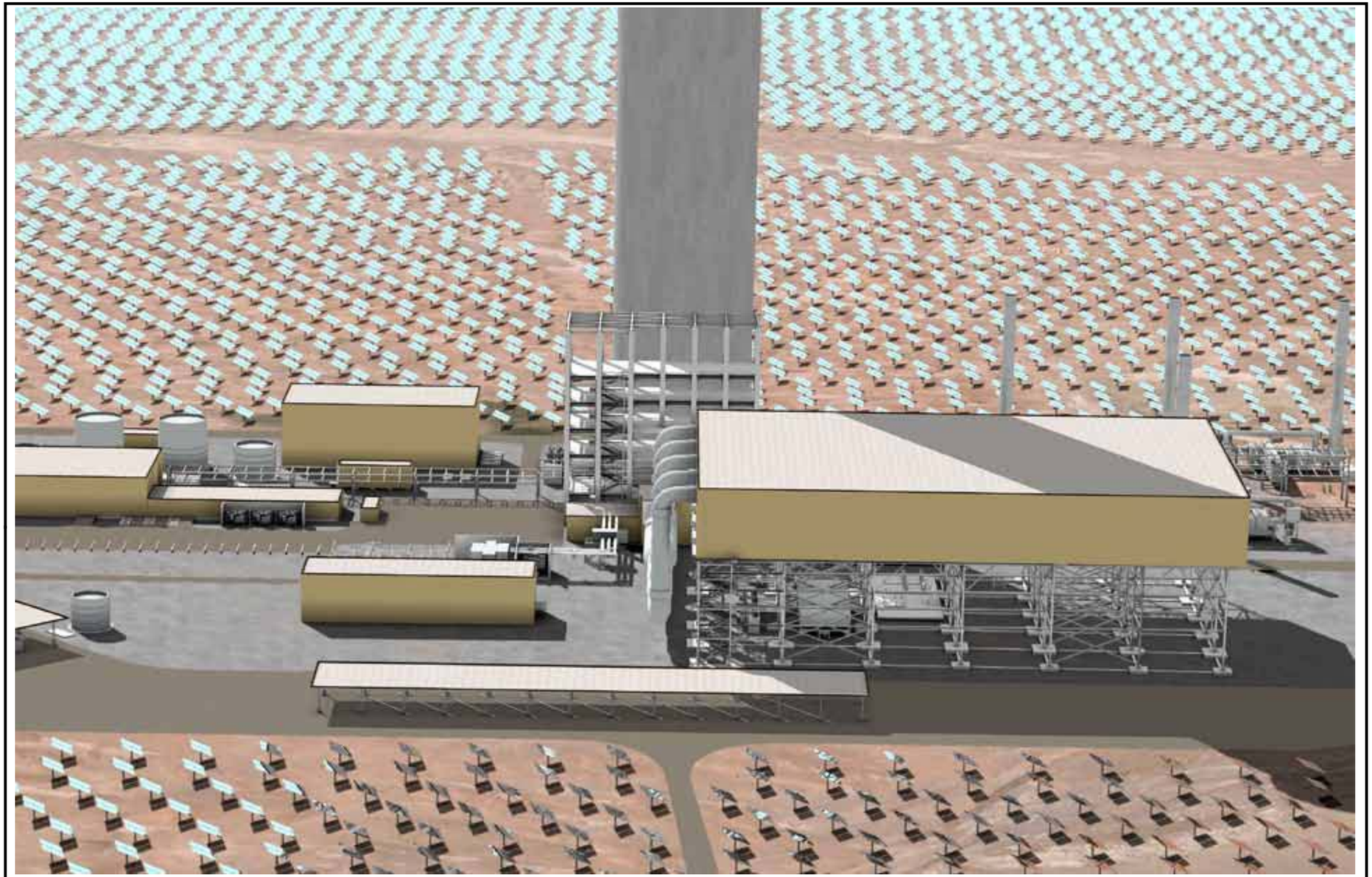
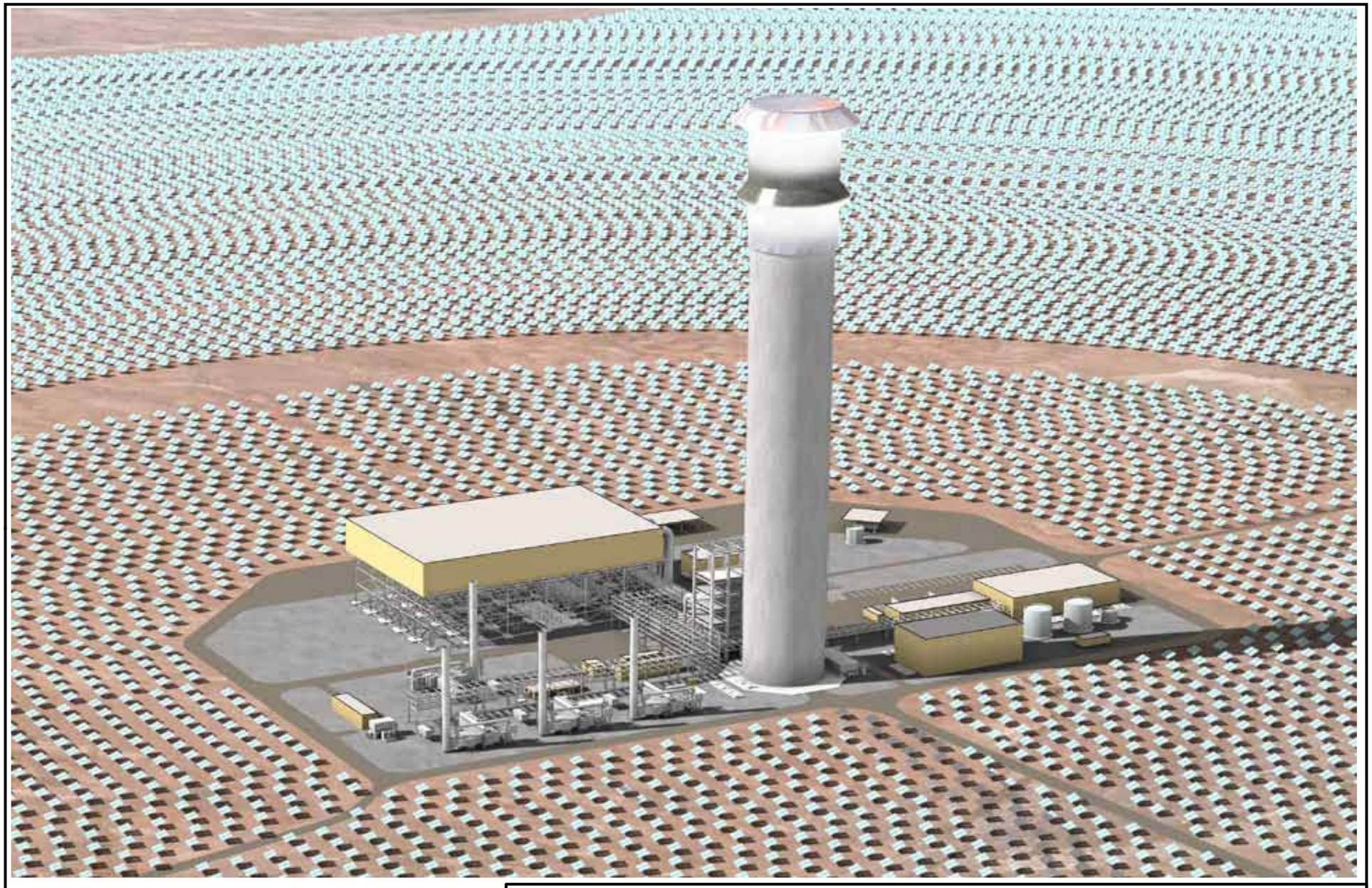


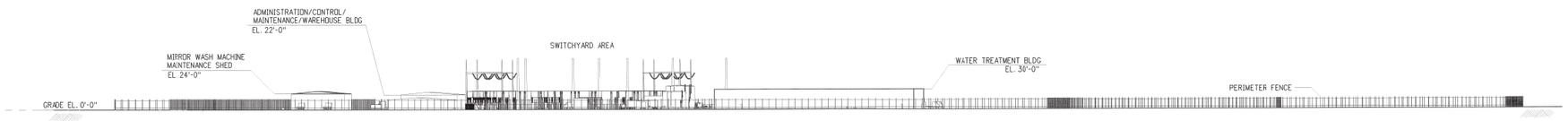
TYPICAL VIEW OF POWER BLOCK FROM THE SOUTH FACING NORTH
RIO MESA SOLAR
ELECTRIC GENERATING FACILITY

URS	SOURCES: URS 2011 NOT TO SCALE	CHECKED BY: CM	DATE: 11/9/2011	FIG. NO: **2-7**
		PM: AL	PROJ. NO: 27651006.10000	

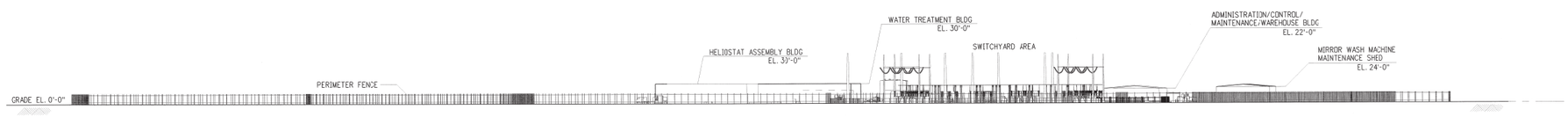


TYPICAL VIEW OF POWER BLOCK AND POWER TOWER FROM NORTHEAST FACING SOUTHWEST
RIO MESA SOLAR
ELECTRIC GENERATING FACILITY

URS	SOURCES: URS 2011 NOT TO SCALE	CHECKED BY: CM	DATE: 11/9/2011	FIG. NO: 2-8
		PM: AL	PROJ. NO: 27651006.10000	



ELEVATION VIEW LOOKING NORTH



ELEVATION VIEW LOOKING SOUTH

NO.	DATE	REVISIONS	BY	CHK	DES. SUPV.	ENGR.	PROJ. ENGR.	APPR.
A	10/31	ISSUED FOR AFC	AKS					

SCALE AS SHOWN | DATE 08/NOV/2011 | DESIGNED AKS | DRAWN AKS | CHKD ENGR

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FREDERICK, MARYLAND

RIO MESA
SOLAR ELECTRIC GENERATING FACILITY

COMMON AREA ELEVATION
VIEWS LOOKING NORTH & SOUTH

BSII (Ltd.)

OWNER DRAWING NO.
Figure 2-9

JOB NO.	DRAWING NO.	REV.
25670	009-PIK-0090-00001	A

34"X44"E SIZE
PSC-

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ELEVATION VIEW LOOKING EAST

ELEVATION VIEW LOOKING WEST

0 200 400 600FT

NO.	DATE	REVISIONS	BY	CHK	CLT. CHK	ENGR	PROJ ENGR	APPR
0	08/NOV/2011	ISSUED FOR AFC	AKS					

SCALE AS SHOWN | DATE 08/NOV/2011 | DESIGNED AKS | DRAWN AKS | CHIEF ENGR

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RIO MESA
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COMMON AREA ELEVATION
VIEWS LOOKING EAST & WEST

BSII (Ltd.)

OWNER DRAWING NO.
Figure 2-10

JOB NO.	DRAWING NO.	REV.
25670	009-PIK-0090-00002	A

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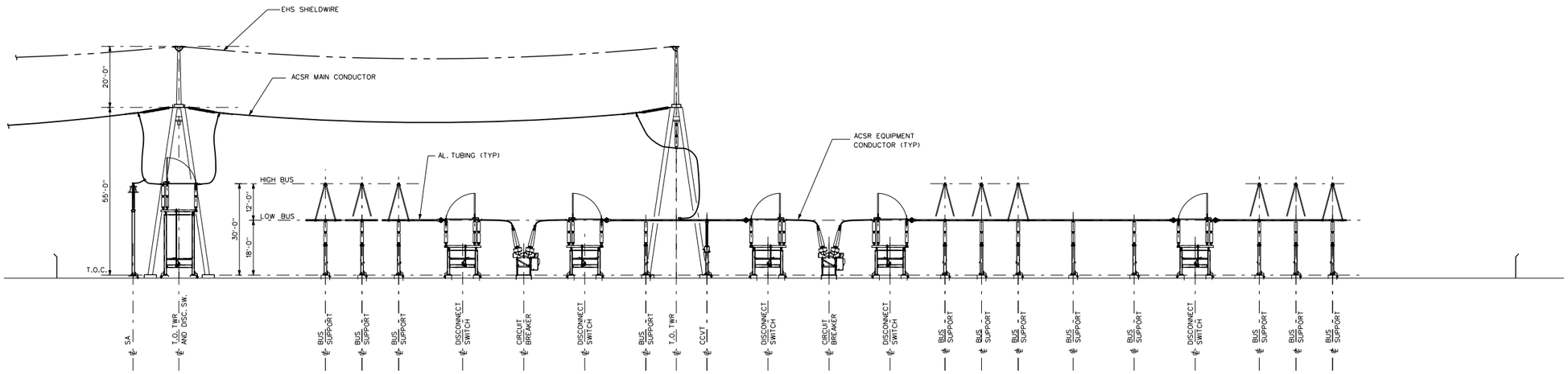

220KV COMMON AREA SWITCHYARD EQUIPMENT BAY SECTION

LOOKING EAST

REFERENCE DRAWING:

25670-009-EZ-3510-00001 COMMON AREA 230KV SWITCHYARD 3 UNIT CONFIGURATION GENERAL ARRANGEMENT

0 20 40 60 80FT

THIS IS A CONCEPTUAL SWITCHYARD SECTION. EXACT LAYOUT AND DIMENSIONS WILL BE DETERMINED DURING DETAILED DESIGN PHASE

NO.	DATE	REVISIONS	BY	CHK	DES SUPV.	ENGR.	PROJ ENGR	APPR
A	8/NOV/11	ISSUED FOR AFC	JCY	DPJ	---	DPJ	TWA	

SCALE 1"=20' DATE 11/8/2011 DESIGNED JCY DRAWN JCY CHIEF ENGR.

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COMMON AREA 220KV SWITCHYARD
BAY SECTION

BSII (Ltd.)

OWNER DRAWING NO.
Figure 2-11

JOB NO.	DRAWING NO.	REV.
25670	009-EZ-3590-00001	A

22 x 34 "D" SIZE

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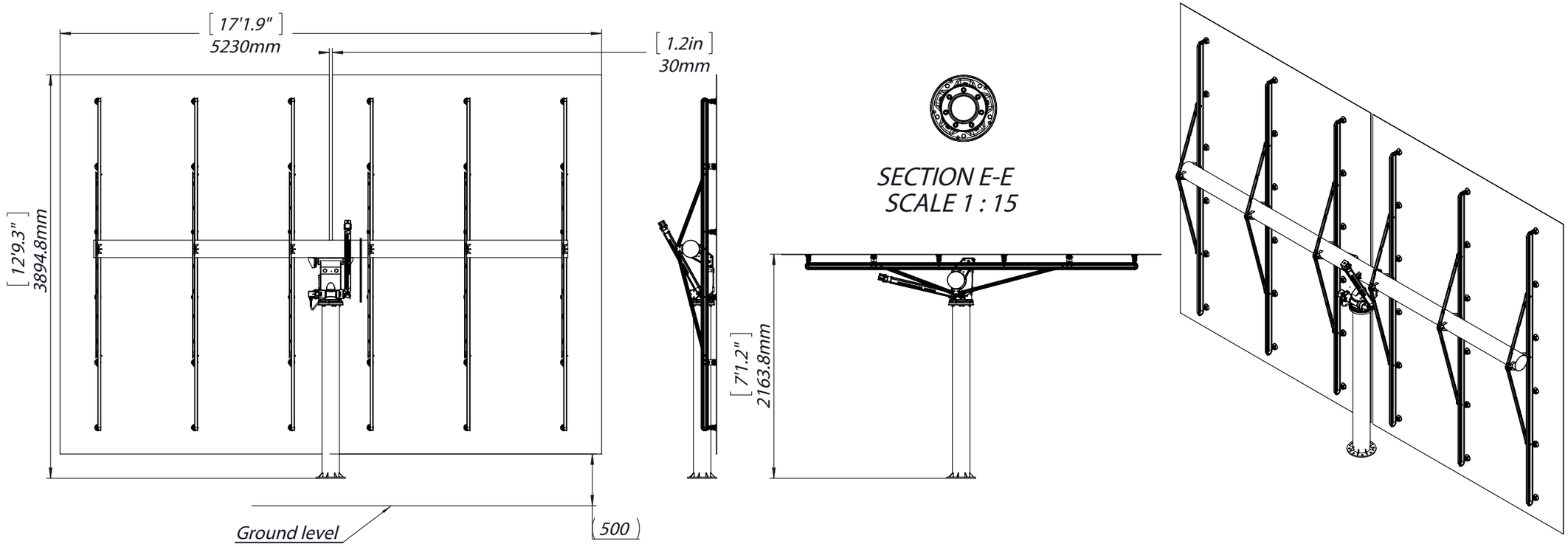

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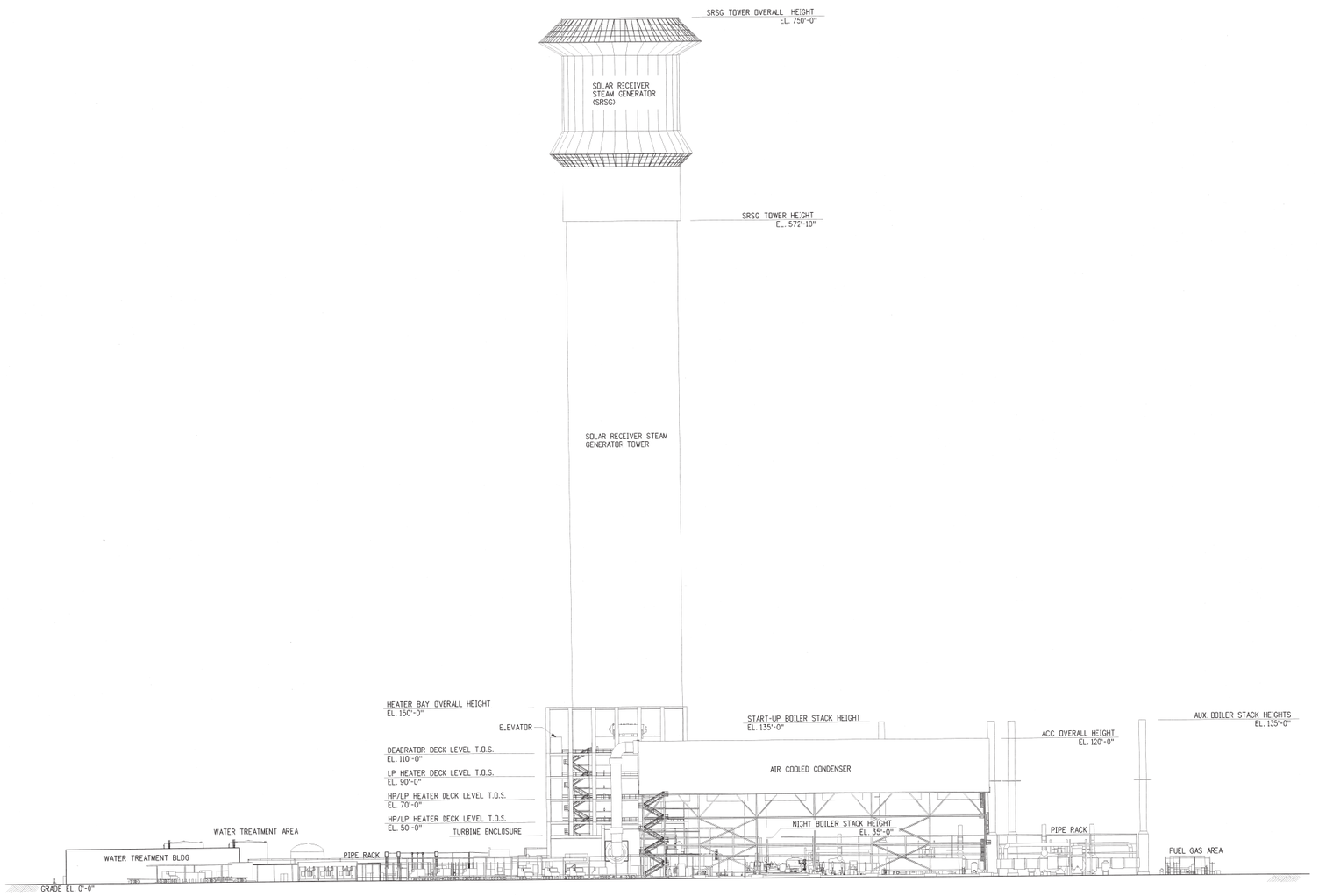
TOLERANCES	NAME	DESIGN STATUS
0..120 = ±0.1	CHECK-IN:	
Angles = ±0.5°	CHECK-IN Date:	MATERIAL
Between Holes = ±0.1	DESIGN:	TREATMENT
Holes <Φ 8 = +0.2 -0.05	APPROVED:	FINISH
	QA:	WEIGHT 339.48
Drawing REV 00C	Reviewer:	DIMENSIONS ARE INmm

Har Hotzvim, Kiryat Mada # 11
Amot Bldg # 6
Jerusalem 91450, ISRAEL
Tel: 972-(0)77-202-5000
Fax: 972-(0) 2-571-1059

TITLE: Figure 2-12
Heliostat Dimensions

SIZE: A3	DOCUMENT NO.	REV
SCALE: 1:10	SHEET: 1 of 1	00Q



ELEVATION VIEW LOOKING NORTH

0 60 120 180 240FT

NO.	DATE	REVISIONS	BY	CHK	DES. SUPV.	TASK	PROJ. ENGR	APPR
C	27 JUL 11	REVISED NIGHTTIME PRESERVATION BOILER STACK ELEVATION	AKS	RPT	RPT	-	TWA	-
B	1 JUN 11	ISSUED FOR AFC	AKS	RPT	RPT	-	TWA	-
A	13 APR 11	ISSUED FOR REVIEW	AKS	RPT	RPT	-	TWA	-

SCALE AS SHOWN DATE 03/JUN/2011 DESIGNED AKS DRAWN AKS CHIEF ENGR

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RIO MESA
SOLAR ELECTRIC GENERATING FACILITY

POWER BLOCK ELEVATION
VIEW LOOKING NORTH

BSII(Ltd.)

OWNER DRAWING NO.
Figure 2-13

JOB NO.	DRAWING NO.	REV.
25570	001-P1-0090-00001	C

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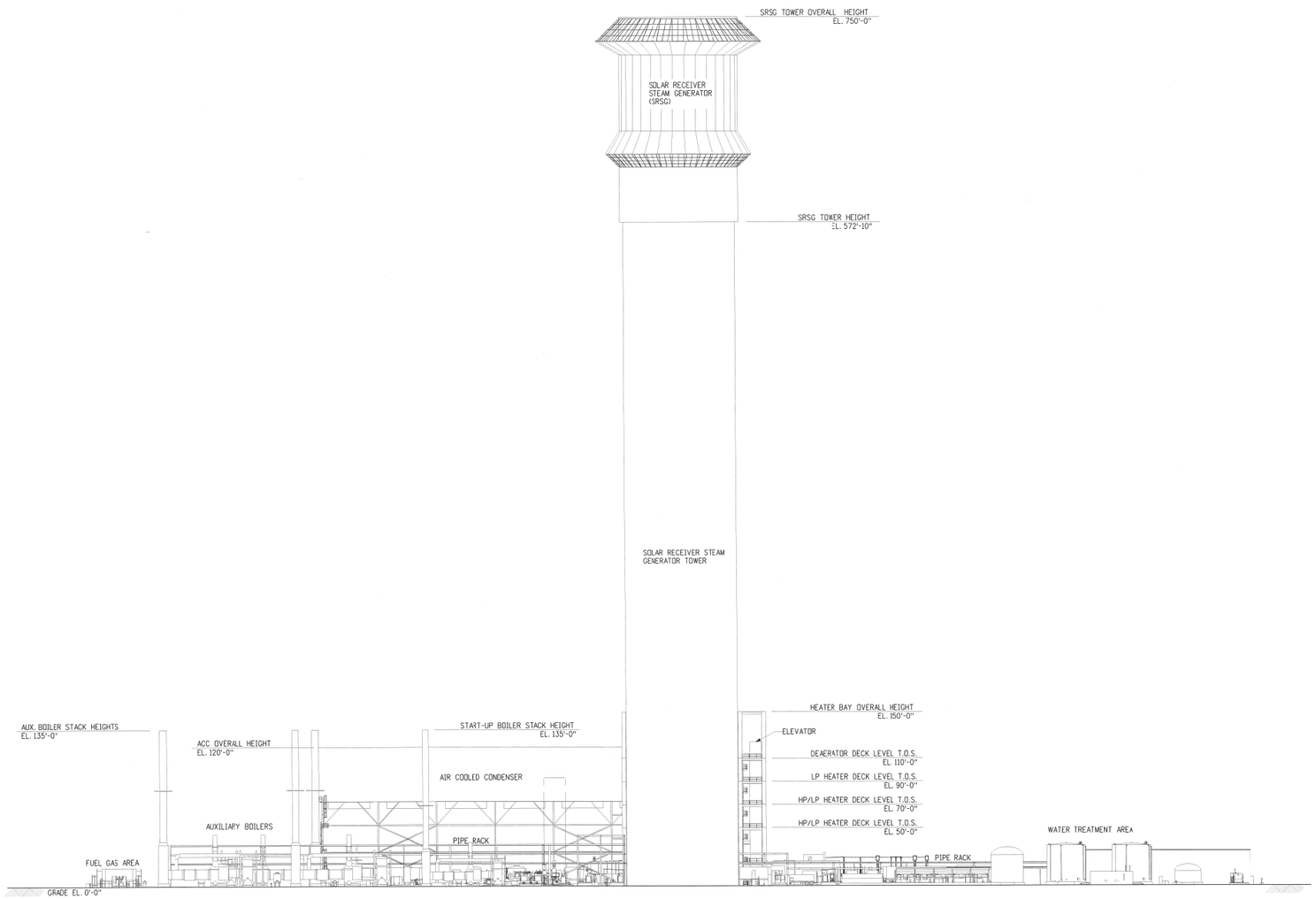
AS-FORMATS-CEL-AC-ESTD-NA-07/17/08



ELEVATION VIEW LOOKING SOUTH

0 60 120 180 240FT

NO.	DATE	REVISIONS	BY	CHK	DES SUPV	EQUIP ENGR	PROJ ENGR
3	22/06/11	REVISED NIGHTTIME PRESERVATION BOILER STACK ELEVATION	AKS	[illegible]	[illegible]	-	[illegible]
2	11/JUN/11	ISSUED FOR AFC	AKS	RPT	RPT	-	TWA	-
1	13/JAN/11	ISSUED FOR REVIEW	AKS	RPT	RPT	-	TWA	-

SCALE AS SHOWN | DATE 03/JAN/2011 | DESIGNED AKS | DRAWN AKS

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RIO MESA
SOLAR ELECTRIC GENERATING FACILITY

POWER BLOCK ELEVATION
VIEW LOOKING SOUTH

BSII (Ltd.)

OWNER DRAWING NO.
Figure 2-14

JOB NO.	DRAWING NO.	REV.
25670	001-P1-0090-00002	C

34"X44" E SIZE

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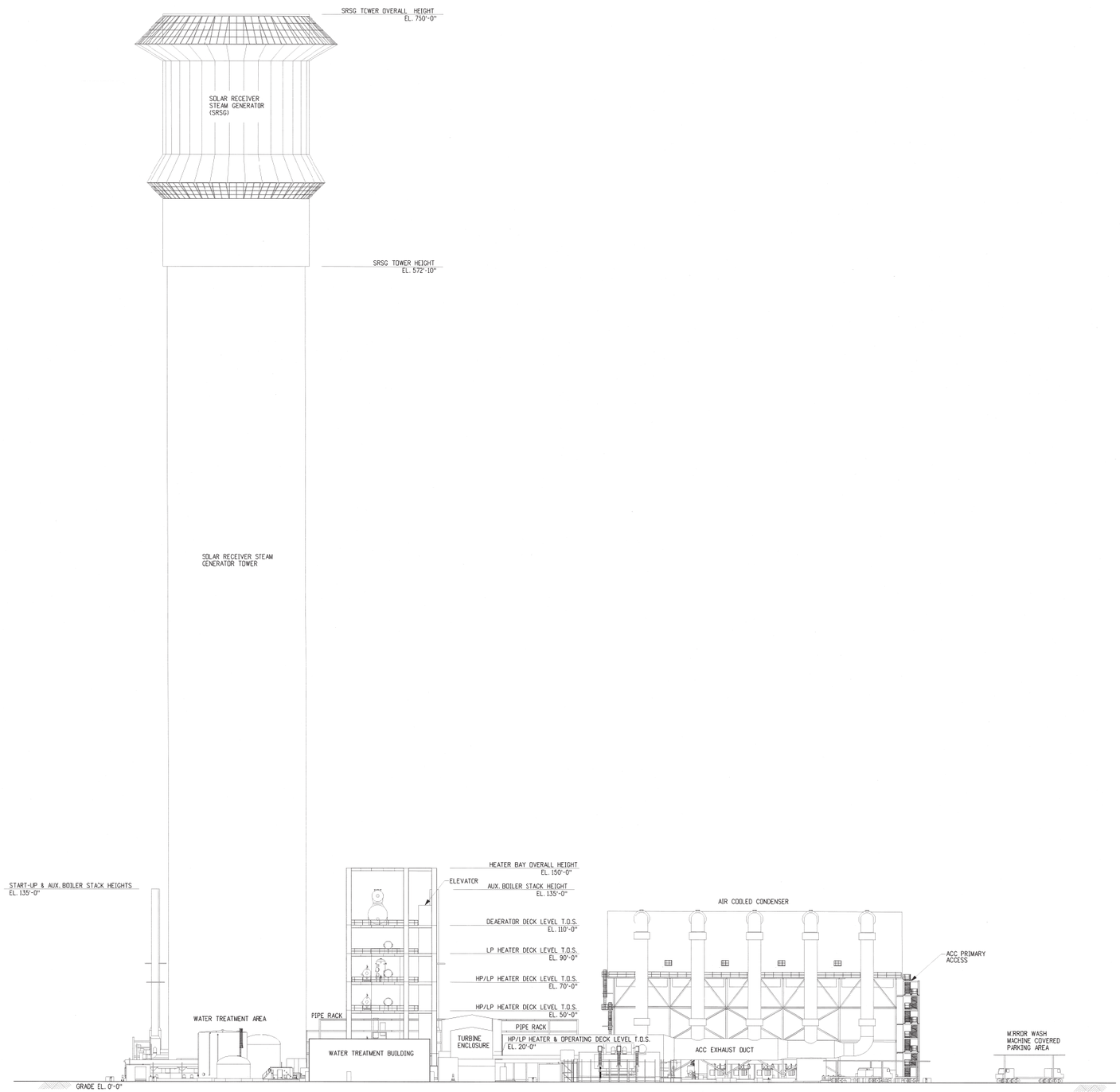

ELEVATION VIEW LOOKING EAST

NO.	DATE	REVISIONS	BY	CHK	DES. SUPV.	ENGR.	PROJ ENGR.	APPR
C	27/11	REVISED NIGHTTIME PRESERVATION BOILER STACK ELEVATION	AKS	RPT	RPT	-	TWA	
B	11/08/11	ISSUED FOR AFC	AKS	RPT	RPT	-	TWA	-
A	13/JUN/11	ISSUED FOR REVIEW	AKS	RPT	RPT	-	TWA	-

SCALE AS SHOWN | DATE 03/JUN/2011 | DESIGNED AKS | DRAWN AKS

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POWER BLOCK ELEVATION
VIEW LOOKING EAST

BSII (Ltd.)

OWNER DRAWING NO.
Figure 2-15

JOB NO.	DRAWING NO.	REV.
25670	001-P1-0090-00003	C

34"X44"E SIZE

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NA_FORMATS.CEL AQ-ESTD_NA 07/17/08

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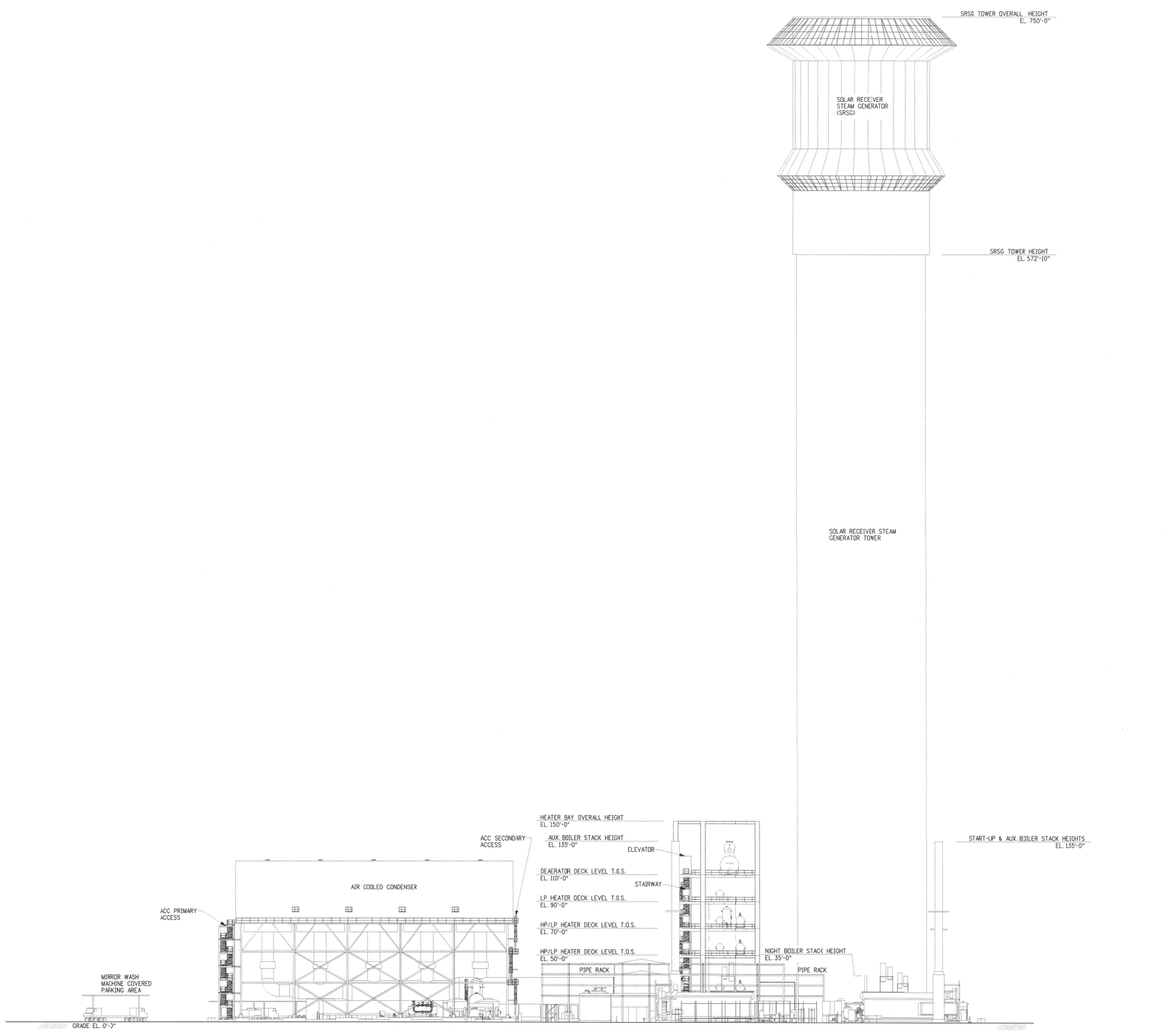

ELEVATION VIEW LOOKING WEST

0 50 100 150FT

NO.	DATE	REVISIONS	BY	CHK	ACO CAPV	ENGR.	PROJ ENGR	APPR
A	03/23/11	REVISED NIGHTTIME PRESERVATION BOILER STACK ELEVATION	AKS	RPT	RPT	-	TWA	
B	11/30/11	ISSUED FOR AFC	AKS	RPT	RPT	-	TWA	-
A	03/29/11	ISSUED FOR REVIEW	AKS	RPT	RPT	-	TWA	-

SCALE AS SHOWN DATE 03/23/2011 DESIGNED AKS DRAWN AKS CHIEF ENGR.

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RIO MESA
SOLAR ELECTRIC GENERATING FACILITY

POWER BLOCK ELEVATION
VIEW LOOKING WEST

BSII (Ltd.)

OWNER DRAWING NO.
Figure 2-16

JOB NO.	DRAWING NO.	REV.
25670	001-P1-0090-00004	C

34"X44"E SIZE

5.1 Air Quality

1. *The information necessary for the air pollution control district where the project is located to complete a Determination of Compliance. [Appendix B(g)(8)(A)]*

Information required for the AFC to conform to the regulations:

Please provide a copy of the letter of completeness from Mojave Desert Air Quality Management District.

Response: As required by the Mojave Desert Air Quality Management District (MDAQMD) Rules 1302(B) and 1306(C), the MDAQMD has reviewed the Rio Mesa SEGF permit application package. On November 14, 2011, the MDAQMD submitted a letter to the CEC indicating the permit application is complete and contains the necessary elements for the MDAQMD to perform the analysis required to issue a Preliminary Determination of Compliance for this project.

This letter was docketed with the California Energy Commission (Docket 11-AFC-04) on November 15, 2011 and can be found at the following California Energy Commission web link: http://www.energy.ca.gov/sitingcases/riomesa/documents/others/2011-11-15_AQMD_Letter_of_Completeness_TN-62888.pdf

5.2 Biological Resources

1. *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;[Appendix B(g)(13)(D)(i)]*

Information required for the AFC to conform to the regulations:

Applicant states that surveys were conducted of only those portions of the project for which right of entry had been granted at the time of survey. Some portions of the project area (229 acres) remain unsurveyed; therefore, the current survey coverage is not inclusive of the entire project site and project linear facilities, as required.

Applicant needs to complete biological resources surveys, so that they are inclusive of the project site and project linear facilities, and submit a supplemental biological resources technical report documenting the findings. It is understood that it may not yet be possible to conduct some surveys within the appropriate spring/summer survey window (e.g., desert tortoise, rare plants, breeding burrowing owl, spring avian point counts). For such surveys, please submit a plan detailing how and when the outstanding surveys will be conducted according to protocol in those areas that are currently unsurveyed. In the meantime, please conduct any surveys possible (e.g., wetland/waters delineation, winter avian point counts) once right of entry is granted and submit findings in a supplemental biological resources technical report.

Response: Mapping of wetlands/waters and vegetation for the parcels for which right-of-entry (ROE) was not granted was achieved through aerial image interpretation, direct observation from the perimeter of these parcels, and extrapolation from surrounding lands. Verification will occur during planned 2012 surveys.

None of these parcels contain suitable nesting habitat for golden eagles so no further eagle nest surveys are needed. Bird count transects meet BLM protocol for the whole project site and adequately cover these parcels with some transects being in close proximity to said parcels.

Mojave fringe-toed lizard (MFTL) surveys were not performed on potentially suitable habitat on narrow strips of land for which we had no ROE at the northern end of the gen-tie line. Based on the distribution of observation of MFTL (AFC Appendix 5.2A, Figure 10), it is clear that MFTL have high fidelity to the habitat mapped as high quality at the northern end of the gen-tie line. We can assume that the portion of the parcel for which we had no ROE in this area is occupied but the remainder of the parcels (i.e. the County land within the project site) with no ROE is not likely occupied because there is no suitable habitat surrounding the county parcel and aerial maps did not indicate suitable habitat.

Fall botanical surveys for special status plants were postponed from 2011 to 2012 for the main portion of the project site because of lack of summer and autumn rainfall at the site in 2011 and will be performed in fall 2012 including the no ROE parcels, provided adequate rainfall occurs in summer 2012. Protocol-level surveys for special-status plants will follow, to the degree feasible, the USFWS's Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed Plants (USFWS, 1996a), and the recommendations of the botanical survey guidelines of the CDFG (CDFG 2009), CNPS (CNPS 2001), and the BLM (BLM 2010).

Seasonal surveys that need to be performed specifically on the no ROE parcels pursuant to regulatory requirements and protocols include surveys for desert tortoise, burrowing owls, and spring special status plants. Surveys will follow the same protocols as for surveys performed in 2011 and reported in the AFC.

Desert tortoise surveys will be performed according to the USFWS 2010 pre-project field survey protocol for potential desert tortoise habitats (USFWS 2010). Survey guidelines require 100 percent coverage of all suitable habitat using 10-meter-wide (30-foot-wide) belt transects. Surveys will be performed in the next potentially active window for desert tortoise according to the protocol (April/May 2012).

Surveys for the western burrowing owl will be conducted on the no ROE parcels according to the 1993 California Burrowing Owl Consortium survey protocol. All portions of the site were considered to support suitable burrowing owl habitat, Phase I surveys. Phase II surveys will consist of pedestrian surveys spaced wide enough (30 meters) to allow for 100 percent visual coverage of the parcels to locate burrows and other burrowing owl signs. All potential burrowing owl burrows will be identified on datasheets and marked with a GPS unit for the second round of surveys to assess occupation by owls. Phase III surveys will consist of four separate days of surveys during which any burrows found in the first round will be observed for burrowing owl occupation. Burrowing Owl surveys are planned for January 2012.

Spring special status plant surveys on the no ROE parcels will follow the protocols listed for fall-blooming special status plants. Two surveys are expected to occur in early spring (late March/early April) and late spring (late April/early May) of 2012.

With these planned surveys, the project will achieve 100% survey coverage for all species. Results of these additional surveys will be detailed in a supplemental biological resources technical report.

2. *All impacts (direct, indirect, and cumulative) to biological resources from project site preparation, construction activities, plant operation, maintenance, and closure. [Appendix B(g)(13)(E)(i)]*

Information required for the AFC to conform to the regulations:

Please provide a discussion of the following: impacts resulting from operation of the evaporation pond, including measures proposed to minimize its impacts to wildlife; impacts to groundwater-dependent vegetation resulting from groundwater withdrawal for power plant operations; impacts to hydrology and vegetation of downstream desert washes from upstream fill/diversion attributable to the project.

Response: Evaporation ponds were identified in the AFC as being potential attractants to ravens (p 5.2-75) and a mitigation measure was identified requiring an evaporation pond monitoring plan was included (BIO-9, p5.2-89). The mitigation measure states that:

"An initial monitoring program of the evaporation pond basin water for trace element concentrations and bird use of the ponds are recommended (Bradford et al., 1991). The basins shall be designed to be unattractive to wildlife species and be covered to preclude wildlife access. An evaporation pond monitoring plan shall be submitted to CEC for approval."

As noted in the Biological Resources Technical Report included as Appendix 5.2A of the Rio Mesa SEGF AFC, the evaporation ponds will be covered with netting to prevent wildlife from accessing the water source. As a result of implementing this mitigation measure, wildlife mortality resulting from evaporation basins will not present a significant impact. In addition, an initial monitoring program of the basin water trace element concentrations and bird use is recommended (Bradford et al., 1991) to avoid potential issues regarding trace element poisoning of wildlife. The evaporation basins will also be designed to be unattractive to wildlife species and prevent inadvertent drowning with fencing around each pond to limit access to the ponds and timing of use of the ponds to prevent habituation of any wildlife to the ponds. In addition, the ponds will be located within the confines of the project perimeter exclusion fencing in order to avoid potential risk to desert tortoise and other terrestrial wildlife of concern.

<u>Regarding effects on groundwater-dependent plants</u>

Groundwater in the Palo Verde Mesa Groundwater Basin (PVMGB) is at a greater depth than can be accessed by most plant species. The Project's groundwater use will not cause or contribute to significant groundwater level declines. Therefore, impacts to vegetation from the project's use of groundwater will not be significant.

While mesquite species are known to have very deep taproots that can reach over 180 feet in depth, few other species in the world are known to be able to extend taproots so far. A literature search could not find estimated depths for either palo verde and ironwood in natural situations. Creosote bush has a combination of less deep taproots and surface root systems. Cacti mostly have broad, shallow root systems.

The average depth to the PVMGB on the mesa is approximately 145 feet with most measured wells being 142 – 147 feet below ground surface (see AFC Section 5.15).

The anticipated water use from plant operations over 25 years (260 acre-feet per year [afy]) constitutes approximately less than 0.2 percent of the total water estimated in storage within the PVMGB (6.8 million af). Less than half of the available 600 afy allocated by MWD will be used during operations, and up to two-thirds of the allocation will be used during peak construction.

AFC Section 5.15 (Figure 5.15-11) shows that drawdown from Project pumping will be limited in the PVMGB to areas very close to the project site. Contoured drawdown extends into the PVVGB approximately 0.5 mile; however, drawdown greater than 0.5 feet is limited to the PVMGB. Maximum drawdown near the Project pumping wells is 1.3 feet at the end of pumping. The maximum observed drawdown will occur during construction pumping and is predicted to be approximately 3 feet near the pumping wells.

Groundwater at 145 feet below the mesa is beyond the taproots of most plant species on the mesa and thus they are not dependent on it. While mesquite has a tap root that can reach this depth, it is mostly found at lower elevations between the mesa and the agricultural land in the adjacent Colorado River valley. Palo verde and ironwood are mostly found in the large washes and most likely take advantage of subsurface moisture concentrated in soils beneath the washes above the water table.

As the groundwater is at a greater depth than can be accessed by most plant species and the Project's groundwater use will not cause or contribute to significant groundwater level declines, impacts to vegetation from the project's use of groundwater will not be significant.

<u>Regarding impacts to hydrology and vegetation of downstream desert washes from upstream fill/diversion attributable to the Project</u>

The AFC states on page 5.2-81 that, "The surface water control for development of the site will maintain the pre-construction volumes and velocity of run-off from the site into the same drainage basins." This conclusion was based on the results of The Final Post Construction Hydrologic & Hydraulic Analysis produced by VTN (2011) and included in the AFC as Appendix 5.15F to the Water Resources Section.

The results of the analysis indicate that there is a slight increase in the volume of runoff leaving the project area (less than a 2% increase). This is expected due to the increased impervious area caused by the Project's development. The flow rates generally were slightly increased due to the added impervious area and new drainage channels. The flow results are shown in Table 5.15-8 of the AFC.

When the solar field is developed, sheet flow and existing natural contours will be maintained to the extent practicable to maintain existing flow rates. In limited areas, such as the power blocks, substation, heliostat assembly buildings and administrative areas, the stormwater management system will include berms/ditches, bypass channels, or swales to direct run-on flow from upslope areas and run-off flow through and around each facility. To reduce erosion, storm drainage channels may be lined with a non-erodible material, such as compacted rip-rap, Rock Gabions, geo-synthetic matting, or engineered vegetation. Additionally, storm drainage channels will include a downstream flow dispersion features to reduce the depth and velocity of the flows.

If needed, stone filters and check dams will be placed throughout the project site to provide areas for sediment deposition and to promote sheet flow. Where available, native materials (rock and gravel) will be used for the construction of the stone filter and check dams. Diversion berms and ditches will be used to direct stormwater around critical facilities, as required. Periodic maintenance will be conducted as required after major storm events. Stone filters and check dams are not intended to alter drainage patterns, but to reduce the potential for soil erosion and promote sheet flow. Additionally, temporarily disturbed areas associated with the Project site and gen-tie-line will be revegetated, as appropriate, after construction in order to prevent increased soil erosion.

Overall, the project is being designed to maintain, to the extent practicable, the existing sheet flow patterns on the site.

The Final Post Construction Hydrologic & Hydraulic Analysis, provided in Appendix 5.15F concluded that development of the site will not have a negative impact on any downstream properties (VTN 2011).

3. *Discussion shall also address sensitive species habitat impacts from cooling tower drift and air emissions;[Appendix B(g)(13)(E)(i)]*

Information required for the AFC to conform to the regulations:

Please provide a discussion of impacts to sensitive species and vegetation from air emissions (e.g., due to operation of auxiliary boilers).

Response: Air emissions from the natural gas-fired boilers and the emergency engines include nitrogen oxides (NOx). Nitrogen oxide gases (NO, NO2) may convert to nitrate particulates and nitric acid in a form that is suitable for uptake by most plants. Nitrogen deposition impacts are not expected to be significant. NOx emissions from the project will be extremely low due to the use of low-emission design combustion equipment and limited annual operation of combustion equipment. In addition, ambient ozone levels in the project area are also relatively low. Nitric acid and particulate nitrate are formed through photochemical reaction of NOx with ozone, and the low background ozone concentrations will limit their formation.

4. *All off-site habitat mitigation and habitat improvement or compensation, and an identification of contacts for compensation habitat and management;[Appendix B(g)(13)(F)(ii)]*

Information required for the AFC to conform to the regulations:

Please identify those contacts the Applicant has been working with to identify and secure off-site habitat compensation and include any pertinent records of correspondence.

Response: Todd Stewart of BrightSource Energy has communicated with George Johnson of Riverside County Transportation and Land Management Agency (RCTLMA) regarding mitigation lands. The email exchange is included as Attachment 5.2-1.

5. *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.[Appendix B(g)(13)(H)]*

Information required for the AFC to conform to the regulations:

Please submit copies of any correspondence between the applicant and USFWS (related to migratory birds, golden eagles, desert tortoise, habitat compensation, Section 7 consultation, etc.), CDFG (related to state-jurisdictional washes, incidental take, etc.), and USACE (related to wetlands and waters of the U.S.) as it pertains to federal permits that will be required for the proposed project, and state permits that would be required but for the Energy Commission's exclusive jurisdiction.

Response: URS solicited and obtained comments from the USFWS, CDFG, BLM, and County on the Biology Work Plan for the project prior to start of biological surveys. Comments pertinent to golden eagle and migratory birds are included in Attachment 5.2-2.

A Form SF-299 right-of-way (ROW) grant application for use of the BLM land was submitted by Rio Mesa Solar III, LLC to the BLM Desert District office in Moreno Valley, California on July 8, 2011. This informed BLM that the project would likely affect the federal-listed as threatened desert tortoise which would trigger an ESA Section 7 consultation with the USFWS.

Letters of transmittal of jurisdictional waters information to USACE and CDFG were provided in AFC Appendix 5.2A (Appendix K). Upon review of the CEC website posting, it appears that the pdf of Appendix K duplicated the body of the CDFG submittal in the USACE submittal. The paper copies of the AFC submitted to the Commission were correct. The correct USACE package is included as Attachment 5.2-3. The USACE package includes a number correction in Table 1 of the USACE submittal that is also applicable to Table 5.2-8 of the AFC and Table 5 of Appendix 5.2A.

Communications with USFWS, CDFG, and USACE regarding migratory birds, golden eagles, and desert tortoise are attached.

No other communications concerning habitat conservation or Section 7 consultation have occurred to date with the USFWS. A call was made to Magdelena Rodriguez of CDFG to identify CDFG jurisdictional waters concurrence to inform her of the presence of the state-listed as endangered Gila woodpecker on 9/20/11. URS left a message, but the call has not been returned to date. A follow-up email regarding the CDFG waters of the state submittal was made and the email and response is included in the attached file. A recent email exchange with Pete Sorensen of the USFWS regarding migratory birds and golden eagles is also included.

6. *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. [Appendix B(i)(3)]*

Information required for the AFC to conform to the regulations:

Please provide a schedule of when permits outside the authority of the Commission will be obtained (i.e., Biological Opinion and CWA Section 404 permit) and the actual or anticipated timing of any application submittals related to the acquisition of these permits.

Response: Table 5.2.16 is updated below to show anticipated timing of submittal and acquisition of permits outside the authority of the Commission.

Table 5.2-16 (modified)
Applicable Permits for Biological Resources

Permit	Agency/Purpose	Schedule
United States Fish and Wildlife Service (USFWS) Endangered Species Act of 1973 (ESA) and implementing regulations, Title 16 United States Code (USC) §§1531 *et seq.*, Title 50 Code of Federal Regulations (CFR) §§ 17.1 *et seq*.	Through the Section 7 process, issues biological opinion with conditions or approval after review of Project effects and mitigation measures.	Obtain a biological opinion for take of desert tortoise habitat and translocation of tortoise from the project site. Implement BIO-1 and BIO 2, mitigation measures. Timing - Draft BA scheduled to be submitted to BLM Q1 2012; expected BLM BA to FWS Q2-3 2012, 135-day review period places BO issuance Q4, 2012.
USFWS Migratory Bird Treaty Act (MBTA) 16 USC §§703-711.	Prohibits the take of migratory birds, as specified at 50 CFR Part 10. Will avoid take of active nests.	Implement BIO-6 and BIO-11 mitigation measures. Timing – is addressed by the CEC Certification scheduled for Q4 2012
California Department of Fish and Game (CDFG) Fully Protected Species Includes: §3511: Fully Protected Birds; §4700: CDFG Fully Protected Mammals; §5050: CDFG Fully Protected Reptiles and Amphibians; §5515: CDFG Fully Protected Fishes.	Issues guidance after Project effect assessment (California Environmental Quality Act [CEQA]) review. Note: no legal means exists whereby take of California Fully Protected species may be authorized by CDFG.	Implement all BIO mitigation measures. Timing – is addressed by the CEC Certification scheduled for Q4 2012.
Clean Water Act (CWA) of 1977: 33 USC Section 1251 – 1376; 30 CFR Section 330.5(a)(26).	Individual 404 permit from the USACE and CWA 401 water quality certification from the Regional Water Quality Control Board (RWQCB) for compliance with CWA.	Obtain a CWA 404 permit and 401 Certification for compliance with CWA. Timing – 404 permit will track with the BLM process. BLM ROD (signed by cooperating agency USACE) scheduled to be received Q2, 2013. CWA 401 certification is addressed by the CEC Certification scheduled for Q4 2012.
Right-of-way (ROW) Grant	Bureau of Land Management (BLM)	Timing – Scheduled for Q2, 2013
2008 Porter-Cologne Water Quality Control Act.	Regulates discharges of waste and fill material into waters of the state through the RWQCB.	Addressed by CEC Certification.
CDFG California Endangered Species Act of 1984 (CESA), Fish and Game Code, §2050 through §2098.	Issues guidance after Project effect assessment (CEQA) review.	Addressed by CEC Certification.
CDFG Fish & Game Code 1602.	Lake and Streambed Alteration Agreement (LSAA).	Addressed by CEC Certification.

BLM = Bureau of Land Management
CDFG = California Department of Fish and Game
CEC = California Energy Commission
CFR = Code of Federal Regulations
CEQA = California Environmental Quality Act
CESA = California Endangered Species Act
CWA = Clean Water Act
ESA = Endangered Species Act
MOU = Memorandum of Understanding
ROW = Right of Way
RWQCB = Regional Water Quality Control Board
LSAA = Lake and Streambed Alteration Agreement
USC = United States Code
USFWS = United States Fish and Wildlife Service

Attachment 5.2-1

George Johnson Email Correspondence

From: Todd Stewart [mailto:tstewart@brightsourceenergy.com]
Sent: Monday, November 07, 2011 1:54 PM
To: andrea@agrenier.com; Leiba, Angela
Subject: FW: Thank you for your time

Fyi.

BrightSource

Todd Stewart P.E.
Senior Director - Project Development
Project Manager - Rio Mesa Solar
BrightSource Energy Inc.
O 510-550-8908 C 925-200-0629 F 510-899-6768
tstewart@BrightSourceEnergy.com
www.BrightSourceEnergy.com

From: Johnson, George [mailto:GJOHNSON@rctlma.org]
Sent: Tuesday, November 01, 2011 6:59 PM
To: Todd Stewart
Subject: RE: Thank you for your time

Todd,

I appreciate you coming in and speaking with me and explaining your business concerns to me. It really helps to better understand your position. You should have received a revised county proposal regarding the solar policy and fee matter this afternoon. I am interested to hear your response.

Regarding the property needed for your Rio Mesa project, I did speak with Rob Field and he advised me that we are performing an appraisal to determine the value of the land. Steven Gilbert should be able to update you on the status.

I also have my staff evaluating possible mitigation lands and will get back to you soon after we have a chance to review.

Best regards,

George

From: Todd Stewart [mailto:tstewart@brightsourceenergy.com]
Sent: Monday, October 31, 2011 4:34 PM
To: Johnson, George
Subject: Thank you for your time

George,

Wanted to say thank you for your time last Thursday afternoon. While we didn't come away with an agreement, I am appreciative of the time you spent with me to discuss the variety of issues concerning our Rio Mesa project.

Please let me know if Steve Gilbert is commencing with the ¼ Section of land we discussed. Should we continue to reach out to Steve regularly on this?

Also whom should we talk to concerning potential mitigation lands? If you can identify the areas we can have someone put eyes on to characterize the habitat contained and then later when the CEC has decided what type of mitigation is required, we can suggest (hopefully) some County lands to fill the requirements.

Finally, we are all looking forward to the County's latest thoughts concerning the "fee".

Thank you again for your time.

Best Regards,

BrightSource

Todd Stewart P.E.
Senior Director - Project Development
Project Manager - Rio Mesa Solar
BrightSource Energy Inc.
O 510-550-8908 C 925-200-0629 F 510-899-6768
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Attachment 5.2-2

Records of Correspondence with Agency Staff

Tannika_Engelhard@fws.gov

03/03/2011 12:22 PM

Hi Theresa, thank for the opportunity to comment on the biological resources survey protocols proposed for use at the Palo Verde Mesa Solar Project site. The Service's comments on the proposed survey protocols for desert tortoise and golden eagle are below. Given the project's proximity to the Colorado River, our Migratory Bird division also intends to review and provide comments on the proposed survey protocols relative to migratory birds that may occur in the area. I'll forward those comments to you as soon as I receive them, likely sometime next week.

The BLM and CDFG may have additional comments on the proposed survey protocols, including those for desert tortoise and golden eagles. Thanks, Tannika

Desert tortoise Surveys

We concur with Bright Source's proposal to conduct tortoise surveys following the Service's 2010 survey protocol, "Preparing for Any Action That May Occur Within the Range of the Mojave Desert Tortoise; 2010 Field Season". We also recommend that Bright Source record live tortoise and sign found on each survey transect in the plant site boundary and linear facilities corridor using the USFWS 2010 Desert Tortoise Pre-Project Survey Data Sheet included in the USFWS 2010 survey protocol. Recording total length of transects walked, the number of transects walked, and the number of tortoises found on each transect allows for the estimation of the number of tortoises that may occur in the project area and associated 95% confidence interval. See Table 3 in the USFWS Survey Protocol for this calculation. As outlined in the USFWS Survey Protocol, please note that surveys outside of the tortoise's most active periods (April through May or September through October) require prior approval by the FWS. Surveys conducted outside of these times without USFWS' prior approval may be considered invalid.
We also strongly recommend Bright Source conduct the following additional actions during protocol surveys:

(1) conduct protocol surveys for a minimum of two different seasons (e.g., Spring 2011 and Fall 2011) to improve the accuracy of the tortoise density estimate onsite

(2) conduct 30-ft wide belt transects at 200m, 400m, and 600m from the solar plant site boundary and all linear facilities.

Golden Eagle Surveys

We recommend that a golden eagle inventory be conducted within 10 miles of the project boundaries to determine if individuals are nesting in the vicinity of the project area. Since adult golden eagles can occupy different nests within a territory at various times, and younger birds can establish new territories and occupy previously unoccupied nests, relying on previously collected inventory data does not provide sufficient information relative to the potential impacts of the proposed project on the species.
Inventory should be conducted following the Service's 2010 "Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations" (Pagel et al. 2010).

Please note that prior to conducting eagle surveys, Bright Source should contact the BLM's Palm Springs office to ensure coordination of the survey effort. Also, to minimize harassment of bighorn sheep, Bright Source must obtain a letter from CDFG (Tom Stephenson 760-872-1171) prior to the initiation of eagle surveys indicating their approval of the survey areas and timing.

The following draft Service guidance should also be considered during development of measures to minimize impacts to golden eagle that may result from the proposed project: (1) Draft Land-based Wind Energy Guidelines and (2) Draft Eagle Conservation Plan Guidance. While this guidance pertains to wind energy projects, some of the conservation measures are applicable to solar energy projects as well. The Service announced the availability of these two documents in the Federal Register on February 18, 2011, and is accepting public comments until May 19, 2011.

Draft eagle guidance: http://www.fws.gov/windenergy/eagle_guidance.html
Draft land-based wind energy guidelines: http://www.fws.gov/windenergy/guidance.html

Comments on the Palo Verde Mesa solar project:

Since it appears that tortoise are likely to occur onsite (based on burrows and sign found during initial assessments), we recommend that Bright Source coordinate early with the Service, BLM, and CDFG on potential issues associated with tortoise relocation and translocation.

We recommend that the proposed gen-tie line and substation interconnect be located to avoid sand dune habitat. As noted in the work plan, this area has high potential to be occupied by the Mojave fringe-toed lizard, a BLM sensitive species, in this area. The Service is concerned about increasing impacts to this species throughout its limited range. Construction of the gen-tie line and substation may also impede sand transport to dune habitat downwind of the project, thereby impacting the ecological function of the sand transport corridor in this area

****

Tannika Engelhard
Fish and Wildlife Biologist
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, CA 92011
Office 760-431-9440, ext. 202
Fax 760-431-9624
Tannika_Engelhard@fws.gov

Theresa_Miller@URSCorp.com

02/21/2011 06:27 PM

Good afternoon,

Please find the attached Work Plan for the above-referenced project, which is located approximately 20 miles southwest of the city of Blythe, in Riverside County, California. I spoke with you last week regarding this project and the applicant's desire to complete surveys as soon as possible in February or very early March to meet the survey protocol windows. Especially critical in timing is the golden eagle and early spring botanical survey windows.

We respectfully request your review and comment on the work plan, which details the proposed survey protocols and effort for surveys for listed species, including burrowing owl; desert tortoise; golden eagle; special status plant species; Mojave fringe-toed lizard; delineation of jurisdictional waters; bat and raptor species; and general wildlife and vegetation mapping.

We would like to request that the review be completed in track changes on the attached document by February 28, 2011 if possible.
Please contact me at 858-812-9292, ext. 1545 or by email if you have any questions.

Thank you,
Theresa

****

Theresa Miller, CE
Senior Biologist

Please note our change of address
URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Phone: (858) 812-9292, ext. 1545
Fax: (858) 812-9293
Mobile: 619-888-0131

URS CORPORATION

Report of Conversation

Project Title:	BrightSource Energy Palo Verde Mesa Project				
Telephone:		**Meeting Location:**	e-mail		
Name:	Sean Harris and Regina Abella	**Date:**	3/03/2011 – 3/21/2011	**Time:**	
With:					
Subject:	Helicopter Surveys in Mule Mountains				

Hi Sean,
I like the way you think - everything in writing! Yes, despite your botany team's findings I do not have any bighorn sheep concerns for that area (East of Palo Verde Mtns, West of Blythe). We have no record of breeding females in the area and no recorded sightings in the past years. In addition, the regional biologist for that area did not express any concerns. If you should find any sheep, especially ewes with lambs, please back out of the area and discontinue the flight. I'd appreciate a report on any bighorn sheep data you may gather. Thanks for checking in again,

Best,

Regina Abella
Desert Bighorn Sheep Coordinator
1812 9th Street
Sacramento, CA 95811
(916) 445-3728

>>> <Sean_Harris@URSCorp.com> 3/21/2011 3:35 PM >>>
Regina,

I just wanted to send you an e-mail confirming what was said during our conversation this afternoon regarding continuing our golden eagle helicopter surveys despite the findings of our botany team (i.e., bighorn sheep droppings, hoof, and horn). We will GPS the locations of any sheep that happen to be observed during our helicopter surveys and send you the data for your knowledge. Thank you for responding to my phone call so quickly. As soon as we receive your confirmation e-mail we will proceed with planning the survey for this week.

Thank you again,

Sean Harris
Wildlife Biologist

URS CORPORATION

Report of Conversation

Project Title:	BrightSource Energy Palo Verde Mesa Project				
Telephone:		**Meeting Location:**	e-mail		
Name:	Sean Harris and Regina Abella	**Date:**	3/03/2011 – 3/21/2011	**Time:**	
With:					
Subject:	Helicopter Surveys in Mule Mountains				

Sean,
to the best of my knowledge there are no breeding females in these mountains, although a lone ram was found some time ago. I have yet to hear from the regional biologist but I don't expect to hear much different. I have no bighorn sheep concerns for this survey, please continue as planned. Also, I'm not sure who Michael Flores does he work with CDFG?

Regina Abella
Desert Bighorn Sheep Coordinator
1812 9th Street
Sacramento, CA 95811
(916) 445-3728

URS CORPORATION

Report of Conversation

Project Title:	BrightSource Energy Rio Mesa Solar Project				
Telephone:	619-888-5542	**Meeting Location:**	Conference Call		
Name:	Angela Leiba	**Date:**	6/28/11	**Time:**	9:00am-10:00am
With:	BSE, ESH, USFWS, CEC, BLM, Cibola Natl. Wildlife Refuge, URS Biologists				
Subject:	Migratory Birds Conference Call				

Present on call: Chris Ellison, Brian Biering, Brenda Zaun, Angela Leiba, Sarah Champion, Sean Harris, Rick York, Todd Stewart, Nick Jacobs, Larry LePre, Tannika Engelhard, Jeep Pagel

Tannika discusses the migratory birds and the proximity to the Colorado River. Angela mentions there was no particularized discussion of migratory birds in the work plan, rather there were Avian bird count surveys which were done in March/April 2011 and included migratory and non-migratory birds. It was the understanding from the work plan matrix that the Avian Bird count surveys sufficed for migratory birds, but now URS is willing to step back and understand why Avian Bird count surveys would not suffice.

Sean Harris, URS Biologist, stated that he performed Nest Surveys but no individual surveys yet.

Jeep stated he wanted full inventory of the birds with 2 flights over the area “at least.”

For the eagle survey results Jamie Dreskell is the contact.

Jeep stated that three 750ft towers would be a draw for eagles and we need to characterize the risk, have the best information and a thorough analysis for migratory birds. Angela stated there is an Avian Protection Plan in progress to characterize these risks. Jeep mentions that eagles will be around all year long to survey. Tannika states that they are recommending the same survey protocols in the area for all Solar projects.

Todd and Chris discuss the temperature in the air where the birds might perch on the tower, Chris mentions the towers in Israel and that certain birds may sense it is getting warmer. They plan to look at the temperature of the air where birds may fly through the different temperature gradients.

USFWS requests a thorough literature review for migratory birds, and URS/BSE agrees to provide this as soon as possible.

Brenda Zahn discusses the night migrations of bird species and how high they are, that birds flying at night might not see the towers and could hit them and questions how the towers will be lighted. Todd responds that the towers are following the FAA lighting.

Brenda asks about the grading and Todd explains that the pylons are vibrated in, and thus it is not a lot of grading, he explains the mirror washing trucks and that it will be no where near the

Project Title:	BrightSource Energy Rio Mesa Solar Project				
Telephone:	619-888-5542	**Meeting Location:**	Conference Call		
Name:	Angela Leiba	**Date:**	6/28/11	**Time:**	9:00am-10:00am
With:	BSE, ESH, USFWS, CEC, BLM, Cibola Natl. Wildlife Refuge, URS Biologists				
Subject:	Migratory Birds Conference Call				

trimming of vegetation as with other solar projects. Tannika asks to confirm that the grading is not like Ivanpah? Todd responds that the portions of Ivanpah that are graded are the powerblock areas.

Brenda asks about the road access for vehicles to get to all the mirrors. Todd responds that there is a solar field circle around the power block at a distance of 130-140ft, and there would be a circumferential drive zone approximately 20 feet wide and there are 120 permanent employees onsite daily. The water for groundwater is with an MWD contract for up to 600/acre feet per year. He goes on to discuss the dry cooling, and that water is only used for the auxiliary systems and that the total project area would be fenced to keep desert tortoise out.

Tannika recommends that for the migratory birds we seek information from refuges because what has been done was not sufficient for migratory birds.

Jeep discusses that there are 4 different National Wildlife Refuges in the area and that it is a “very rich bird spot” and they believe the project warrants a different level of monitoring. He recommended monitoring strategy for raptors, waterfowl, upland species, etc. He disagrees with the avian bird count protocols typically recommended by USFWS and wonders what will be needed to complete a NEPA analysis.

Larry LePre discusses that there is a book written on birds of the Colorado River Valley and people out counting birds in Arizona. Larry is willing to give URS a chance to compile literature on the birds in the area. He understands that the river is a major corridor, with 50k swallows etc, but wants to further understand how far out is the risk from the river and what species particularly at risk. URS/BSE reiterates its agreement to compile a literature review and also focus on migration counts in fall 2011.

Rick York states he does not have a decided position and doesn’t have any recommendations to make regarding the avian count surveys. He wants everyone to know the potential effects. Would like to go along with key wildlife agencies, and has nothing in addition to what has already been discussed.

Tannika discusses that there are decades of surveys and wants to know how recent is the refuge data? URS reiterates its agreement to prepare the literature review.

Brenda discusses the LCRMSCP.com/org and Dr. Charles Van Riper and other grad students

URS CORPORATION

Report of Conversation

Project Title:	BrightSource Energy Rio Mesa Solar Project				
Telephone:	619-888-5542	**Meeting Location:**	Conference Call		
Name:	Angela Leiba	**Date:**	6/28/11	**Time:**	9:00am-10:00am
With:	BSE, ESH, USFWS, CEC, BLM, Cibola Natl. Wildlife Refuge, URS Biologists				
Subject:	Migratory Birds Conference Call				

working out there.

Todd mentions that the surveys proposed by USFWS significantly deviate from what has been required of other projects, and the work that is being requested is a multi million dollar effort for migratory birds., Todd expressed a desire to take advantage of the work that is already out there.

Jeep states that what was tasked is a “Volkswagen” and they can give us a “Mercedes” if that is what they would like. Jeep questions the survey costs by Environmental Consultants.

Larry questions the risk of birds flying through the heat, and asks which birds might be burned. Larry wants to know about Israel raptor migration areas and whether or not those sites were in the migratory bird corridor. Todd states that BSE will look into avian mortality at the solar facility in Israel, and also notes we need the relative elevation of different types of species.

Tannika says that we need surveys, despite the costs, because we need to understand what species are flying over the area and the surveys need to be sufficient to know what might be impacted by the projects.

Sean Harris states that migratory birds that might be at risk are the Swifts and Swallows that are in the ag lands. Sand Cranes may also be at risk according to Brenda Zahn because they vary day to day at the Cibola National Wildlife Refuge. Sean says they are in the ag lands, they are away from the river and only there in the winter.

Todd drops off the call at 10:10am.

Larry asks how wide the migratory bird corridor is. There would need to be a lot of time there spent to catch the relatively rare events. Brenda thinks late September is a bad time and Dec-Jan is the best time.

Jeep states that BSE is welcome to try to obtain enough information and good info, and that FWS is available to help.

URS Action Item: research migratory bird counts and give to FWS a literature review as well as anything to roll into overall permits. Information will be shared with the Cibola National Wildlife Refuge as well.

Sarah Champion/SanDiego/URSCorp
07/21/2011 02:12 PM

To
cc
bcc
Subject Fw: Rio Mesa Corps JD map (UNCLASSIFIED)

ROC: between Derek and Crystal email

----- Forwarded by Angela Leiba/SanDiego/URSCorp on 07/18/2011 06:11 PM -----

Derek Langsford/SanDiego/URSCorp
07/15/2011 05:36 PM

To "Doyle, Crystel L SPL" <Crystel.L.Doyle@usace.army.mil>, "Mace, James E SPL" <James.E.Mace@usace.army.mil>
cc Angela Leiba/SanDiego/URSCorp@URSCorp
Subject RE: Rio Mesa Corps JD map (UNCLASSIFIED) Link

Hi Crystel,

Thanks for the link. As promised here are graphics of the whole project - the project site, the access areas, and the Transmission line.

I look forward to hearing from you Monday.

Derek

Derek H. Langsford, PhD, CSE
Biological Resources Team Manager
URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
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Email: Derek_Langsford@URSCorp.com

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"Doyle, Crystel L SPL" <Crystel.L.Doyle@usace.army.mil>

07/15/2011 04:07 PM

To <Derek_Langsford@URSCorp.com>
cc
Subject RE: Rio Mesa Corps JD map (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Hi Derek,

Here is the link to our regulatory website per our conversation, http://www.spl.usace.army.mil/regulatory/ .

Thanks,
Crystel

-----Original Message-----
From: Derek_Langsford@URSCorp.com [mailto:Derek_Langsford@URSCorp.com]
Sent: Wednesday, July 13, 2011 1:17 PM
To: Doyle, Crystel L SPL
Cc: Angela_Leiba@URSCorp.com; Mace, James E SPL
Subject: Fw: Rio Mesa Corps JD map

Hi Crystel,

I've left several messages with Jim on his field cell phone in reference to the email below, and yesterday on his office phone, only to find out he's out of the office until July 25. He gave your name and number to contact in his stead. I left a message with you yesterday and again this morning regarding this project.

Jim offered to work closely with us on the Corps JD for this 11,000 + acre solar project near Blythe. Below is the email that I previously sent containing a graphic of our draft JD with questions for which we desperately need feedback to keep the project on schedule.

Please let me know if Jim is out on vacation or not until July 25. If he is on vacation or really won't be able to look at it until July 25, can you or someone else provide the feedback we need? It's approaching two weeks since I first sent the information and the project engineers and managers are gnawing at their knuckles to move forward with the design.

I'd appreciate a response at your absolutely earliest convenience. If Jim or you are unable to provide us with feedback in the near future, please tell me if there is anyone else at the Corps from whom I could get the needed feedback?

Regards and thanks,

Derek

Derek H. Langsford, PhD, CSE
Biological Resources Team Manager
URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
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----- Forwarded by Derek Langsford/SanDiego/URSCorp on 07/13/2011 12:54 PM -----

Derek Langsford/SanDiego/URSCorp

07/11/2011 08:22 PM

To
"Mace, James E SPL" <James.E.Mace@usace.army.mil>
cc
Angela Leiba/SanDiego/URSCorp@URSCorp
Subject
Fw: Rio Mesa Corps JD map

Hi Jim,

Sorry to bug you, but it's been 10 days since I first sent you the email with our draft JD and we are getting increasingly anxious to get your input. I'll try calling tomorrow and hope you have had a chance to look at the map and the questions below and can impart direction for us to be able to submit a formal request for approval of the delineation.

If you can't respond immediately could you please tell us when you will be able to do so? Engineering design and the project's Application for Certification are dependent on the Corps JD.

Thanks,

Derek

Derek H. Langsford, PhD, CSE
Biological Resources Team Manager

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4225 Executive Square, Suite 1600
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----- Forwarded by Derek Langsford/SanDiego/URSCorp on 07/11/2011 08:11 PM -----

Derek Langsford/SanDiego/URSCorp

07/07/2011 12:07 PM

To
cc
Subject
Fw: Rio Mesa Corps JD map

Hi Jim,

This is a follow-up email to my earlier messages to let you know we are REALLY eager to get your feedback on our efforts so far on the Rio Mesa JD :-)

See my previous email below for details.

If you can get back to us at your earliest convenience we'd really appreciate it.

Thanks,

Derek

Derek H. Langsford, Ph.D.
Biological Resources Team Manager
URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Phone: (858) 812-9292, ext. 1563
Fax: (858) 812-9293
Direct: (858) 812-8296
Email: Derek_Langsford@URSCorp.com

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----- Forwarded by Derek Langsford/SanDiego/URSCorp on 07/07/2011 11:41 AM -----

Derek Langsford/SanDiego/URSCorp

07/01/2011 05:45 PM

To
"Mace, James E SPL" <James.E.Mace@usace.army.mil>
cc
Angela Leiba/SanDiego/URSCorp@URSCorp, David Trzeciak/SanDiego/URSCorp@URSCorp, Heather Rothbard/SanDiego/URSCorp@URSCorp
Subject
Rio Mesa Corps JD mapLink
<Notes:///85257807006A39CE/DABA975B9FB113EB852564B5001283EA/9A521CC5749B93F5852578BD005FBD32>

Hi Jim,

We really appreciate your willingness to work closely with us on the jurisdictional determination. This represents our first informal provision of our work to date.

Please find attached an 11 x 17 pdf of the Draft Rio Mesa project JD for Corps jurisdiction as we currently have it. All identified drainages enter Hodges Drain which feeds into the Colorado River at the Palo Verde Outfall. We have also determined that the drainages in the transmission line portion of the project to the north of the project site infiltrate into the desert floor, are isolated, and therefore not Corps jurisdictional.

Per the Solar Two/IVS project, we have divided the drainage basins as best as we could and assigned letters to each of them. Some drainages split and then join other drainages e.g. drainages B, E and G have the same source in the west. Also the drainages with riparian vegetation (ironwood/palo verde woodland, mesquite woodland and greasewood scrub habitats) are colored green to help you interpret the relative function and value of the different areas on the site. The washes contain the ironwood/palo verde woodland, whereas the mesquite woodland and greasewood scrub are in the east of the site where the washes enter the historic Colorado River floodplain.

We'd like to get your input on several things:

* Do you want to see this in another form - a large size pdf that you
can move around and zoom into, on a CD, or large scale paper map?

* In your opinion, have we captured all the features over which the
Corps would take jurisdiction?

* Is this level of detail presented too little, adequate or too much
for further analysis?

The complex jurisdictional layer is just a few polygons. To attribute each reach with a width and to group them into 3-foot categories would be another daunting task (fyi, the map represents 1.4 million GIS vertices i.e. individual cursor click-points). The total acreage of Corps jurisdiction is over 1300 acres. We can calculate how much acreage is in each identified drainage basin and should be able to separate out the relatively wide washes from the relatively narrow washes without difficulty. Would that work?

On Solar Two/IVS, only certain drainage features were regulated and linear distance and acreage data was provided for them (see attached). How do you foresee this project being viewed, and how much of the complex of drainages on site might ultimately be subject to avoidance and mitigation, if impacted? I've attached data from the Solar Two/IVS project.

Let us know your thoughts before we proceed to the next step.

We'd apprecaite your response to this draft ASAP - would EOB Wednesday July 6 be possible?

Happy July 4 and thanks,

Derek

Derek H. Langsford, Ph.D.
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4225 Executive Square, Suite 1600
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"Mace, James E SPL" <James.E.Mace@usace.army.mil>

06/28/2011 10:25 AM

To
<Derek_Langsford@URSCorp.com>
cc
Subject
RE: Rio Mesa (formerly Palo Verde Mesa) JD update (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Yes - please split them into groups of widths.

Jim

-----Original Message-----
From: Derek_Langsford@URSCorp.com [mailto:Derek_Langsford@URSCorp.com]
Sent: Tuesday, June 21, 2011 3:52 PM
To: Mace, James E SPL
Subject: Rio Mesa (formerly Palo Verde Mesa) JD update

Hi Jim,

We are approaching the final stages of our JD effort on the Rio Mesa project, SW of Blythe, and hope to have a map for your initial review next week. It has been the most challenging JD we've ever done. The complexity of the hydrology on site is astonishing. There is an extremely fine network of braided channels across large swaths of the project site.

We are wondering how you would like to see the JD summarized numerically. We can report a total acreage if Corps jurisdiction. Do you want us to split up the drainage features into categories of drainage widths (e.g. >0'-3', 3 '-6', 6'-9' etc.)?

Please let me know.

Regards,

Derek

Derek H. Langsford, Ph.D.
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Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

JD_Example_Tline_Area.pdf JD_Example_Access_Area.pdf JD_Example_Project_Area.pdf

BRIGHTSOURCE ENERGY
Palo Verde Mesa Project

August 8, 2011
2:00 pm – 3:00 pm (PST)

Call Purpose: Informal consultation with ACOE on temporary and permanent site access

Attendees:

BrightSource Ophir Orr, Kevin Bertrand,Nick Jacobs, Andrea Grenier (sub)
Bechtel: Terry Atkins, Don F?
URS: Angela Leiba, Derek Langsford
US Army Corps of Engineers: Jim Mace

Call In Number: 888.369.1427; code 1347946

Meeting Summary

Introductions
Derek welcomed everyone to the call and thanked Jim for taking the time to speak with us. He then handed the call over to Ophir.

Ophir introduced everyone at BSE and Bechtel to Jim and went through the BrightSource Energy (BSE) company and Rio Mesa (RM) project overview on pdf that was sent to everyone prior the conference call

Summary of Access Road
Terry gave overview of access road at 34th Ave to access common area on "peninsula" between to wash systems and need to cross broad wash area to rise up the 40+ feet to the mesa.

Details and options for 34th Ave access
Don. provided detail of the hydrology and civil engineering challenges at this location. He described options:

1. at grade (subject to damage from storm events)
2. arched culverts with fill for footings (proponent-preferred option)
3. causeway

Jim asked if the access would be built to survive 100 year flood.

Don said "yes" with 100-year event being 2-3 feet of water.

Jim asked for some more details of location of proposed culverts relative to property line (P/L).

Don said not determined yet but likely start 1/3 of way to mesa from P/L. Need to get up bank to above Ordinary High Water Mark (OHWM).

Terry asked about corrugated metal pipe (CPM) versus pre-cast concrete.

Jim said that the project has a fair amount of flexibility especially if this could be considered long-term maintenance of the existing road or versus road used to access project. Flexibility a result of lack of wildlife in the area. Jim said to predict worst-case scenario where possible for permitting.

Ophir said road has to carry 200 staff/day (to clean mirros, maintain equipment and operate plant).

Jim said it sounds like we need a 2-lane year-round all weather road access,

Ophir said "yes."

Don asked if it is OK to have temporary access followed by construction of permanent access.

Jim said “yes.” Also said to present worst case scenario for construction in terms of timeframe as if specified upfront no later amendment would be needed.

Hodges Drain crossing
Don: project will need to structural upgrade of CA DOT box culvert for 34th at Hodges Drain. No grade change is anticipated.

Jim said if no new fill then may be covered by a maintenance permit. May even be able to separate out from project and possibly even be exempt if not part of project.

Ophir asked Jim to confirm culverts are viable.
Jim said “yes” and added that natural bottom would be preferred.

Jim then described standard (i.e. individual) permit for impacts > 0.5 acre versus Nationwide Permits (NWPs) and the need for alternatives analysis in the standard permit. Said can split permits if legally defensible e.g. split Hodges Drain permit out from project permit as it looks like maintenance permit. He confirmed that they will exclude natural bottom if use that approach from calculation of fill.

Don said they can proceed with further engineering based on the results of this discussion

Other Crossings
Don andTerry described alternative access on to site via Bradshaw trail then heading south to common area which would need to cross a major wash.

Jim said that same issues apply to any crossings on site as those described to access site but any on-site crossings would be part of the project permit.

Closing
After all questions were answered, *Ophir* and *Derek* thanked Jim for his input and the call ended.

URS CORPORATION

Report of Conversation

Project Title:	Bright Source Energy, Rio Mesa SEGF Project (27651003)				
Telephone:	(760) 922-6508	**Meeting Location:**	Telephone Voice Mail; URS San Diego		
Name:	Derek Langsford	**Date:**	9/20/11	**Time:**	
With:	Magdalena Rodriguez, CDFG				
Subject:	Guidance on Waters of the State submittal and Gila Woodpecker				

I called and left a message with Magdalena requesting guidance on submitting materials to CDFG to get concurrence from CDFG on our delineation of waters of the state of California.

I also informed her that we had observed the state-listed as endangered Gila woodpecker on the site.

Langsford, Derek

From: Langsford, Derek
Sent: Monday, October 24, 2011 6:19 PM
To: 'Magdalena Rodriguez'
Cc: Shankar Sharma; Leiba, Angela
Subject: RE: Rio Mesa CDFG jurisidiction - follow-up

Will do!

Regards,

Derek

Derek H. Langsford, PhD, CSE
Biological Resources Team Manager
URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Phone: (858) 812-9292, ext. 1563
Fax: (858) 812-9293
Direct: (858) 812-8296
Email: derek.langsford@urs.com

-----Original Message-----
From: Magdalena Rodriguez [mailto:MCRodriguez@dfg.ca.gov]
Sent: Monday, October 24, 2011 5:20 PM
To: Langsford, Derek
Cc: Shankar Sharma; Leiba, Angela
Subject: Re: Rio Mesa CDFG jurisidiction - follow-up

Derek,

I did receive the jurisdiction packet with CD you sent last week. I also wanted to inform you that my colleague Shankar Sharma will be the lead and will be taking over this project and working with the CEC during the permitting process. I will only be involved for guidance. Please send any future correspondence to him and cc me also.

Thank You,

Magdalena
-----Original Message-----
From: "Langsford, Derek" <derek.langsford@urs.com>
To: Rodriguez, Magdalena <MCRodriguez@dfg.ca.gov>
Cc: Leiba, Angela <angela.leiba@urs.com>

Sent: 10/21/2011 2:41:11 PM
Subject: Rio Mesa CDFG jurisidiction - follow-up

Hi Magdalena,

Could you please confirm receipt of the package that was sent from our office to you on 10/11/11 that contained the proposed CDFG-jurisdictional waters and wetlands of the state at the Rio Mesa SEGF site?

The project is located approximately 10 miles SW of Blythe between the Mule Mountains and the Colorado River floodplain.

We included maps of the site on both 11x17 and E-sized prints of the identified areas of state jurisdiction as well as a CD containing those images and a high resolution PDF of the site for you to check.

Please let me know if you need anything else to help you to determine that our mapping is satisfactory.

Thank you!

Derek

Derek H. Langsford, PhD, CSE
Biological Resources Team Manager
URS Corporation
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La Jolla, CA 92037
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Langsford, Derek

From: Pete_Sorensen@fws.gov
Sent: Tuesday, November 08, 2011 1:51 PM
To: Leiba, Angela
Cc: agolden@energy.state.ca.us; Andrea Grenier (andrea@agrenier.com); Brenda_Zaun@fws.gov; Brian Biering (bsb@eslawfirm.com); Langsford, Derek; Jody_Fraser@fws.gov; Goin, Jon; llapre@blm.gov; mcrodriguez@dfg.ca.gov; mmassar@blm.gov; Mock, Patrick; ryork@energy.state.ca.us; Champion, Sarah; Todd Stewart (tstewart@brightsourceenergy.com); kmarsden@blm.gov; Joel_Pagel@fws.gov
Subject: RE: Rio Mesa Solar Facility - Bird Counts for November-December

Angela,

Thanks for the response. I am thinking BLM or CEC should arrange any meetings, since they represent the lead agencies for this proposal. Since Brightsource apparently has decided not to adopt our recommended changes to the survey protocols, and it is our opinion that a more customized approach than BLM's standard point count method for solar projects is needed for this project, the issue seems to warrant wider participation and expertise in an effort to achieve agency and scientific consensus. Therefore, if a meeting is scheduled, we would plan on inviting representatives from our Refuges and Migratory Birds programs, and potentially USGS.

thanks,

Pete Sorensen
Division Chief

"Leiba, Angela" <angela.leiba@urs.com>

11/07/2011 03:39 PM

To "Pete_Sorensen@fws.gov" <Pete_Sorensen@fws.gov>, "Mock, Patrick" <patrick.mock@urs.com>

cc "agolden@energy.state.ca.us" <agolden@energy.state.ca.us>, "Langsford, Derek" <derek.langsford@urs.com>, "Goin, Jon" <jon.goin@urs.com>, "llapre@blm.gov" <llapre@blm.gov>, "mcrodriguez@dfg.ca.gov" <mcrodriguez@dfg.ca.gov>, "mmassar@blm.gov" <mmassar@blm.gov>, "ryork@energy.state.ca.us" <ryork@energy.state.ca.us>, "Brenda_Zaun@fws.gov" <Brenda_Zaun@fws.gov>, "Jody_Fraser@fws.gov" <Jody_Fraser@fws.gov>, "Todd Stewart (tstewart@brightsourceenergy.com)" <tstewart@brightsourceenergy.com>, "Andrea Grenier (andrea@agrenier.com)" <andrea@agrenier.com>, "Brian Biering (bsb@eslawfirm.com)" <bsb@eslawfirm.com>, "Champion, Sarah" <sarah.champion@urs.com>

Subject RE: Rio Mesa Solar Facility - Bird Counts for November-December

Pete,

On our June 28th all-agency conference call, per your request, we agreed to provide additional information specifically on migratory birds. On our call in June we agreed to provide the following additional information.

1) An annotated bibliography – sent to FWS on 7/15/11
2) White Paper – Part 1 (migratory corridor analysis)
3) White Paper – Part 2 (potential impacts analysis)

Items 2 and 3 were rolled into our AFC submitted to the CEC and the BLM on 10/14/11. The CEC project Manager, Pierre Martinez

indicated that a copy of the AFC was sent to USFWS shortly after submittal. If for some reason you do not have the AFC, please let us know and we will send you a copy of the AFC via CD immediately.

Given the fairly narrow window for the fall/winter bird point count surveys, we would like to get USFWS concurrence on the schedule as soon as possible. To be in conformance with the BLM's Avian Bird Point Count Protocols for Solar Projects, we recommend we complete the fall surveys (slated to begin this week). We also agree that a meeting with all agencies be held to identify the road forward on migratory bird issues relating to this project.

Angela Leiba, GISP
Vice President
Environmental Department Manager
Senior Project Manager
URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Office: 858.812.9292
Direct: 858.812.8252
Cell: 619.888.5542
angela.leiba@urs.com (NEW!)

URS – A Fortune 500 Company

From: Pete_Sorensen@fws.gov [mailto:Pete_Sorensen@fws.gov]
Sent: Monday, November 07, 2011 10:02 AM
To: Mock, Patrick
Cc: agolden@energy.state.ca.us; Leiba, Angela; Langsford, Derek; Goin, Jon; llapre@blm.gov; mcrodriguez@dfg.ca.gov; mmassar@blm.gov; ryork@energy.state.ca.us; Brenda_Zaun@fws.gov; Jody_Fraser@fws.gov
Subject: Re: Rio Mesa Solar Facility - Bird Counts for November-December

On June 27 and 28, the Service expressed disagreement with the proposed scope of work at the time and recommended/discussed additional bird monitoring studies that we thought may be adequate but we have not heard to what extent the applicant has incorporated our recommendations into the ongoing work. Without that knowledge we lack the necessary context to judge the adequacy of the work described below. We also have not received a whitepaper on migratory birds that the applicant committed to provide during previous discussions. If the work below adheres without deviation to BLM's standard monitoring methods, we do not concur for reasons previously discussed, that the proposed work will yield adquate data to quantify or qualitatively describe the likely impacts of the proposed project.

We would appreciate a full description of the proposed study program and further meetings to attain interagency agreement on study adequacy, if needed.

Pete Sorensen
Division Chief
Palm Springs Fish and Wildlife Office

"Mock, Patrick"
<patrick.mock@urs.com>

11/02/2011 10:01 AM

To "llapre@blm.gov" <llapre@blm.gov>, "agolden@energy.state.ca.us" <agolden@energy.state.ca.us>, "mcrodriguez@dfg.ca.gov" <mcrodriguez@dfg.ca.gov>, "mmassar@blm.gov" <mmassar@blm.gov>, "ryork@energy.state.ca.us" <ryork@energy.state.ca.us>, "Pete Sorensen Pete_Sorensen Pete_Sorensen@fws.gov (Pete_Sorensen@fws.gov)" <Pete_Sorensen@fws.gov>

cc "Leiba, Angela" <angela.leiba@urs.com>, "Langsford, Derek" <derek.langsford@urs.com>, "Goin, Jon" <jon.goin@urs.com>

Subject Rio Mesa Solar Facility - Bird Counts for November-December

URS is about to start the Fall/Winter phase of the planned Bird Point Count Surveys per our approved Work Plan and we wanted to get concurrence regarding our survey schedule.
We plan on conducting two point count surveys during the two weeks prior to the Thanksgiving Holiday week, then do the final two surveys during the first two weeks of December:

1st survey week of November 7th
2nd survey week of November 14
3rd survey week of November 28
4th survey week of December 5th

Please reply promptly with your concurrence or concerns regarding this schedule.

Thank you,

Pat

Patrick J. Mock, PhD, CSE, CWB®
4225 Executive Square, Suite 1600
La Jolla, CA 92037
858-812-9292 x 1535
619-888-6159 cell
858-812-9293 fax
patrick.mock@urs.com

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Langsford, Derek

From: Magdalena Rodriguez <MCRodriguez@dfg.ca.gov>
Sent: Wednesday, November 16, 2011 3:17 PM
To: Shankar Sharma; Langsford, Derek
Cc: Leiba, Angela
Subject: RE: Rio Mesa CDFG jurisidiction - follow-up

Derek,

I haven't went over this with Shankar yet due to current work load. I will try to make time to go over the information with Shankar that you provided . However, the earliest we could get to this will be the first week of December.

Thank You,
Magdalena

Magdalena Rodriguez
California Department of Fish and Game
Staff Environmental Scientist
Inland Deserts Region
3602 Inland Empire Blvd Suite C220
Ontario, CA 91764

Office 909 945 3294
Fax 909 481 2945
mcrodriguez@dfg.ca.gov

>>> "Langsford, Derek" <derek.langsford@urs.com> 11/16/2011 3:09 PM >>>
Hi Shankar,

Could you tell me the status of the review of URS's determination of the Rio Mesa Waters of the State and when me might get an official response from CDFG?

Many thanks,

Derek

Derek H. Langsford, PhD, CSE
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Phone: (858) 812-9292, ext. 1563
Fax: (858) 812-9293
Direct: (858) 812-8296
Email: derek.langsford@urs.com

-----Original Message-----
From: Magdalena Rodriguez [mailto:MCRodriguez@dfg.ca.gov]
Sent: Monday, October 24, 2011 5:20 PM
To: Langsford, Derek
Cc: Shankar Sharma; Leiba, Angela

Subject: Re: Rio Mesa CDFG jurisidiction - follow-up

Derek,

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Thank You,

Magdalena
-----Original Message-----
From: "Langsford, Derek" <derek.langsford@urs.com>
To: Rodriguez, Magdalena <MCRodriguez@dfg.ca.gov>
Cc: Leiba, Angela <angela.leiba@urs.com>

Sent: 10/21/2011 2:41:11 PM
Subject: Rio Mesa CDFG jurisidiction - follow-up

Hi Magdalena,

Could you please confirm receipt of the package that was sent from our office to you on 10/11/11 that contained the proposed CDFG-jurisdictional waters and wetlands of the state at the Rio Mesa SEGF site?

The project is located approximately 10 miles SW of Blythe between the Mule Mountains and the Colorado River floodplain.

We included maps of the site on both 11x17 and E-sized prints of the identified areas of state jurisdiction as well as a CD containing those images and a high resolution PDF of the site for you to check.

Please let me know if you need anything else to help you to determine that our mapping is satisfactory.

Thank you!

Derek

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Attachment 5.2-3

USACE Letters regarding jurisdictional waters information

October 7, 2011

James E. Mace, Senior Project Manager
U.S. Army Corps of Engineers, Riverside Regulatory Field Office
1451 Research Park Drive, Suite 100
Riverside, CA 92507-2154

Subject: BrightSource Energy Rio Mesa Solar Project: Methods for ACOE Proposed Jurisdictional Drainage Delineation
URS Project No. 27651003

Dear Mr. Mace:

On behalf of BrightSource Energy Inc., URS Corporation Americas (URS) would like to provide these revised materials and documents necessary to make a jurisdictional determination regarding waters found on the Rio Mesa Solar Project site. The revisions are and along the eastern edge of the Project site where it was determined that some areas previously mapped as non-wetland are likely wetlands. The vast majority of these wetland areas are not impacted by the Project as currently planned. There were also some small changes to the mapping along the gen-tie line and Bradshaw Trail/34th Ave. access corridor. The following materials have been attached to this letter:

1. Methods for ACOE Jurisdictional Drainage Delineation Memo
2. Table 1 – Revised - Detailed Potential Jurisdictional Waters of the United States
3. Table 2 – Revised - Summary of Potential Waters of the United States
4. Figure 1 – ACOE Informally Agreed Waters of the U.S.- Project Site
5. Figure 2 – ACOE Informally Agreed Waters of the U.S.- Generator Tie-Line Corridor and Access Corridors
6. Revised - Preliminary Jurisdictional Determination Form

Please contact Derek Langsford at (858) 812-9292 or derek.langsford@urs.com (note new email address), if you have any questions.

Sincerely,

URS CORPORATION

Angela Leiba
Vice President

Derek Langsford
Biology Group Team Manager

URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Tel: 858.812.9292
Fax: 858.812.9293

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October 7, 2011

James E. Mace, Senior Project Manager
U.S. Army Corps of Engineers, Riverside Regulatory Field Office
1451 Research Park Drive, Suite 100
Riverside, CA 92507-2154

Subject: BrightSource Energy Rio Mesa Solar Project, Blythe,CA
Methods for ACOE Proposed Preliminary Jurisdictional Waters Delineation
URS Project No. 27651003

Dear Mr Mace:

On behalf of BrightSource Energy Inc., URS Corporation Americas (URS) provides this letter to document the methods used to delineate the preliminary jurisdictional waters found within the Rio Mesa Solar Project Biological Survey Area (BSA).

Areas considered and assessed as potential jurisdictional Waters of the United States (WUS) were based on wetland delineation practices that are in compliance with the decision following Rapanos v. the United States, 547 U.S. 715 (2006) (ACOE 1987, 2008a, and 2008b). The methodology to determine what is proposed jurisdictional and what is proposed non-jurisdictional involved two criteria:

OHWM: Areas with higher density vegetation, but lacking any of the OHWM characteristics, were eliminated as proposed jurisdictional waters, whereas proposed jurisdictional waters exhibited conditions indicative of OHWMs being present.

Connectivity: Ephemeral washes that were not ultimately connected to the Colorado River, a traditional navigable water (TNW), were eliminated as proposed jurisdictional. Downstream connectivity to a TNW was determined and confirmed using topographic maps, current aerial photography, and field reconnaissance.

The preliminary data review and site reconnaissance survey (January, 2011) identified numerous west to east trending ephemeral washes throughout the project site, including five large ephemeral washes trending west to east and west to south. Given the size of the study area and the myriad of potential features present, the characterization and mapping of these drainages were accomplished by a combination of field surveys and desktop mapping using high resolution aerial photographs. Eleven drainage systems were pre-chosen, using the high resolution aerial photographs, as representatives of typical ephemeral washes found throughout the site. These 11 drainage systems were chosen based on size, flow direction, connectivity, flow patterns, vegetation composition, topography, and USGS `blue lines'.

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The reviewed areas are represented by Drainage Identification letters, labeled A through I, gen-tie line ROW corridor, and Bradshaw Trail and 34th Avenue Access, for simplicity, and presented in Figures 1 and 2, and summarized in Table 1. Potential WUS on the project site were identified by URS personnel through review of existing documentation and verified during the field investigation. During the field investigation, URS biologists gathered information on the physical parameters such as topographic demarcation, soil characteristics, vegetation cover, and connectivity of drainages to the Colorado River. Aerial photographs at a scale of one inch equals 200 feet (VTN 2011), USGS 7.5-Minute Quadrangle Maps including the Thumb Peak, Palo Verde, Ripley, and Roosevelt Mine, and the USFWS's Wetland Mapper (National Wetlands Inventory [NWI], 2011) were used to identify potential wetland and water resources in the project area. A data search for previously delineated and mapped wetland and non-wetland WUS was conducted using the NWI website. A total of 8.30 acres of Bush seepweed (*Suaeda moquinii*) scrub wetlands, mapped on the NWI, occur within the BSA (Figure 1& 2). Metadata for this wetland acreage were not found on the NWI website. An additional site visit was conducted to collect additional data, soil type, plant species, and hydrology on the quality of the 8.30 acres of wetlands. A wetland determination data form (Arid West Region) was completed during the field visit. Similarities in the vegetation and hydrology of the area around this NWI identified seepweed wetland point to a total of 117.78 acres of wetland WUS. A summary of findings is currently being developed and will be presented in a separate memo.

A site reconnaissance survey and preliminary assessment of water features were conducted April 18 through April 22, 2011. The total area surveyed was approximately 11,381 acres. Pedestrian surveys were conducted along the 11 drainages and included points representing locations in the middle of the drainage channel, OHWMs, locations of low and high banks, and the outer extent of vegetation typically associated with each drainage. Data were recorded using a Trimble® Geo-XT GPS. General characteristics of the wash, including average channel width, evidence of flow, and general vegetation were noted. URS biologists reported no observable surface water in the BSA at the time of the investigation, but they documented evidence of past recent surface water flows, including visible shelves and edges in washes, OHWMs, litter and debris, and vegetation disturbance. Other evidence observed was the heavy braiding of washes throughout the project site. URS biologists determined that surface waters flowed southeast to Hodges Drain, which connects to the Palo Verde Outfall. This outfall flows into the Colorado River, which is identified as a TNW.

Field data were incorporated into a GIS for subsequent analysis and mapping. Data points collected along transect lines were plotted on recent aerial photographs having one to two foot resolution, and drainage features within the survey area were manually digitized in to the GIS using the nearest reference location data to aid in the mapping. The area extending one mile from the site boundaries was qualitatively evaluated for the presence of wetlands and other waters and for possible indirect effects to waters adjacent to the project site. When determining drainage acreages using desktop mapping, categories such as 1-3 feet wide, 3-6 feet wide, 6-9 feet wide, 9-12 feet wide, 12-15 feet wide, and greater than 15 feet wide, were used to quantify the acreage. Acreage calculations assumed that 1-3 feet was 3 feet and 3-6 feet was 6 feet, etc. Prior to field surveys, this proposed methodology was discussed with USACE regulatory staff from the Los Angeles District (Pers. Comm. Jim Mace, 2011).

Based on the field data and aerial photograph interpretation, these drainage systems were delineated based on connectivity of the smaller delineated ephemeral washes to the largest five ephemeral drainages and/or connect to Hodges Drain to the east of the project site boundary (Figure 1). Features for each drainage system include single, large channels with well-defined bed and banks, as well as broad, but sometimes weakly expressed, assemblages of shallow braided ephemeral channels. A total of approximately 1,178.78 acres of potentially jurisdictional WUS were identified and mapped in the project area, with an additional 254.82 acres in the BSA. Table 1 shows the breakdown of each drainage system's total acreage. The majority of WUS on the Project site are non-wetland, the numbers in brackets [xx] in Table 1 are the wetland acreages included in the totals. Table 2 shows a summary of wetland and non-wetland proposed jurisdictional WUS.

Sincerely,

URS CORPORATION

Heather Rothbard
Staff Botanist/Wetland Scientist

Derek H. Langsford, PhD
Biological Resources Team Manager

Table 1
Potential Jurisdictional WUS

Drainage Systems[1]	Drainage Size within the Project Site (acres)	500ft Buffer Area (acres)	Total Area (Project + Buffer) (acres)
A	17.31	7.01	24.31
B	127.84	17.26	145.10
C	9.88	1.17	11.07
D	6.52	0.98	7.48
E	191.62	44.86 [4.11][2]	236.46 [4.11]
F	6.20	7.62 [6.09]	13.82 [6.09]
G	419.85 [58.85]	75.69 [48.72]	495.59 [107.57]
H	141.53	50.05	191.55
I	238.28	50.20	33.50
Gen-tie line and ROW	9.05	[3]	9.05
Bradshaw Trail & 34th Ave Access	10.7	[3]	10.7
Totals	1,178.78 [58.85]	254.84 [58.93]	1433.62 [117.78]

[1] Drainage Divisions A through I are shown on Figure 1

[2] Numbers in parentheses designates wetland acreage included in total WUS

[3] Acreage included in Project Site

Gen-tie line = Generator tie line
ROW=Right-of-Way
WUS = Waters of the United States under Section 404 and 401 of the Clean Water Act. Defined in the study area by Ordinary High Water Mark

Table 2
Summary of Potential Jurisdictional Wetland and Non-Wetland WUS in the BSA

Type	Existing within Project Site	Existing within Buffer Area	Existing Acres within BSA
Jurisdictional Waters of the United States (WUS)			
Wetland*	58.85	58.93	117.78
Non-wetland WUS	1,119.93	196.39	1,326.32
TOTAL United States Army Corps of Engineers (USACE) Jurisdiction	1,178.78	254.84	1,433.62

BSA = Biological Survey Area
WUS = Waters of the United States
* Wetland present included bush seepweed scrub and bush seepweed scrub/ mesquite bosque vegetation communities.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office: Los Angeles District | File/ORM #: | PJD Date: Aug 22, 2011

State: CA | City/County: Palo Verde Mesa, Riversite County

Nearest Waterbody: Colorado River

Location: TRS, LatLong or UTM: San Bernardino Meridian: T8S R21E S1-3, 9-11,14-16, 20-23, 26-29, 33-35. T7S R21E S14-16, 23,26, 35

Name/ Address of Person Requesting PJD:
Derek H. Langsford, PhD, CSE
Biological Resources Team Manager
URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Phone: (858) 812-9292, ext. 1563

Identify (Estimate) Amount of Waters in the Review Area:

Non-Wetland Waters: 272530 linear ft <5 width 1450.14 acres | Stream Flow: Ephemeral

Wetlands: 8.30 acre(s) | Cowardin Class: Palustrine, scrub-shrub

Name of Any Water Bodies on the Site Identified as Section 10 Waters: Tidal: N/A | Non-Tidal: N/A

☑ Office (Desk) Determination
☑ Field Determination: Date of Field Trip: Apr 20, 2011

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- ☑ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: URS Corporation
- ☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps
- ☐ Corps navigable waters' study:
- ☑ U.S. Geological Survey Hydrologic Atlas:
  - ☐ USGS NHD data.
  - ☑ USGS 8 and 12 digit HUC maps.
- ☑ U.S. Geological Survey map(s). Cite quad name: Palo Verde
- ☑ USDA Natural Resources Conservation Service Soil Survey. Citation: websoilsurvey.nrcs.usda.gov Colorado Desert Are
- ☑ National wetlands inventory map(s). Cite name: fws.gov/wetlands/Data/Mapper.html
- ☑ State/Local wetland inventory map(s): californiawetlands.net/tracker/crb/map
- ☑ FEMA/FIRM maps: 06025C0275C
- ☐ 100-year Floodplain Elevation is:
- ☑ Photographs: ☑ Aerial (Name & Date): VTN Consulting, 2011
  - ☐ Other (Name & Date):
- ☐ Previous determination(s). File no. and date of response letter:
- ☑ Other information (please specify): VTN Consulting, 2011. Draft Rio Mesa Overall E

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and Date of Regulatory Project Manager (REQUIRED)

Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Appendix A - Sites

District Office	Los Angeles District	File/ORM #		PJD Date:	Aug 22, 2011
State	CA	City/County	Palo Verde/Riverside	Person Requestinq PJD	Derek Langsford

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
Wetland	*****	see Figure11a	Palustrine, scrub-shrub	117.78 acres	Non-Section 10 wetland
A	*****	see Figure 11a	Riverine	24.32 acres	Non-Section 10 non-wetlanc
B	*****	see Figure11a	Riverine	145.10 acres	Non-Section 10 non-wetlanc
C	*****	see Figure 11a	Riverine	11.05 acres	Non-Section 10 non-wetlanc
D	*****	see Figure 11a	Riverine	7.50 acres	Non-Section 10 non-wetlanc
E	*****	see Figure 11a	Riverine	232.37 acres	Non-Section 10 non-wetlanc

Notes:

*****Please see attached Figure number 11a and 11b, showing locations of Site Numbers labeled as Sections A thru I, Gen-tie and ROW corridors, and Bradshaw Trail and 34th Avenue Access.

Continued Sections from List above:

F: 7.73 acres, ***** see Figure 11a, Riverine, Non-Section 10 non-wetland

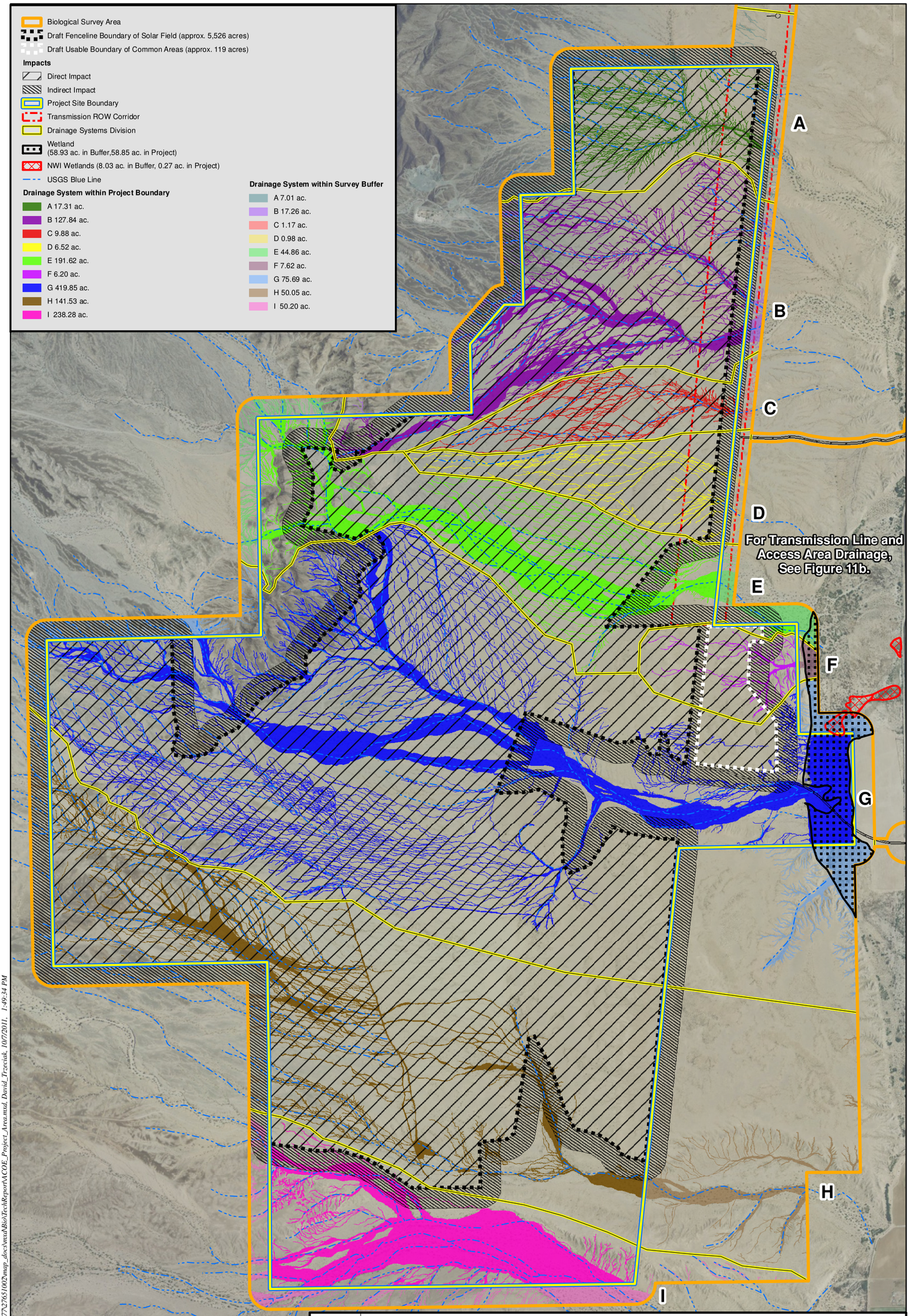
G: 387.96 acres, ***** see Figure11a, Riverine, Non-Section 10 non-wetland

H: 191.55 acres, ***** see Figure 11a, Riverine, Non-Section 10 non-wetland

I: 288.48 acres, ***** see Figure 11a, Riverine, Non-Section 10 non-wetland

Gen-tie/ROW corridor: 9.05 acres, ***** see Figure 11b, Riverine, Non-Section 10 non-wetland

Bradshaw Trail/34th Ave Access: 10.70 acres, ***** see Figure 11b, Riverine, Non-Section 10 non-wetland



SOURCES:
Draft Solar Field Layout & Fenceline (Bechtel, 8-03-2011).
Project Site, Transmission Line Corridor (VTN, 3-15-2011)
Aerial Imagery (NAIP, 5-25-2009)
USGS Blue Lines (USGS, 2009)
NWI Wetlands (U.S. Fish & Wildlife Service, 2011)
ACOE Informally Agreed Waters of the U.S.,
Drainage Systems Division, Biological Survey Area (URS, 2011).

ACOE INFORMALLY AGREED WATERS OF THE U.S.
PROJECT SITE
RIO MESA SOLAR
ELECTRIC GENERATING FACILITY

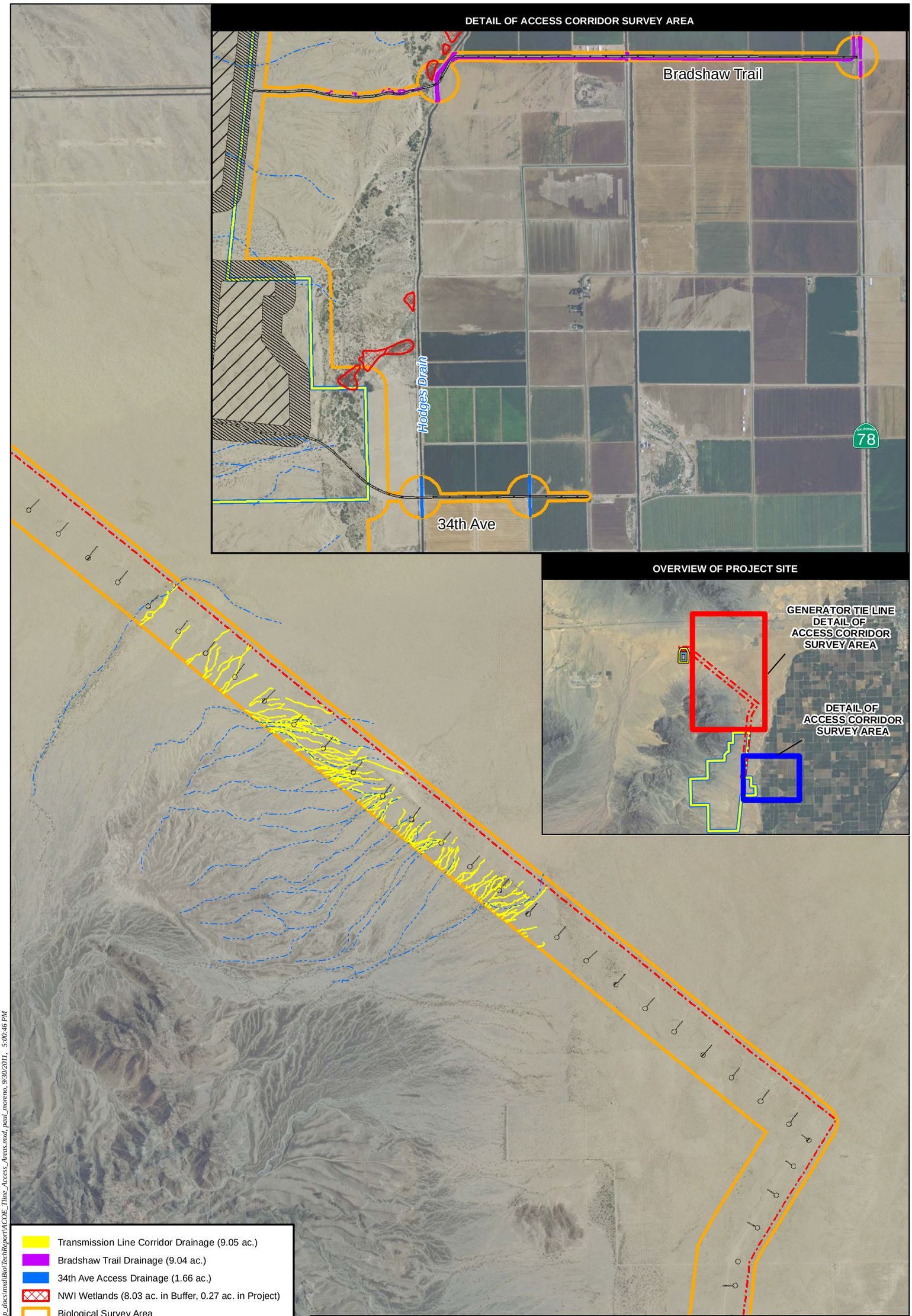
URS

1100 0 1100 2200 Feet

SCALE: 1" = 2,200' (1:26,400)
SCALE CORRECT WHEN PRINTED AT 11X17

CREATED BY: DT	DATE: 10/7/2011	FIG. NO: 11a
PM: AL	PROJ. NO: 27651006.50506	

Path: \\S082-GIS-01\gis\gis\projects\1577\27651002\map_docs\mxd\Bio\TechReport\ACOE_Project_Area.mxd, David_Trzeciak, 10/7/2011, 1:49:34 PM



SOURCES: Project Site, Transmission Line Corridor (VTN, 3-15-2011)
Aerial Imagery (NAIP, 5-25-2009)
USGS Blue Lines (USGS, 2009)
ACOE Informally Agreed Waters of the U.S.,
Drainage Systems Division, Biological Survey Area (URS, 2011).
NWI Wetlands (U.S. Fish & Wildlife Service, 2011).

ACOE INFORMALLY AGREED WATERS OF THE U.S.
GENERATOR TIE LINE CORRIDOR AND ACCESS CORRIDORS
RIO MESA SOLAR
ELECTRIC GENERATING FACILITY

URS

1100 0 1100 2200 Feet
SCALE: 1" = 2,200' (1:26,400)
SCALE CORRECT WHEN PRINTED AT 11X17

CREATED BY: DT	DATE: 09-22-11	FIG. NO:
PM: AL	PROJ. NO: 27651005.50506	11b

Path: G:\gis\projects\1577\27651002\map_docs\mxd\Bio\TechReport\ACOE_Tline_Access_Areas.mxd, paul_moreno, 9/30/2011, 5:00:46 PM

5.3 Cultural Resources

1. *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.[Appendix B(g)(2)(A)]*

Information required for the AFC to conform to the regulations:

The synthesis of the regional prehistory and history of the Colorado Desert as a whole is sufficient as a broad introduction to the archaeology of the project area, but is insufficient as a useful context to facilitate in the interpretation of the survey results. Using the Colorado Desert prehistory and history as a springboard, and using the cultural resources technical reports and site forms that were gathered for the appendices of the AFC, the applicant needs to develop a discussion of the prehistoric and historic-era archaeology within no more than a 5-mile radius of the project location. Explain what the archaeology looks like on the ground within that radius.

Response: In relation to the prehistoric cultural context described above, this section provides a discussion of prior archaeological research specifically relating to the project area and a 5-mile radius surrounding the project area, as well as the main elements of material culture found in, and in the vicinity of, the RMS Solar project site. It should be noted that all mention of "immediately surrounding environment" and the term "project area" in the following discussion specifically represent the area covering the RMS project footprint and a 5-mile radius around that footprint. Summaries of cultural resource investigations previously conducted in the project and its immediate environs are discussed, particularly those that relate to the prehistory and ethnography of the region. This information was compiled during records searches completed by the EIC and the SCIC. For a more detailed discussion of previous reports and cultural resources refer to Section 2 of the Rio Mesa Solar Electric Generating Facility Technical Report (2011), which will hereafter be referred to as "Technical Report."

Generally, prehistoric archaeology within the project area exhibits a pattern of site types and distribution similar to that identified elsewhere in the Colorado Desert. Site types and their distribution are directly correlated with geographical regions and resource procurement (e.g., water, plant, animal, stone, and wood). Prehistoric use/habitation is also related to travel and trade routes, most of which are oriented west to east to connect coastal groups with inland groups situated along the Colorado River. Other sites pertain to the noted practice of semi-sedentary agriculture within the Colorado River Valley itself. Previous archaeological research in and around the project area has revealed a variety of such sites, representing a wide range of cultural sequences. The majority of past archaeological study within the RMS project area and its immediate environs is represented by large-scale cultural resource management investigations associated with proposed energy and infrastructure development projects from the 1970s to recent times (2011). These reflect nuclear and solar energy projects, gas line and transmission facility projects, as well as various other miscellaneous projects.

From the 1970s to the early 1980s, the Sundesert Nuclear Plant project produced several cultural resources studies, resource evaluations, and addendum reports, portions of which addressed the RMS project area. Authorship for these reports are mostly attributed to Jay and Sherilee von Werlhof (date unknown, 1977, 1978, 1981), though one each is associated with Jay von Werlhof and Howard Pritchett (1977), and Richard A. Weaver (1977). Fieldwork for the majority of these studies included sample and pedestrian archaeological surveys, as well as geotechnical examinations, trenching, and in-the-field lithic and artifact analysis. Published reports resulting from work completed by Jay and Sherilee von Werlhof, identified lithic workshops, trails, historic-period refuse deposits, speculative historic-period "pioneer" features, and 1942-1944 Patton Desert Training Center (DTC) military maneuver features and artifacts as the most prevalent archaeological site types. Interestingly, the von Werlhofs also mentioned a "hippie commune" that was established in the northwestern quarter of Section 20, but had since been abandoned (von Werlhof & von Werlhof 1978). Depending on the date of this "hippie commune," which could not be verified, there is a possibility that historic period artifacts and features within the project area are associated with this previous activity. Conclusions derived from the work completed by the von Werlhofs during the 1970s indicated that the majority of the prehistoric archaeological lithic workshops were associated with the San Dieguito I through the Late Yuman chronological periods. Furthermore, it was noted that ceramics consisting of vessel types best suited for short durations of travel were most commonly observed in the area between the mountains and the valley; all ceramics observed during these studies were interpreted as Late Yuman period. Overall, amidst results from the work completed in the 1970s and early 1980s, groundstone tools (grinding slabs, bowls, manos, and pestles), hearthstones or house pits, materials relating to ceramic manufacture, and long-term habitation sites were notably absent. Minor mention is made in one of the von Werlhof reports regarding "living" and "camp" sites, where they concluded that such occupation sites are most likely found on higher, protected elevations (von Werlhof & von Werlhof 1978). However, additional work completed in the region since the publication of these reports has since documented the presence of such artifacts, features and sites (see discussion below). Of all the SunDesert Nuclear Plant project reports, specific mention of village sites, shelters, and temporary camps, along with several other common prehistoric site types (pottery loci, quarries, rock alignments, trails and isolates), is only made by Richard Weaver (1977). Taken as a whole, recommendations stemming from these reports were broad, ranging from complete avoidance to the preservation of artifacts in place, Phase III data recovery in areas directly impacted and the curation of artifacts, the establishment of archaeological districts considered eligible that should be avoided (von Werlhof & von Werlhof, 1978), and recommended artifact collection as adequate mitigation of effects, to the development of a comprehensive mitigation plan for the SunDesert project.

The majority of the previous cultural resources studies connected with pipeline-related projects completed within the RMS project area and its immediately surrounding environment are of recent date and span from the early 2000s to as recent as 2009 (Dalu 2009; FERC & CSLC 2007; Kirkish et al. 2000; McCorkle, Apple et al. 2001; Underwood 2002; York et al. 2000; however, two of the eight reports associated with proposed pipelines are of less recent date (Greenwood 1977; Padon et al. 1989). These reports present results

from a variety of investigative efforts, the majority of which include intensive cultural resources or archaeological survey, and many of which were associated with the North Baja Gas Pipeline. Of the eight pipeline-related reports, two discussed the results of a Class III investigation or inventory (Dalu 2009; FERC & CSLC 2007) and only one presented results from a cultural resources evaluation program that included close interval survey, surface collection or surface scrapes, and subsurface sampling through shovel test pits and excavation units (McCorkle, Apple et al. 2001). Additionally, two reports resulted in negative findings and no further recommended actions (Dalu 2009; Underwood 2002). A variety of prehistoric, historic-period, and multi-component site types were documented in the reports with positive findings. Prehistoric site types include isolated finds, ceramic scatters and pot drops, quarry sites, trails and associated trail features, campsites or activity areas, cleared circles and rock cairns, lithic scatters, single-event flaking stations, and combination ceramic and lithic scatter sites, as well as geoglyphs and rock art. Prevalent historic-period site types are refuse scatters or deposits and features and sites associated with DTC military maneuvering.; Common historic built environment resources include roads, railroads, irrigation features by way of canals and ditches, transportation or stage routes such as the Bradshaw Trail and the Plank Road, transmission line segments (Pilot Knob and Blythe Knob), historic wells, former townsites, and mining and early ranch sites. NRHP eligibility recommendations and determinations were made for some of these resources (see FERC & CSLC 2007; McCorkle, Apple et al. 2001; and Section 2 of the Technical Report).

Several transmission line-related project reports covering parts of the RMS project area and its immediate environs have documented a variety of cultural resources investigations that have occurred since the 1970s (Applied Earthworks 2006; Cowan & Wallof 1977; CSRI 1978; Mooney/Hayes Associates 2005; Schaefer 2003; TetraTech 2008; WCRM 1995; WESTEC 1982). These reports represent literature review and inventory surveys, inventory survey and evaluation efforts, and an ethnographic study, all of which were completed in support of transmission line projects.

The most common prehistoric archaeological site types documented as a result of these studies reflect those types already highlighted in other project summaries discussed above, including isolated finds, ceramic scatters, lithic processing sites, lithic quarry locations, temporary camps, trails (specific mention is made of the segments of the Xam Kwatcan ceremonial trail network), cremations and burials, petroglyphs and intaglios, cleared circles, and rock alignments.

Additional site types identified in these studies that were not previously mentioned in other reports include plant processing locations such as mesquite collection areas and a palm oasis (Cowan & Wallof 1977) and, importantly, the identification of 38 locations recognized by the Native American Heritage Commission as either traditional cultural properties (TCP) or areas of special Native American concern (Schaefer 2003). Many of the already-mentioned historic-period site types were likewise documented in the transmission line-related reports, including roads, cemeteries, town sites or homesteads, railroads, military maneuvering areas, mining-related sites and features, canals and other waterwork features (East Highline Canal),

utilities lines, and wells. Several archaeological sites within the surrounding environs of the project area were recommended as NRHP and CRHR eligible in these previous studies. Some regions The Mule Mountains, Big Maria Mountains, McCoy Mountains Complex, and Ford Dry Lake were described as areas of high or extreme archaeological/cultural sensitivity.

A number of miscellaneous studies that covered portions of or areas within 5-miles of the project area were also completed from the 1970s through to the present date (2011). Among the earlier reports from the 1970s and 1980s is an independent study of an aboriginal trail complex located in the Big Maria, Little Maria, and McCoy Mountains (Alderson 1977), and a series of archaeological sample unit records connected with the Big Maria Planning Unit (Various Authors, series of records dating through the early 1970s; EIC Report Number RI-01249). The official date for the this study is not known; however the report indicates that a reconnaissance level survey of an aboriginal trail complex was conducted of a broad area west from the Colorado River to Riverside County (Various Authors, series of records dating through the early 1970s; EIC Report Number RI-01249). Results of this reconnaissance study indicated that trails appear to wander when exiting mountain passes and that trails observed surrounding mountains "from about 450 ft. to approximately 700 ft." in elevation are cut from large expanses of desert pavement; in these areas it appears that trails "averaged 30 to 45 centimeters in width and 2.5 centimeters in depth" (Alderson 1977:6). Several features were noted along the eastern slopes of the Mule Mountains, as was one established trail running north-to-south from the southern end of the McCoy Mountains to the Mule Mountains (Alderson 1977:9).

Of equal interest to the Alderson study is the plethora of detailed archaeological sample unit records collected as part of the California Desert Program centered on the Big Maria Planning Unit. All of these records date to the 1970s and provide detailed information on survey data collected across multiple areas stretching from the Colorado River west towards the northern Salton Sea and the Coachella Valley. Specifically of interest to the present project area are records related to survey completed within the "Salton Sea East" section, continuing west to include the eastern Chuckwalla Valley and Big Maria Mountains.

The Salton Sea is what is left of ancient Lake Cahuilla, which was the nearest and largest body of water to the Colorado River. Observations documented in the various records relating o the Salton Sea East section describe a multitude of prehistoric and historic-period archaeological sites that consist of isolated prehistoric projectile points and other finds, trail features, temporary camps (containing fire-affected rock concentrations, potsherds, flakes, bone, and milling tool fragments), ceramic scatters, ceramic and lithic scatter sites, historic wells and roads (e.g., Teague Well, Hopkins Well, Chandler Well, Wiley's Well), and extensive military maneuver activity areas (over 100 fox holes, some with sand bags, ration cans, military trash, gun emplacement trenches, poles, barbed wire, exhausted munitions, signal wires, heavy vehicle tracks, arc-shaped earth mounds, ground disturbances, etc.), as well as established historical mine complexes (Jacklin Mine Complex, dating to the mid 1900s), historic-period mining claims (dated to February 1935), and refuse deposits or scatters associable with mining activities.

Several rock features or cairns are likewise described, many of which could not be chronologically placed. Of the diagnostic prehistoric artifacts documented, mention was made of a single Pinto point and an isolated Gypsum Cave type projectile point, both of which are associated with the Archaic Period (refer to Table 2.3-1 Colorado Desert Chronologies, Section 2 of the Technical Report).

Miscellaneous cultural resources studies and management plans were prepared by or for the BLM from the 1980s to the present time (2011) (BLM & CADFG 2001; Reed 1981; BLM & CADFG 2001), including geophysical testing (WESTEC Services 1982), archaeological inventory and evaluation (Mitchell 1989), and Class III survey and inventory (Enright and Mirro 2011; Keller 2010; McDonald and Schaefer 1998), as well as other inventory efforts (DeCarlo et al. 2010). Of particular interest is a management plan drafted to facilitate the protection of "an especially unusual cluster of archaeological sites at the northern end of the Mule Mountains" that included "aboriginal trails, scatters of broken pottery, rock quarries, cleared circles, a major petroglyph location, and the remains of WWII military activity" (Reed 1981: 1). This area of critical concern covers a large swath of land surrounding the Mule Mountains.

Another study of interest discusses the results and conclusions of a comprehensive archaeological inventory and assessment of all pebble terraces in the BLM resource area to assess which, if any, pebble terraces are eligible for inclusion in the NRHP (Mitchell 1989). The purpose of this assessment was to allow commercial rock collection on pebble terraces considered ineligible. Several natural pebble terraces along the Mule Mountains, among others in the immediate vicinity, were assessed. The results from this study indicated that the most frequent reduction activity represented within the Mule Mountain Pebble Terraces was assaying and quarrying for rock of suitable qualities for lithic tool manufacture. It was also noted that "[f]ourteen percent of the time, a rock of sufficient quality was found and taken elsewhere for further reduction (Patterns III and IV)" (Mitchell 1989:50).

Final recommendations proffered in this report concluded that "the research potential for all the pebble terraces subject to this study has been exhausted" and that lithic artifacts from these contexts "are incapable of yielding a chronology, or ethnicity of manufacture." It was further noted that such terraces "are not eligible for inclusion to the NRHP because of their lack of integrity, which has been a result of either road construction, World War II activities, off-road vehicle use, mechanical rock collection, power line construction, and/or trash dumping" (Mitchell 1989: 53).

Generally, amongst the remaining miscellaneous reports, similar sites types as those mentioned were identified and common prehistoric archaeological sites documented include isolated finds, ceramic scatters, lithic scatters, combined ceramic and lithic scatters and lithic reduction sites, trails, lithic quarry locations, habitation sites, cleared circles, and rock features. The most prevalent historic-period site types, aside from isolated finds, were military maneuvering sites, historic-period refuse deposits (military related and non-military related), transportation routes, camps, residential structures or features, small-scale mining activities, and homestead sites.

Several eligibility assessments and recommendations have been made for some of the recorded resources. Avoidance of archaeological resources is advocated as the preferred treatment in most of the reports, along with some recommended treatment of lithic scatters under California Archaeological Resource Identification and Data Acquisition Program: Sparse Lithic Scatters (CARIDAP), should disturbance of such sites be unavoidable. NRHP eligible properties were identified by some of these previous reports, including the Blythe Intaglios (earth figures of CA-AZ Colorado River Basin), McCoy Spring Archaeological Site, North Chuckwalla Mountain Quarry District & North Chuckwalla Mountains Petroglyph District, Stonehead (earth figures of CA-AZ Colorado River Basin), Winterhaven Anthropomporph and Bowknot (earth figures of CA-AZ Colorado River Basin), among others.

As derived from the above review of previous research, along with the results from the current archaeological investigation of the area, the general artifact assemblage for this portion of the Colorado Desert, and hence the RMS project footprint and its immediate environment, includes: debitage, cores, bifaces/bifacial cores, projectile points, scrapers, drills, edge modified flakes, shaped and unshaped manos, slab and mortar metates, and ceramics (buff, red-on-buff, and brown wares). The types of projectile points reported in this area include: Pinto, Desert Side-notched, and Cottonwood Triangular. Personal communication with George Kline of the BLM further suggests that other archaic projectile points have been reported in the Blythe Solar project area as a result of archaeological testing, however no report is on file at this time. Features frequently reported in the project area include trails, cleared circles, cairns, rock circles/hearths, and low-lying rock piles. The prehistoric site types observed in this region can be characterized as widely distributed, low density lithic reduction loci and lithic scatters, temporary encampments, tool maintenance materials, transportation materials, rock features, and isolated/single use localities. As discussed in Section 2 of the Technical Report, and as can be corroborated from the review of some of the above previous reports, stone tool materials previously reported in the project and surrounding areas consist predominately of Colorado River pebble terrace quartzite cobbles, cryptocrystalline silicates (jasper, chalcedony, and chert), rhyolite, basalt, all of which occurred locally, and, to a lesser extent, obsidian debitage, which was imported.

Cultural resources studies conducted indicate that the project area was utilized by various Native American groups between the Archaic Period (8,000 to 3,000 B.P.) and the time of the European Contact in the mid-16th Century A.D. Continuing settlement and use of this region is likewise attested to in the historic period from the earliest days of colonization through to modern-times. Particular conclusions discussed in previous reports describe the project area and its immediate environs as "a transportation corridor in the prehistoric past, with major trail networks," indicating that "this region, while apparently not permanently occupied, was visited and traversed by prehistoric populations for several millennia" (WESTEC 1982:6). It was additionally concluded with some confidence "that the area near the Colorado River was used extensively as a residence and procurement area throughout the history of human occupation of the Southwest" suggesting that, "all things being equal, site densities will likely increase with proximity to the river edge over most of its course" and that long stretches of

desert abutting "directly on the river…probably provided relatively little in the way of resources" (McDonald & Schaefer 1998:44). The stone tool assemblages observed in many locations appears to reflect the progression of technology of stemmed points, and the dart, atlatl, and bow and arrow projectile point technology (including Pinto, Gypsum, Desert side-notched, and Cottonwood The presence of groundstone artifacts indicates the increased dietary reliance on mesquite, acorns (at higher elevations), Carrizo grass, seeds, and other processed plant resources. Triangular points) was widespread.

Archaic and Late Prehistoric Period cultural traditions/complexes noted in the project area include the Pinto, Armagosa, Gypsum, Saratoga Spring, Rose Spring, Yuman, Patayan, Hakataya, and Shoshonean, indicating a seasonal/temporary use of the region for a prolonged period. Particular to the historic-period use of the project area and its immediately surrounding environment, the most dominant use, as indicated from this review of previous archaeological studies and investigations in addition to results obtained from the Technical Report, is attributable to World War II military maneuver and training use of the area, followed by exploitation of the natural resources through mining, agriculture (specific to the Colorado River basin), and later through transportation and other utility and infrastructure development.

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2. *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.*

   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.

   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). [Appendix B(g)(2)(C)]

   Information required for the AFC to conform to the regulations:

   Applicant states that surveys were conducted of only those portions of the project for which right of entry had been granted at the time of survey. Some portions of the project area (229 acres) remain unsurveyed; therefore, the current survey coverage is not inclusive of the project site and project linear facilities, as required. Applicant needs to complete the cultural resources survey, so that it is inclusive of the project site and project linear facilities, and submit a supplemental cultural resources technical report documenting the findings.

   Response: Prior to submission of the AFC, the Applicant completed detailed cultural and biological surveys for 8,908 acres, which is approximately 97.4% of the total study area. The Applicant could not survey 229 acres prior to AFC submission because the Applicant did not have Rights of Entry. The Applicant originally requested Rights of Entry to property owned by Riverside County within the project site on March 23, 2011. The Applicant is working diligently to secure ROEs so it can complete the supplemental cultural surveys. The Applicant recently re-submitted all of the necessary forms and paid the fee required by Riverside County to secure Rights of Entry to County owned property. The County indicated it will need between two and six weeks to issue the ROEs. Based on the County's timeframe of six weeks to issue the Rights of Entry, the Applicant will be able to complete the requested cultural surveys and submit a supplemental technical report by mid-February, 2012. If the County can issue the Rights of Entry before that, the Applicant will be able to submit the supplemental tech report earlier than mid-February, 2012.

5.15 Water Resources

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. [Appendix B(g)(1)]*

Information required for the AFC to conform to the regulations:

Submit a discussion of the effectiveness of the proposed mitigation and monitoring plans proposed to verify the mitigation effectiveness.

Response: As indicated in AFC Section 5.15, the Project will result in minor increases in runoff volume and sediment load (approximately 2% increase for the 100-year storm) that will not result in significant impacts downstream. Additionally, drainage design features and BMPs will be utilized to further mitigate erosion and sedimentation onsite. Project construction and operation will have no effect on the overall drainage pattern of the site in a manner that would result in substantial erosion, siltation, or flooding onsite or offsite. AFC Section 5.15.6 (AFC page 5.15-37) presents the mitigation measures proposed to reduce impacts to water resources (surface water). On August 23, 2011, the Bureau Of Reclamation (BOR) met with the Applicant to discuss the potential impacts of groundwater use at the Rio Mesa SEGF and whether there are potential impacts on Colorado River surface water. At the meeting, BSE discussed its conclusions that based on current groundwater levels and the project's maximum annual water use under the Metropolitan Water District of Southern California (MWD) lease agreement (600 afy), groundwater pumping for the Project would not constitute a net withdrawal from the Palo Verde Mesa groundwater basin that is tributary to the Colorado River, and would not constitute a diversion or use of Colorado River water. BOR expressed its agreement and provided a letter on November 2, 2011 regarding the MWD lease agreement and water use for the Project, including clarification of Colorado River water use. The letter notes the meeting and discusses BOR's understanding of the MWD lease agreement. Please see Attachment 5.15-1: Letter from BOR dated November 2, 2011.

The mitigation measures proposed are prescribed by stormwater and erosion control management programs mandated under the NPDES permitting system (Construction and Industrial General Permits). Both the General Construction Permit and the General Industrial Permit require development and implementation of a monitoring program. The objectives of the monitoring program are to (1) demonstrate compliance with the General Permit, (2) aid in the implementation of the SWPPP, and (3) measure the effectiveness of the BMPs in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges.

Additionally, a DESCP will be prepared prior to construction to address appropriate methods and actions, both temporary and permanent, for the protection of water quality and soil resources, demonstrate no increase in offsite flooding potential, and identify all monitoring and maintenance activities.

The effectiveness of the proposed surface water mitigation during construction and operation will be evaluated based upon the implementation of the construction SWPPP and industrial SWPPP and compliance with the Construction and Industrial General Permits. The DESCP will identify any additional measures and mitigation success criteria beyond those required by the General Permits. From an erosion and sediment control standpoint, effectiveness will be evaluated based upon the performance of the BMPs. Monitoring will entail routine site inspection of erosion and sediment control BMPs, natural drainage channels, site facilities, access roads, and heliostats. Effectiveness will be determined by evaluation of the condition of the drainage design feature or BMP, and evidence of the need for maintenance or repair based upon the design guidelines for the particular design element or BMP.

2. *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); [Appendix B(g)(14)(A)(i)]*

Information required for the AFC to conform to the regulations:

In support of the development of Waste Discharge Requirements for discharge of industrial wastewater to the proposed evaporation ponds, provide a complete characterization of the discharge including but not limited to:

- *Design and actual flows;*
- *A list of constituents and the discharge concentration of each constituent;*
- *A list of other appropriate waste discharge characteristics;*
- *A description and schematic drawing of all treatment processes;*
- *A description of any Best Management Practices used; and*
- *A description of disposal methods.*

To facilitate a more timely review and agency coordination, this information may be presented using the Regional Water Quality Control Board Application/Report of Waste Discharge General Information Form for Waste Discharge Requirements or NPDES Permit (Form 200).

Response: A Regional Water Quality Control Board Application/Report of Waste Discharge General Information Form for Waste Discharge Requirements or NPDES Permit (Form 200) is included as Attachment 5.15-2. A description and schematic of the wastewater treatment process and discharge to the evaporation ponds are included below under Item 3.

3. *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); [Appendix B(g)(14)(C)(ii)]*

Information required for the AFC to conform to the regulations:

Provide information about the expected physical and chemical characteristics of the wastewater to be discharged to the proposed evaporation pond consistent with the information required under Appendix B(g)(14)(A)(i) above..

Response: As mentioned above, Attachment 5.15-2 is a Regional Water Quality Control Board Application/Report of Waste Discharge General Information Form for Waste Discharge Requirements or NPDES Permit (Form 200). A description and schematic of the wastewater treatment process and discharge to the evaporation ponds are included below.

Design and actual flows

Due to variations in Power Block operation and seasonal effects on water usage (i.e. WSAC in use), the daily volume of residue sent to the evaporation pond will vary between ~8,620 gallons per day (gpd) during the summer season (max evaporation) and ~3,200 gpd during winter season. The evaporator recirculation pumps will be sized later during detailed design; however, the purge rate from the evaporator may be as high as 50 gallons per minute (gpm) into the evaporation pond. This flow rate is a maximum instantaneous flow rate that may be used in the design to maintain chemistry of the wastewater treatment system.

A list of constituents and the discharge concentration of each constituent (see table below)

Maximum Residue Dissolved Constituent Concentrations for Discharge to Evaporation Ponds, milligrams per liter (mg/L)	
Arsenic	0.43
Barium	3
Chromium	0.2
Copper	2
Molybdenum	2
Nickel	0.4
Selenium	0.2
Zinc	12
Calcium	3,000
Magnesium	640
Sodium	20,500
Potassium	370
Iron	11
Manganese	0.7

Fluoride	140
Chloride	25,000
Nitrate, as N	0.15
Sulfate	15,000
Phosphate	2
Alkalinity, as $CaCO_3$	4,200
Silica	1,200
pH	5-7
TDS	72,000

The concentrations stated in the table above are the maximum possible concentration in the wastewater purge if all salts (cations+anions) are dissolved in the fluid. Due to pH, temperature and constituent concentrations, the residue from the WWTS will begin to precipitate solids (i.e. CaPO4, CaF, MgCl, etc.). This precipitation will occur until the constituent concentrations are at steady state based on each respective solubility indexes (based on temperature and pH). Since the facility is nearly a zero liquid discharge, none of the liquid waste will be discharged to bare land or a body of water.

A list of other appropriate waste discharge characteristics

Appropriate waste discharge characteristics are described above.

A description and schematic drawing of all treatment processes

Raw Water Treatment System

The Raw Water Treatment System (RWTS), located in the Common Area, will treat raw well water to produce high quality treated water for plants and common area uses. The RWTS will consist of a two pass reverse osmosis system with multimedia or ultrafiltration type pre-filter. The pre-filters will be used to remove excess suspended solids that could harm reverse osmosis membranes. Anti-scalant, biocide, acid and dechlorination agent will be added (as needed) to maintain chemistry during operation. Reject from the first pass RO along with pre-filter waste and pre-flushes will be collected in the wastewater collection tank and treated by the WWTS (see below). Permeate from the 1st pass RO will be collected in a break tank and injected with caustic to maintain chemistry prior to being treated by the second pass RO. Permeate from the second pass RO will be collected in the Common Area Treated Water Storage Tank. The RWTS is expected to operate with a minimum 80% recovery. The RWTS will be designed for continuous operation (24/7).

Potable Water Treatment System

A Potable Water Treatment System (PWTS) will be provided in each plant and the Common Area to provide potable drinking water. The system will consist of a solids filter, softener and reverse osmosis. Waste from the PWTS (not sanitary waste) will be forwarded to the respective Wastewater Collection Tank.

Wastewater Treatment System and Common Area

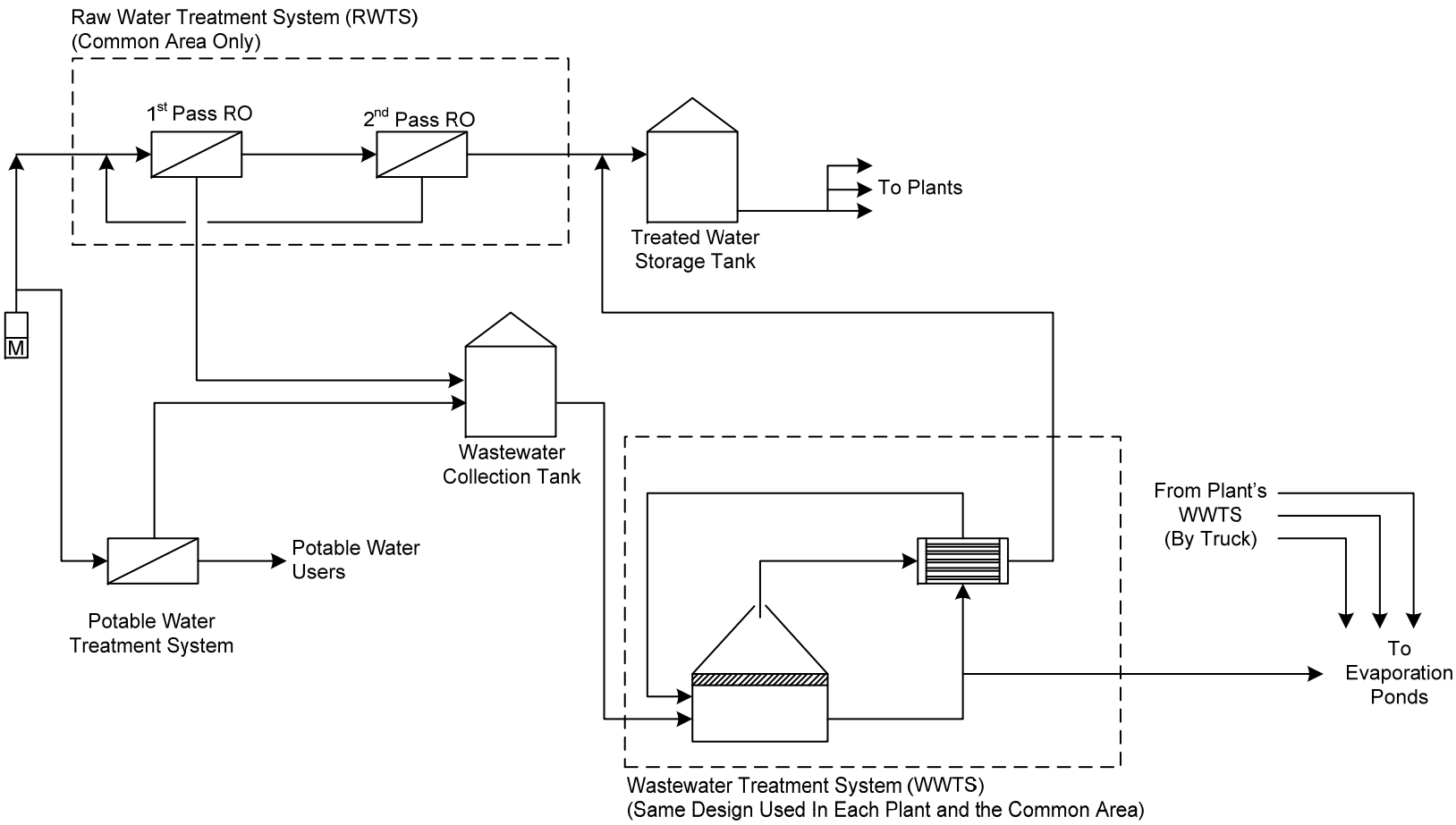
Wastewater from the RWTS and the Common Area PWTS will be collected in the Common Area Wastewater Collection Tank. Once collected, wastewater will be fed through the Wastewater Treatment System (WWTS). The WWTS utilizes evaporation inside an evaporator to separate water as steam from the brine solution. Collected vapor is mechanically recompressed and used (along with supplemental electric heating) to heat the wastewater feed. During operation, dissolved solids will be purged as required to maintain chemistry in the evaporator. Minimal anti-scalant and anti-foam will be added along with pH adjusters (acid and caustic) to maintain chemistry. The wastewater treatment system will be designed to operate at a minimum 85% recovery. The collected distillate water is high quality water and is collected (without additional treatment) in the Common Area Treated Water Storage Tank. The WWTS will be designed to operate over 12 hours during night-time operation.

Power Block

Located in each plant will be a smaller WWTS designed to treat Wet Surface Air Cooler (WSAC) blowdown, SRSG blowdown (when required), PWTS waste, misc. service water waste generated during operation. 2nd Pass RO permeate quality water will be used for general plant makeup. The blowdowns from SRSG and WSAC are considered to be better quality than that found in raw well water. Wastewater generated by the Plant specific PWTS (located at each plant) will be very small in volume and is not considered influential to the wastewater quality going to the evaporation ponds. Wastewater collected in each Plant will be of much better quality (lower TDS) than that found in the Common Area; therefore, the wastewater presented above from the Common Area WWTS is considered enveloping for all WWTS residue streams.

Residue from each plant will be collected and trucked to the Common Area Evaporation Ponds. The WWTS will be designed to operate over 12 hours during night-time operation.

Water Treatment System Detailed Diagram



A description of any Best Management Practices used

The facility will operate as a near zero liquid discharge; therefore, requiring maximum recycling within the facility to minimize the losses due to evaporation from the evaporation ponds. Construction and operational BMPs will be included and implemented with the Construction SWPPP/DESCP and Industrial SWPPP.

A description of disposal methods

Residue from each Plant and the Common Area's Wastewater Treatment System are collected in the evaporation pond. The evaporation pond will be double lined with leachate monitoring. For avian protection, the ponds will be outfitted with bird netting. During the course of operation, the sludge developed within the ponds will eventually require removal. Once the sludge is removed from the ponds, it will be analyzed to the WET method to determine the hazardous class rating. The evaporation pond is expected to be stable and not considered hazardous when removed. If the sludge is deemed hazardous, it will be disposed of in accordance with applicable LORS for disposing hazardous wastes.

4. *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. [Appendix B(g)(14)(D)(iv)]*

Information required for the AFC to conform to the regulations:

Provide a discussion of how elements of the project design comply with each of the applicable LORS identified in Table 5.15-1 of the AFC.

Response: AFC Sections 5.15.2.1, 5.15.2.2, and 5.15.2.3 provide more detailed descriptions of the LORS listed in Table 5.15-1. Table 5.15-1 has been modified to include a brief statement of how the project will comply with each of the applicable LORS.

Table 5.15-1 (modified)
Laws, Ordinances, Regulations, and Standards for Water Resources

LORS	Requirements/Applicability	AFC Section Explaining Conformance	Conformance Description
Federal			
National Environmental Policy Act (NEPA) of 1969	NEPA establishes a public, interdisciplinary framework for federal decision-making and ensures that Federal agencies take environmental factors into account when considering federal actions.	Section 5.15.2.1	The BLM, as lead Federal agency for the Project, is responsible for preparation of a draft and final Environmental Impact Statement (EIS) in compliance with NEPA to evaluate the environmental impacts of the portions of the Project on Federal lands.
Federal Clean Water Act (CWA) of 1977 (as amended)	Prohibits discharge of pollutants to receiving waters unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. Applies to all point-source discharges, including industrial wastewater and stormwater runoff, during both construction and operation.	Section 5.15.2.1	Relevant NPDES permits (Construction and Industrial General Permits) are discussed below under State LORS. The State administers the NPDES permit. Construction and Industrial SWPPPs will be prepared.
CWA § 401 (33 U.S.C. §1251 et seq.)	Section 401 of the CWA requires that any activity that may result in a discharge into a water body must be certified by the RWQCB.	Section 5.15.2.1	Federal compliance with CWA 404/401 is required. A 404 permit and associated 401 water quality certification will be obtained.
Resource Conservation and Recovery Act (RCRA) (40 CFR §§ 260, et seq.)	RCRA endeavors to prevent surface and groundwater contamination, sets guidelines for determining hazardous wastes, and identifies proper methods for handling and disposing of those wastes.	Section 5.15.2.1	A Spill Prevention, Control and Countermeasure (SPCC) Plan, Construction SWPPP, and Industrial SWPPP will be prepared and implemented.
State			
Warren-Alquist State Energy Resources Conservation and Development Act, California Public Resources Code, §§ 25000, et seq.	Gives the California Energy Commission (CEC) licensing authority in lieu of state, regional, and local permits and requirements.	Section 5.15.2.2	CEC to process project AFC.

Table 5.15-1 (modified)
Laws, Ordinances, Regulations, and Standards for Water Resources

LORS	Requirements/Applicability	AFC Section Explaining Conformance	Conformance Description
California Environmental Quality Act (CEQA) California Public Resources Code, Division 13, §§21000-21177, as amended 2010.	Requires all agencies of State government that regulate activities of private individuals, corporations, and public agencies, which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage.	Section 5.15.2.2	The water resources environmental analysis was based upon CEQA Appendix G guidelines.
Federal CWA (implemented by State of California)	Implements and enforces the Federal NPDES permit program. Requires Construction and Industrial Stormwater Pollution Prevention Plans.	Section 5.15.2.2	Construction and Industrial SWPPPs will be prepared and implemented.
Federal RCRA (implemented by State of California)	DTSC implements and enforces hazardous waste requirements in California. DTSC is the primary authority enforcing RCRA hazardous waste requirements in California. RCRA Subtitle C establishes standards for the generation, transportation, treatment, storage, and disposal of hazardous waste.	Section 5.15.2.2	A Spill Prevention, Control and Countermeasure (SPCC) Plan, Construction SWPPP, and Industrial SWPPP will be prepared and implemented.
Porter-Cologne Water Quality Control Act	Requires the SWRCB and RWQCBs to adopt water quality criteria to protect state waters. These standards are typically applied to projects through Waste Discharge Requirement (WDR) permits as necessary. Establishes beneficial water uses for both surface and groundwater.	Section 5.15.2.2	The project will discharge industrial wastewater to the onsite evaporation ponds. The Project will comply with Conditions of Certification for waste discharge requirements.
California Water Code Section 13751	Requires completion report to be filed with the State for well construction, alteration, or destruction.	Section 5.15.2.2	Well completion reports will be filed for well construction, alteration, or destruction per State and local requirements.
California Code of Regulations, Title 22 §§ 64400.80 through 64445	Requires periodic monitoring of water quality for potable water wells.	Section 5.15.2.2	Well water is not considered potable and will be treated prior to use.
California Code of Regulations, Title 27	Outlines standards for waste disposal classification and management.	Section 5.15.2.2	The project will discharge industrial wastewater to the onsite evaporation ponds. The evaporation ponds will be designed in accordance with Title 27 requirements.

Table 5.15-1 (modified)
Laws, Ordinances, Regulations, and Standards for Water Resources

LORS	Requirements/Applicability	AFC Section Explaining Conformance	Conformance Description
California Water Code §§ 461, 13550, and 13551	Discourages use of potable water for non-potable uses, including industrial applications, unless alternatives would cause an adverse environmental impact or be economically or otherwise infeasible.	Section 5.15.2.2	Project site groundwater is not considered potable without treatment. The project will use treated groundwater for power plant processes and will utilize dry cooling.
Local			
Riverside County ordinances related to building, grading, and stormwater and erosion control	Describes ordinances for grading; soil erosion control; and stormwater compliance for construction activities.	Section 5.15.2.3	The project grading and drainage plan will be prepared to the specifications of Riverside County through the CEC's AFC process.
Riverside County Flood Hazard Zone Ordinance Code 458.13	Requires a development permit prior to any construction or other development within any area of special flood hazards and requires that flood capacity of any altered watercourse be maintained.	Section 5.15.2.3	Through the CEC's AFC process, the project will comply with the standards that would apply to a development permit prior to construction within any are of special flood hazards. Flood capacity will be maintained.
Riverside County ordinances related to well installation	Requirements for well installation.	Section 5.15.2.3	The project wells will be installed in accordance with County policy, as determined by the CEC.

CWA = Clean Water Act
CFR = Code of Federal Regulations
DTSC = California Department of Toxic Substances Control
EPA = United States Environmental Protection Agency
NPDES = National Pollutant Discharge Elimination System
RCRA = Resource Conservation and Recovery Act
RWQCB = Regional Water Quality Control Board
SPCC = Spill Prevention and Countermeasures
SWPPP = Stormwater Pollution Prevention Plan
SWRCB = California State Water Resources Control Board
USC = United States Code

Attachment 5.15-1

Letter from BOR, dated November 2, 2011

United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

IN REPLY REFER TO:
LC-4405
WTR-4.00

NOV 2 2011

VIA OVERNIGHT MAIL

Mr. Todd Stewart, P.E.
Project Development Manager, Rio Mesa Solar
BrightSource
1999 Harrison Street, Suite 2150
Oakland, California 94612

Subject: Proposed Rio Mesa Solar Energy Generating Facility, Blythe, California, and the Proposed Accounting Surface Policy (Your Letter Dated September 1, 2011)

Dear Mr. Stewart:

Thank you for your subject letter and meeting with my staff on August 23, 2011, regarding the proposed Rio Mesa Solar Energy Generating Facility (Rio Mesa SEGF) project. The Rio Mesa SEGF project is located on the Palo Verde Mesa in California. The Rio Mesa SEGF project will require up to 260 acre-feet of water annually which is proposed to be pumped from wells.

As discussed at the meeting and outlined in your letter, we understand that BrightSource has an agreed form of land lease with Metropolitan Water District of Southern California (Metropolitan) for the Rio Mesa SEGF project that is pending execution. Your letter indicated that the proposed land lease contains the following language regarding the use of water, granting, "the right to extract from, and use on, the Site an amount of groundwater not to exceed six hundred (600) acre-feet of water each Lease Year."

We further understand that the proposed land lease also contains language regarding the groundwater pumping and the requirements for the tenant if the groundwater pumping is determined to be Colorado River water. As provided in your letter, the specific language is as follows:

> "(c) In the event that the U.S. Bureau of Reclamation, or any other agency with jurisdiction over the water, determines that the groundwater pumping constitutes a diversion or use of Colorado River water, Tenant shall retroactively and thereafter purchase the groundwater pumped from the Site from Owner by exchange or an equal amount of Owner's non-Colorado River water in accordance with Owner's authority to deliver water to Tenant for electric power generation purposes."

In a recent e-mail communication with Mr. John Doney, Attorney-Advisor, Office of the Solicitor, Boulder City Field Unit, you confirmed that the above language in the proposed land lease contains a typographic error in the fourth sentence which reads "purchase the groundwater pumped from the Site from Owner by exchange **or** an equal amount of Owner's non-Colorado River water" which should read "purchase the groundwater pumped from the Site from Owner by exchange **of** an equal amount of Owner's non-Colorado River water."

Our understanding of the above language in the proposed land lease is that in the event Reclamation determines that such groundwater pumping by the Rio Mesa SEGF project constitutes a diversion and use of Colorado River water, the Rio Mesa SEGF project would thereafter be required to purchase from Metropolitan a quantity of water from Metropolitan's Colorado River water supply equal to the quantity of such groundwater pumping. Metropolitan would then utilize the funds paid by the Rio Mesa SEGF project for Metropolitan's Colorado River water to acquire or develop an equal amount of non-Colorado River water for Metropolitan's use.

Based upon our understanding, if the above language in the proposed land lease is corrected and remains in the proposed land lease, we believe such language would satisfy our concerns in the event that the Rio Mesa SEGF project's use of groundwater pumped from below the Palo Verde Mesa is determined by Reclamation to constitute a diversion or use of Colorado River water. We assert that Reclamation, in cooperation with the United States Geological Survey, is the only agency authorized to make such a determination regarding the use of Colorado River water.

We appreciate you and your staff meeting with us to discuss the Rio Mesa SEGF project. If you have questions, please call Mr. Steven C. Hvinden, Chief, Boulder Canyon Operations Office, at 702-293-8414.

Sincerely,

Lorri Gray-Lee
Regional Director

cc: Mr. Bill Hasencamp
Manager, Colorado River Resources
Metropolitan Water District
of Southern California
P.O. Box 54153
Los Angeles, California 90054-0153

Mr. Jeffrey G. Harvey, Ph.D.
Principal & Senior Scientist
Harvey Meyerhoff Consulting Group
1861 Coarse Gold Place
Gold River, California 95670

See next page.

cc: Continued from previous page.

Mr. Ed Smith
General Manager
Palo Verde Irrigation District
180 West 14th Avenue
Blythe, California 92225-2714
(w/cy of incoming)

Attachment 5.15-2
NPDES Permit (Form 200)

Note: This form is provided for purposes of the Response to Data Adequacy Review only and is not intended for submittal to an agency for approval.

INTRODUCTION

This application package constitutes a Report of Waste Discharge (ROWD) pursuant to California Water Code Section 13260. Section 13260 states that persons discharging or proposing to discharge waste that could affect the quality of the waters of the State, other than into a community sewer system, shall file a ROWD containing information which may be required by the appropriate Regional Water Quality Control Board (RWQCB).

This package is to be used to start the application process for all waste discharge requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permits* issued by a RWQCB except:

a) Those landfill facilities that must use a joint Solid Waste Facility Permit Application Form, California Integrated Waste Management Board Form E-1-77; and
b) General WDRs or general NPDES permits that use a Notice of Intent to comply or specify the use of an alternative application form designed for that permit.

This application package contains:

1. Application/General Information Form for WDRs and NPDES Permits [Form 200 (10/97)].
2. Application/General Information Instructions.

Instructions

Instructions are provided to assist you with completion of the application. If you are unable to find the answers to your questions or need assistance with the completion of the application package, please contact your RWQCB representative. *The RWQCBs strongly recommend that you make initial telephone or personal contact with RWQCB regulatory staff to discuss a proposed new discharge before submitting your application.* The RWQCB representative will be able to answer procedural and annual fee related questions that you may have. (See map and telephone numbers inside of application cover.)

All dischargers regulated under WDRs and NPDES permits must pay an annual fee, except dairies, which pay a filing fee only. The RWQCB will notify you of your annual fee based on an evaluation of your proposed discharge. Please do NOT submit a check for your first annual fee or filing fee until requested to do so by a RWQCB representative. Dischargers applying for reissuance (renewal) of an existing NPDES permit or update of an existing WDR will be billed through the annual fee billing system and are therefore requested NOT to submit a check with their application. Checks should be made payable to the State Water Resources Control Board.

Additional Information Requirements

A RWQCB representative will notify you within 30 days of receipt of the application form and any supplemental documents whether your application is complete. If your application is incomplete, the RWQCB representative will send you a detailed list of discharge specific information necessary to complete the application process. The completion date of your application is normally the date when all required information, including the correct fee, is received by the RWQCB.

*** NPDES PERMITS:** If you are applying for a permit to discharge to surface water, you will need an NPDES permit which is issued under both State and Federal law and may be required to complete one or more of the following Federal NPDES permit application forms: Short Form A, Standard Form A, Forms 1, 2B, 2C, 2D, 2E, and 2F. These forms may be obtained at a RWQCB office or can be ordered from the National Center for Environmental Publications and Information at (513) 891-6561.

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE
GENERAL INFORMATION FORM FOR
WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

INSTRUCTIONS

FOR COMPLETING THE APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR: WASTE DISCHARGE REQUIREMENTS/NPDES PERMIT

If you have any questions on the completion of any part of the application, please contact your RWQCB representative. A map of RWQCB locations, addresses, and telephone numbers is located on the reverse side of the application cover.

I. FACILITY INFORMATION

You must provide the factual information listed below for ALL owners, operators, and locations and, where appropriate, for ALL general partners and lease holders.

A. FACILITY:
Legal name, physical address including the county, person to contact, and phone number at the facility. (**NO P.O. Box numbers!** If no address exists, use street and nearest cross street.)

B. FACILITY OWNER:
Legal owner, address, person to contact, and phone number. Also include the owner's Federal Tax Identification Number.

OWNER TYPE:
Check the appropriate Owner Type. The legal owner will be named in the WDRs/NPDES permit.

C. FACILITY OPERATOR (The agency or business, not the person):
If applicable, the name, address, person to contact, and telephone number for the facility operator. Check the appropriate Operator Type. If identical to B. above, enter "same as owner".

D. OWNER OF THE LAND:
Legal owner of the land(s) where the facility is located, address, person to contact, and phone number. Check the appropriate Owner Type. If identical to B. above, enter "same as owner".

E. ADDRESS WHERE LEGAL NOTICE MAY BE SERVED:
Address where legal notice may be served, person to contact, and phone number. If identical to B. above, enter "same as owner".

F. BILLING ADDRESS
Address where annual fee invoices should be sent, person to contact, and phone number. If identical to B. above, enter "same as owner".

Note: This form is provided for purposes of the Response to Data Adequacy Review only and is not intended for submittal to an agency for approval.

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

II. TYPE OF DISCHARGE

Check the appropriate box to describe whether the waste will be discharged to: A. Land, or B. Surface Water.

Check the appropriate box(es) which best describe the activities at your facility.

Hazardous Waste - **If you check the Hazardous Waste box,** STOP **and contact a representative of the RWQCB for further instructions.**

Landfills - **A separate form, APPLICATION FOR SOLID WASTE FACILITY PERMIT/WASTE DISCHARGE REQUIREMENTS, California Integrated Waste Management Board Form E-1-77, may be required. Contact a RWQCB representative to help determine the appropriate form for your discharge.**

III. LOCATION OF THE FACILITY

1. Enter the Assessor's Parcel Number(s) (APN), which is located on the property tax bill. The number can also be obtained from the County Assessor's Office. Indicate the APN for both the facility and the discharge point.

2. Enter the Latitude of the entrance to the proposed/existing facility and of the discharge point. Latitude and longitude information can be obtained from a U.S. Geological Survey quadrangle topographic map. Other maps may also contain this information.

3. Enter the Longitude of the entrance to the proposed/existing facility and of the discharge point.

IV. REASON FOR FILING

NEW DISCHARGE OR FACILITY:
A discharge or facility that is proposed but does not now exist, or that does not yet have WDRs or an NPDES permit.

CHANGE IN DESIGN OR OPERATION:
A material change in design or operation from existing discharge requirements. Final determination of whether the reported change is material will be made by the RWQCB.

CHANGE IN QUANTITY/TYPE OF DISCHARGE:
A material change in characteristics of the waste from existing discharge requirements. Final determination of whether the reported change would have a significant effect will be made by the RWQCB.

CHANGE IN OWNERSHIP/OPERATOR:
Change of legal owner of the facility. Complete Parts I, III, and IV only and contact the RWQCB to determine if additional information is required.

WASTE DISCHARGE REQUIREMENTS UPDATE OR NPDES PERMIT REISSUANCE:
WDRs must be updated periodically to reflect changing technology standards and conditions. A new application is required to reissue an NPDES permit which has expired.

OTHER:
If there is a reason other than the ones listed, please describe the reason on the space provided. (If more space is needed, attach a separate sheet.)

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

V. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

It should be emphasized that communication with the appropriate RWQCB staff is vital before starting the CEQA documentation, and is recommended before completing this application. There are Basin Plan issues which may complicate the CEQA effort, and RWQCB staff may be able to help in providing the needed information to complete the CEQA documentation.

Name the Lead Agency responsible for completion of CEQA requirements for the project, i.e., completion and certification of CEQA documentation.

Check YES or NO. Has a public agency determined that the proposed project is exempt from CEQA?
If the answer is YES, state the basis for the exemption and the name of the agency supplying the exemption on the space provided. (Remember that, if extra space is needed, use an extra sheet of paper, but be sure to indicate the attached sheet under Section VII. Other.)

Check YES or NO. Has the "Notice of Determination" been filed under CEQA? If YES, give the date the notice was filed and enclose a copy of the Notice of Determination and the Initial Study, Environmental Impact Report, or Negative Declaration. If NO, check the box of the expected type of CEQA document for this project, and include the expected date of completion using the timelines given under CEQA. The date of completion should be taken as the date that the Notice of Determination will be submitted. (If not known, write "Unknown")

VI. OTHER REQUIRED INFORMATION

To be approved, your application MUST include a COMPLETE characterization of the discharge. If the characterization is found to be incomplete, RWQCB staff will contact you and request that additional specific information be submitted.

This application MUST be accompanied by a site map. A USGS 7.5' Quadrangle map or a street map, if more appropriate, is sufficient for most applications.

VII. OTHER

If any of the answers on your application form need further explanation, attach a separate sheet. Please list any attachments with the titles and dates on the space provided.

VIII. CERTIFICATION

Certification by the owner of the facility or the operator of the facility, if the operator is different from the owner, is required. The appropriate person must sign the application form.
Acceptable signatures are:

1. **for a corporation,** a principal executive officer of at least the level of senior vice-president;
2. **for a partnership or individual (sole proprietorship),** a general partner or the proprietor;
3. **for a governmental or public agency,** either a principal executive officer or ranking elected/appointed official.

DISCHARGE SPECIFIC INFORMATION

In most cases, a request to supply additional discharge specific information will be sent to you by a representative of the RWQCB. If the RWQCB determines that additional discharge specific information is not needed to process your application, you will be so notified.

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

I. FACILITY INFORMATION

A. Facility:

Name: Rio Mesa Solar Electric Generating Facility (Rio Mesa SEGF)			
Address: North of Imperial County Boundary, south of Bradshaw Trail, East of Mule Mountains, West of SR-78			
City:	County: Riverside	State: CA	Zip Code:
Contact Person: Todd Stewart, BrightSource Energy, Inc.		Telephone Number: 510-550-8460	

B. Facility Owner:

Name: Rio Mesa Solar I, LLC; Rio Mesa Solar II, LLC; Rio Mesa Solar III, LLC			Owner Type (Check One) 1. ☐ Individual 2. ☐ Corporation
Address: 1999 Harrison Street, Suite 2150			3. ☐ Governmental Agency 4. ☑ Partnership
City: Oakland	State: CA	Zip Code: 92612	5. ☐ Other:
Contact Person: Todd Stewart, Daniel T. Judge		Telephone Number: 510-550-8460	Federal Tax ID:

C. Facility Operator (The agency or business, not the person):

Name: TBD			Operator Type (Check One) 1. ☐ Individual 2. ☐ Corporation
Address: TBD			3. ☐ Governmental Agency 4. ☑ Partnership
City: TBD	State:	Zip Code:	5. ☐ Other:
Contact Person: TBD		Telephone Number: TBD	

D. Owner of the Land:

Name: Los Angeles County Metropolitan Water District and US BLM			Owner Type (Check One) 1. ☐ Individual 2. ☐ Corporation
Address: 700 North Alameda Street			3. ☐ Governmental Agency 4. ☐ Partnership
City: Los Angeles	State: CA	Zip Code: 90012	5. ☑ Other: MWD, US BLM
Contact Person: Ralph T. Hicks (MWD), Cedric Perry (BLM)		Telephone Number: (213) 217-6183 (MWD), (951) 697-5200 (BLM)	

E. Address Where Legal Notice May Be Served:

Address: Rio Mesa Solar Holdings, LLC, 1999 Harrison Street, Suite 2150		
City: Oakland	State: CA	Zip Code: 92612
Contact Person: Todd Stewart, Daniel T. Judge		Telephone Number: 510-550-8460

F. Billing Address:

Address: Rio Mesa Solar Holdings, LLC, 1999 Harrison Street, Suite 2150		
City: Oakland	State: CA	Zip Code: 92612
Contact Person: Todd Stewart, Daniel T. Judge		Telephone Number: 510-550-8460

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

II. TYPE OF DISCHARGE

Check Type of Discharge(s) Described in this Application (A or B):

☑ **A. WASTE DISCHARGE TO LAND** ☐ **B. WASTE DISCHARGE TO SURFACE WATER**

Check all that apply:

- ☐ Domestic/Municipal Wastewater Treatment and Disposal
- ☐ Cooling Water
- ☐ Mining
- ☐ Waste Pile
- ☐ Wastewater Reclamation
- ☐ Animal Waste Solids
- ☐ Land Treatment Unit
- ☐ Dredge Material Disposal
- ☐ Surface Impoundment
- ☑ Industrial Process Wastewater
- ☐ Animal or Aquacultural Wastewater
- ☐ Biosolids/Residual
- ☐ Hazardous Waste (see instructions)
- ☐ Landfill (see instructions)
- ☐ Storm Water
- ☐ Other, please describe: Groundwater treatment process wastewater discharged to evaporation ponds

III. LOCATION OF THE FACILITY

Describe the physical location of the facility.

1. Assessor's Parcel Number(s)	2. Latitude	3. Longitude
Facility: See Attached Figure	**Facility:** 33.488	**Facility:** -114.749
Discharge Point: Evaporation Pond	**Discharge Point:** Evap. Pond	**Discharge Point:** Evap Pond

IV. REASON FOR FILING

- ☑ New Discharge or Facility
- ☐ Change in Design or Operation
- ☐ Change in Quantity/Type of Discharge
- ☐ Changes in Ownership/Operator (see instructions)
- ☐ Waste Discharge Requirements Update or NPDES Permit Reissuance
- ☐ Other: _____

V. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Name of Lead Agency: California Energy Commission (CEC) and U.S. Bureau of Land Management (BLM)

Has a public agency determined that the proposed project is exempt from CEQA? ☐ **Yes** ☑ **No**

If Yes, state the basis for the exemption and the name of the agency supplying the exemption on the line below.

Basis for Exemption/Agency: _____

Has a "Notice of Determination" been filed under CEQA? ☐ **Yes** ☑ **No**

If Yes, enclose a copy of the CEQA document, Environmental Impact Report, or Negative Declaration. If no, identify the expected type of CEQA document and expected date of completion.

Expected CEQA Documents:

☑ **EIR** ☐ **Negative Declaration**

Expected CEQA Completion Date: EIR equivalent thru CEC

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

VI. OTHER REQUIRED INFORMATION

Please provide a COMPLETE characterization of your discharge. A complete characterization includes, but is not limited to, design and actual flows, a list of constituents and the discharge concentration of each constituent, a list of other appropriate waste discharge characteristics, a description and schematic drawing of all treatment processes, a description of any Best Management Practices (BMPs) used, and a description of disposal methods.

Also include a site map showing the location of the facility and, if you are submitting this application for an NPDES permit, identify the surface water to which you propose to discharge. Please try to limit your maps to a scale of 1:24,000 (7.5' USGS Quadrangle) or a street map, if more appropriate.

VII. OTHER

Attach additional sheets to explain any responses which need clarification. List attachments with titles and dates below:

A characterization of the proposed discharge and facilities is included in the data adequacy response. The project is in the engineering design phase and the characterization and discharge amounts may change during the course of design. The Power Block Plan, Water Balance Diagrams, and Common Area Plot Plan are included as Fig. 2-3, 2-6a, 2-6b, and 2-8, in the AFC.

You will be notified by a representative of the RWQCB within 30 days of receipt of your application. The notice will state if your application is complete or if there is additional information you must submit to complete your Application/Report of Waste Discharge, pursuant to Division 7, Section 13260 of the California Water Code.

VIII. CERTIFICATION

"I certify under penalty of law that this document, including all attachments and supplemental information, were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Print Name: _____ **Title:** _____

Signature: _____ **Date:** _____

FOR OFFICE USE ONLY

Date Form 200 Received:	Letter to Discharger:	Fee Amount Received:	Check #:

Note: This form is provided for purposes of the Response to Data Adequacy Review only and is not intended for submittal to an agency for approval.

California Environmental Protection Agency
Bill of Rights for Environmental
Permit Applicants

California Environmental Protection Agency (Cal/EPA) recognizes that many complex issues must be addressed when pursuing reforms of environmental permits and that significant challenges remain. We have initiated reforms and intend to continue the effort to make environmental permitting more efficient, less costly, and to ensure that those seeking permits receive timely responses from the boards and departments of the Cal/EPA. To further this goal, Cal/EPA endorses the following precepts that form the basis of a permit applicant's "Bill of Rights."

1. Permit applicants have the right to assistance in understanding regulatory and permit requirements. All Cal/EPA programs maintain an Ombudsman to work directly with applicants. Permit Assistance Centers located throughout California have permit specialists from all the State, regional, and local agencies to identify permit requirements and assist in permit processing.

2. Permit applicants have the right to know the projected fees for review of applications, how any costs will be determined and billed, and procedures for resolving any disputes over fee billings.

3. Permit applicants have the right of access to complete and clearly written guidance documents that explain the regulatory requirements. Agencies must publish a list of all information required in a permit application and of criteria used to determine whether the submitted information is adequate.

4. Permit applicants have the right of timely completeness determinations for their applications. In general, agencies notify the applicant within 30 days of any deficiencies or determine that the application is complete. California Environmental Quality Act (CEQA) and public hearing requests may require additional information.

5. Permit applicants have the right to know exactly how their applications are deficient and what further information is needed to make their applications complete. Pursuant to California Government code Section 65944, after an application is accepted as complete, an agency may not request any new or additional information that was not specified in the original application.

6. Permit applicants have the right of a timely decision on their permit application. The agencies are required to establish time limits for permit reviews.

7. Permit applicants have the right to appeal permit review time limits by statute or administratively that have been violated without good cause. For state environmental agencies, appeals are made directly to the Cal/EPA Secretary or to a specific board. For local environmental agencies, appeals are generally made to the local governing board or, under certain circumstances, to Cal/EPA. Through this appeal, applicants may obtain a set date for a decision on their permit and, in some cases, a refund of all application fees (ask boards and departments for details).

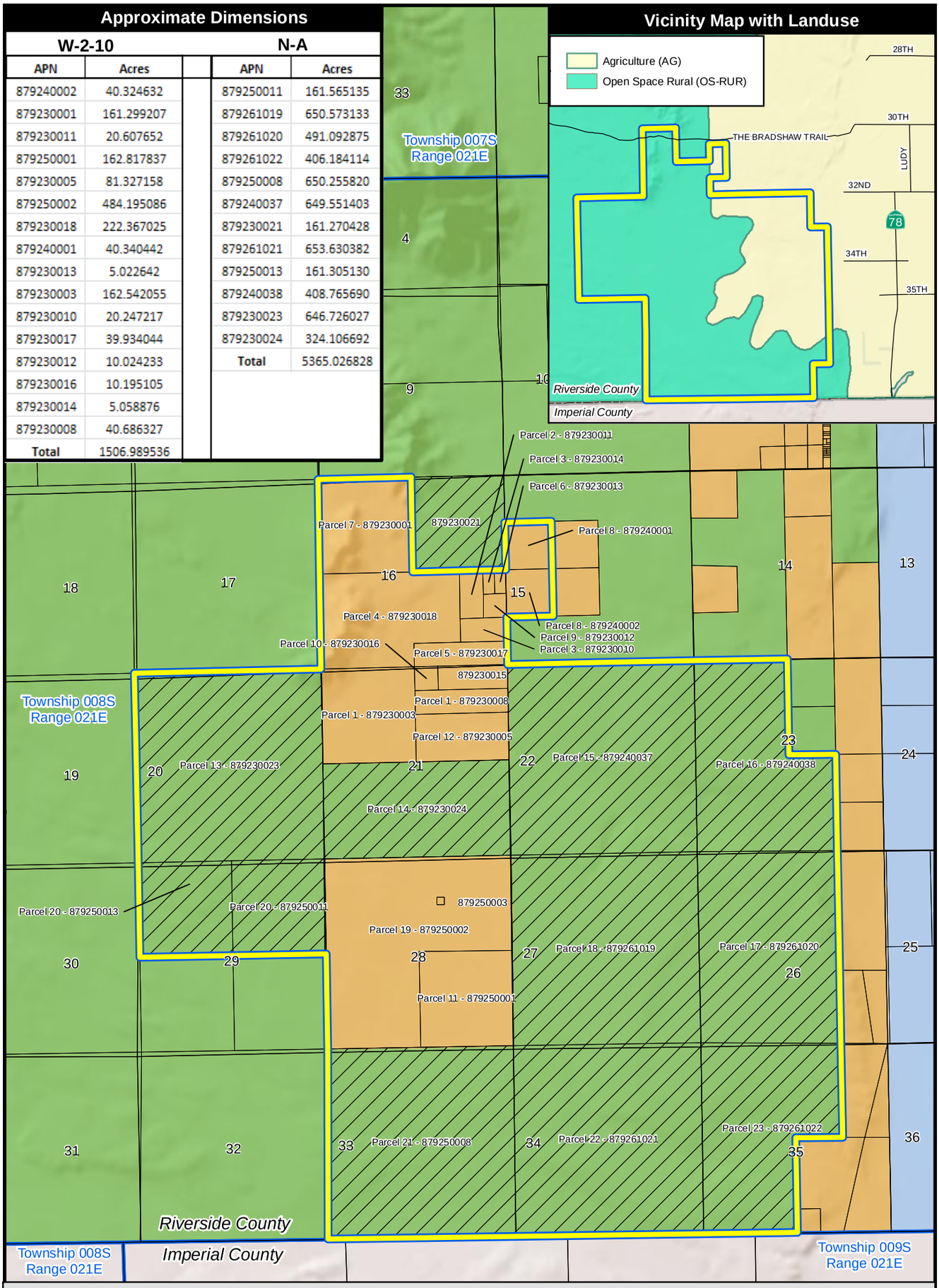
8. Permit applicants have the right to work with a single lead agency where multiple environmental approvals are needed. For multiple permits, all agency actions can be consolidated under a lead agency. For site remediation, all applicable laws can be administered through a single agency.

9. Permit applicants have the right to know who will be reviewing their application and the time required to complete the full review process.

Note: This form is provided for purposes of the Response to Data Adequacy Review only and is not intended for submittal to an agency for approval.

Approximate Dimensions

W-2-10		N-A	
APN	Acres	APN	Acres
879240002	40.324632	879250011	161.565135
879230001	161.299207	879261019	650.573133
879230011	20.607652	879261020	491.092875
879250001	162.817837	879261022	406.184114
879230005	81.327158	879250008	650.255820
879250002	484.195086	879240037	649.551403
879230018	222.367025	879230021	161.270428
879240001	40.340442	879261021	653.630382
879230013	5.022642	879250013	161.305130
879230003	162.542055	879240038	408.765690
879230010	20.247217	879230023	646.726027
879230017	39.934044	879230024	324.106692
879230012	10.024233	Total	5365.026828
879230016	10.195105		
879230014	5.058876		
879230008	40.686327		
Total	1506.989536		



CHANGE OF ZONE PRIMARY EXHIBIT

APPLICANT:
RIO MESA SOLAR HOLDINGS, LLC.
1999 HARRISON STREET, SUITE 2150
OAKLAND, CA 94612
PHONE: 510-550-8460

LANDOWNER:
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
700 N. ALAMEDA ST.
LOS ANGELES, CA 90012

PREPARER:
URS CORPORATION
4225 EXECUTIVE SQUARE, SUITE 1600
LA JOLLA, CA 92037
PHONE: 858-812-8283

LEGAL DESCRIPTION:
T. 8S.,R. 21E,
SEC. (ALL: 20-22, 27,28, 33,34;
PORTIONS: 15,16,23,26,29,35)
S.B.B.& M

ASSESSORS PARCEL NO.:
879230001-03, 05, 08, 10-14, 16-18, 21, 23-24
879240001, 02, 37-38
879250001, 02, 08, 11, 13
879261019-22

MISC. INFO.:
DATE EXHIBIT PREPARED: 8/03/11
UTILITIES: NONE
SCHOOL DISTRICT: PALO VERDE UNIFIED
UTILITIES PURVEYOR: NONE
FEMA: FLOOD ZONE D
THOMAS BROS.: PAGE # 412 (A2, A3), 2001

Legend
- Private Land (6742.3 Acres)
- Township
- PLSS Section Line
- Parcels Needing Change of Zone (from NA to W-2)

County of Riverside Zoning
- N-A
- R-R
- W-2-10

SOURCES: Zoning (Riverside County, 2010), Township, Sections (BLM, 2007), County, Roads (ESRI, 2007).

URS

N

0 3,500 Feet
1 inch = 3,500 feet

Path: G:\gis\projects\15771\27651002\map_docs\mxd\Zoning\8x14.mxd, paul_moreno, 9/15/2011, 4:48:53 PM