

**In Response to CURE Requests 1-143  
Application for Certification (08-AFC-5)  
SES Solar Two, LLC**

**Submitted to:  
Bureau of Land Management  
1661 S. 4th Street, El Centro, CA 92243**



**Submitted to:  
California Energy Commission  
1516 9th Street , MS 15, Sacramento, CA 95814-5504**



**Submitted by:  
SES Solar Two, LLC  
2920 E. Camelback Road, Suite 150, Phoenix, AZ 85016**



**With Support From:  
URS Corporation**

**May 2009**



May 6, 2009

Mr. Christopher Meyer  
Project Manager  
Attn: Docket No. 08-AFC-5  
California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814-5512

Subject: SES Solar Two (08-AFC-5)  
Responses to CURE Data Requests 1-143  
URS Project No. 27657106.00400

Dear Mr. Meyer:

On behalf of SES Solar Two, LLC, URS Corporation Americas (URS) hereby submits the Responses to CURE Data Requests, Part One (Data Requests 1-143) filed April 6, 2009 (SES Solar Two 08-AFC-5).

I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge. I also certify that I am authorized to submit the Data Responses on behalf of SES Solar Two, LLC.

Sincerely,

A handwritten signature in black ink, appearing to read "Angela Leiba", is positioned below the "Sincerely," text.

Angela Leiba  
Project Manager

AL:ml

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 1:** Please provide additional information regarding the location of parking for construction workers and explain how construction worker traffic will enter and exit the Project Site.

**Response:** A temporary construction parking lot for Phase I will be located on previously disturbed land within the Phase II area. This lot is located west of the main site access road off the Evans Hewes Highway entrance and south of the north property line. Phase II will utilize the Dunaway Road yard site for construction parking.

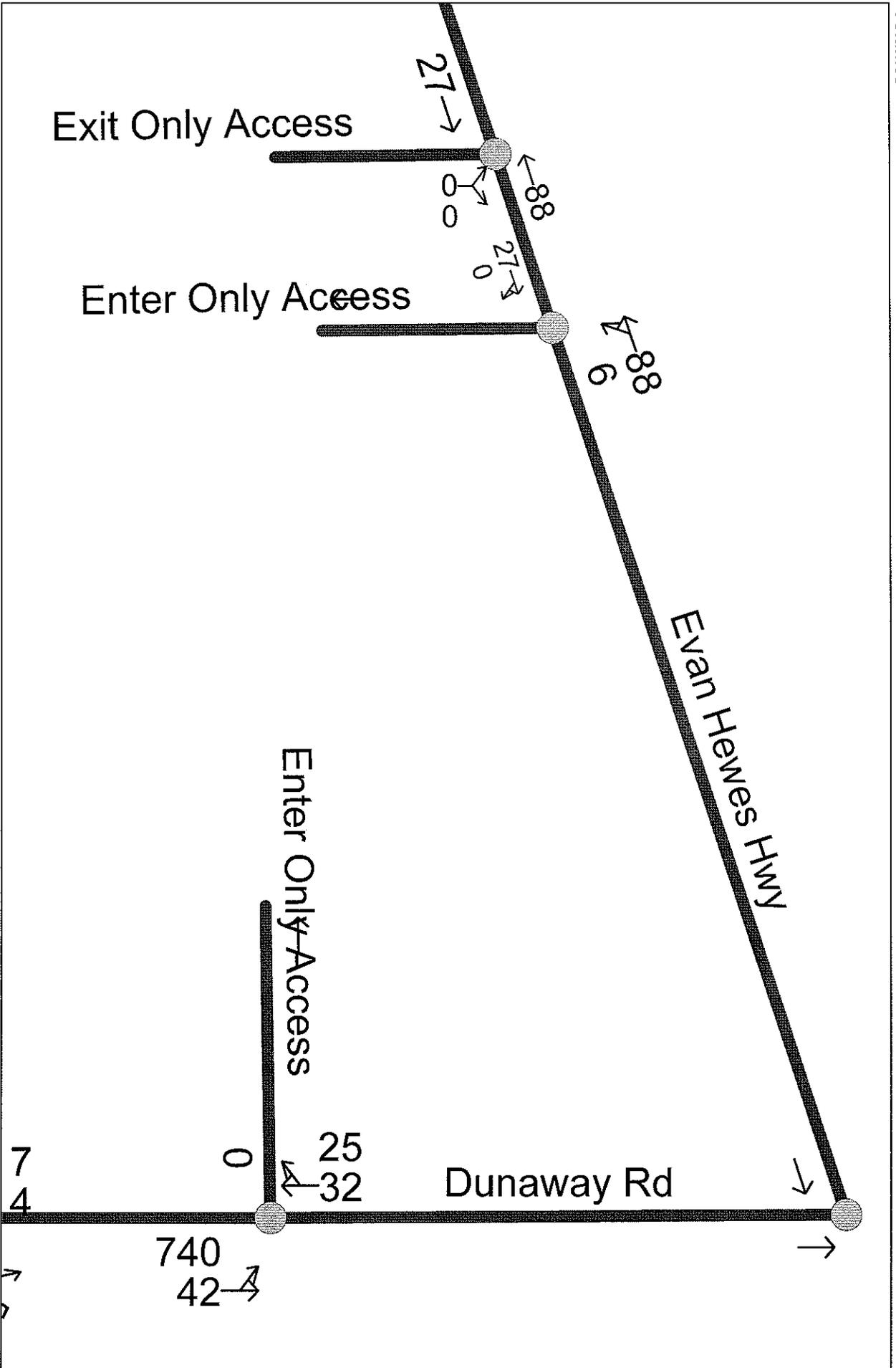
**SES Solar Two**  
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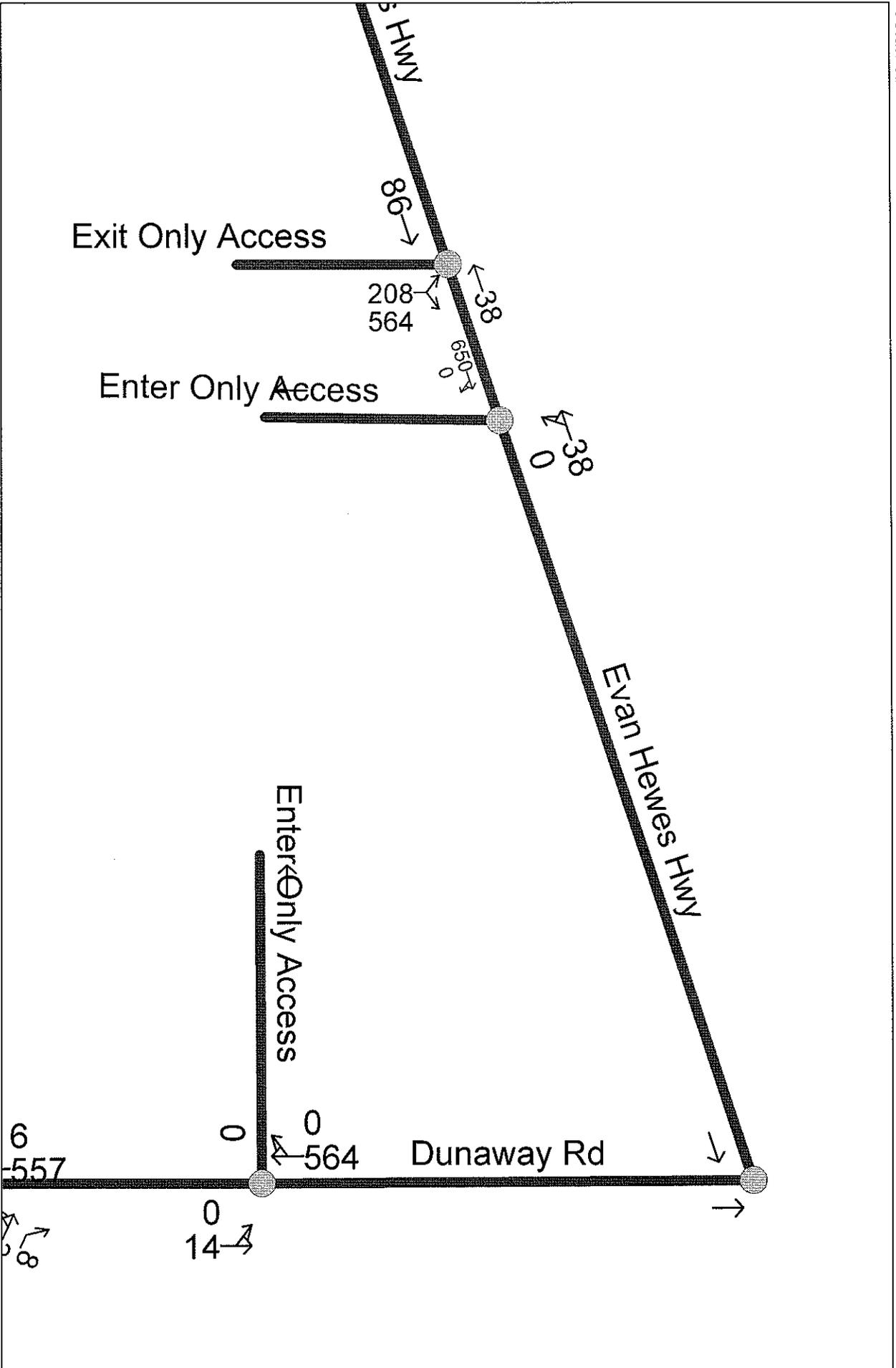
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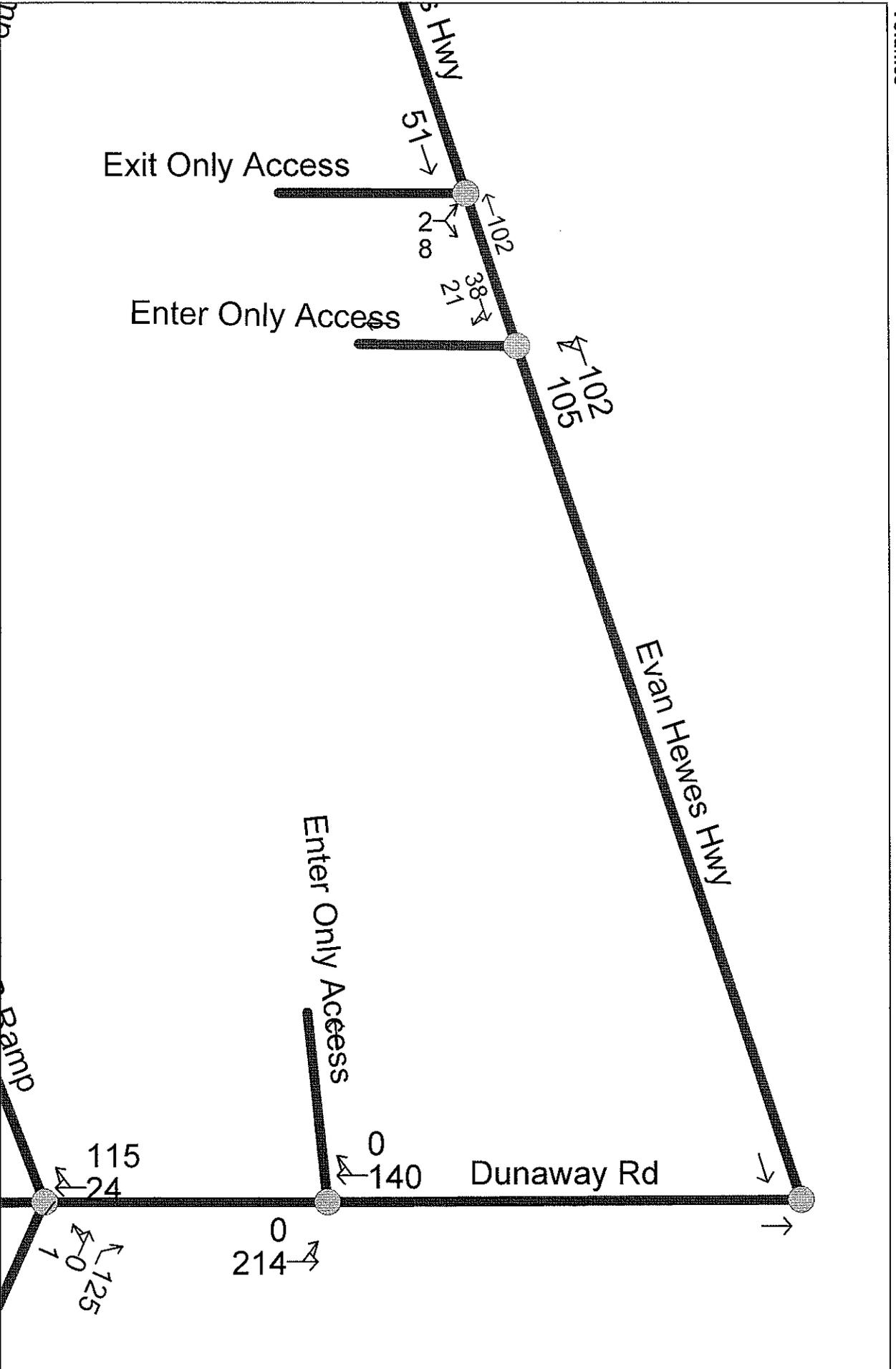
**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

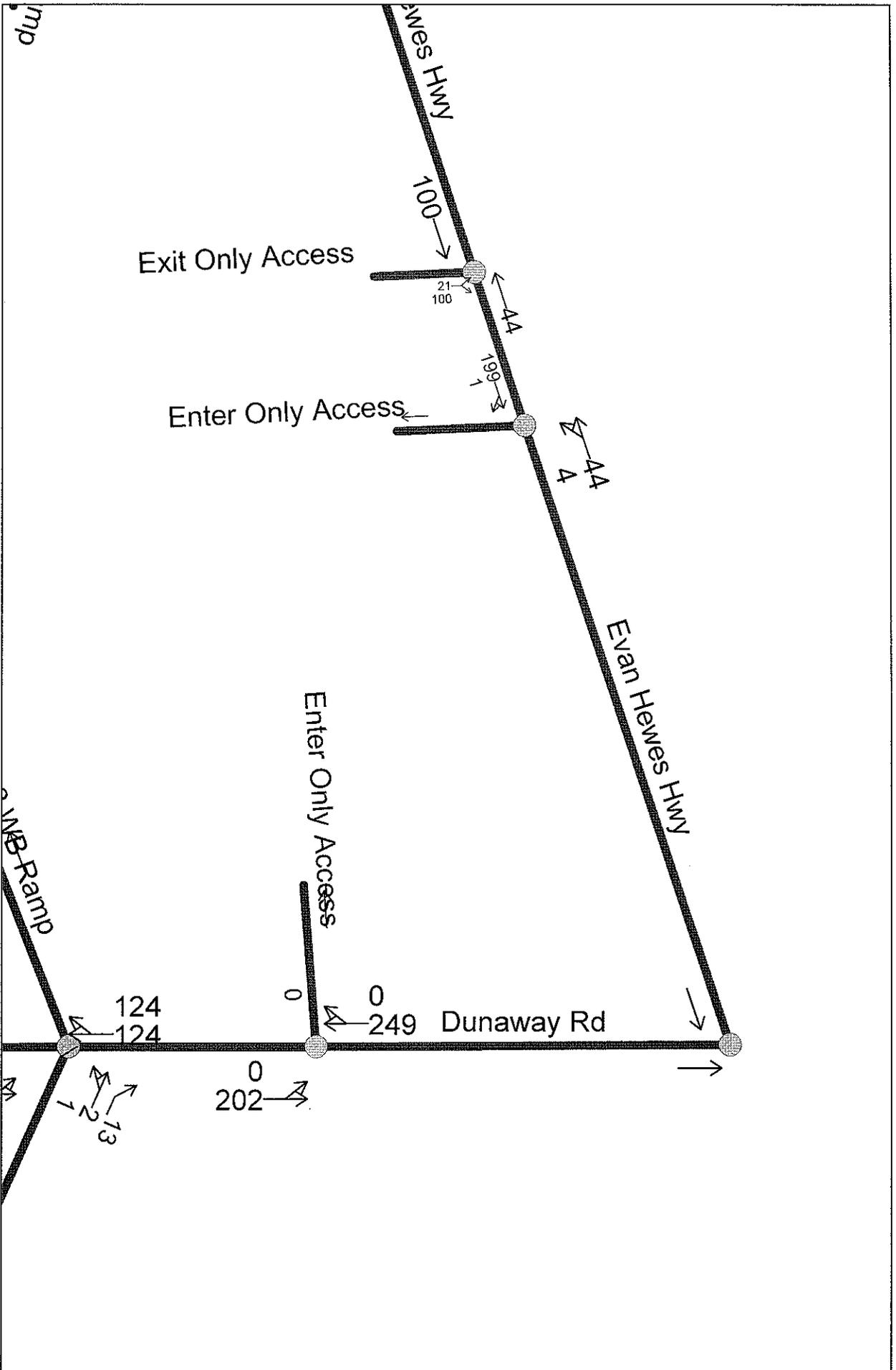
**Data Request 2:** Please provide forecast turning movements at the Project access driveways on Dunaway Road and on Evan Hewes Highway during both phases of construction and during post construction operating conditions.

**Response:** Traffic model output (see attachment TRAF-1 provided behind this response) show the forecast turning movements for the aforementioned project access driveways. These volumes were generated by the Synchro traffic analysis model developed for both phases of project construction and during post construction operating conditions.









**SES Solar Two**  
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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 3:** Please provide an analysis of resulting traffic conditions and Level of Service at the two main Project access driveways on Dunaway Road and on Evan Hewes Highway during both phases of construction and during post construction operating conditions.

**Response:** The Traffic Level of Service (LOS) Worksheets (see attachment TRAF-2 provided behind this response) summarize the result of the LOS calculations at the two main Project access driveways during both phases of project construction and during post construction operating conditions.

HCM Unsignalized Intersection Capacity Analysis      2010 AM No Proj + Proj Constructn Cond  
 6: Enter Only Access & Dunaway Rd 4/20/2009



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	740	42	32	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	804	46	35	27
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1703	48	62			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1703	48	62			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	48			
cM capacity (veh/h)	48	1020	1541			
<b>Direction, Lane #</b>	<b>NB 1</b>	<b>SB 1</b>				
Volume Total	850	62				
Volume Left	804	0				
Volume Right	0	27				
cSH	1541	1700				
Volume to Capacity	0.52	0.04				
Queue Length 95th (ft)	79	0				
Control Delay (s)	9.6	0.0				
Lane LOS	A					
Approach Delay (s)	9.6	0.0				
Approach LOS						
<b>Intersection Summary</b>						
Average Delay			9.0			
Intersection Capacity Utilization			53.2%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis  
 9: Evan Hewes Hwy & Enter Only Access

2010 AM No Proj + Proj Constructn Cond  
 4/20/2009



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↷		↶			
Sign Control	Free		Free		Stop	
Grade	0%		0%		0%	
Volume (veh/h)	27	0	6	88	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	0	7	96	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			29		138	29
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			29		138	29
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1584		852	1045

Direction	Lane #	EB 1	WB 1
Volume Total		29	102
Volume Left		0	7
Volume Right		0	0
cSH		1700	1584
Volume to Capacity		0.02	0.00
Queue Length 95th (ft)		0	0
Control Delay (s)		0.0	0.5
Lane LOS			A
Approach Delay (s)		0.0	0.5
Approach LOS			

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization		12.9%	ICU Level of Service A
Analysis Period (min)		15	

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘	↗
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	27	0	0	88	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	0	0	96	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			29		125	29
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			29		125	29
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1584		870	1045
Direction Lane #	EB 1	WB 1	NB 1			
Volume Total	29	96	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.02	0.06	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
<b>Intersection Summary</b>						
Average Delay			0.0			
Intersection Capacity Utilization			8.0%		ICU Level of Service	A
Analysis Period (min)			15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				4	1	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	14	564	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	15	613	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	628	613	613			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	628	613	613			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	447	492	966			

Direction, Lane #	NB 1	SB 1
Volume Total	15	613
Volume Left	0	0
Volume Right	0	0
cSH	966	1700
Volume to Capacity	0.00	0.36
Queue Length 95th (ft)	0	0
Control Delay (s)	0.0	0.0
Lane LOS		
Approach Delay (s)	0.0	0.0
Approach LOS		

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization	37.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	T		L			
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	650	0	0	38	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	707	0	0	41	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type						None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			707		748	707
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			707		748	707
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			892		380	436

Direction, Lane #	EB 1	WB 1
Volume Total	707	41
Volume Left	0	0
Volume Right	0	0
cSH	1700	892
Volume to Capacity	0.42	0.00
Queue Length 95th (ft)	0	0
Control Delay (s)	0.0	0.0
Lane LOS		
Approach Delay (s)	0.0	0.0
Approach LOS		

Intersection Summary		
Average Delay	0.0	
Intersection Capacity Utilization	37.5%	ICU Level of Service A
Analysis Period (min)	15	



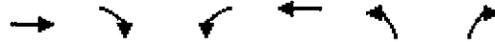
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘	↘
Sign Control	Free			Free	Stop	Stop
Grade	0%			0%	0%	
Volume (veh/h)	86	0	0	38	208	564
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	93	0	0	41	226	613
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			93		135	93
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			93		135	93
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		74	36
cM capacity (veh/h)			1501		859	964

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	93	41	839
Volume Left	0	0	226
Volume Right	0	0	613
cSH	1700	1700	933
Volume to Capacity	0.05	0.02	0.90
Queue Length 95th (ft)	0	0	321
Control Delay (s)	0.0	0.0	31.8
Lane LOS			D
Approach Delay (s)	0.0	0.0	31.8
Approach LOS			D

Intersection Summary		
Average Delay		27.4
Intersection Capacity Utilization	57.4%	ICU Level of Service B
Analysis Period (min)		15



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	214	140	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	233	152	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	385	152	152			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	385	152	152			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	618	894	1429			
Direction, Lane #	NB 1	SB 1				
Volume Total	233	152				
Volume Left	0	0				
Volume Right	0	0				
cSH	1429	1700				
Volume to Capacity	0.00	0.09				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.0	0.0				
Lane LOS						
Approach Delay (s)	0.0	0.0				
Approach LOS						
<b>Intersection Summary</b>						
Average Delay			0.0			
Intersection Capacity Utilization			14.6%		ICU Level of Service	A
Analysis Period (min)			15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↗		
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	38	21	105	102	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	41	23	114	111	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			64		392	53
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			64		392	53
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		100	100
cM capacity (veh/h)			1538		567	1015

Direction, Lane #	EB 1	WB 1
Volume Total	64	225
Volume Left	0	114
Volume Right	23	0
cSH	1700	1538
Volume to Capacity	0.04	0.07
Queue Length 95th (ft)	0	6
Control Delay (s)	0.0	4.1
Lane LOS		A
Approach Delay (s)	0.0	4.1
Approach LOS		

Intersection Summary			
Average Delay		3.2	
Intersection Capacity Utilization	21.2%	ICU Level of Service	A
Analysis Period (min)		15	



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	51	0	0	102	2	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	55	0	0	111	2	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type: None						
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume: 55, 166, 55						
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol: 55, 166, 55						
tC, single (s): 4.1, 6.4, 6.2						
tC, 2 stage (s)						
tF (s): 2.2, 3.5, 3.3						
p0 queue free %: 100, 100, 99						
cM capacity (veh/h): 1549, 824, 1011						

Direction Lane #	EB 1	WB 1	NB 1
Volume Total	55	111	11
Volume Left	0	0	2
Volume Right	0	0	9
cSH	1700	1700	967
Volume to Capacity	0.03	0.07	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	8.8
Lane LOS			A
Approach Delay (s)	0.0	0.0	8.8
Approach LOS			A

Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization	15.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	202	249	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	220	271	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	490	271	271			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	490	271	271			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	537	768	1293			
<b>Direction, Lane #</b>						
	NB 1	SB 1				
Volume Total	220	271				
Volume Left	0	0				
Volume Right	0	0				
cSH	1293	1700				
Volume to Capacity	0.00	0.16				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.0	0.0				
Lane LOS						
Approach Delay (s)	0.0	0.0				
Approach LOS						
<b>Intersection Summary</b>						
Average Delay			0.0			
Intersection Capacity Utilization			16.4%	ICU Level of Service	A	
Analysis Period (min)			15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↖			
Sign Control	Free		Free		Stop	
Grade	0%		0%		0%	
Volume (veh/h)	199	1	4	44	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	216	1	4	48	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			217		273	217
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			217		273	217
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1352		714	823

Direction Lane #	EB 1	WB 1
Volume Total	217	52
Volume Left	0	4
Volume Right	1	0
cSH	1700	1352
Volume to Capacity	0.13	0.00
Queue Length 95th (ft)	0	0
Control Delay (s)	0.0	0.7
Lane LOS		A
Approach Delay (s)	0.0	0.7
Approach LOS		

Intersection Summary	
Average Delay	0.1
Intersection Capacity Utilization	13.9%
ICU Level of Service	A
Analysis Period (min)	15

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	100	0	0	44	21	100
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	109	0	0	48	23	109
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			109		157	109
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			109		157	109
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		97	88
cM capacity (veh/h)			1482		835	945

Direction	Lane #	EB 1	WB 1	NB 1
Volume Total		109	48	132
Volume Left		0	0	23
Volume Right		0	0	109
cSH		1700	1700	924
Volume to Capacity		0.06	0.03	0.14
Queue Length 95th (ft)		0	0	12
Control Delay (s)		0.0	0.0	9.5
Lane LOS				A
Approach Delay (s)		0.0	0.0	9.5
Approach LOS				A

Intersection Summary			
Average Delay		4.4	
Intersection Capacity Utilization	19.3%	ICU Level of Service	A
Analysis Period (min)	15		

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 4:** Please provide the expected queuing at each of the Project access points to ensure that adequate stacking and storage areas are provided, particularly if security check points are to be employed for entering construction worker traffic.

**Response:** Queuing at the project access points is not anticipated as construction workers will be entering in an efficient manner (i.e., identity badges, vehicle decals, dashboard permits, etc.) with minimal delay at the project entrance. The security checkpoints will be primarily focused on the movements of project materials to and from the laydown areas and the release of these materials for use in the project site. These movements will be randomized and occur on an as-needed basis. Therefore no queuing is anticipated.

**SES Solar Two**  
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**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 5:** Please identify the level of traffic control that will be required to provide safe traffic conditions at both primary access driveways during Phase I and II of construction, as well as during post construction operating conditions.

**Response:** Traffic control will be primarily in the form of signage and striping and delineation lines and painted pavement markings. The Traffic Control Plan (attachment TRAF-3 provided behind this response) shows the proposed traffic control during both phases of project construction and during post construction operating conditions.

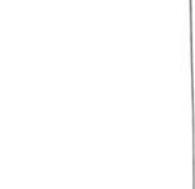
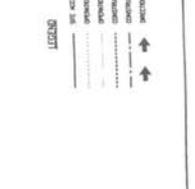
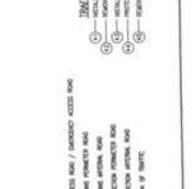
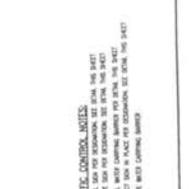
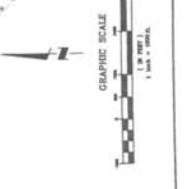
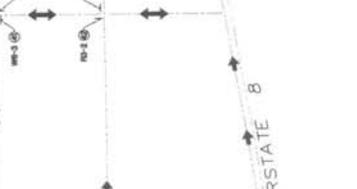
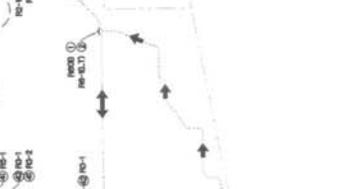
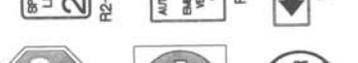
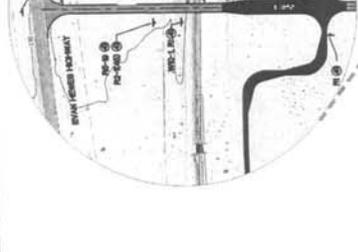
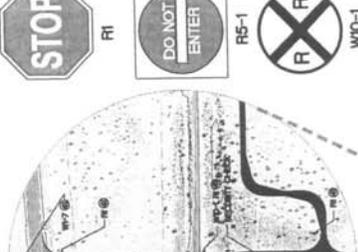
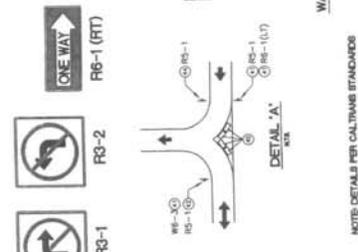
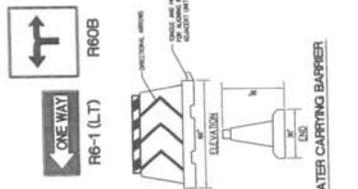
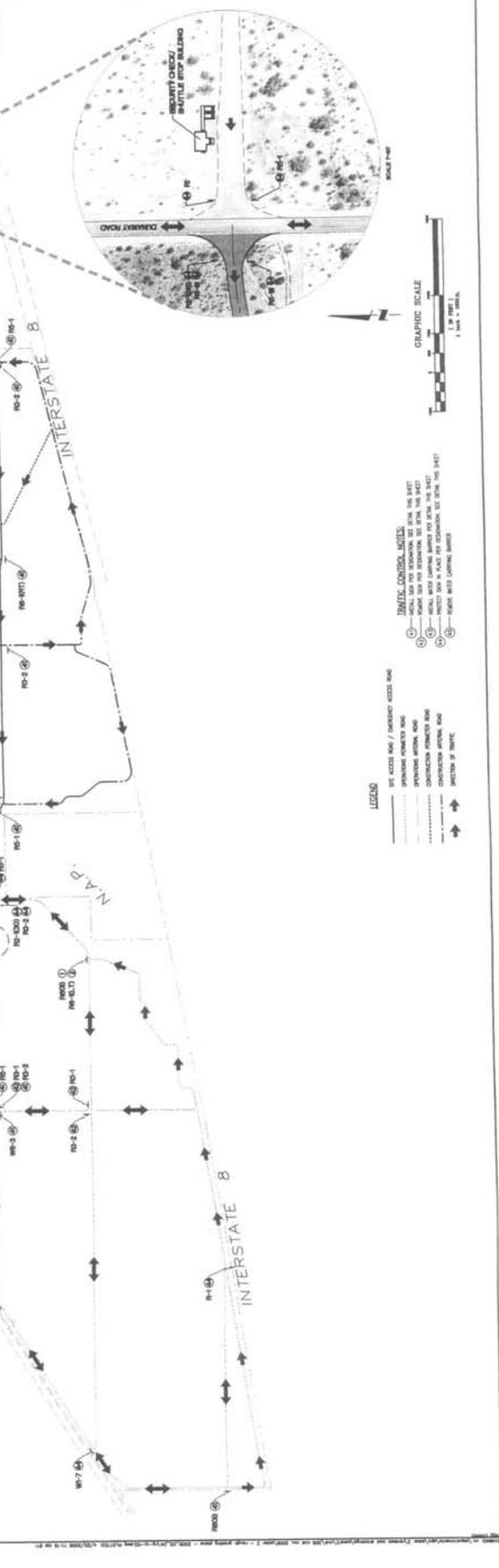


NO.	DATE	BY	REVISION
1	08/11/11	SES	ISSUE FOR CONSTRUCTION
2	08/11/11	SES	ISSUE FOR PERMITS
3	08/11/11	SES	ISSUE FOR BIDDING
4	08/11/11	SES	ISSUE FOR CONSTRUCTION
5	08/11/11	SES	ISSUE FOR CONSTRUCTION
6	08/11/11	SES	ISSUE FOR CONSTRUCTION
7	08/11/11	SES	ISSUE FOR CONSTRUCTION
8	08/11/11	SES	ISSUE FOR CONSTRUCTION
9	08/11/11	SES	ISSUE FOR CONSTRUCTION
10	08/11/11	SES	ISSUE FOR CONSTRUCTION

SES SOLAR TWO LLC  
 SOLAR TWO SITE PLAN  
 TRAFFIC CONTROL PLAN  
 CONSTRUCTION AND OPERATION STAGES

DESIGNED BY: SES  
 CHECKED BY: SES  
 DATE: 08/11/11

SCALE: 1" = 100'



LEGEND

SEE ACCESS ROAD / PARKING ACCESS ROAD

REV	DATE	BY	CHK	DESCRIPTION
1	11/19/20	REB	SM	ISSUE FOR PERMITS
2	12/01/20	REB	SM	REVISED FOR PERMITS
3	12/01/20	REB	SM	REVISED FOR PERMITS
4	12/01/20	REB	SM	REVISED FOR PERMITS
5	12/01/20	REB	SM	REVISED FOR PERMITS
6	12/01/20	REB	SM	REVISED FOR PERMITS
7	12/01/20	REB	SM	REVISED FOR PERMITS
8	12/01/20	REB	SM	REVISED FOR PERMITS
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**SEES SOLAR TWO LLC**  
**TRAFFIC CONTROL PLAN**  
**SOLAR TWO - SITE PLAN**

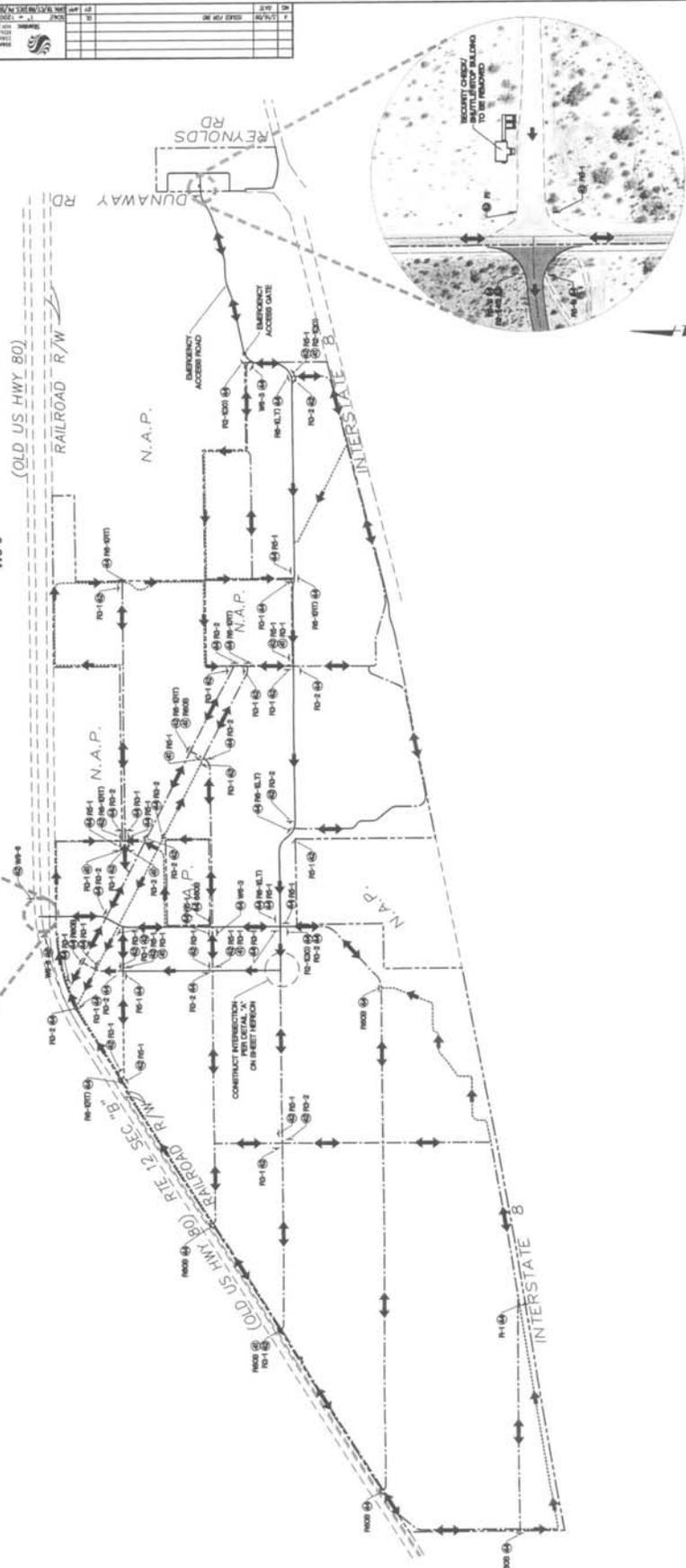
DATE: 11/19/20  
 DRAWN BY: REB  
 CHECKED BY: SM  
 PROJECT: SEES SOLAR TWO LLC  
 SHEET NO: 101  
 TOTAL SHEETS: 101

**TRAFFIC CONTROL PLAN**

**NOTES:**  
 1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CALIFORNIA MUTUAL AID MANUAL AND THE MUTUAL AID MANUAL FOR THE STATE OF CALIFORNIA.  
 2. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CALIFORNIA MUTUAL AID MANUAL AND THE MUTUAL AID MANUAL FOR THE STATE OF CALIFORNIA.  
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**LEGEND:**  
 (1) TRUCK CROSSING  
 (2) SPEED LIMIT 15  
 (3) SPEED LIMIT 25  
 (4) STOP  
 (5) DO NOT ENTER  
 (6) R5-1  
 (7) W10-1  
 (8) R5-19  
 (9) W1-7  
 (10) R2-1(15)  
 (11) W6-3  
 (12) TRUCK CROSSING  
 (13) R2-1(25)  
 (14) AUTHORIZED EMERGENCY VEHICLES ONLY  
 (15) R5-19  
 (16) W1-7  
 (17) R6-1 (RT)  
 (18) R6-1 (LT)  
 (19) R3-2  
 (20) R3-1  
 (21) R60B

**DETAIL 'A'**  
 SEE PLAN FOR LOCATION. SEE PLAN FOR DETAIL.  
 ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CALIFORNIA MUTUAL AID MANUAL AND THE MUTUAL AID MANUAL FOR THE STATE OF CALIFORNIA.



**TRAFFIC CONTROL PLAN**

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 (8) R5-19  
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 (17) R6-1 (RT)  
 (18) R6-1 (LT)  
 (19) R3-2  
 (20) R3-1  
 (21) R60B

**SCALE:**  
 1" = 100'

**GRAPHIC SCALE**

**NOTES:**  
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**TRAFFIC CONTROL PLAN**

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 (21) R60B

**SCALE:**  
 1" = 100'

**GRAPHIC SCALE**

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**TRAFFIC CONTROL PLAN**

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 (1) TRUCK CROSSING  
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 (21) R60B

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**GRAPHIC SCALE**

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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 6:** Please clarify whether the Applicant will install measures at the Project access driveways at its cost to mitigate any significant traffic and public safety impacts?

**Response:** As illustrated in the Traffic Control Plan (provided as attachment TRAF-3), the Applicant will install the required measures at the Project access driveways according to Caltrans and Imperial County design standards.

The placement of traffic control devices shall take into consideration, stopping, corner sight distance and sight visibility triangles as required by Caltrans and Imperial County.

As required in **Topic 405 – Intersection Design Standards** from the Caltrans Highway Design Manual, 405.1 Sight Distance, the following conditions apply:

“(c) Private Road Intersections (Refer to Index 205.2) and Rural Driveways (Refer to Index 205.4) – **The minimum corner sight distance shall be equal to the stopping sight distance as given in Table 201.1, measured as previous described.**”

Table 201.1 shows the sight distance standards:

**Table 201.1**  
**Sight Distance Standards**

Design Speed <sup>(1)</sup> (mph)	Stopping <sup>(2)</sup> (ft)	Passing (ft)
20	125	800
25	150	950
30	200	1,100
35	250	1,300
40	300	1,500
45	360	1,650
50	430	1,800
55	500	1,950
60	580	2,100
65	660	2,300
70	750	2,500
75	840	2,600
80	930	2,700

(1) See Topic 101 for selection of design speed.

(2) For sustained downgrades, refer to advisory standard in Index 201.3

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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 7:** Please provide plans showing traffic flow and traffic signing for both of the construction phases and for post construction operating conditions.

**Response:** The Traffic Control Plan (attachment TRAF-3) show the proposed traffic flow and signing during both phases of project construction and during post construction operating conditions.

**SES Solar Two**  
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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 8:** When the construction staging area is in use on the east side of Dunaway Road, please explain whether the Project will operate the crossing with flaggers or traffic control devices to ensure safe truck crossings from the construction staging area to the Project Site.

**Response:** Flaggers will be deployed at the truck crossing on an as-needed basis. The low traffic volume along Dunaway Road and the infrequent movement of impounded materials and equipment may not warrant the continuous need for flaggers.

**SES Solar Two**  
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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 9:** Please provide an analysis of the three closely spaced access points proposed on the east side of Dunaway Road for the construction staging areas to determine the need for left and right turn acceleration and deceleration lanes at these three driveways.

**Response:** The anticipated traffic movements at the north and south access points on the east side of Dunaway Road will be minimal and spread out throughout the day. Traffic movement in the staging area is contingent upon the needs of the construction activity. The majority of the movements will proceed directly to the project site to the west with the exception of loads that need to be off-loaded or reloaded in the staging area. The middle Dunaway Road access point (west side) has been adequately analyzed with acceptable LOS and there are no anticipated queuing issues. The low traffic volume on Dunaway Road does not warrant the need for left and right turn acceleration and deceleration lanes at these driveways.

The Traffic LOS Worksheets (attachment TRAF-2) show the intersection LOS at the Dunaway Road (west side) access point.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 10:** Please provide an analysis of both primary access driveways for the need to provide left and right turn acceleration and deceleration lanes on both Dunaway Road and on Evan Hewes Highway during both of the construction phases, as well as during post construction operation of the facility.

**Response:** The low traffic volumes provide sufficient opportunities for turning and merging at both Dunaway Road and Evan Hewes Highway during both phases of construction as well as during post construction operation of the Project.

The Traffic LOS Worksheets (attachment TRAF-2) show the intersection of LOS at both Dunaway Road and Evan Hewes Highway access points.

**SES Solar Two**  
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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 11:** Please provide the stopping sight distance at the proposed access driveway on Evan Hewes Highway to ensure that it is adequate to safely allow left turns out of the Project Site at this location.

**Response:** The generally flat terrain on Evan Hewes Highway, good visibility and no vertical or horizontal sight obstructions provide adequate stopping sight distance for the project access driveway on Evan Hewes Highway.

For discussion purposes and assuming a design speed of 55 miles per hour (MPH), the required stopping distance is 500 feet.

Table 201.1 Sight Distance Standards shown below, from Chapter 200, Geometric Design and Structures Standards of the Caltrans Highway Design Manual shows the required stopping sight standards in context to the roadway design speed.

**Table 201.1**  
**Sight Distance Standards**

Design Speed <sup>(1)</sup> (mph)	Stopping <sup>(2)</sup> (ft)	Passing (ft)
20	125	800
25	150	950
30	200	1,100
35	250	1,300
40	300	1,500
45	360	1,650
50	430	1,800
55	500	1,950
60	580	2,100
65	660	2,300
70	750	2,500
75	840	2,600
80	930	2,700

(1) See Topic 101 for selection of design speed.

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**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 12:** Please provide the current status of and the schedule to obtain concurrence from the UPRR and the PUC for the new at-grade crossing of the railroad tracks just south of Evan Hewes Highway.

**Response:** The existing crossing (county road #2003, BLM road #246) is currently being discussed with the San Diego Mass Transit System (Tim Allison, 619-595-4903, tim.allison@sdmts.com) as to the type of crossing upgrade requirements (wood plank, rubber, etc.).

**SES Solar Two**  
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**08-AFC-5**

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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 13:** Please determine the appropriate level of protection for safety at the new at-grade vehicular crossing of the UPRR track just south of Evan Hewes Highway.

**Response:** San Diego Mass Transit System will determine appropriate level of protection for safety at the existing at grade vehicular crossing of the San Diego Mass Transit System track just south of Evan Hewes Highway.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 14:** Please clarify whether the Applicant will install at-grade crossing protection measures, as required by the PUC, for the Project access driveway crossing of the UPRR.

**Response:** Applicant will install at grade crossing protection measures as required by San Diego Mass Transit System.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 15:** Please provide forecasts of the number of heavy truck deliveries to the Project Site during each month of the construction activities.

**Response:** Heavy truck deliveries are limited to 2 substation transformers for Phase 1. These deliveries are expected to be made during the 4<sup>th</sup> month of construction. During Phase 2, heavy truck deliveries are limited to 3 substation transformers. These will be delivered approximately during the 18<sup>th</sup> month of construction. The delivery months are subject to change but the expected number of deliveries will not.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 16:** Please clarify whether the Applicant will monitor roadway conditions and repair all damage caused by heavy truck traffic to roadways in the vicinity of the Project Site.

**Response:** The Applicant will monitor roadway conditions where heavy truck traffic accesses the site on county roads.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 17:** Please provide an analysis of the potential impacts to a) traffic using the Evan Hewes Highway roadway and b) UPRR operations during construction of the off-site water service.

**Response:** Impacts associated with the pipeline providing water to the site from the Seeley Wastewater Treatment Facility will be discussed in the material to be submitted that describes details on the supply system. It is anticipated construction of the offsite water service will have minimal impact to roadway and railroad traffic. Prior to construction, advance notice will be provided to regular commuters on planned construction activities including consultation with the County, railroad operators and local businesses and stake holders. Depending on the best practices method to be used in the pipe crossings (i.e cut and fill trenching or jack and bore technique), traffic impacts and could be minimized with advance notification, adequate precaution, and alternate route detours during this one-time short term construction activity.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: TRAFFIC AND CIRCULATION**

**Data Request 18:** Please provide an analysis of the potential impacts to traffic using Interstate 8 caused by construction of the transmission lines.

**Response:** Construction or installation work of transmission lines crossing Interstate 8 may require the use of guard poles, netting, or similar means to protect moving traffic and structures from the activity. If necessary on state highways, continuous traffic breaks operated by the CHP shall be planned and provided.

This operation may temporarily delay traffic, and could affect normal operations of the highway for short periods. This type of construction is not unique, and routinely used by San Diego Gas & Electric (SDGE) and other electric power utility providers to avoid and minimize potential impacts on traffic.

Due to the aforementioned measures and the fact that the construction and stringing operation at this crossing location would be short-term in nature, the effect of potential traffic disruptions will be at a level that is less than significant.

Additional details of the related San Diego Gas & Electric Company's Sunrise Powerlink Project, Draft Environmental Impact Report / Environmental Impact Statement and Draft Land Use Plan Amendment can be found at the California Public Utilities Commission's (CPUC) website via this link: <http://www.cpuc.ca.gov/environment/info/asp/sunrise/toc-deir.htm>

**SES Solar Two**  
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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 19:** Please provide a copy of (or citation to) the FTHL survey protocol that was used for Project surveys.

**Response:** Because FTHL are historically known to occupy the site, the site was presumed occupied and no surveys were required. However, the BLM requested a distribution survey be conducted to estimate how many FTHLs may occupy the site. The protocol used was based on Appendix 5 of the Flat-tailed Horned Lizard Rangeland Management Strategy (2003), and modified according to guidance provided by Daniel Steward from BLM and concurred with by CEC staff.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 20:** Please provide the Project's FTHL mitigation strategies that address the 10 measures outlines in the Rangewide Management Strategy.

**Response:** The 10 mitigation measures outlined in the FTHL Rangewide Management Strategy (RMS) are meant to apply to small scale projects and are not practicable given the Project size. With the exception of the offsite transmission line, the Project site is not within a FTHL Management Area (MA). Of the 10 measures outlined in the RMS, the Project will comply with numbers 1, 7, and 10.

The Project compensatory mitigation for FTHL will be done offsite. Pre-construction clearance surveys will be performed by a qualified biologist and any FTHL found at that time will be relocated to an Agency approved area of FTHL suitable habitat offsite. This area will most likely be located within the Yuha Desert FTHL MA south of Interstate 8 (I-8).

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 21:** Please clarify the geographic relationship between FTHL Management Areas and Project features (including transmission lines and water pipeline).

**Response:** The Yuha Desert FTHL Management Area is south of I-8 (See Figure 5.9.1 in the AFC). The proposed transmission line will be built along an existing transmission line corridor and an existing access road will be utilized. The only new permanent impacts within the FTHL MA will be from the new transmission towers. No other impacts to FTHL Management Areas will occur.

**SES Solar Two**  
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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 22:** Please provide acreage values for Project impacts within and outside of a FTHL Management Area. For impacts within a management area, provide the requisite “multiplying factor” with supporting justification (i.e., factors used to calculate multiplying factor).

**Response:** Approximately 92.7 acres of native vegetation occur within the offsite transmission line assessment area located within the Yuha Desert FTHL MA. This area is part of an existing transmission line ROW. The only permanent impacts associated with the offsite transmission line will be from 70-75 80-ft tall poles. The impact area for installation of each pole would be less than 0.25 acre, assuming a 100' x 100' construction area for each pole. This would result in a potential impact of approximately 19 acres. The mitigation ratio will be determined through consultation with BLM, CEC, and the wildlife agencies.

**SES Solar Two**  
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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 23:** Please provide the compensation proposal for Project impacts to the FTHL. If a compensation proposal is not yet available due to ongoing agency consultation, please provide an estimated date for submittal of the proposal.

**Response:** The mitigation ratio will be determined through consultation with BLM, CEC, and the wildlife agencies. Estimated date for submittal is expected near FSA/FEIS submission (currently scheduled for December 2009).

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 24:** Please provide justification for the assumed 25 percent detection rate for FTHL surveys used in the AFC.

**Response:** The distribution survey protocol provided 38 percent survey coverage with a presumed detection rate of 25 percent. The detection rate was provided by BLM staff (Daniel Steward, pers. comm. 2008) and is based on extensive experience in the use of the distribution survey protocol by BLM and wildlife agency staff.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 25:** The AFC provides a FTHL occupancy estimate that appears to rely on FTHLs being uniformly distributed across the landscape. Please provide the calculations used, and scientific justification for, the AFC's occupancy estimate of 20 to 30 FTHL within the Project site. Please include a discussion of the ICC's home range estimate guideline.

**Response:** The entire site is considered potential FTHL habitat and food resources are distributed relatively evenly across the site. The distribution survey protocol provided 38 percent survey coverage with a presumed detection rate of 25 percent. Since only two FTHLs were observed onsite, it is estimated that there are approximately 20 to 30 FTHLs onsite  $[(2/(0.38 \times 0.25)) = 21]$ . The protocol survey methods do not provide data to estimate home range, however, studies have shown a FTHL home range of approximately 4 to 8 acres in the Yuha Desert FTHL MA (FTHL ICC 2003).

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 26:** Please clarify whether all three of the FTHL mitigation measures proposed in the AFC will be implemented, or only “one or more” (as currently proposed).

**Response:** FTHL mitigation measures will be determined and finalized after consultation with the agencies. Any or all of the measures listed could be implemented if required by the CEC or BLM. Please also see the Response to Data Request 20.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 27:** Please provide the techniques that will be used to conduct the proposed FTHL clearance surveys.

**Response:** Areas that will be graded will first be thoroughly searched by a qualified biologist and any horned lizards detected and captured will be relocated to a suitable location offsite. The protocol found in Appendix 7 of the FTHL Rangewide Management Strategy will be followed as modified by the agencies.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 28:**

Please clarify whether proposed pre- and post-construction monitoring using mark and recapture techniques is a project-specific recommendation by the BLM or other resource agency. If not a requisite of the BLM or other resource agency, specify the purpose of conducting mark and recapture sampling, how results will be applied, and the level of effort that will be devoted. In addition, please justify the benefits of this proposed mitigation measure considering some level of mortality typically occurs when animals are captured and handled.

**Response:**

The mark and recapture techniques were recommended by the BLM and USFWS (Daniel Steward, pers. comm. 2008) and will be implemented if required by the agencies. The techniques for the FTHL mark-recapture program recommended by BLM and USFWS can be found in the Robust Pradel Mark-Recapture Protocol for Monitoring Flat-tail Horned Lizards on Sentinel Plots (USFWS 2006). A final plan will be designed after agency consultation.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 29:** Please provide the Applicant's verification that each member of the FTHL survey team received authorization from CDFG to conduct surveys, as required by the FTHL survey protocol.

**Response:** Because the surveys conducted followed the Distribution Monitoring Protocol (Appendix 5), no CDFG authorization was required. In addition, no FTHLs were handled during surveys. All surveyors were trained by BLM staff prior to conducting protocol surveys.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 30:** Please provide the estimated completion date for the FTHL translocation plan referenced in the AFC.

**Response:** The translocation plan will be prepared if this measure is required by the BLM or CEC. The plan will be prepared and approved by the agencies prior to construction (currently estimated Q1, 2010) if required by the agencies.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 31:** Please provide the specific methods that were used to conduct focused surveys. Please include: (1) the total number of man-hours devoted to each survey day; (2) the role of each individual that participated; (3) spacing of transects (if implemented); and (4) whether surveyors worked independently or in teams.

**Response:** Rare plant surveys were conducted in concurrence with FTHL surveys in 2007. Because 2007 was considered drier than normal, rare plant surveys were repeated in 2008. Approximately 165 person-days were devoted to rare plant surveys in 2007 and 2008. Biologists were distributed up into groups of two or three with more experienced botanists paired with less experienced surveyors. Transects were meandering and surveyors were spaced evenly to cover the entire site, offsite water and transmission lines, and buffer area. A guide of rare plants that potentially occur in the Project vicinity was made and included photos and taxonomy. The guide was distributed to all members of the survey term. All surveyors were trained by botanists experienced in desert rare plant surveys. All field surveys methods and level of survey effort was developed in consultation with CEC and BLM staff.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 32:** Please provide information on the locations within the site where focused special-status plant surveys were conducted, by year (i.e., 2007, 2008). Please address any extra level of effort (e.g., closer transect spacing) that was devoted to washed or other potentially suitable habitats.

**Response:** The entire site, transmission line, and water line areas were surveyed with more focus on washes and other areas that tend to have a higher potential to support rare plants. All areas of the site, t-line, waterline, and buffer were sampled during 165 person-days of rare plant surveys over two spring seasons.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 33:** Please provide information on the floristic field survey experience of the individuals that conducted the surveys, including any past experience identifying the special-status species identified as having the potential to occur within the Project area.

**Response:** A list of surveyors can be found in Table 5.6-2 of the AFC and Table 1 of the Solar Two Biological Technical Report (BTR) (Appendix Y of the AFC). Resumes for all Project surveyors were sent as part of previous Data Adequacy Request Responses (see Supplemental Information in Response to CEC Data Adequacy Requests and BLM Minimum Requirement Comments dated September 2008). The team was lead by Ken McDonald, who is a botanist with 9 years of experience. A guide of rare plants that potentially occur in the Project area was made and included photos and taxonomy. The guide was distributed to all members of the survey term. All surveyors were trained by team botanists experienced in desert rare plant surveys.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 34:** Please provide 2007, 2008, and mean rainfall data obtained by the weather station(s) nearest the Project site.

**Response:** Based on data provided by the Western Regional Climate Center (<http://www.wrcc.dri.edu/index.html>), rainfall recorded in El Centro was 1.62 inches in 2007, and 2.09 inches in 2008. The long-term average rainfall for El Centro is 2.7 inches.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 35:** Please provide information on the phenology of the special-status plant species identified as having potential to occur on the Project site.

**Response:** Rare plant phenology is provided in Attachment D of the Biological Technical Report (Appendix Y of the AFC).

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 36:** Please discuss the effect rainfall had on the survey team's ability to detect special-status plant species during both 2007 and 2008.

**Response:** Rare plant surveys were repeated in 2008 because the blooming season was much reduced in 2007 due to below average rainfall (1.62 inches in 2007 and 2.09 inches in 2008).

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: SOIL AND WATER RESOURCES**

**Data Request 37:** If field survey techniques did not follow established protocols, please provide the Applicant's proposal to identify potential Project impacts to rare plant species (e.g., proposal for additional surveys) and the appropriate mitigation strategy.

**Response:** Survey effort, timing, and methods implemented were appropriate for the site. All areas of the site were sampled over two seasons of rare plant surveys, which was sufficient to assess the Project's affects on detected rare plants. There are no historically documented occurrences of rare plants onsite or in the immediate vicinity. Adjacent USGS quads have few rare plant records, with the nearest locality over 1 mile from the site. No mitigation is proposed due to a lack of rare plants being detected onsite.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 38:**

Please provide scientific justification for the AFC's conclusion that only low to moderate potential exists for special-status plant species to occur on-site due to sparse vegetation and moderate level of disturbance. Please clarify how this conclusion was reached considering the AFC also states: (1) the site is dominated by upland plant species that are sparsely distributed as is typical of this type of desert habitat, and (2) with the exception of Plaster City plant just north of the Project, a maintained dirt access road along the transmission line, and several ORV trails, the Project Site is relatively undisturbed.

**Response:**

The level of disturbance is evenly distributed where chronic disturbance is prevalent. The shrub density is on the low side of the range of variation due to the presence of extensive desert pavement and hard pan soil conditions, and OHV activity that preclude vegetation development or recovery. There are more pristine sites south of I-8 with higher potential to support rare plants. There are very few rare plant localities known from the immediate Project vicinity (within 5 miles of the site boundary).

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 39:** Please provide a discussion of potential direct, indirect, and cumulative impacts to the American badger.

**Response:** No badgers or definitive evidence of badger presence was detected onsite during two years of field surveys. The nearest historical badger sighting is over a mile away on the south side of I-8. No direct, indirect, or cumulative impacts to this species are expected to occur.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 40:** Please clarify the techniques used for documenting badger presence on the Project site.

**Response:** There is no specific survey protocol for badgers. The Project site was extensively surveyed during the spring and summer of 2007 and 2008 and any potential burrows or other sign would have been documented. Although several potential burrows were observed, they were not active and were more likely made by either coyotes or kit fox, which were both observed onsite. No definitive presence of badger was detected onsite.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 41:** Please provide mitigation measures for potential impacts to the American badger.

**Response:** No specific mitigation for badgers is necessary because they have not been documented onsite.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 42:** Please provide an analysis of the Project's direct, indirect, and cumulative impacts on wildlife corridors.

**Response:** The site is not considered an important wildlife corridor because it is bounded by I-8 to the south and S-80 (Evan Hewes Highway) and railroad tracks to the north and west. An area of open habitat will remain intact between the eastern Project boundary and Dunaway Road that could be used as a wildlife movement route. Additional opportunity for wildlife to move north or south of I-8 occurs west of the Project site (please see attachment BIO-1 provided behind this response).

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

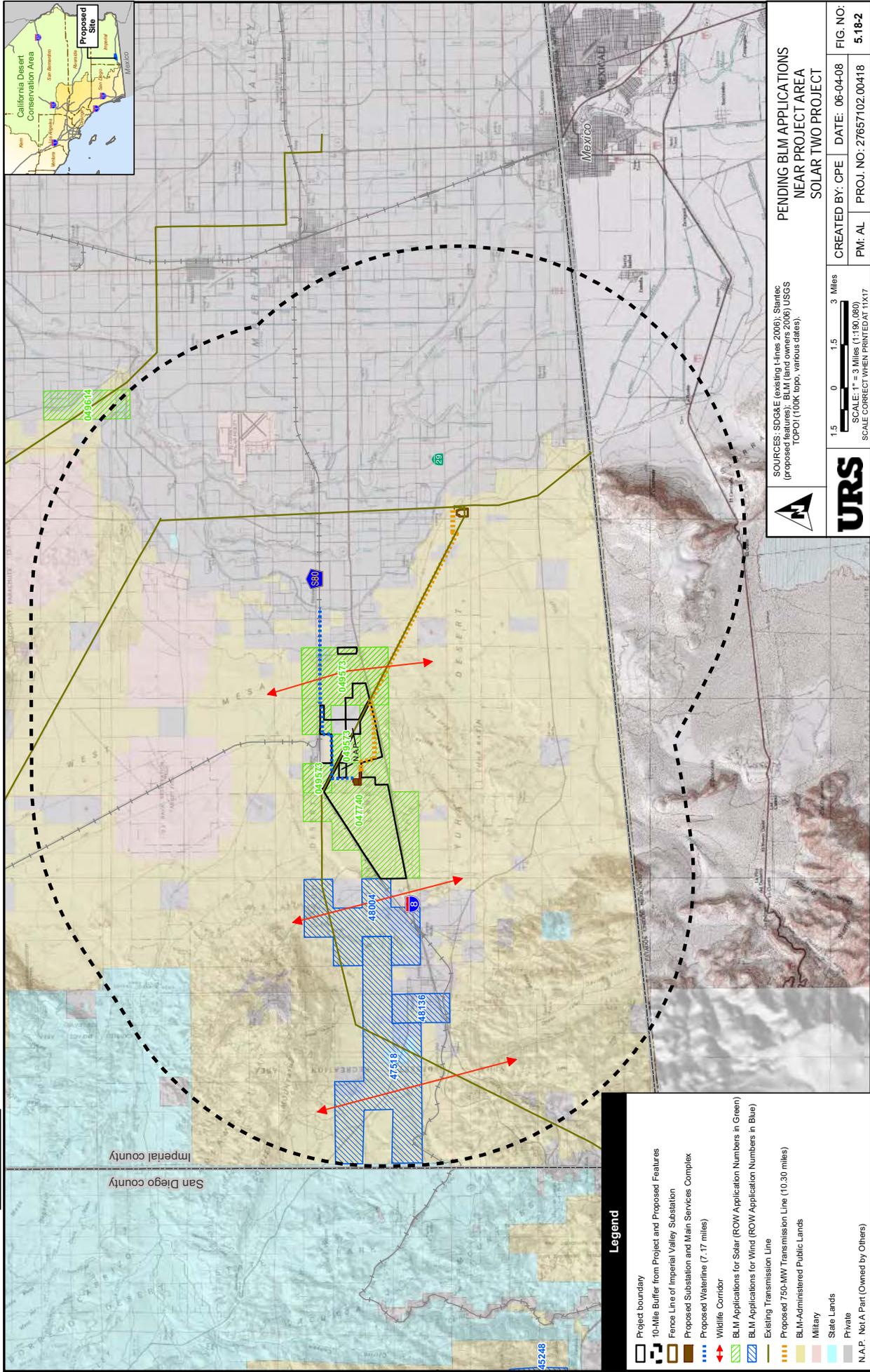
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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 43:** Please use the map provided in AFC Figure 5.18-2 to depict the “alternative routes” available to wildlife.

**Response:** See attachment BIO-1, a figure with alternative routes for wildlife movement added to Figure 5.18-2 provided with the response to Data Request 42.

BIO-1



**PENDING BLM APPLICATIONS  
NEAR PROJECT AREA  
SOLAR TWO PROJECT**

SOURCES: SDG&E (existing L-lines 2006); Stantec (proposed features); BLM (land owners 2006) USGS TOPOI (100K topo, various dates).

CREATED BY: CPE	DATE: 06-04-08	FIG. NO.:	5.18-2
PM: AL	PROJ. NO.: 27657102.00418		

- Legend**
- Project boundary
  - 10-Mile Buffer from Project and Proposed Features
  - Fence Line of Imperial Valley Substation
  - Proposed Substation and Main Services Complex
  - Proposed Waterline (7.17 miles)
  - Wildlife Corridor
  - BLM Applications for Solar (ROW Application Numbers in Green)
  - BLM Applications for Wind (ROW Application Numbers in Blue)
  - Existing Transmission Line
  - Proposed 750-MW Transmission Line (10.30 miles)
  - BLM-Administered Public Lands
  - Military
  - State Lands
  - Private
  - N.A.P. Not A Part (Owned by Others)

Path: G:\gis\proj\1577223880\mxd\exam\line\_ahb\app\mxd\_042109\_Rawdell\_Clar

**SES Solar Two  
In Response to CURE Data Requests, Set One  
Data Requests 1-143  
08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 44:** Considerable efforts have been made into the recovery and monitoring of bighorn sheep (*Ovis canadensis*) in the Project region. Please provide any information that the Applicant has obtained on the occurrence and movement of bighorn sheep in the vicinity of the Project site and any analysis of the Project's potential impacts on the recovery of the species.

**Response:** Bighorn sheep are not expected to extensively use the site because it is surrounded by busy highways and a railroad. The site is also not considered an important corridor due to its proximity to busy highways, development, OHV activities, and lack of high quality bighorn habitat. Designated critical habitat for this species occurs over 5 miles west of the site (a map of newly modified bighorn sheep critical habitat can be found at: <http://www.regulations.gov/search/index.jsp>).

Although bighorn sheep are known to forage in lowland areas such as valley floors, rolling hills, alluvial fans, and washes, they rarely stray far from perennial water sources or rocky escape terrain (USFWS 2009). Use of the site is likely to be transitory. URS did not detect bighorn sheep during two seasons of spring and summer surveys.

However, Dr. Joe Platt of PBS&J was onsite on March 25, 2009 at 11:40 AM and observed a group of five (5) female/yearling bighorn sheep in the western half of the site. Five female bighorn sheep were seen in the wash located approximately ½ mile west of the ATV camp with the shade structures. The maintained dirt road can be seen in the photograph below. They were following the wash in a northwest to southeast direction. At least one appeared pregnant and one appeared to be a yearling. See attachment BIO-2 presented behind this response for photos taken by Dr. Platt.



**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 45:** Please provide the Applicant's plan to mitigate the Project's impacts to wildlife corridors.

**Response:** The Project site is not considered an important wildlife corridor due to its semi-isolation by I-8, S-80, and the railroad. No separate mitigation measures for impacts to wildlife corridors will be necessary. There are available wildlife movement routes in the Project vicinity (please see attachment BIO-1 presented behind the response to Data Request 42).

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 46:** Please clarify the management strategies that will be implemented to prevent raven use of evaporation ponds. If additional actions are needed before strategies can be specified, please provide an estimated schedule for the final management proposal.

**Response:** The Raven Management Plan, including management strategies that will help prevent raven use of evaporation ponds, was docketed with BLM and CEC on March 20, 2009 and is currently under agency review.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 47:** Please specify the party or parties responsible for determining whether adaptive management and additional monitoring would be needed. If the project owner, please provide a mechanism that ensures an objective evaluation of need.

**Response:** A qualified biologist will document the effectiveness of the raven prevention measures deemed necessary in the Raven Monitoring Plan (still under agency review). If they are deemed to be inadequate after a sufficient period of monitoring, adaptive measures and additional monitoring will be implemented as determined by the qualified biologist in consultation with the agencies.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 48:** Please provide the survey methods that will be used to adequately identify Project impacts to burrowing owls.

**Response:** Protocol surveys were determined to be unnecessary due to the extensive coverage provided by other focused surveys conducted onsite during 2007 and 2008. No burrowing owls were observed onsite. Three potential burrows observed onsite were not active. Pre-construction surveys will be conducted and any potential burrows will be scoped, and if unoccupied, will be collapsed within 30 days of planned ground disturbance during the non-breeding season. Any owls encountered during clearance surveys will be passively excluded from the area of disturbance. A biological construction monitor will search for nesting owls in areas adjacent to active construction twice monthly during the breeding season. This level of monitoring is consistent with established CDFG protocols for burrowing owl.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 49:** Please discuss how the proposed pre-construction survey compares to the established Burrowing Owl Consortium survey protocol in identifying occupied burrows and territories, and the need for avoidance or passive relocation.

**Response:** Pre-construction surveys will follow the Burrowing Owl Consortium survey protocol. Any potential burrows observed will be monitored, scoped, and if deemed unoccupied, collapsed within 30 days of planned ground disturbance during the non-breeding season. If owls are observed within construction areas, they will be passively excluded during the non-breeding season. A biological construction monitor will search for nesting owls in areas adjacent to active construction twice monthly during the breeding season.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 50:** Please discuss whether the Applicant will follow all mitigation guidelines established by the California Burrowing Owl Consortium and adopted by the CDFG.

**Response:** No owls were observed onsite. Any owls observed during pre-construction surveys will be passively relocated following the California Burrowing Owl Consortium guidelines. Compensatory mitigation for flat-tailed horned lizard would also mitigate for owl habitat impacts if owls are detected during pre-construction surveys.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 51:** Please provide the written report required of the California Burrowing Owl Consortium and/or CDFG mitigation guidelines.

**Response:** No burrowing owls were detected onsite during extensive field surveys. No separate written report is necessary since the surveys are documented in the BTR that has been provided to the agencies.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 52:** In accordance with CDFG mitigation guidelines, please provide a burrowing owl mitigation plan that includes a plan for offsetting loss to burrowing owl foraging and burrow habitat. In accordance with CDFG guidelines, discuss the plan for providing funding for long-term management and monitoring of the protected lands.

**Response:** No burrowing owl mitigation plan is necessary because no burrowing owls have been documented onsite. Habitat onsite is only marginally suitable for owls and the majority of burrowing owls in the Imperial Valley occur along irrigation canals near agricultural fields east of the site. Compensatory mitigation for flat-tailed horned lizard would also mitigate for owl habitat impacts if owls are detected during pre-construction surveys.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 53:** Please clarify the months in which both initial and routine vegetation clearing activities will be conducted.

**Response:** Where practicable, vegetation clearing will occur outside of the bird breeding period (August 1 through January 31). If any vegetation needs to be cleared outside that period, nest surveys will be conducted and any active nests will be avoided.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 54:** Please provide a discussion of how the Project will comply with the Migratory Bird Treaty Act.

**Response:** The Project will avoid “take” of migratory birds to the maximum extent practicable. Initial vegetation clearance will occur outside of the breeding season (August 1 through January 31), where practicable. If any vegetation needs to be cleared outside that period, nest surveys will be conducted and any active nests will be avoided.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 55:** Please provide information on any bird nests that were detected during Project surveys.

**Response:** Bird nests were occasionally encountered during field surveys, either in shrubs or on the ground. Most nests were inactive. Active nests that were identified onsite include house finch, lesser nighthawk, and mourning dove.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 56:** Please clarify when site clearing activities will occur in areas having potential breeding habitat for LeConte's thrasher, loggerhead shrike, and California horned lark.

**Response:** Initial vegetation clearance will occur outside of the breeding season (August through January), where practicable. If any vegetation needs to be cleared outside that period, nest surveys will be conducted and any active nests will be avoided.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 57:**

Please clarify the intended meaning of the AFC statement that “site clearing activities will be conducted during the non-breeding season within limited areas that would constitute only a very small portion of a bird territory or home range.” Specifically, is the AFC indicating: (1) clearing may occur during the breeding season but only in very small areas; or (2) clearing activities will only impact small portions of territories or home ranges? If the former, please quantify clearing activities that will occur given the AFC indicates territories ( or home ranges) of concern are as small as four acres (for the horned lark). If the latter, please provide scientific support for the conclusion that the territories (or home ranges) of the three species identified can be reduced without affecting survivorship or nesting success.

**Response:**

Both of the above statements are correct. Initial vegetation clearance will occur outside of the breeding season (August 1 through January 31). If any vegetation needs to be cleared outside that period, nest surveys will be conducted and any active nests will be avoided. Vegetation clearing during the bird breeding season will likely be small in area.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 58:** Please provide the calculations that were used to derive carrying capacity numbers provided in the AFC.

**Response:** Estimates were based on documented home ranges of each species, and the perceived relative abundance documented by the Project field biologists. The entire site may not be suitable for a given species so capacity would be less for some species due to low habitat suitability.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 59:** Please provide additional information on the methods used to determine “perceived” relative abundance.

**Response:** Field biologists reported their perception of abundance based on the frequency of observation of each species. Abundant species generally are flocking species or those encountered throughout the site. Uncommon species typically were species encountered only a few times during the two spring/summer field seasons.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 60:** Relative abundance can be used to make comparisons between time periods, species, or areas. Please clarify how the term is being applied in the AFC.

**Response:** See the response to Data Request 59.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 61:** Please provide context to the information provided in the AFC by discussing the relationship among the carrying capacity numbers, site (habitat) quality, and the relative significance the Project will have on regional populations.

**Response:** The USFWS requested the information so that it could to be used in their regional planning program. The site is not especially notable in terms of bird diversity or abundance. More pristine sites of comparable size and similar habitat characteristics south of I-8 likely support higher levels of bird diversity and abundance.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 62:** Please provide an assessment of how regionally available habitat for the species identified will be impacted, and the impacts the Project will have on critical factors necessary for a species to survive and reproduce and successfully (at both the local and regional scale).

**Response:** The impact assessment is focused on species of special management concern. Non-sensitive species are well distributed throughout the desert region and are not deemed to be significantly affected by the proposed Project at both project specific and cumulative levels of analysis.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 63:** Please provide an assessment of potential Project impacts on the Colorado Desert fringe-toed lizard.

**Response:** There is no suitable soft, sandy dune habitat for fringe-toed lizard onsite and this species was not observed during extensive field surveys. No impacts to this species are expected.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 64:** Please discuss any proposed mitigation for Project impacts on the Colorado Desert fringe-toed lizard.

**Response:** There is no suitable soft, sandy dune habitat for the fringe-toed lizard onsite and this species was not observed during extensive field surveys. No species-specific mitigation is necessary.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 65:** Please provide any scientific data supporting the conclusions that special-status species known to occur adjacent to the Project site will become accustomed to, and not adversely affected by, Project noise.

**Response: Effects of Noise on Wildlife**

Human-generated noise is known to affect animals in a range of ways, from annoyance, to chronic stress, to hearing loss. Noise may directly affect reproductive physiology or energetic consumption as individuals incur energetic costs or lose mating or foraging opportunities by repeatedly reacting to or avoiding noise. Animals may also be forced to retreat from favorable habitat in order to avoid adverse anthropogenic noise levels. Though the direct effects of noise on wildlife may be the most obvious, noise may also have indirect effects on population dynamics through changes in habitat use, courtship and mating, reproduction and parental care, and possibly migration patterns. Excessive noise may also affect mortality rates of adults by causing hearing loss, a serious hazard in predator-prey interactions. Other effects of noise on wildlife are likely to be subtler, such as those affecting heart or communication. In species that rely on acoustic communication, anthropogenic noise may adversely affect individual behavior by making signal detection difficult and thus altering the dynamic interaction between the producers and perceivers of communicative signals.

It cannot always be assumed that human-generated noise will necessarily have a negative effect. One reason is that, although natural environments can be quiet (e.g. low 20's dBA in desert, Brattstrom and Bondello 1983), natural noise is part of the natural world (Ryan and Brenowitz 1985) and adaptations to a noisy existence have evolved in selected situations. For instance, certain species of frogs avoid vocalizing during loud calling by cicadas (Páez, et al. 1993). Similar avoidance of acoustic interference is found in songbirds (Popp 1989). Certain species have been found successfully living adjacent to chronically noisy sites such major highways (Famarlaro and Newman 1998).

In addition, habituation of animals to their environment also is a significant factor in assessing impacts of noise. The definition of habituation is "the elimination of the organism's response to often recurring, biologically irrelevant stimuli without impairment of its reaction to others". Habituation is ubiquitous in the animal kingdom (Peeke and Petrinovich 1984). No study takes place without subjects habituating to their natural or experimental environments. More predictable sources of disturbance can lead to greater apparent habituation in field situations than less predictable ones. Similar noise-producing activities occurring in the same habitat at frequent or predictable intervals may affect locally-breeding wildlife less than less-frequent or less-predictable activities.

**Hearing Abilities**

The frequency ranges and sensitivities of various groups of wildlife can be summarized as:

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- Mammals 150 kHz to < 10 Hz ; sensitivity to 6-20 dB
- Birds (more uniform than mammals) 100 Hz to 8 kHz; sensitivity at 0-10 dB
- Reptiles (poorer than birds) 50 Hz to 2 kHz; sensitivity at 40-50 dB
- Amphibians 100 Hz to 2 kHz; sensitivity from 10-60 dB

**Applicable Criteria and Background**

There are no federal, state, or local applicable construction noise exposure criteria for wildlife. The Federal Railroad Administration (FRA) has adopted a noise exposure criterion of 100 dBA SEL for high speed rail noise (FRA 2005). However, the characteristics of high speed rail noise are very different from construction noise; therefore, this criterion is not applicable.

The Draft Comprehensive Species Management Plan for the least Bell's vireo evaluated the potential for masking of least Bell's vireo (*Vireo bellii pusillus*) song by traffic noise and recommended that continuous noise levels above 60 dBA  $L_{eq}$  within habitat areas may affect the suitability of habitat use by least Bell's vireo (SANDAG 1988). Since then, many regulatory agencies recommend the use of 60 dBA  $L_{eq}$  hourly levels to be considered a significant impact for sensitive bird species at the edge of suitable habitat. In the absence of appropriate criteria, the 60 dBA  $L_{eq}$  hourly was used below to determine noise impacts on wildlife. However, there are no approved noise impact standards or criteria and that the Project Applicant will work closely with the BLM and CEC to determine what is appropriate noise levels may be generated by the project and the potential effects it might have on wildlife.

**Wildlife Species of Concern**

Wildlife species that potentially would be sensitive receptors of noise include flat-tailed horned lizard (FTHL), burrowing owl, Le Conte's thrasher, loggerhead shrike, and bighorn sheep.

**Construction Noise Impact Assessment**

The proposed project consists of installation roads, buildings and SunCatcher dishes throughout the project site. SunCatcher installation would be in 18 MW blocks within 92-acre units (a 1000' x 4000' area) over a 4-month period. Expected noise-producing types of construction equipment that would be used within each block are shown in Table 1.

Construction activities associated with the project would result in a short-term, temporary increase in the ambient noise level. Noise would result from operation of the construction equipment. The increase in noise level would be primarily experienced close to the noise source. The magnitude of the impact would depend on the type of construction activity, noise level generated by various pieces of construction equipment, duration of the construction phase, and distance between the noise source and receiver.

Table 1 shows maximum expected noise levels generated by individual pieces of construction equipment for each identified type, and they fall within the typical range of approximately 65 dBA to 95 dBA at 50 feet from the source (U.S. Environmental Protection Agency [U.S. EPA], 1971).

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**Table 1**  
**Expected Noise Levels for 18MW Suncatcher SunCatcher Block**  
**Construction Equipment**

Equipment Type	Individual Equipment Base SPL at 50' (L <sub>max</sub> dBA)	Quantity of Equipment per Month *			
		1	2	3	4
PLC Trencher	87	1			
Backhoe	87	2		6	
Compactor	87	2	1	1	1
Cable/Rigging Truck	90	1			
Flatbed Truck w. Boom	90	1	3	6	
Pickup Truck	87	1	3		4
Dozer	90	1			
Grader	88	1	1	1	1
Loader	90	1			
Dump Truck	90	1			
Vibratory Machine	77		3		
Fuel/Service Truck	89		1		
Crane	90		3		2
Maxi Sneeker	86			6	
Skid Steer	82			5	
Telehandler	87				4
SES Field Service Truck	90				8
Track Transporter	90				2

\* based on revised construction equipment roster as of March 19, 2009.

Acoustical calculations were performed to estimate the 60 dB L<sub>eq</sub> hourly noise level from construction activities. Noise from the activity was assumed to have point source acoustical characteristics. Generally, a point source sound decays at a rate of 6 dB per doubling of distance from the source. This is a logarithmic relationship describing the acoustical spreading of a pure, undisturbed spherical wave in air. The rule applies to the propagation of sound waves with no ground interaction. The calculations are based on the formula below (Harris, 1991):

$$SPL_2 = SPL_1 - 20 \log \left( \frac{d_2}{d_1} \right), \text{ where:}$$

SPL<sub>1</sub> = known sound level,

SPL<sub>2</sub> = desired sound level,

d<sub>1</sub> = known distance, and

d<sub>2</sub> = desired distance.

Attenuation due to air absorption at a rate of approximately 1 dBA per 1000' of sound propagation, and ground absorption of up to 3 dBA (depending on

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distance and ground conditions) was also included and reasonably consistent with industry-accepted standardized algorithms (ISO 9613-2:1996[E]).

For a single piece of equipment, such as a stationary dozer located at the boundary of a construction zone, the distance to the 60 dBA  $L_{eq}$  was calculated to be 975 feet. Based on these calculations, there is a potential that a sensitive receptor occurring within the radius of 975 feet from intense construction activities could be disturbed by construction noise. This radius would encompass about 68 acres, with the actual amount of habitat affected beyond the active construction area ranging from 17 to 34 acres. For areas cleared prior to construction, leaving 74-foot wide strips of habitat, this range of potential noise impacted vegetation would be reduced to a third (6 to 12 acres).

For multiple equipment that are simultaneously active during the loudest fourth month as presented in Table 1, and assuming variable equipment physical locations can conservatively share an identical source location at the geographic center of the 18 MW block area, the radius is predicted to be 3,000 feet. This radius (from the block center, not its boundary) would encompass about 649 acres, with 557 acres as the actual amount of habitat affected beyond the active construction area. For areas cleared prior to construction, leaving 74-foot wide strips of habitat, this range of potential noise impacted vegetation would be reduced to a third (i.e., 186 acres). During the quietest month (1), the radius to 60 dBA  $L_{eq}$  is predicted to be only 2400 feet, resulting in potential noise impacted area adjacent to construction of 322 acres. With preconstruction vegetation clearing, the amount of vegetation exposed to noise is one third of this value, 107 acres.

However, it is important to note that construction typically occurs intermittently over the course of an hour or day, so sound levels will vary greatly over those time periods, depending on the ongoing activity. The amount of suitable habitat would be reduced due to the pre-construction clearing of vegetation accomplished during the bird non-breeding season. Species would likely avoid the area during construction activities due to the reduced vegetation and the physical disturbance of people and equipment, thereby reducing the potential for noise impacts due to the absence of the potential sensitive receptor. Therefore, it is likely that noise from construction may result in a temporary displacement of some wildlife over the course of the construction period.

FTHL would be translocated from disturbance areas prior to initiation of construction and a biological monitor would be present to relocate any individuals detected during construction. Likewise, burrowing owl, if present, would also be passively relocated prior to initiation of disturbance activities. Potential burrowing owl burrows would be checked for occupancy and unoccupied burrows would be collapsed during the non-breeding season. Le Conte's thrasher, loggerhead shrike, and other bird species of concern that may nest in shrubs or on the ground, would likely be displaced away from active construction sites where the hourly  $L_{eq}$  may chronically exceed 60 dB during the breeding season. Bighorn sheep, if present, would avoid active construction sites.

Construction noise impacts to common wildlife and non-listed species of concern is considered less than significant because of the temporary nature of the impact and expected low effect on species demography. Temporary noise barriers having sufficient height with respect to grade, composed of properly

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assembled solid materials, and appropriately placed to reduce the noise levels at the burrow may be appropriate if nesting burrowing owls are detected within 250 feet of active construction (e.g., a single dozer or other large piece of equipment from Table 1) and the noise levels at the burrow entrance exceed 60 dB  $L_{eq}$  hourly. Currently, no burrowing owls are known to be present on the project site.

**Construction Noise Minimization Measures**

All noise-producing project equipment, and vehicles using internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.

The use of noise-producing signals, including horns, whistles, electronic alarms, and sirens and bells, will be for safety warning purposes only. If nesting burrowing owls are detected within 250 feet of active construction, a temporary noise barrier shall be appropriately placed to reduce the noise levels at the burrow.

**Operation Noise Impact Assessment**

After construction is completed, the project will have operating SunCatchers, power transformers, collector GSUs, and mobile maintenance/service trucks creating noise over the entire project area. Aggregate operational noise from the first three of these (i.e., the ones having fixed locations) is expected to range, depending on time of day, from 63-70 dBA hourly  $L_{eq}$  over re-vegetated strips of land between rows of SunCatchers. The noise from service trucks will depend on frequency of pass-by and distance with respect to a receiver location. For instance, a pick-up truck (85 dBA at 50') passing a sensitive receptor 4 times in an hour, with each pass-by taking no more than 30 seconds and at a distance of no closer than 150', would result in an hourly  $L_{eq}$  of less than 60 dBA. Operational noise levels would exceed the 60 dBA  $L_{eq}$  impact threshold for the vegetation that is left undisturbed post-construction. This includes about 177 acres of vegetation along the eastern boundary of the site that is not currently impacted by highway noise. The use of noise impacted vegetation by wildlife will depend on each species tolerance to noise and their ability to adapt to the louder noise environment. AFC Section 5.6.2.1 concluded that "only common species with small vegetated area requirements (e.g., house finch [*Carpodacus mexicanus*], lizards, and snakes) are expected to continue to utilize these strips of vegetation." The added effect of increased noise does not substantially change this conclusion.

**References**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 66:** Please provide the mitigation measures for construction noise that cannot be found in Section 5.6.4 of the AFC, as indicated.

**Response:** All noise-producing Project equipment, and vehicles using internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed “package” equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.

The use of noise-producing signals, including horns, whistles, electronic alarms, and sirens and bells, will be for safety warning purposes only.

If nesting burrowing owls are detected within 250 feet of active construction, a temporary noise barrier shall be appropriately placed to reduce the noise levels at the burrow.

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 67:** Please discuss any Project-specific design measures that will be implemented to mitigate potential avian collision hazards with Project structures and the proposed transmission line.

**Response:** The transmission line will be constructed parallel to an existing t-line. Avian collision avoidance measures (e.g., bird flight diverter devices) can be implemented near Project structures and/or the transmission line if required by the CEC or BLM.

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 68:** Please clarify whether Suncatchers will reflect the surrounding landscape (especially when the sun is low on the horizon). If Suncatchers will reflect the landscape, discuss the potential for bird strikes (i.e., similar to what occurs with reflective windows) and any mitigation to reduce strike hazard.

**Response:** Due to the curvature of the dishes, individual SunCatchers present a very distorted view of the horizon. The extent of the horizon visible depends on the angle of the mirrors.

Based on nearly 20 years of experience with dish systems at Sandia National Laboratories and various other locations, bird strikes have not been a problem (See Data Response 86). Not one accident involving a bird collision with the dish hardware has been recorded throughout the entire dish test program.

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 69:** Please provide a discussion of the Project's requirement to amend the California Desert Conservation Area Plan.

**Response:** Please review Section 5.9.3 of the AFC for a complete discussion of this issue.

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 70:** Please provide a discussion of the Project's compliance with any habitat management plan(s) prepared for site (as directed by FTHL Rangewide Management Strategy for lands adjacent to ACECs).

**Response:** The proposed Project site is separated from the Desert Wildlife Management Area (DWMA) by an interstate freeway. The transmission line is within a designated ROW for this land use. The Project does not conflict with any habitat management plan.

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 71:** Please provide a discussion of how the Applicant will comply with the latest version of the FTHL Rangewide Management Strategy (i.e., provisions not present in the 1997 version). Please provide a mitigation and compensation plan that complies with guidelines presented in the 2003 Strategy.

**Response:** The 2003 amendment was used during the preparation of the AFC and BTR, but this reference was incorrectly cited. Mitigation and compensation is still being determined by the agencies. Once mitigation measures have been determined, a mitigation and compensation plan can be developed and implemented.

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 72:** Please discuss any anticipated indirect impacts of the Project on the bighorn sheep.

**Response:** Bighorn sheep are not expected to significantly use the site. The site is surrounded by busy highways and a railroad and is actively used by OHVs. The site presents a potential habitat sink or 'dead end', with mostly unsuitable habitat and ongoing human disturbance (OHV activity). Closing the area off could potentially benefit bighorn sheep because it would force the sheep to use safer movement routes associated with designated critical habitat that occurs approximately 5 miles west of the Project site. Bighorn sheep (5) were detected onsite in March 2009 in the western half of the site (see the response to Data Request 44).

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 73:** Please provide information on the abundance and distribution of *Pluchea sericea* and *Tamarix* spp. within the site and discuss what actions were taken to determine whether their presence was indicative of a wetland feature.

**Response:** A stand of *Pluchea sericea* with mixed *Tamarix* was detected near the Main Canal along the proposed offsite water line route between S-80 and the railroad tracks northeast of the Project site. No wetland plant species were detected on the Solar Two project site. The final route for the waterline has not been determined and additional field surveys are currently ongoing.

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 74:** Some species of *Eragrostis* and *Lepidium* are classified as wetland indicator species in California. Please discuss why plants detected on-site and within these two genera were not identified to the species level (i.e., they were only identified to the genus level) and how they were determined to be upland indicator species.

**Response:** Hydrologic conditions required to support wetland vegetation are absent from the site. The above plants were only identified to genus because distinguishing characteristics needed to identify to species were not present at the time of observation. They were detected within creosote bush scrub habitat.

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**08-AFC-5**

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 75:** Please provide the Wetland Delineation Report and results of the USACE verification.

**Response:** The jurisdictional waters determination report was submitted to USACE for review on February 26, 2009. The report was docketed with BLM and CEC on March 20, 2009. USACE verification is in process.

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 76:** Please provide wetland delineations for all off-site areas to be impacted by the project.

**Response:** A revised proposed waterline route will be field surveyed in April/May 2009 and results will be provided to the CEC and BLM. Only Waters of the State are present onsite and within the offsite transmission line route. No vegetated wetlands are associated with this Project.

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 77:** Please provide a copy of all correspondence with the Army Corps regarding potential wetlands in these off-site areas.

**Response:** See response to Data Request 76. Correspondence with the USACE is provided as attachment BIO-3 to this response.



Patrick Mock/SanDiego/URSCorp

10/02/2008 11:10 AM

To "Monarres, Laurie A SPL"

<Laurie.A.Monarres@usace.army.mil>

cc Corinne\_Lytle@URSCorp.com,  
JNishida@energy.state.ca.us., Cheryl  
Rustin/SanDiego/URSCorp@URSCorp

bcc

Subject Fw: SES Solar Two: DA needs for Biological Resources



Rainfall Solar 2.pdf



Figure 5.5-2 Groundwater Basins annotated.pdf



More Solar Two wash photos.pdf



Figure 5.5-3 FEMA 100YR Flood Zone.pdf

Laurie:

Attached are figures from the water resources section of the AFC document. Additional photos of the washes are also provided.

In typical years, all of the flows infiltrate into the groundwater basin. Most of the flows from the Solar Two site are concentrated by the highways and railroad tracks and then sheet flows north of SR-80 and the railroad, where the water infiltrates before getting to the canals. Only during very extreme storm events (100+ year events) would any water make it into the IID canals east and northeast of the site. The berms associated with IID canals prevent stormwater from entering into the canals in most years.

Long term average annual rainfall is 2.91 inches.

The predicted 24 hr 100-year event is 3.46 inches (119% of typical yearly total).

I think this situation merits the SWANCC review. The washes are maintained by irregular ephemeral flood flows that do not qualify as OHWM.

Pat

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----- Forwarded by Patrick Mock/SanDiego/URSCorp on 10/02/2008 09:58 AM -----



Patrick Mock/SanDiego/URSCorp

09/30/2008 11:31 AM

To "Monarres, Laurie A SPL"

<Laurie.A.Monarres@usace.army.mil>

cc Corinne\_Lytle@URSCorp.com,  
JNishida@energy.state.ca.us., Cheryl



Rustin/SanDiego/URSCorp@URSCorp  
Subject RE: SES Solar Two: DA needs for Biological Resources 



Solar Two Wash photos.doc solar\_2\_site\_watersheds\_11x17.pdf

Requested photos of the washes onsite. The attached watershed map does not indicate any obvious connections to the Salton Sea.

Typical annual precipitation in the vicinity (El Centro) is about 3 inches per year. This suggests that the washes onsite are maintained by irregular flood flows rather than annual rains and typical OHWM are likely lacking. If there is a connection to the Salton Sea, water flowing through the site would only reach the Sea in extreme years of heavy rainfall. Typically the water will infiltrate via sheet flow before reaching any USACE jurisdictional channel.

Please reply as to whether the proposed project will require a 404 permit process.

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"Monarres, Laurie A SPL" <Laurie.A.Monarres@usace.army.mil>



"Monarres, Laurie A SPL"  
<Laurie.A.Monarres@usace.army.mil>

09/29/2008 07:50 AM

To <Patrick\_Mock@URSCorp.com>  
cc <JNishida@energy.state.ca.us>,  
<Corinne\_Lytle@URSCorp.com>  
Subject RE: SES Solar Two: DA needs for Biological Resources

Hi Patrick,

Do the waters in question indeed eventually connect to the Salton Sea (e.g. via canals)? Do you have some representative photos of the washes?

thanks,  
Laurie

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Laurie Ikuta Monarres  
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---

**From:** Patrick\_Mock@URSCorp.com [mailto:Patrick\_Mock@URSCorp.com]  
**Sent:** Friday, September 26, 2008 8:31 AM  
**To:** Monarres, Laurie A SPL  
**Cc:** JNishida@energy.state.ca.us; Corinne\_Lytle@URSCorp.com  
**Subject:** Fw: SES Solar Two: DA needs for Biological Resources

Ms. Monarres,

Please reply ASAP so we can respond to CEC's data request.

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Joy Nishida (see email below) requested that I contact the USACE regarding potential permit requirements for the SES Solar Two Power Project located west of El Centro, north of Interstate 8. In the AFC document prepared for the CEC review, URS concluded that the flood flow channels were potential Waters of the State, but not federal jurisdictional waters due to a lack of connection to a navigable waters. A figure from the AFC document is attached and the relevant text is provided below.

Please provide direction as to whether a USACE regulatory process may be required.

The AFC document is at the following website:

<http://www.energy.ca.gov/sitingcases/solartwo/documents/applicant/afc/index.php>

Please reply with any questions or additional information that you may require.

## Jurisdictional Delineation Results

A number of well-defined washes cross the Project site and off-site transmission line. Several of these washes were created by runoff from off-site flows that are directed by culverts under I-8. Other smaller washes convey on-site runoff and eventually connect to the larger washes. Several areas of the site, including much of the northeastern corner, exhibit sheet-flow conditions in areas where well-defined natural channels do not occur. The majority of the runoff crossing the site flows from south and west, eventually reaching the railroad tracks along the northern Project boundary. Washes that reach the railroad tracks then flow under existing trestles or follow along the railroad berm towards the east. The majority of the larger washes on-site have been degraded by extensive ORV usage.

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*(See attached file: Figure 3 - Potential Waters of the State.pdf)*

Patrick J. Mock, PhD, CSE, CWB®  
Senior Project Manager  
Principal Scientist  
URS Corporation  
1615 Murray Canyon Road, Suite 1000  
San Diego, CA 92108  
619-294-9400  
619-293-7920 Fax  
619-888-6159 Cell

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----- Forwarded by Patrick Mock/SanDiego/URSCorp on 09/25/2008 09:46 AM -----

To<Patrick\_Mock@URSCorp.com>

cc

Subject: Fwd: SES  
Solar Two:  
DA needs for  
Biological  
Resources

Pat,

As the biologist assigned to this project, Rick York directed me to answer your questions. The reason to contact the agencies is to discuss what the project is and what the possible impacts are. From this information, the agencies can give you an idea of what permits may be required. The Energy Commission requires contact with various agencies for data adequacy, even if you believe these agencies may not have jurisdiction over any aspect of the Project.

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I hope this answers your questions.

Joy

----- Forwarded by Patrick Mock/SanDiego/URSCorp on 09/26/2008 08:26 AM -----

**"Orourke, Therese SPL"**  
<Therese.Orourke@usace.army.mil>

09/26/2008 07:57 AM

To<Patrick\_Mock@URSCorp.com>

cc"Monarres, Laurie A SPL"  
<Laurie.A.Monarres@usace.army.mil>

Subject: RE: SES Solar Two: DA needs for  
Biological Resources

Pat - Please contact Laurie Monarres. I have assigned her as the Project Manager.

---

**From:** Patrick\_Mock@URSCorp.com [[mailto:Patrick\\_Mock@URSCorp.com](mailto:Patrick_Mock@URSCorp.com)]

**Sent:** Thursday, September 25, 2008 2:29 PM  
**To:** Smith, Robert R SPL  
**Cc:** Orourke, Therese SPL  
**Subject:** RE: SES Solar Two: DA needs for Biological Resources

Thank you Robert.

Therese,

Please reply ASAP so we can inform the CEC as to any USACE permit requirements.

Pat

Patrick J. Mock, PhD, CSE, CWB®  
Senior Project Manager  
Principal Scientist  
URS Corporation  
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▼ " height="16">"Smith, Robert R SPL" <Robert.R.Smith@usace.army.mil>

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To<Patrick\_Mock@URSCorp.com>  
cc"Orourke, Therese SPL"  
<Therese.Orourke@usace.army.mil  
>  
SubjecRE: SES Solar Two: DA needs for  
tBiological Resources

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5/20  
08  
12:5  
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PM

You should contact our new Section Chief regarding assignment of this action. Her name is Therese Orouke at 760 602-4830.

Robert Revo Smith Jr., P.E.  
Environmental Engineer/Civil Engineer  
Regulatory Project Manager San Diego Field Office  
6010 Hidden Valley Rd, Suite 105  
San Diego, CA 92011-4213  
(760) 602-4831  
fax (858) 674-5388  
email robert.r.smith@usace.army.mil

---

**From:** Patrick\_Mock@URSCorp.com [[mailto:Patrick\\_Mock@URSCorp.com](mailto:Patrick_Mock@URSCorp.com)]  
**Sent:** Thursday, September 25, 2008 10:37 AM  
**To:** Smith, Robert R SPL; lori.minares@usace.army.mil  
**Cc:** Corinne\_Lytle@URSCorp.com; Joy Nishida  
**Subject:** Fw: SES Solar Two: DA needs for Biological Resources

Mr. Smith and Ms. Minares:

Joy Nishida (see email below) requested that I contact the USACE regarding potential permit requirements for the SES Solar Two Power Project located west of El Centro, north of Interstate 8. In the AFC document prepared for the CEC review, URS concluded that the flood flow channels were potential Waters of the State, but not federal jurisdictional waters due to a lack of connection to a navigable waters. A figure from the AFC document is attached and the relevant text is provided below.

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Please reply with any questions or additional information that you may require.

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----- Forwarded by Patrick Mock/SanDiego/URSCorp on 09/25/2008 09:46 AM -----

To<Patrick\_Mock@URSCorp.com>

cc

Subject: Fwd: SES  
tSolar Two:  
DA needs for  
Biological  
Resources

Pat,

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I hope this answers your questions.

Joy

Joy Nishida  
California Energy Commission  
Siting, Transmission, and Environmental Protection Division  
Biological Resources Unit  
1516 Ninth Street, MS 40  
Sacramento, CA 95814-5512

(916) 654-3947

JNishida@energy.state.ca.us

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VE SW.jpg 1996-06-15 S2 East of Dunaway Road.jpg 2002-05-27 S2 East of Dunaway Road.jpg



2003-01-24 S2 East of Dunaway Road.jpg 2003-07-05 S2 East of Dunaway Road.jpg 2005-07-21 S2 East of Dunaway Road.jpg



2006-01-11 S2 East of Dunaway Road.jpg 2009-03-12 S2 East of Dunaway Road HRes Composite MS VE.jpg VE NE.jpg



VE NW.jpg VE SE.jpg



Patrick Mock/SanDiego/URSCorp

09/30/2008 11:31 AM

To "Monarres, Laurie A SPL"  
<Laurie.A.Monarres@usace.army.mil>  
cc Corinne\_Lytle@URSCorp.com,  
JNishida@energy.state.ca.us., Cheryl  
Rustin/SanDiego/URSCorp@URSCorp

bcc

Subject RE: SES Solar Two: DA needs for Biological Resources 



Solar Two Wash photos.doc solar\_2\_site\_watersheds\_11x17.pdf

Requested photos of the washes onsite. The attached watershed map does not indicate any obvious connections to the Salton Sea.

Typical annual precipitation in the vicinity (El Centro) is about 3 inches per year. This suggests that the washes onsite are maintained by irregular flood flows rather than annual rains and typical OHWM are likely lacking. If there is a connection to the Salton Sea, water flowing through the site would only reach the Sea in extreme years of heavy rainfall. Typically the water will infiltrate via sheet flow before reaching any USACE jurisdictional channel.

Please reply as to whether the proposed project will require a 404 permit process.

Patrick J. Mock, PhD, CSE, CWB®  
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Principal Scientist  
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"Monarres, Laurie A SPL" <Laurie.A.Monarres@usace.army.mil>



"Monarres, Laurie A SPL"  
<Laurie.A.Monarres@usace.army.mil>  
09/29/2008 07:50 AM

To <Patrick\_Mock@URSCorp.com>  
cc <JNishida@energy.state.ca.us>,  
<Corinne\_Lytle@URSCorp.com>  
Subject RE: SES Solar Two: DA needs for Biological Resources

Hi Patrick,

Do the waters in question indeed eventually connect to the Salton Sea (e.g. via canals)? Do you have some representative photos of the washes?

thanks,  
Laurie

-----

Laurie Ikuta Monarres  
U.S. Army Corps of Engineers Regulatory Division  
6010 Hidden Valley Road, Suite 105  
Carlsbad, CA 92011  
(760) 602-4832  
Laurie.A.Monarres@usace.army.mil

---

**From:** Patrick\_Mock@URSCorp.com [mailto:Patrick\_Mock@URSCorp.com]  
**Sent:** Friday, September 26, 2008 8:31 AM  
**To:** Monarres, Laurie A SPL  
**Cc:** JNishida@energy.state.ca.us; Corinne\_Lytle@URSCorp.com  
**Subject:** Fw: SES Solar Two: DA needs for Biological Resources

Ms. Monarres,

Please reply ASAP so we can respond to CEC's data request.

Patrick J. Mock, PhD, CSE, CWB®  
Senior Project Manager  
Principal Scientist  
URS Corporation  
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San Diego, CA 92108  
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----- Forwarded by Patrick Mock/SanDiego/URSCorp on 09/25/2008 09:46 AM -----

To<Patrick\_Mock  
@URSCorp.co  
m>

cc

Subject: Fwd: SES  
Solar Two: DA  
needs for  
Biological  
Resources

Pat,

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Joy

----- Forwarded by Patrick Mock/SanDiego/URSCorp on 09/26/2008 08:26 AM -----

**"Orourke, Therese SPL"**  
<Therese.Orourke@usace.army.mil>

09/26/2008 07:57 AM

To<Patrick\_Mock@URSCorp.com>

cc"Monarres, Laurie A SPL"  
<Laurie.A.Monarres@usace.army.mil>

Subject: RE: SES Solar Two: DA needs for  
Biological Resources

Pat - Please contact Laurie Monarres. I have assigned her as the Project Manager.

---

**From:** Patrick\_Mock@URSCorp.com [[mailto:Patrick\\_Mock@URSCorp.com](mailto:Patrick_Mock@URSCorp.com)]  
**Sent:** Thursday, September 25, 2008 2:29 PM  
**To:** Smith, Robert R SPL  
**Cc:** Orourke, Therese SPL  
**Subject:** RE: SES Solar Two: DA needs for Biological Resources

Thank you Robert.

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▼ " height="16">"Smith, Robert R SPL" <Robert.R.Smith@usace.army.mil>

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To<Patrick\_Mock@URSCorp.com>  
cc"Orourke, Therese SPL"  
<Therese.Orourke@usace.army.mil  
>  
SubjecRE: SES Solar Two: DA needs for  
tBiological Resources

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PM

You should contact our new Section Chief regarding assignment of this action. Her name is Therese Orouke at 760 602-4830.

Robert Revo Smith Jr., P.E.  
Environmental Engineer/Civil Engineer  
Regulatory Project Manager San Diego Field Office  
6010 Hidden Valley Rd, Suite 105  
San Diego, CA 92011-4213  
(760) 602-4831  
fax (858) 674-5388  
email robert.r.smith@usace.army.mil

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**Sent:** Thursday, September 25, 2008 10:37 AM  
**To:** Smith, Robert R SPL; lori.minares@usace.army.mil  
**Cc:** Corinne\_Lytle@URSCorp.com; Joy Nishida  
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cc

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I hope this answers your questions.

Joy

Joy Nishida  
California Energy Commission  
Siting, Transmission, and Environmental Protection Division  
Biological Resources Unit  
1516 Ninth Street, MS 40  
Sacramento, CA 95814-5512

(916) 654-3947

JNishida@energy.state.ca.us

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As per your request, I am resending my previous e-mail. Let me know if you have any other questions.

-----

Laurie Ikuta Monarres  
U.S. Army Corps of Engineers Regulatory Division  
6010 Hidden Valley Road, Suite 105  
Carlsbad, CA 92011  
(760) 602-4832  
Laurie.A.Monarres@usace.army.mil

-----Original Message-----

From: Monarres, Laurie A SPL  
Sent: Tuesday, March 10, 2009 11:01 AM  
To: 'Bill\_Magdych@URSCorp.com'  
Cc: Patrick\_Mock@URSCorp.com  
Subject: RE: SES Solar 2 NJD report - checking on status

Hi Bill,

I did indeed receive the report you submitted. Would it be possible for you to provide me with an electronic copy? That would help for faster coordination with the EPA and Corps HQ.

I am still in the process of reviewing it, but have a couple of information requests up front that would help to move things along. First, would you be able to provide any historic aerials of the project site and downstream area, particularly where the OHWM trails off? Currently, there is that odd patch of tamarisk and some possibly man-made ditches that indicate some past disturbance (perhaps agriculture?) has occurred and may be obscuring the downstream connection. Second, could you please try to piece together the history of that site and see if it was indeed used for ag at some point and when those detention basins were created? I will likely have some other follow-up questions as well, but it would be great if you could look into these pieces of the puzzle for me initially.

I will do my best to complete the JD in a timely manner once I have sufficient information to make a determination. Please feel free to contact me with any questions.

thanks,  
Laurie

-----

Laurie Ikuta Monarres  
U.S. Army Corps of Engineers Regulatory Division 6010 Hidden Valley Road,  
Suite 105 Carlsbad, CA 92011  
(760) 602-4832  
Laurie.A.Monarres@usace.army.mil

---

From: Bill\_Magdych@URSCorp.com [mailto:Bill\_Magdych@URSCorp.com]  
Sent: Tuesday, March 10, 2009 9:49 AM





"Monarres, Laurie A SPL"  
<Laurie.A.Monarres@usace.army.mil>  
09/29/2008 07:50 AM

To <Patrick\_Mock@URSCorp.com>  
cc <JNishida@energy.state.ca.us>, <Corinne\_Lytle@URSCorp.com>  
bcc

Subject RE: SES Solar Two: DA needs for Biological Resources

History:  This message has been replied to and forwarded.

Hi Patrick,

Do the waters in question indeed eventually connect to the Salton Sea (e.g. via canals)? Do you have some representative photos of the washes?

thanks,  
Laurie

-----

Laurie Ikuta Monarres  
U.S. Army Corps of Engineers Regulatory Division  
6010 Hidden Valley Road, Suite 105  
Carlsbad, CA 92011  
(760) 602-4832  
Laurie.A.Monarres@usace.army.mil

---

**From:** Patrick\_Mock@URSCorp.com [mailto:Patrick\_Mock@URSCorp.com]  
**Sent:** Friday, September 26, 2008 8:31 AM  
**To:** Monarres, Laurie A SPL  
**Cc:** JNishida@energy.state.ca.us; Corinne\_Lytle@URSCorp.com  
**Subject:** Fw: SES Solar Two: DA needs for Biological Resources

Ms. Monarres,

Please reply ASAP so we can respond to CEC's data request.

Patrick J. Mock, PhD, CSE, CWB®  
Senior Project Manager  
Principal Scientist  
URS Corporation  
1615 Murray Canyon Road, Suite 1000  
San Diego, CA 92108  
619-294-9400  
619-293-7920 Fax  
619-888-6159 Cell

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Joy Nishida (see email below) requested that I contact the USACE regarding potential permit requirements for the SES Solar Two Power Project located west of El Centro, north of Interstate 8. In the AFC document prepared for the CEC review, URS concluded that the flood flow channels were potential Waters of the State, but not federal jurisdictional waters due to a lack of connection to a navigable waters. A figure from the AFC document is attached and the relevant text is provided below.

Please provide direction as to whether a USACE regulatory process may be required.

The AFC document is at the following website:

<http://www.energy.ca.gov/sitingcases/solartwo/documents/applicant/afc/index.php>

Please reply with any questions or additional information that you may require.

## Jurisdictional Delineation Results

A number of well-defined washes cross the Project site and off-site transmission line. Several of these washes were created by runoff from off-site flows that are directed by culverts under I-8. Other smaller washes convey on-site runoff and eventually connect to the larger washes. Several areas of the site, including much of the northeastern corner, exhibit sheet-flow conditions in areas where well-defined natural channels do not occur. The majority of the runoff crossing the site flows from south and west, eventually reaching the railroad tracks along the northern Project boundary. Washes that reach the railroad tracks then flow under existing trestles or follow along the railroad berm towards the east. The majority of the larger washes on-site have been degraded by extensive ORV usage.

None of the washes that occur on-site or along the off-site transmission line connect to USACE-defined navigable waters. Therefore, none of the washes associated with the Project would be considered under federal jurisdiction. Several washes do, however, display defined bed and banks and may be considered Waters of the State under Section 1600 of the California Fish and Game Code. Because most of the public land on which the Project site occurs is administered by the BLM, it is at BLM's discretion as to whether or not a 1602 agreement would be required for this Project. Any state jurisdictional washes that occur within the privately owned parcels on-site would require 1602 agreement before any disturbance. A map illustrating the potential Waters of the State within the Project boundary and along the off-site transmission line and water line can be found on Figure 3, Potential Waters of the State.

*(See attached file: Figure 3 - Potential Waters of the State.pdf)*

Patrick J. Mock, PhD, CSE, CWB®  
Senior Project Manager  
Principal Scientist  
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----- Forwarded by Patrick Mock/SanDiego/URSCorp on 09/25/2008 09:46 AM -----

To<Patrick\_Mock  
@URSCorp.com  
>

cc

Subject: Fwd: SES  
tSolar Two: DA  
needs for  
Biological  
Resources

Pat,

As the biologist assigned to this project, Rick York directed me to answer your questions. The reason to contact the agencies is to discuss what the project is and what the possible impacts are. From this information, the agencies can give you an idea of what permits may be required. The Energy Commission requires contact with various agencies for data adequacy, even if you believe these agencies may not have jurisdiction over any aspect of the Project.

I don't have a contact for RWQCB, but for the USACE, you'll need to contact Lori Minares (760) 602-4832. She is somewhat familiar with the project and despite what you may believe regarding the jurisdictionality of the ephemeral washes, the AFC stated that the waters from the site drain to the Salton Sea, which is under Corps jurisdiction. You'll need to discuss the possibility of having to do a wetland delineation with the Corps.

The CDFG contact is Craig Weightman (760) 200-9158. If the Corps doesn't take jurisdiction of the ephemeral washes on the Project site, then it is under the jurisdiction of the State. According to Craig, even though the Project is on BLM land, you still may be required to get a Streambed Alteration Agreement with CDFG. You'll need to give these agencies a call and provide the Energy Commission a summary of what was discussed, who was contacted, and when this discussion took place. The agencies can get a copy of the AFC by contacting our Project Manager, Christopher Meyer.

I hope this answers your questions.

Joy

----- Forwarded by Patrick Mock/SanDiego/URSCorp on 09/26/2008 08:26 AM -----

**"Orourke, Therese SPL"**  
<Therese.Orourke@usace.army.mil>

To<Patrick\_Mock@URSCorp.com>

09/26/2008 07:57 AM

cc"Monarres, Laurie A SPL"  
<Laurie.A.Monarres@usace.army.mil>

Subject: RE: SES Solar Two: DA needs for  
Biological Resources

Pat - Please contact Laurie Monarres. I have assigned her as the Project Manager.

---

**From:** Patrick\_Mock@URSCorp.com [[mailto:Patrick\\_Mock@URSCorp.com](mailto:Patrick_Mock@URSCorp.com)]  
**Sent:** Thursday, September 25, 2008 2:29 PM  
**To:** Smith, Robert R SPL  
**Cc:** Orourke, Therese SPL  
**Subject:** RE: SES Solar Two: DA needs for Biological Resources

Thank you Robert.

Therese,

Please reply ASAP so we can inform the CEC as to any USACE permit requirements.

Pat

Patrick J. Mock, PhD, CSE, CWB®  
Senior Project Manager  
Principal Scientist  
URS Corporation  
1615 Murray Canyon Road, Suite 1000  
San Diego, CA 92108  
619-294-9400  
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▼ " height="16">"Smith, Robert R SPL" <Robert.R.Smith@usace.army.mil>

"Smith  
h,  
Rober To<Patrick\_Mock@URSCorp.com>  
t R  
SPL" cc"Orourke, Therese SPL"  
<Robert.R.Smith@usace.army.mil>  
<Therese.Orourke@usace.army.mil>  
l>  
Subject: RE: SES Solar Two: DA needs for  
Biological Resources  
@usa  
ce.ar  
my.m

il>

09/25/  
2008  
12:51  
PM

You should contact our new Section Chief regarding assignment of this action. Her name is Therese Oroureke at 760 602-4830.

Robert Revo Smith Jr., P.E.  
Environmental Engineer/Civil Engineer  
Regulatory Project Manager San Diego Field Office  
6010 Hidden Valley Rd, Suite 105  
San Diego, CA 92011-4213  
(760) 602-4831  
fax (858) 674-5388  
email robert.r.smith@usace.army.mil

---

**From:** Patrick\_Mock@URSCorp.com [[mailto:Patrick\\_Mock@URSCorp.com](mailto:Patrick_Mock@URSCorp.com)]  
**Sent:** Thursday, September 25, 2008 10:37 AM  
**To:** Smith, Robert R SPL; lori.minares@usace.army.mil  
**Cc:** Corinne\_Lytle@URSCorp.com; Joy Nishida  
**Subject:** Fw: SES Solar Two: DA needs for Biological Resources

Mr. Smith and Ms. Minares:

Joy Nishida (see email below) requested that I contact the USACE regarding potential permit requirements for the SES Solar Two Power Project located west of El Centro, north of Interstate 8. In the AFC document prepared for the CEC review, URS concluded that the flood flow channels were potential Waters of the State, but not federal jurisdictional waters due to a lack of connection to a navigable waters. A figure from the AFC document is attached and the relevant text is provided below.

Please provide direction as to whether a USACE regulatory process may be required.

The AFC document is at the following website:

<http://www.energy.ca.gov/sitingcases/solartwo/documents/applicant/afc/index.php>

Please reply with any questions or additional information that you may require.

## Jurisdictional Delineation Results

A number of well-defined washes cross the Project site and off-site transmission line. Several of these washes were created by runoff from off-site flows that are directed by culverts under I-8. Other smaller washes convey on-site runoff and eventually connect to the larger washes. Several areas of the site, including much of the northeastern corner, exhibit sheet-flow conditions in

areas where well-defined natural channels do not occur. The majority of the runoff crossing the site flows from south and west, eventually reaching the railroad tracks along the northern Project boundary. Washes that reach the railroad tracks then flow under existing trestles or follow along the railroad berm towards the east. The majority of the larger washes on-site have been degraded by extensive ORV usage.

None of the washes that occur on-site or along the off-site transmission line connect to USACE-defined navigable waters. Therefore, none of the washes associated with the Project would be considered under federal jurisdiction. Several washes do, however, display defined bed and banks and may be considered Waters of the State under Section 1600 of the California Fish and Game Code. Because most of the public land on which the Project site occurs is administered by the BLM, it is at BLM's discretion as to whether or not a 1602 agreement would be required for this Project. Any state jurisdictional washes that occur within the privately owned parcels on-site would require 1602 agreement before any disturbance. A map illustrating the potential Waters of the State within the Project boundary and along the off-site transmission line and water line can be found on Figure 3, Potential Waters of the State.

*(See attached file: Figure 3 - Potential Waters of the State.pdf)*

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----- Forwarded by Patrick Mock/SanDiego/URSCorp on 09/25/2008 09:46 AM -----

To<Patrick\_Mock  
@URSCorp.co  
m>

cc

Subject: Fwd: SES  
tSolar Two: DA  
needs for  
Biological  
Resources

Pat,

As the biologist assigned to this project, Rick York directed me to answer your questions. The reason to contact the agencies is to discuss what the project is and what the possible impacts are. From this information, the agencies can give you an idea of what permits may be required. The Energy

Commission requires contact with various agencies for data adequacy, even if you believe these agencies may not have jurisdiction over any aspect of the Project.

I don't have a contact for RWQCB, but for the USACE, you'll need to contact Lori Minares (760) 602-4832. She is somewhat familiar with the project and despite what you may believe regarding the jurisdictionality of the ephemeral washes, the AFC stated that the waters from the site drain to the Salton Sea, which is under Corps jurisdiction. You'll need to discuss the possibility of having to do a wetland delineation with the Corps.

The CDFG contact is Craig Weightman (760) 200-9158. If the Corps doesn't take jurisdiction of the ephemeral washes on the Project site, then it is under the jurisdiction of the State. According to Craig, even though the Project is on BLM land, you still may be required to get a Streambed Alteration Agreement with CDFG. You'll need to give these agencies a call and provide the Energy Commission a summary of what was discussed, who was contacted, and when this discussion took place. The agencies can get a copy of the AFC by contacting our Project Manager, Christopher Meyer.

I hope this answers your questions.

Joy

Joy Nishida  
California Energy Commission  
Siting, Transmission, and Environmental Protection Division  
Biological Resources Unit  
1516 Ninth Street, MS 40  
Sacramento, CA 95814-5512

(916) 654-3947  
JNishida@energy.state.ca.us

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"Monarres, Laurie A SPL"  
<Laurie.A.Monarres@usace.army.mil>  
11/26/2008 12:38 PM

To <Patrick\_Mock@URSCorp.com>  
cc  
bcc  
Subject RE: JD form for Solar Two

History:  This message has been replied to and forwarded.

Hi Pat,

Thank you for submitting this info. I've been studying the aerial view of the project site and associated washes on Google Earth, and it appears to me that Coyote Wash (just north of the project site) flows east below the Borrego Sink and continues to an agricultural canal and then to the Salton Sea. The Corps is conducting a JD for another project associated with Coyote Wash, so we will probably be conducting a site visit for both projects to determine if the washes associated with each have a significant nexus with the Salton Sea and are thus Corps jurisdictional. Would you be available to meet us at the site on the afternoon of January 7?

Thanks and have a great holiday!

take care,  
Laurie

-----

Laurie Ikuta Monarres  
U.S. Army Corps of Engineers Regulatory Division  
6010 Hidden Valley Road, Suite 105  
Carlsbad, CA 92011  
(760) 602-4832  
Laurie.A.Monarres@usace.army.mil

---

**From:** Patrick\_Mock@URSCorp.com [mailto:Patrick\_Mock@URSCorp.com]  
**Sent:** Thursday, November 20, 2008 1:15 PM  
**To:** Monarres, Laurie A SPL  
**Cc:** JNishida@energy.state.ca.us; Corinne\_Lytle@URSCorp.com; Theresa\_Miller@URSCorp.com; Cheryl\_Rustin@URSCorp.com; Dallas\_Pugh@URSCorp.com  
**Subject:** JD form for Solar Two

*(See attached file: Draft JD Form Solar Two URS final.doc)(See attached file: Figures & Photos Solar Two JD form.pdf)*

Here is the draft JD form. Please reply ASAP if you have any questions or concerns.  
Reminder: Next Monday afternoon (11/24/08) is the Scoping Meeting for the joint CEC/BLM review process for the project. They will be doing a site visit too.

Thank you for your prompt attention to this issue.

Patrick J. Mock, PhD, CSE, CWB®  
Senior Project Manager  
Principal Scientist  
URS Corporation  
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San Diego, CA 92108  
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Patrick Mock/SanDiego/URSCorp

11/26/2008 03:11 PM

To "Monarres, Laurie A SPL"

<Laurie.A.Monarres@usace.army.mil>

cc Cheryl Rustin/SanDiego/URSCorp, Theresa Miller/SanDiego/URSCorp, Corinne Lytle/SanDiego/URSCorp

bcc

Subject RE: JD form for Solar Two 

I put it on my schedule. We do not think there is a connection to the canals except perhaps in years with extreme rainfall events.

Patrick J. Mock, PhD, CSE, CWB®  
Senior Project Manager  
Principal Scientist  
URS Corporation  
1615 Murray Canyon Road, Suite 1000  
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619-294-9400  
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"Monarres, Laurie A SPL" <Laurie.A.Monarres@usace.army.mil>



"Monarres, Laurie A SPL"  
<Laurie.A.Monarres@usace.army.mil>

11/26/2008 12:38 PM

To <Patrick\_Mock@URSCorp.com>

cc

Subject RE: JD form for Solar Two

Hi Pat,

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Thanks and have a great holiday!

take care,  
Laurie

-----

Laurie Ikuta Monarres  
U.S. Army Corps of Engineers Regulatory Division  
6010 Hidden Valley Road, Suite 105  
Carlsbad, CA 92011  
(760) 602-4832  
Laurie.A.Monarres@usace.army.mil

---

**From:** Patrick\_Mock@URSCorp.com [mailto:Patrick\_Mock@URSCorp.com]  
**Sent:** Thursday, November 20, 2008 1:15 PM  
**To:** Monarres, Laurie A SPL  
**Cc:** JNishida@energy.state.ca.us; Corinne\_Lytle@URSCorp.com; Theresa\_Miller@URSCorp.com; Cheryl\_Rustin@URSCorp.com; Dallas\_Pugh@URSCorp.com  
**Subject:** JD form for Solar Two

*(See attached file: Draft JD Form Solar Two URS final.doc)(See attached file: Figures & Photos Solar Two JD form.pdf)*

Here is the draft JD form. Please reply ASAP if you have any questions or concerns.  
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Thank you for your prompt attention to this issue.

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"Monarres, Laurie A SPL"  
<Laurie.A.Monarres@usace.army.mil>  
03/10/2009 11:01 AM

To <Bill\_Magdych@URSCorp.com>  
cc <Patrick\_Mock@URSCorp.com>  
bcc  
Subject RE: SES Solar 2 NJD report - checking on status

Hi Bill,

I did indeed receive the report you submitted. Would it be possible for you to provide me with an electronic copy? That would help for faster coordination with the EPA and Corps HQ.

I am still in the process of reviewing it, but have a couple of information requests up front that would help to move things along. First, would you be able to provide any historic aeriels of the project site and downstream area, particularly where the OHWM trails off? Currently, there is that odd patch of tamarisk and some possibly man-made ditches that indicate some past disturbance (perhaps agriculture?) has occurred and may be obscuring the downstream connection. Second, could you please try to piece together the history of that site and see if it was indeed used for ag at some point and when those detention basins were created? I will likely have some other follow-up questions as well, but it would be great if you could look into these pieces of the puzzle for me initially.

I will do my best to complete the JD in a timely manner once I have sufficient information to make a determination. Please feel free to contact me with any questions.

thanks,  
Laurie

-----

Laurie Ikuta Monarres  
U.S. Army Corps of Engineers Regulatory Division  
6010 Hidden Valley Road, Suite 105  
Carlsbad, CA 92011  
(760) 602-4832  
Laurie.A.Monarres@usace.army.mil

---

**From:** Bill\_Magdych@URSCorp.com [mailto:Bill\_Magdych@URSCorp.com]  
**Sent:** Tuesday, March 10, 2009 9:49 AM  
**To:** Monarres, Laurie A SPL  
**Cc:** Patrick\_Mock@URSCorp.com  
**Subject:** SES Solar 2 NJD report - checking on status

Hi Laurie,

We sent you a copy of the new report finding no jurisdictional waters at the SES Solar 2 site. Please confirm that you have received this report. Please also let me know if you have questions or would like to discuss it. Also, please provide me with a timeframe for rendering a determination.





Patrick Mock/SanDiego/URSCorp

11/18/2008 01:45 PM

To "Monarres, Laurie A SPL"

<Laurie.A.Monarres@usace.army.mil>

cc JNishida@energy.state.ca.us

bcc

Subject Solar Two Data Request - USACE jurisdiction? 

Here is the CEC data request. CEC staff have focused on an incorrect statement made by our hydrology staff.

Our hydrology staff assumed that water may drain to the Salton Sea rather than verifying that it actually does.

If it does make it to the Sea, it would be during a 500+ year event.

Please reply as to whether USACE will be wanting to take jurisdiction. Do you need any additional information?

AFC Section 5.6.1.3 discusses jurisdictional waters. Page 5.6-14 jurisdictional delineation results identify ephemeral washes which display defined bed and banks that may be considered waters of the state. The section states that "None of the washes that occur on-site or along the off-site transmission line connect to USACE-defined navigable waters. Therefore, none of the washes associated with the Project would be considered under federal jurisdiction." According to the Surface Water Quality Section 5.5.1.3 page 5.5-4, "Project surface water that does not infiltrate or evaporate ultimately drains approximately 30 miles north to the Salton Sea," which establishes a surface water connection to a body of water which is under USACE jurisdiction (see *Colvin v. United States*). According to email correspondence with Laurie Monarres of the U. S. Army Corps of Engineers (USACE), an approved jurisdictional determination is still to be completed. Also, since waters of the state are likely on-site, impact to potential waters of the state will require a Streambed Alteration Agreement by California Department of Fish and Game (CDFG) before any disturbance. Staff needs this information to complete its analysis.

## DATA REQUESTS

1. Please provide the wetland delineation report and the final determination from the USACE regarding whether or not jurisdiction will be asserted. Should the USACE assert jurisdiction, please explain the project-specific circumstances that would necessitate substantial temporary or permanent impacts to jurisdictional waters.

Patrick J. Mock, PhD, CSE, CWB®  
Senior Project Manager  
Principal Scientist  
URS Corporation  
1615 Murray Canyon Road, Suite 1000  
San Diego, CA 92108  
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**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

---

**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 78:**

Please provide a copy of the jurisdictional determination form provided to the Army Corps for these areas. If no jurisdictional determination from the Army Corps has been sought for these areas, please provide a copy of a statement from the Army Corps that it will not exercise jurisdiction over these off-site areas.

**Response:**

The revised offsite waterline route will be delineated and a Corps jurisdictional determination will be requested, as necessary.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

---

**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 79:** Please provide a discussion of expected indirect Project impacts on biological resources and the areas of environmental concern (i.e., management areas) adjacent to the Project.

**Response:** The management areas are south of I-8 and are not expected to be affected by the Project, except where transmission line towers will be installed south of I-8. The proposed offsite transmission line will be constructed parallel to an existing t-line within an existing ROW. An existing access road will be used for construction and maintenance. The only new permanent impacts to habitat will be associated with the new transmission-line towers. Indirect impacts to the Yuha Desert FTHL MA will be minimized to the greatest extent practicable using BMPs outlined in the AFC.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

---

**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 80:** Please provide a discussion of cumulative impacts that is based on valid deductive reasoning.

**Response:** A detailed cumulative impact assessment can be found in a report recently completed by Ecosphere Environmental (Docketed on April 30, 2009).

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

---

**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 81:** Please indicate the biological resources of management concern in the management areas depicted in Figure 1 of the AFC's Review of Federal and State Surface Waters. Please identify whether the Project has the potential to have an adverse effect on these biological resources of management concern (i.e., in addition to the already identified potential increase in raven abundance)

**Response:** There is no "Figure 1" in the AFC document. All figures are numbered by subsection (e.g., Figure 5.6-1). There is no figure in the AFC with the title "Review of Federal and State Surface Waters".

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

---

**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 82:** Please provide mitigation for any new, potentially significant indirect and cumulative Project impacts identified through consideration of the previous three data requests.

**Response:** CEC and BLM will assess cumulative impacts and any required mitigation.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

---

**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 83:** Please provide the protocols that were used to survey for special-status plant and animal species in the Project area. For species that were not surveyed according to established protocol, please provide information on any correspondence with regulatory authorities that justify deviations from the protocols.

**Response:** See the responses to Data Requests 19, 31, and 48, above. BLM and CEC requested surveys for rare plants and FTHL. No other species specific surveys were required by the agencies.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

---

**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 84:** Please provide an evaluation of Project impacts to migrating birds, by migratory period (i.e., fall migration and spring migration). Please indicate the methods that were used in the evaluation, including any appropriately timed field surveys.

**Response:** Desert habitats are not especially productive areas that attract large numbers of migratory birds. The Salton Sea is located 20+ miles northeast of the Project site and the perennial rivers and agricultural lands adjacent to the Sea are the primary areas used by migratory birds. URS surveyed during the spring migration season. Additional surveys during the fall migration season are not necessary due to intense hot weather in the desert during the fall that migratory birds tend to avoid. See pp 26-32 in *Birds of the Salton Sea* by Patten et al. 2003.. No significant impacts to migratory birds are expected due to the project site being a low use area for such bird species.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

---

**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 85:** Please provide the results of any informal consultations with USFWS and CDFG on potential Project impacts to Federal or State listed species.

**Response:** No listed species were detected during two seasons of spring/summer surveys and none are expected. See Attachment D in the BTR (Appendix Y of the AFC).

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 86:** Please provide a discussion of potential bird mortality from the heat generated by the Project's collectors.

**Response:** Dr. Thomas Mancini, Sandia Concentrating Solar Power (CSP) Program Manager at Sandia National Laboratories submitted this response: "Based on years of operating dishes at the DOE National Solar Thermal Test Facility in Albuquerque, New Mexico, I am not aware of a single case where a bird has been injured or killed as a result of flying into the area of the concentrated beam or harmed by heat collected at the receiver. In fact, while it is anecdotal, it seems that birds seem to avoid areas of concentrated sunlight and warmth at or near the receiver."

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 87:** Please provide monitoring data from similar solar facilities.

**Response:** Dr. Thomas Mancini, Sandia CSP Program Manager at Sandia National Laboratories submitted this response: "No birds have been harmed at the NSTTF during 20 years of operation." No monitoring data are available for comparable facilities.

**SES Solar Two**  
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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 88:** If monitoring data is not available from similar facilities, please develop and describe a monitoring plan to analyze whether the heat will cause significant impacts to birds.

**Response:** If no birds have been harmed, it is not clear that a monitoring program is needed. However, staff at the Project site will observe and report any birds injured or killed in the field and put this information into a biannual report.. Should these observations and experience indicate the need; a more formal monitoring program will be developed at that time.

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 89:** Please describe mitigation measures that the Project will employ to avoid impacts to birds from heat encountered while flying between the collectors and receivers.

**Response:** Based on 20 years of solar dish operation at Sandia and other locations, during which there has been no evidence of a problem with birds being impacted by the solar field, it does not appear that any mitigation measures will be required.

**SES Solar Two**  
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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 90:** Please describe the type of fence that will be used and whether it will comply with the fence mitigation outlined in the Flat Tailed Horned Lizard Management Plan.

**Response:** The perimeter fence will be designed to minimize potential impacts to movement of small-sized wildlife. FTHL will not be excluded from the site after construction.

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 91:** Please specify the timing of Project fence installation in relation to pre-construction surveys, proposed wildlife mitigation measures, Project construction, and any other Project activities that may affect resident wildlife species.

**Response:** The key segments of the perimeter fence are likely to be installed during early phases of construction to establish site control and security. Vegetation removal associated with fence construction would be done during the non-breeding season after pre-construction surveys for sensitive wildlife (FTHL and burrowing owl). Any vegetation removal that must occur during the breeding season will be preceded by a nest survey and any active nests detected will be avoided.

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 92:** Please identify the wildlife species for which proposed fencing may act as a barrier.

**Response:** Larger species (e.g., coyote) would likely access the site via the larger washes where fencing may be impractical. Most small species would not be hindered by the fence. Perimeter fencing is expected to consist of 8-foot tall chain link with barbed wire on top and a 6-inch gap on the bottom. This type of fence would allow small animals to enter and exit the site.

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 93:** Please identify potential impacts to biological resources from fencing.

**Response:** Impacts associated with fencing will be limited since the majority of the site will be disturbed. Fencing will provide perch sites for birds to launch foraging forays into any habitats adjacent to the fence and potentially allow for increased capture success. Large terrestrial wildlife may be hindered in accessing the site, but not excluded since access to the larger washes will be maintained.

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**TECHNICAL AREA: BIOLOGICAL RESOURCES**

**Data Request 94:** Please discuss any measures that will be implemented to mitigate potential adverse impacts on biological resources from fencing.

**Response:** No additional impacts associated with fencing that would require mitigation are expected given that the majority of the site will be disturbed. Local wildlife movement through the site will be primarily associated with the major washes that pass through the site and will remain mostly intact.

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**TECHNICAL AREA: WATER SUPPLY**

**Data Request 95:** Please provide an assessment of the reduced amount of discharge on the beneficial uses of the New River under construction and operation scenarios.

**Response:** The Applicant's consultant, URS Corporation contacted the Colorado River Basin Regional Water Quality Control Board 7 (RWQCB 7) and State Water Resources Control Board (SWRCB) regarding the use of treated effluent from the Seeley Wastewater Treatment Facility (WWTF). Preliminary discussions with RWQCB 7 indicated that new Waste Discharge Requirements (WDRs) will be required for Seeley WWTF for any plant upgrades and change in water discharge or use. Additionally, preliminary discussions with the SWRCB indicated that the project would not be subject to water rights requirements/permits through the SWRCB if the project obtains water from the Seeley WWTF prior to discharge to the New River. Currently, SES proposes to obtain water from the treatment facility prior to its discharge point.

Specifically in response to CURE data requests 95 and 96, the SWRCB indicated that State Water Code Section 1211 (and associated application forms) be consulted regarding the change of purpose of use or direction of water to a new location. However, it is URS's understanding from preliminary conversations with the SWRCB that if water is obtained from Seeley WWTF prior to discharge to the New River, then the Project use of water from Seeley WWTF and the downstream beneficial use item will not be required to be analyzed under Water Code Section 1211. The preliminary agreement between the Applicant and Seeley WWTF is to obtain the treated effluent water from Seeley prior to discharge to the New River.

Average annual flows in the New River upstream of Seeley WWTF have been reported to be approximately 150 to 200 cubic feet per second (cfs)<sup>1, 2, 3</sup>. In comparison, flows in the New River at the Salton Sea average approximately 600 cfs<sup>3</sup>. Considering reduction of flows to the New River from redirection of flows to the Project up to 200,000 gallons per day (gpd) from the Seeley WWTF indicates a reduction of flow of approximately 0.15% for annual average conditions (200,000 gallons per day or 0.31 cubic feet per second [cfs] divided by 200 cfs = 0.15%). The anticipated reduction in flows is not considered to be a significant impact on existing downstream uses. Additionally, the 150 to 200 cfs average annual flow at the border does not account for additional agricultural return flows to the New River between the border and the Seeley WWTF (located approximately x miles downstream of the international border) which would reduce the anticipated percentage reduction in flows to the Salton Sea.

Based upon the above considerations, use of the Seeley WWTF treated effluent is not considered to be a potential impact to existing beneficial uses downstream (specifically return flows to the Salton Sea).

The Applicant and its consultants will continue discussions with RWQCB 7 and SWQRCB regarding these issues to obtain a formal understanding of the proposed water use from Seeley WWTF in regards to these data requests.

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RWQCB 7 and SWRCB contacts:

**John Carmona - RWQCB 7** - NPDES, 401 Certification, Stormwater (760) 340-4521 (personal communication 04/14/09)

**Cliff Raley - RWQCB 7** - Senior Water Resources Control Engineer, (760) 776-8962 (email response on 04/20/2009)

**Nadim Zeywar, RWQCB 7**, Senior Environmental Scientist, TMDL Unit, (760) 776-8942 (personal communication on 04/21/09)

**Gordon Inness - SWRCB** - Water Reclamation Program - (916) 341-5517 (personal communication on 04/15/09)

**Jim Kassel - SWRCB** - Asst. Division Chief, Water Rights Section - (916) 341-5446 (personal communication on 4/16/09)

**Ryan Babb - SWRCB** - Water Rights Section - (916) 341-5410 (personal communication on 04/16/09)

References:

1. California Unions for Reliable Energy (CURE) Data Requests Set One, Dated April 6, 2009, CEC Docket Number 08-AFC-05

2. Salton Sea Ecosystem Restoration Program Programmatic Environmental Impact Report, Chapter 5, Surface Water Resources, last accessed April 29, 2009 at: <http://www.saltonsea.water.ca.gov/PEIR/draft/>

3. State Water Resources Control Board website accessed on April 29, 2009 at: [http://www.swrcb.ca.gov/rwqcb7/water\\_issues/programs/salton\\_sea/watershed.shtml](http://www.swrcb.ca.gov/rwqcb7/water_issues/programs/salton_sea/watershed.shtml)

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**TECHNICAL AREA: WATER SUPPLY**

**Data Request 96:** Please provide documentation of communication by Seeley County Water District with the RWQCB about any NPDES permit compliance issues that may result from re-routing treated wastewater discharge to the New River.

**Response:** See the response to Data Request 95.

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**TECHNICAL AREA: CULTURAL RESOURCES**

**Data Request 97:** Please provide a copy of all correspondence with NPS regarding the project's impact on the Bautista de Anza Trail and/or pertaining to the permits and other approvals required from NPS for the project.

**Response:** To date, there has been no correspondence with the NPS concerning the Juan Bautista de Anza Trail. However, there have been extensive discussions with BLM concerning the Trail because they would be the responsible land manager for the Anza trail through BLM public land. They will further consult with NPS and others as we continue through the Section 106 process.

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**TECHNICAL AREA: CULTURAL RESOURCES**

**Data Request 98:** Please also provide a copy of all correspondence with any local, state, and federal agencies, including BLM, regarding the project's potential impact on the Bautista de Anza Trail.

**Response:** To date, no applications have been submitted to the NPS concerning the Juan Bautista de Anza Trail. However, the applicant is working with the BLM to determine the appropriate course of action regarding NPS involvement with this trail.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
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**TECHNICAL AREA: CULTURAL RESOURCES**

**Data Request 99:** Please also provide a copy of all correspondence with any local, state, and federal agencies, including BLM, regarding the project's potential impact on the Bautista de Anza Trail.

**Response:** Ongoing correspondence has taken place with the Applicant; the Applicant's environmental consultant, URS; and the BLM regarding inclusion and proper documentation of the Bautista de Anza Trail. All documentation relating to potential impacts to cultural resources, including the Bautista de Anza Trail, have been included in the confidential Cultural Resources documentation provided to both the CEC and BLM (dated April 2009).

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**TECHNICAL AREA: CULTURAL RESOURCES**

**Data Request 100:** Please describe proposed alternatives for the relocation of the Bautista de Anza Trail, including a description of all federal or private lands involved, and the ownership status of these private lands.

**Response:** While the NPS maps for the Juan Bautista de Anza Trail identify the trail as passing through the Project area, no physical evidence of this trail was located during the cultural resources surveys. Furthermore, the NPS maps do not show the exact route of the trail but rather “to a degree of certainty” (<http://www.solideas.com/DeAnza/TrailGuide/>) an approximately three-mile-wide corridor through which the de Anza party most likely passed. While other trails in the NPS trails system, such as the Oregon Trail, were repeatedly used by settlers moving to the western United States and as such left clear signs on the ground like trail ruts, campsites, graves, etc., the de Anza “Trail” was a route through which the de Anza party passed once on their exploratory journey through southern California and Arizona. An activity such as this would leave traces that were ephemeral at best and it is not surprising that no remnants were located within the Project area. Because there are no physical remnants of this trail in the Project area, there is nothing to relocate. The Auto Tour Route, created by the NPS to allow people to experience the Juan Bautista de Anza Trail from the comfort of their automobiles that runs near the Project area will still be accessible to the public.

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**TECHNICAL AREA: CULTURAL RESOURCES**

**Data Request 101:** If these private lands are not owned by the Applicant, please provide a discussion of how rights over these lands have been or will be obtained. Please also describe the process that the Applicant will undertake if Congressional approval for this relocation of the Bautista de Anza Trail is required.

**Response:** Please see the response to Data Request 100.

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**TECHNICAL AREA: CULTURAL RESOURCES**

**Data Request 102:** Please indicate whether the Applicant has been able to determine, subsequent to the filing of the AFC, that the Project would avoid any of the 264 archaeological sites and isolated finds, referenced in the AFC.

**Response:** As the applicant works through the Section 106 process with the BLM in consultation with the State Historic Preservation Officer (SHPO) and Native American Tribes and Communities, the BLM will make determinations of eligibility for the archaeological sites and isolated finds located within the Project area. Efforts will then be made to avoid, minimize, or mitigate any adverse effects to archaeological sites and isolated finds that are determined to be eligible for listing in the National Register of Historic Places (NRHP).

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**TECHNICAL AREA: CULTURAL RESOURCES**

**Data Request 103:** If the Applicant has not been able to determine that the Project would avoid any of the 264 archaeological sites and isolated finds, referenced in the AFC, please recommend the California Register of Historic Resources ("CRHR") eligibility of archaeological sites that cannot be avoided, based on extant surface observations or a further round of field observation.

**Response:** The criteria for eligibility for listing in the California Register of Historic Resources (CRHR) mirror those for listing in the NRHP. Therefore, as the process outlined in the response to Comment No. 102 is followed, due consideration will also be given to the potential for listing in the CRHR.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 104:** Please provide the completed SIS and FAS and the executed Interconnection Agreement, for ISO queue project 78, the first 300 Mw of the SES project

**Response:** The SIS for the Solar Two Project is available in Appendix H of the AFC. The FAS is not available due to the proprietary nature of this document. The current Solar Two (Phase I) 300MW interconnection agreement with ISO is being modified due to delays in the joint permitting process.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 105:** Please provide the expected interconnection date(s) to the CAISO grid for the first through 300<sup>th</sup> Mw of the SES #2 project.

**Response:** SES currently assumes that construction of Phase I will commence in the first quarter of 2010 and 300 MW will be on line by the end of 2011.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 106:** If the expected interconnection date(s) to the CAISO grid for the SES #2 project is different from the 12/31/09 date shown for ISO queue project 78, please explain the basis for the difference(s).

**Response:** Project delays have been experienced due to the extensive cultural investigations and other permitting delays.

**SES Solar Two**  
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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 107:** Please provide copies of any communications between SES (or its affiliates, parent, or subsidiaries) and the ISO regarding the on-line date for SES and/or the interconnection date to the ISO for any part(s) of the SES project, whether part of ISO queue 78 or 124 or not.

**Response:** Amendments to the Project dates will be filed in the near future.

**SES Solar Two**  
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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 108:** Please provide the expected interconnection date(s) to the CAISO grid for the 301<sup>st</sup> through 900<sup>th</sup> Mw of the SES #2 project.

**Response:** Initial interconnection (the first 9 MW of power from Phase II (301-309 MW) is expected to come on line in early 2012, with the full build-out taking approximately 3 years (These dates are tentative and depend on the availability of the Sunrise Powerlink).

**SES Solar Two**  
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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 109:** If the expected interconnection date(s) to the CAISO grid for megawatts 301-900 of the SES #2 project are different from the January-March 2011 dates shown by the CAISO, please explain the basis for the difference(s).

**Response:** The expansion phases of the Solar Two project are dependent on the availability of the Sunrise Powerlink, which has experienced permitting delays. In addition, the delays encountered on the first 300 MW phase of the project would delay the start date for the expansion phase.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 110:** Please explain whether the ISO has been informed that SES is only seeking a CEC permit for a 750 Mw project, and not the 900 Mw requested by the combination of ISO queue requests 78 and 124. If the answer is yes, please explain how the size of ISO queue project 124 can be reduced by 25% (from 600 Mw to 450 Mw) without triggering a re-study under the ISO queue evaluation procedures.

**Response:** CAISO is aware the Applicant is currently applying for certification of a 750 MW project. The Applicant has explained that they intend to permit an additional site that will accommodate 150 MW and will interconnect to the same Imperial Valley substation, so the ultimate result will be a total of 900 MW installed to the CAISO system at the Imperial Valley substaiton.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 111:** Please identify all not-yet constructed transmission projects (such as the Sunrise Powerlink Project identified in the AFC) that would be part of the ISO grid or connected to the ISO grid which are not yet in service but are necessary to deliver generation from SES.

**Response:** The Sunrise Powerlink Imperial Valley 500/230 kV transformer bank 82 is the not-yet constructed transmission project that would be part of the ISO grid or connected to the ISO grid necessary to deliver generation from the Solar Two Project.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 112:** Please quantify how many Mw of SES project output will be deliverable to the ISO grid in the absence of the Sunrise Powerlink project.

**Response:** Due to SPS limitations at the Imperial Valley (IV) substation, SES generation will be subject to congestion management protocols. At this time, there are 1070 MW of generation connected to IV, and there is a 1150 MW tripping limit set by the CAISO. Thus, generation connected to IV will be limited to a total dispatch of 1150 MW, dependent upon market bids.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 113:** Please quantify how many Mw of SES project output will be deliverable to the ISO grid in the absence of the new 500/230 kV transformer at the Imperial Valley substation identified as “IV Bank 82” in Table 13 on p.32 of: <http://www.caiso.com/202e/202e923d51d30.pdf>

**Response:** Please see the response to Data Request 112.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 114:** Please identify any additions to the current IID transmission system which will need to be in service in order to reliably deliver the full 750 Mw of SES generation to the ISO grid without impairing IID system reliability.

**Response:** No impact to IID was identified in the SIS or other transmission studies conducted for the Solar Two Project.

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**In Response to CURE Data Requests, Set One**  
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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 115:** Please identify any additions to the current CFE transmission system which will need to be inservice in order to reliably deliver the full 750 Mw of SES generation to the ISO grid without impairing CFE system reliability.

**Response:** No impact to CFE was identified in the SIS or other transmission studies conducted for the Solar Two Project.

**SES Solar Two**  
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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 116:** Please provide any studies other than those included in the SIS or FAS which address impacts on the IID and/or CFE systems from buildings and operating the full SES project.

**Response:** The Applicant is not aware of any other studies addressing impacts on the IID and/or CFE systems from building or operating the Solar Two project.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 117:** Please explain how SES intends to address the various criteria violations and voltage support inadequacies identified by the ISO for Phase II of the SES project.

**Response:** The August 9, 2007 ISO report stated that "No criteria violations were found due to the SES Solar Two Expansion Project".

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 118:** Please provide the schedule for construction of Bank 82 at the Imperial Valley Substation, taking into account the alleged 3-year period required for construction that is shown on the CAISO website.

**Response:** Construction as shown on the CAISO website includes design, procurement of equipment and physical construction. It is expected that 30 months will be required from the beginning of design to placing Bank 82 in-service. Physical construction is expected to take 10 months and will begin once SES Solar Two begins commercial operation. Therefore, Bank 82 is expected to be in operation about 10 months after Solar Two begins commercial sales to the electric grid.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 119:** The CAISO has indicated that the costs of the required reconductoring of the Sycamore-Chicarita 138 kV line from a 204 MVA rating to a 250 MVA rating will be largely included within SDG&E's Sunrise project. Please identify whether (and if so, where) the December 2008 CPUS decision approving Sunrise included any provision allowing or ordering SDG&E to reductor the Sycamore-Chicarita line to a 250 MVA rating.

**Response:** The December 2008 CPUC Final Decision on Sunrise Powerlink, in the last paragraph of page 86, approves the reconductoring of the Sycamore Canyon–Pomerado 69 kV line and Sycamore Canyon–Scripps 69 kV line, and the installation of a new 230/138 kV 392 MVA transformer at Encina to solve the overloads from the Sycamore Canyon-Chicarita line.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 120:** To the extent SES is relying upon Sunrise Powerlink project to enable delivery from SES Phase II, please provide the most recent schedule for Sunrise operation and indicate whether and how that schedule is consistent with the proposed SES schedule.

**Response:** There is currently sufficient capacity on the existing transmission system to deliver power from Phase I of the Solar Two Project. Sunrise Powerlink is currently scheduled to be placed in service by June 2012. Phase II will be completed after Sunrise Powerlink is energized, therefore, Phase II will be deliverable via Sunrise Powerlink.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 121:** Please indicate whether the CAISO interconnection studies for SES Phase II (either the one at <http://www.caiso.com/202e/202e91f151400.pdf>, or any others) include a new 500 kV interconnection between SCE and SDG&E via the proposed "Lee Lake" substation.

**Response:** The CAISO Interconnection Study for Phase II does include a new 500 kV Interconnection between SCE and SDG&E via the proposed "Lee Lake" substation.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 122:** To the extent the CAISO's interconnection studies for SES Phase II have assumed a new 500 kV line between SCE and SDG&E, please indicate whether it will still be possible to deliver

**Response:** According to SDG&E (Alan E. Dusi, PE – 4/20/09), since the project which proposes the new 500 kV line between SCE and SDG&E was ahead of the SES Solar Two Project in the CAISO queue, it was included in all power flow studies of the Project. No studies were performed in which the new 500 kV line was not included.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 123:** The DEIR/DEIS for the Sunrise project (California SCH #2006091071; DOI Control No. DES-07-58) describes the SES project as a “connected action” that is “likely to be built if the Sunrise Powerlink transmission line is constructed.” The Sunrise DEIR/DEIS describes the SES project at pp. B-1 01 through B-1 11. Please identify any inaccurate or incorrect statements in the portions of the DEIR/DEIS describing the SES project.

**Response:** Please refer to the Applicant’s response letter dated 4/27/2009.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 124:**

For each section of the Sunrise DEIR/DEIS which specifically addresses impacts of the SES project:

- a. Does the DEIR/DEIS have an accurate description of the SES impacts?
- b. Please identify any inaccuracies in the Sunrise DEIR/DEIS.

Please indicate whether SES would agree to the proposed mitigation conditions contained in that section of the Sunrise DEIR/DEIS.

**Response:** Please refer to the Applicant's response letter dated 4/27/2009.

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**TECHNICAL AREA: TRANSMISSION PLANNING**

- Data Request 125:** Please provide copies of any communications between SES (or its affiliates, parent, or subsidiaries) and either the BLM or the CPUC regarding:
- a. The descriptions of SES in the draft Sunrise DEIR/DEIS.
  - b. The SES impacts described in the draft Sunrise DEIR/DEIS.
  - c. The proposed mitigation of SES impacts contained in the draft Sunrise DEIR/DEIS.

**Response:** Please refer to the Applicant's response letter dated 4/27/2009.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: TRANSMISSION PLANNING**

**Data Request 126:**

The AFC for the SES project is for a 750 Mw project. However, SDG&E has indicated (and the Sunrise DEIR/DEIS also indicates) that SES could be up to 900 Mw. Please provide a copy of the contract(s) with SDG&E to purchase generation from the SES project, including any approved or pending amendments. In responding to this request, prices may be redacted until such time as a mutually agreeable non-disclosure agreement is reached. Dates and schedules should not be redacted, nor should megawatt amounts, since they are both germane to the question of project size and timing, which is critical to analyzing the size and timing of environmental impacts.

**Response:** Please see attachment TRANS-1.



J. Steve Rahon  
Director  
Tariffs & Regulatory Accounts  
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San Diego, CA 92123-1548  
  
Tel: 858.654.1773  
Fax: 858.654.1788  
srahon@semprautilities.com

November 15, 2005

**ADVICE LETTER 1727-E-A**  
(U 902-E)

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

**SUBJECT: SUPPLEMENTAL FILING - REQUEST FOR APPROVAL OF RENEWABLE  
ENERGY PROCUREMENT CONTRACTS RESULTING FROM 2004 RPS  
SOLICITATION**

**I. PURPOSE**

This supplemental advice letter is being filed to revise Appendices A, B-1 and B-2 to make a correction to the weighted average price of the SES Solar Two LLC (Stirling) contract. In calculating the weighted average price, incorrect percentages between expected on-peak and off-peak generation were applied to the on-peak and off-peak contract prices stated in the Edison Electric Institute ("EEI") confirmations for Phase I and Phase II. Additionally, SDG&E is requesting this filing be approved no later than December 31, 2005. This supplemental filing replaces Advice Letter 1727-E in its entirety.

SDG&E seeks approval from the California Public Utilities Commission ("Commission") of three power purchase agreements ("PPAs") with various eligible renewable developers. Approval of these PPAs by the Commission will further SDG&E's efforts to move significantly closer to achieving its overall goal of reaching a 20% renewable portfolio mix by 2010.

SDG&E issued its first Renewable Portfolio Standard Request for Offers on July 1, 2004 ("the RFO"), in accordance with Decision (D.) 04-06-014. Since receiving offers in response to the RFO, SDG&E has analyzed all bids received, developed a short-list of potential developers and briefed its Procurement Review Group ("PRG") during the course of the review, analysis and negotiation process.

Each of the PPAs contains standard terms and conditions authorized by the Commission in D.04-06-014, except as otherwise noted in the contract summaries appended to this advice letter. The prices for the proposed PPAs are below the Market Price Referent ("MPR") as set forth in Resolution E-3942 issued July 21, 2005; therefore, no Supplemental Energy Payments will be required for these projects.

The PPAs are being presented for Commission review and approval in accordance with the "RPS Solicitation — Contract Approval Milestones" contained in D.04-07-029.

Once the projects are developed and commercial operations achieved, the projects will contribute significantly towards SDG&E's renewable procurement goals. The proposed projects are for new developments and will provide additional incremental renewable resources for

SDG&E. On August 15, 2005 SDG&E provided an updated forecast of its procurement activities related to its 2005 Incremental Procurement Target (“IPT”) and Annual Procurement Target (“APT”). Since SDG&E expects to continue to exceed its annual IPT and APT goals for the next several years, these projects are focused on assisting SDG&E in achieving an overall 20% renewable portfolio by 2010. Appendix A illustrates the contributions each proposed project will make towards SDG&E’s Renewable Portfolio Standard (“RPS”) goals.

In support of this advice letter, SDG&E is submitting the following confidential information under seal. This material is also protected from public disclosure by the May 20, 2003 Protective Order issued in Rulemaking (R.) 01-10-024. SDG&E is also concurrently filing a Motion for Confidential Treatment of the Appendices listed below pursuant to Public Utilities Code sections 583 and 454.5(g) and General Order 66-C.

Appendix A	Proposed Projects’ Contribution Towards SDG&E RPS Goals
Appendix B-1	SDG&E’s Shortlist (Initial vs. Final)
Appendix B-2	SES Solar Two LLC (Stirling) <ul style="list-style-type: none"><li>▪ Contract Summary</li><li>▪ Edison Electric Institute (“EEI”) Cover</li><li>▪ EEI Confirmations</li><li>▪ Additional EEI Exhibits</li></ul>
Appendix B-3	MM Prima Deshecha Energy LLC (Algonquin) <ul style="list-style-type: none"><li>▪ Contract Summary</li><li>▪ Edison Electric Institute (“EEI”) Cover</li><li>▪ EEI Confirmation</li><li>▪ Additional EEI Exhibits</li></ul>
Appendix B-4	Covanta Otay 3 Company (Covanta) <ul style="list-style-type: none"><li>▪ Contract Summary</li><li>▪ Edison Electric Institute (“EEI”) Cover</li><li>▪ EEI Confirmation</li><li>▪ Additional EEI Exhibits</li></ul>
Appendix C	Supplemental Market Price Referent (“MPR”) worksheet
Appendix D	Summary of PRG Discussions

## II. DESCRIPTION OF THE PROJECTS

To date, SDG&E has been able to finalize PPAs with three respondents to its 2004 RPS RFO process. In all cases, the PPAs provide that SDG&E receive all Renewable Energy Credits associated with purchase of energy by SDG&E from the projects.

Copies of each of the PPAs are appended to this Advice Letter as Confidential Appendices B-2, B-3 and B-4. The principal terms for each project are summarized in the table below:

Project	Type	Size Net (MW)	Term	Location
SES Solar Two LLC ("Stirling") Phase 1 Phase 2 (option) Phase 3 (right of first refusal)	Solar	300 300 300	20 20 TBD	Imperial Valley
MM Prima Deshecha Energy LLC	Landfill Gas	15	15 with 5 yr Option to Extend	Orange County
Covanta Otay 3 Company	Landfill Gas	3.75	10	San Diego County

### III. CONTRACT ANALYSIS

#### A. Consistency with SDG&E's Commission Approved 2004 RPS Plan

On June 14, 2004, SDG&E filed its 2004 Renewable Procurement Plan for review. SDG&E received approval shortly thereafter on June 28, 2004. The plan called for SDG&E to issue a competitive solicitation for eligible renewable resources. The RFO sought as-available or unit-firm capacity and/or energy from:

- 1) Re-powered facilities;
- 2) Incremental capacity upgrades of existing facilities;
- 3) New facilities;
- 4) Existing facilities with expiring contracts; or
- 5) Eligible resources currently under contract with SDG&E. SDG&E shall consider offers to extend terms of or expand contracted capacities for existing agreements.

The RFO provided that Respondents may offer 10, 15 or 20-year PPAs and that deliveries must commence in 2005, 2006, 2007 or 2008. Resources located in Imperial Valley must commence in 2010, unless the resource has adequate transmission capability to deliver to SP-15 sooner. Any PPA executed with a Respondent offering resources from Imperial Valley without such adequate transmission capability shall be contingent upon SDG&E obtaining approval for and being able to license and construct a new 500 kV line from Imperial Valley to the San Diego area.

In addition to the PPA described above, Respondents offering RPS eligible geothermal, photovoltaic or wind resources may also provide an option price for SDG&E to acquire the facility along with all environmental attributes, land rights, permits and other licenses – thus enabling SDG&E to own and operate the facility at the end of the PPA term.

Finally, Respondents may propose turnkey projects to develop, permit, and construct new, RPS-eligible geothermal, photovoltaic or wind generating facility to be acquired by SDG&E. The same transmission contingency applies to turnkey projects as to PPA offers.

### 1. Fit with Identified Renewable Resource Needs

SDG&E's approved plan stated that for the 2004 solicitation, SDG&E does not have a preference for a particular product or technology type and that SDG&E has latitude in the resources that it selects. True to this declaration, the proposed agreements were not selected due to product type or technology type. Rather, SDG&E reviewed all offers and selected these projects due to factors applicable to its least cost best fit analysis.

### 2. Consistency with RPS Solicitation Protocol

An open and competitive playing field was established for the procurement effort. SDG&E followed protocols established within its solicitation:

- a. An RFO website was created, allowing respondents to download solicitation documents, participate in a Question and Answer forum and see updates or revisions associated with the process.
- b. A pre-bid conference was hosted at SDG&E.
- c. An internet upload capability was created to accept offers.
- d. SDG&E adhered to the following RFO schedule established for the solicitation:

<b>DATE</b>	<b>EVENT</b>
07/01/2004	RFO Issued
08/12/2004	Offers Due
08/26/2004	Briefed PRG on Offers Received
12/13/2004	Notified CPUC Executive Director that Shortlist was finalized.
02/15/2005	Briefed PRG on Shortlist
05/19/2005	Briefed PRG on negotiation status
07/18/2005	Briefed PRG on Recommendations and Status of Negotiations
07/21/2005	Final MPR Issued
08/31/2005 – 09/06/05	Executed proposed contracts
09/09/2005	Briefed PRG on contracts executed and Status of Remaining Negotiations

### 3. Consistency with SDG&E's Long Term Resource Plan

SDG&E filed its 2004 Long Term Resource Plan ("LTRP") on July 9, 2004, which was approved by the CPUC on December 16, 2004. The proposed agreements are consistent with the assumptions presented in the plan and contribute to SDG&E meeting its long-term goals of achieving 20% by 2010.

SDG&E analyzed the projects on its short list to determine whether they would fit into its future needs by comparing the RFO projects to its LTRP. When SDG&E filed its LTRP, it planned a diversified portfolio of renewable resources, in and out of its service territory, to meet its mandate of 20% renewables by 2010. In its Best Fit analysis, SDG&E matched up the various bids to its LTRP and selected the projects that were not only the

lowest cost resources but also fit into its LTRP portfolio. Many of the projects selected on the final shortlist did not exactly match the generic resources expected in the LTRP. This is due in part to the type of bids SDG&E received – which did not align with expected resources in the LTRP.

B. Consistency of Bid Evaluation Process with Least-Cost Best Fit (LCBF) decision

SDG&E evaluated all offers in conformance with the LCBF process outlined in D.03-06-071 issued on June 19, 2003 and D.04-07-029 issued on July 8, 2004.

Once SDG&E received all the bids in the RFO, SDG&E performed an initial screening process to determine if each bid met the criteria of the RFO. The bids must have been received on time and all bids must have been completed with prices, terms, transmission costs, etc. Bids not received in a timely manner (unless there was a technical difficulty and notification was received by SDG&E prior to the deadline) were disqualified. Once SDG&E had a list of viable projects, SDG&E began to narrow the field of bidders for its short list

SDG&E ranked each project based on an all-in price consisting of the total average bid price (with and without Production Tax Credits (PTC)), annual carrying cost for transmission upgrades and annualized Average Wheeling Charges (if any), all converted to an average \$/MWh. The following describes the methodology:

1. Bid Price (with PTC) – SDG&E used the average bid price (with PTC) \$/MWh, if any, as provided by the bidder. SDG&E used the price without PTC if no PTC was given.
2. Transmission Rate - SDG&E's Transmission Planning Department determined that bids received for projects within SDG&E's service area did not fit the portfolio of resources used as the basis for SDG&E's cluster study and decided to perform new transmission studies for each bid received. For projects located within Pacific Gas and Electric ("PG&E") and Southern California Edison's ("SCE") service area, SDG&E used rates as provided in those utilities' cluster studies. The average transmission rate was calculated based on either PG&E or SCE's cluster study results or the results of the new study performed by SDG&E. The transmission costs in the cluster studies were in current dollars, so SDG&E escalated those costs by a 2.5% inflation rate to the project start date. Transmission costs developed by SDG&E's Transmission Planning Department were costs in the year of the project start date. SDG&E then calculated a \$/MWh annualized carrying cost of transmission rate by multiplying the total one-time cost of transmission upgrades (not including gen-ties) by a factor that is based on the expected life of the transmission upgrades. This factor calculates the annualized carrying costs for SDG&E, which are the estimated amounts required by SDG&E to recover its costs, plus return on investment, over the life of the transmission facilities. The annualized costs were multiplied by the contract years and then divided by the projected total generation MWh over (provided by the bidder) to calculate an average transmission rate \$/MWh. The average transmission rate was then added to the bidder's price.
3. Transmission Wheeling Rate - There were no transmission studies for projects located in the Imperial Irrigation District ("IID"). For projects from within IID's service territory, the average transmission wheeling costs for these projects were derived from the IID's transmission rate tariff. The charges were given to SDG&E by the bidder in millions of dollars per year. The dollars were then amortized over the life

of the contract using a 2.5% escalation rate and present valued back to 2005 at the same 2.5% escalation rate. This analysis assumed that any transmission upgrades resulting from these resources would not cause upward or downward pressure on IID's tariff, and that IID's tariff would escalate by inflation. The total PV dollars were then divided by the projected generation MWh over the life of the project/term of the contract to calculate an average \$/MWh. The average transmission wheeling costs, if any, was then added to the bidder's price.

C. Consistency with Adopted Standard Terms and Conditions

On June 14, 2004 the Commission issued D.04-06-014, which adopts standard contract terms and conditions for use in the RPS. The decision labeled some terms and conditions as being non-modifiable. During the course of negotiations, some parties requested changes to modifiable and non-modifiable terms and conditions. All material changes and the reasons for them are noted in the contract summaries appended to this advice letter. SDG&E respectfully requests Commission approval of these changes.

D. Consistency with Transmission Ranking Cost Decision

In evaluating each bid for the least cost, SDG&E added transmission costs in the one of the following three ways:

1. The transmission costs provided to the bidder by the interconnected utility, or
2. The interconnected utilities' cluster study if the project did not provide the transmission costs, or
3. Transmission cost studies prepared by SDG&E. If the project was not specifically identified in the cluster study, then transmission costs were included in the project that were in the closest cluster study of the interconnecting utility.

SDG&E's Transmission Planning Department evaluated the projects to determine whether they accurately fit into the SDG&E cluster study dated June 23, 2004. They determined that bids received did not fit the portfolio of resources used as the basis for SDG&E's cluster study and decided to perform studies on each bid received. Once Transmission Planning completed their study, the transmission costs were added to each bid. Bidders who were in the CAISO queue, and had their transmission studies completed by the date of the issued RFO, received priority on transmission upgrades. Although renewable projects were in the CAISO queue, none of the projects had completed interconnection studies.

While further studying transmission import availability, an import limitation for new energy resources from the north through the San Onofre intertie was quantified at 107 MW. This limited the number of available resources SDG&E initially considered. However, SDG&E later expanded the resources it considered to factor in an ISO deliverability criteria, which does not include a strict limitation based on import limits. This resulted in SDG&E accepting an additional resource from the north based on price and fit with other resources bid. No assessment of congestion cost or risk was undertaken.

As explained in its RFO, SDG&E's ability to procure from resources bid from locations in the Imperial Valley area are contingent upon SDG&E successfully being able to license and construct a new 500 kV line from the Imperial Valley area to San Diego. As such, the PPAs for resources in the Imperial Valley are contingent upon SDG&E providing each seller with a notice to proceed with construction once the conditions precedent related to SDG&E's ability to proceed with construction of a new 500 kV have been met. SDG&E envisions that it will be able

to license and build a new 500 kV transmission in time to allow the projects located in Imperial Valley to be constructed and achieve commercial operation by year 2010.

E. Terms and Conditions of Delivery

Conditions precedent for the proposed PPAs are discussed in the contract summaries appended to this advice letter.

F. Contract Price

The contract prices detailed in the appendices of this filing are all below the MPR prices as set forth in Resolution E-3942. None of the proposed PPAs require Supplemental Energy Payments. Appendix B-1, appended to this advice letter, provides a comparison between the initial offered price and the final contract price for the proposed PPAs.

One proposed project contemplates commercial operation in years 2011 or 2012. The Commission did not, in its previous Resolution, consider projects with 20 year terms beginning in 2011 or 2012 because these dates were not contemplated by SDG&E at the time the MPRs were initially calculated. Two supplemental MPRs are necessary to provide the project the flexibility to achieve COD in 2011 or 2012. The Energy Division, pursuant to CPUC Code Section 399.15(c), provided SDG&E, via email, with the supplemental MPRs as shown below.

**Energy Division Provided MPRs**

	Peaking MPR	Baseload MPR
2007	\$115.50	\$60.50
2008	\$117.50	\$61.50
2009	\$120.10	\$62.90
2010	\$122.80	\$64.40
2011	\$124.90	\$65.70
2012	\$127.10	\$67.10

SDG&E's Calculation of blended MPR, as shown in Appendix C, utilizes the method the Commission adopted in D.04-07-029 issued on July 8, 2004.<sup>1</sup> Blended MPRs for years 2011 and 2012 are based on supplemental MPRs calculated by the Energy Division, which is subject to Commission approval.

As part of SDG&E's request for full rate recovery hereunder, SDG&E requests that the Commission approve the two supplemental MPRs, as shown above and SDG&E's calculation of blended MPRs for 2011 and 2012 as shown in Appendix C.

G. Qualitative Factors

As stated in the RFO, SDG&E differentiates offers of similar cost by reviewing qualitative factors including: (in no particular order of preference)

- a) Location
- b) Benefits to minority and low income areas
- c) Resource diversity
- d) Environmental stewardship

<sup>1</sup> Finding of Fact #26 and Conclusion of Law #6.

Minority/low-income areas and environmental stewardship were not factors in SDG&E's ranking process because those factors were not applicable to the offers; however, SDG&E did consider its own service territory and resource diversity in its ranking.

#### H. Project Milestones

Each PPA identifies the agreed upon project milestones, including, interconnection agreement, project financing, construction start and commercial operation deadlines.

#### I. Project Viability

1. **Financeability:** One proposed PPA will not depend on third party financing. For the remaining proposed PPAs, SDG&E expects that the developers will be able to obtain adequate and timely financing to allow the projects to deliver by the Commercial Operation deadlines.
2. **Tax Credits:** Two of the projects are expected to make use of either Production Tax Credits ("PTC") or Investment Tax Credit ("ITC"), whichever is applicable.
3. **Creditworthiness and Experience:** The proposed PPAs contain performance securities that will motivate developers to declare Commercial Operations by the deadline and perform in accordance with all terms and conditions.
4. **Project Status:** One project is presently operating with the contract including a capacity expansion from this project. The other two projects are new.

#### **IV. PRG FEEDBACK**

SDG&E periodically met with its PRG to brief them during the course of the Least Cost-Best Fit analysis, development of short-list, negotiation and recommendation phases of the RFO process. SDG&E first briefed its PRG on August 26, 2004 on SDG&E's preliminary summary and review of the bids received in response to the RFO. SDG&E subsequently provided further briefings on February 15, 2005 to summarize its recommendations for its short-list; May 19, 2005 to provide an update on the status of its negotiations; on July 18, 2005 to report final recommendations for projects that it proposed to contract with; and on September 9, 2005 to describe changes that had occurred during the final contract negotiation stages and how the final contracts differed from the presentation made on July 18th.

The PRG members have expressed their support for the contracts being proposed. None of the PRG members have objected to SDG&E's PPA recommendations or with any of the prices or terms presented to them. Appendix D provides a summary for each meeting, the major issues discussed, and changes which SDG&E made as a result of the PRG meetings.

#### **V. SUPPLEMENTAL ENERGY PAYMENTS**

No supplemental energy payments are necessary for the proposed PPAs.

#### **VI. REQUEST FOR COMMISSION APPROVAL**

The PPAs are conditioned on "CPUC Approval" as that term is defined in the each of the PPAs.

SDG&E therefore requests that the Commission approve the PPAs in their entirety without modification, including a ruling that approves:

1. The agreements in their entirety, including payments to be made by SDG&E, subject to CPUC review of SDG&E's administration of the Agreement.
2. Any procurement pursuant to these agreements are procured from an eligible renewable energy resource for purposes of determining SDG&E's compliance with any obligation that it may have to procure eligible renewable energy resources pursuant to the California Renewables Portfolio Standard (Public Utilities Code Section 399.11 et seq.), Decision 03-06-071, or other applicable law;
3. Any procurement pursuant to this Agreement constitutes incremental procurement or procurement for baseline replenishment by SDG&E from an eligible renewable energy resource for purposes of determining SDG&E's compliance with any obligation to increase its total procurement of eligible renewable energy resources that it may have pursuant to the California Renewables Portfolio Standard, CPUC Decision 03-06-071, or other applicable law;
4. The two new MPRs for years 2011 and 2012 as calculated by the Energy Division and SDG&E's calculation of blended MPRs for 2011 and 2012 as shown in Appendix C.

### **PROTEST**

Anyone may protest this advice letter to the California Public Utilities Commission. The protest must state the grounds upon which it is based, including such items as financial and service impact, and should be submitted expeditiously. The protest must be made in writing and received within 20 days of the date this advice letter was filed with the Commission. There is no restriction on who may file a protest. The address for mailing or delivering a protest to the Commission is:

CPUC Energy Division  
Attention: Tariff Unit  
505 Van Ness Avenue  
San Francisco, CA 94102

Copies should also be sent via e-mail to the attention of both Jerry Royer (jrr@cpuc.ca.gov) and Honesto Gatchallian (jnj@cpuc.ca.gov) of the Energy Division. It is also requested that a copy of the protest be sent via electronic mail and facsimile to SDG&E on the same date it is mailed or delivered to the Commission (at the addresses shown below).

Attn: Monica Wiggins  
Regulatory Tariff Manager  
8330 Century Park Court, Room 32C  
San Diego, CA 92123-1548  
Facsimile No. (858) 654-1788  
E-Mail: mwiggins@semprautilities.com

### **EFFECTIVE DATE**

SDG&E respectfully requests that this advice letter become effective no later than December 31, 2005.

**NOTICE**

In accordance with Section III.G of General Order No. 96-A, a copy of this filing has been served on the utilities and interested parties shown on the attached list, including interested parties in R.01-10-024, R.04-04-026 and the PRG, by either providing them a copy electronically or by mailing them a copy hereof, properly stamped and addressed.

Address changes should be directed to Christina Sondrini by facsimile at (858) 654-1788 or by e-mail to [csondrini@semprautilities.com](mailto:csondrini@semprautilities.com).

---

J. STEVE RAHON  
Director - Tariffs & Regulatory Accounts

# CALIFORNIA PUBLIC UTILITIES COMMISSION

## ADVICE LETTER FILING SUMMARY ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No. **SAN DIEGO GAS & ELECTRIC**

Utility type:

ELC

GAS

PLC

HEAT

WATER

Contact Person: Monica Wiggins

Phone #: (858) 654-1770

E-mail: mwiggin@semprautilities.com

### EXPLANATION OF UTILITY TYPE

ELC = Electric

GAS = Gas

PLC = Pipeline

HEAT = Heat

WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: 1727-E-A

Subject of AL: Supplemental Filing – Request for Approval of Renewable Energy Procurement  
Contracts Resulting from 2004 RPS Solicitation

Keywords (choose from CPUC listing): Procurement, Contracts

AL filing type:  Monthly  Quarterly  Annual  One-Time  Other

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #:

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL

Summarize differences between the AL and the prior withdrawn or rejected AL<sup>1</sup>:

Resolution Required?  Yes  No

Requested effective date: no later than 12/31/05

No. of tariff sheets: 0

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: N/A

Service affected and changes proposed<sup>1</sup>:

Pending advice letters that revise the same tariff sheets: N/A

**Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:**

**CPUC, Energy Division**

**Attention: Tariff Unit**

**505 Van Ness Ave.,**

**San Francisco, CA 94102**

**[jjr@cpuc.ca.gov](mailto:jjr@cpuc.ca.gov) and [jnj@cpuc.ca.gov](mailto:jnj@cpuc.ca.gov)**

**San Diego Gas & Electric**

**Attention: Monica Wiggins**

**8330 Century Park Ct, Room 32C**

**San Diego, CA 92123**

**[mwiggin@semprautilities.com](mailto:mwiggin@semprautilities.com)**

<sup>1</sup> Discuss in AL if more space is needed.

General Order No. 96-A, Sec. III. G.  
ADVICE LETTER FILING MAILING LIST

cc: (w/enclosures)

Public Utilities Commission

W. Ahern

ORA

D. Appling  
S. Cauchois  
J. Greig  
L. Maack  
R. Pocta  
W. Scott

Energy Division

W. Franklin  
S. Gallagher  
H. Gatchalian  
D. Lafrenz  
J. Royer

CA. Energy Commission

F. DeLeon  
R. Tavares

Alcantar & Kahl LLP

K. Harteloo

American Energy Institute

C. King

APS Energy Services

J. Schenk

BP Energy Company

J. Zaiontz

Barkovich & Yap, Inc.

B. Barkovich

Bartle Wells Associates

R. Schmidt

California Energy Markets

S. O'Donnell  
C. Sweet

California Farm Bureau Federation

K. Mills

California Wind Energy

N. Rader

Children's Hospital & Health Center

T. Jacoby

City of Chula Vista

W. Gaters

City of Poway

R. Willcox

City of San Diego

J. Cervantes  
G. Lonergan  
M. Valerio

Commerce Energy Group

A. Ahmed  
V. Gan

Constellation New Energy

W. Chen

CP Kelco

A. Friedl

Davis Wright Tremaine, LLP

E. O'Neill  
J. Pau

Dept. of General Services

C. Torres

Douglass & Liddell

D. Douglass  
D. Liddell  
G. Klatt

Duke Energy North America

M. Gillette

Dynegy, Inc.

J. Paul

Ellison Schneider & Harris LLP

E. Janssen

Energy Policy Initiatives Center (USD)

S. Anders

Energy Price Solutions

A. Scott

Energy Strategies, Inc.

K. Campbell  
M. Scanlan

Goodin, MacBride, Squeri, Ritchie & Day

B. Cragg  
J. Heather Patrick  
J. Squeri

Goodrich Aerostructures Group

M. Harrington

Hanna and Morton LLP

N. Pedersen

Ista-North America

L. Belew

J.B.S. Energy

J. Nahigian

Luce, Forward, Hamilton & Scripps LLP

J. Leslie

Manatt, Phelps & Phillips LLP

D. Huard

M. Snow

R. Keen

Matthew V. Brady & Associates

M. Brady

Modesto Irrigation District

C. Mayer

Morrison & Foerster LLP

P. Hanschen

MRW & Associates

D. Richardson

Pacific Gas & Electric Co.

J. Clark

M. Huffman

S. Lawrie

E. Lucha

Robinsons-May Dept. Stores

R. Britt

R. W. Beck, Inc.

C. Elder

San Diego Regional Energy Office

S. Freedman

School Project for Utility Rate Reduction

M. Rochman

Shute, Mihaly & Weinberger LLP

O. Armi

Solar Turbines

F. Chiang

Sutherland Asbill & Brennan LLP

K. McCrea

Southern California Edison Co.

M. Alexander

K. Cini

K. Gansecki

H. Romero

TransCanada

J. Roscher

B. Johnson

R. Hunter

D. White

TURN

M. Florio

M. Hawiger

UCAN

M. Shames

U.S. Dept. of the Navy

K. Davoodi

N. Furuta

J. Perez

Utility Specialists, Southwest, Inc.

D. Koser

Western Manufactured Housing

Communities Association

S. Dey

White & Case LLP

L. Cottle

Interested Parties

R.01-10-024

R.04-04-026

Procurement Review Group

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: VISUAL RESOURCES**

**Data Request 127:** Please establish a key observation point directly south of the project near the western boundary where the mirror array will be closest to motorists and where, during mid-day low angle (winter) sun conditions, the potential for reflection and glint and glare would be greatest to passing motorists. Please provide simulations at the requested key observation point during different times of day and during different seasons to adequately predict impacts under a variety of conditions.

**Response:** Two additional key observation points were established directly south of the project to respond to CURE's request. Both locations (KOP 6 and 7) are depicted on Figure 1, KOP Location Map of attachment VIS-1 located behind this response. Subsequently, simulations were prepared and are presented as figures in attachment VIS-1 for the following circumstances:

- Figure 1: KOP Location Map
- Figure 2: Existing View from KOP # 6
- Figure 3: Proposed View from Kop # 6 on January 15 at 7AM
- Figure 4: Proposed View from Kop # 6 on January 15 at 12PM
- Figure 5: Proposed View from Kop # 6 on January 15 at 4PM
- Figure 6: Proposed View from Kop # 6 on April 15 at 7AM
- Figure 7: Proposed View from Kop # 6 on April 15 at 12PM
- Figure 8: Proposed View from Kop # 6 on April 15 at 4PM
- Figure 9: Proposed View from Kop # 6 on July 15 at 7AM
- Figure 10: Proposed View from Kop # 6 on July 15 at 12PM
- Figure 11: Proposed View from Kop # 6 on July 15 at 4PM
- Figure 12: Proposed View from Kop # 6 on October 15 at 7AM
- Figure 13: Proposed View from Kop # 6 on October 15 at 12PM
- Figure 14: Proposed View from Kop # 6 on October 15 at 4PM
- Figure 15: Existing View from KOP # 7
- Figure 16: Proposed View from Kop # 7 on January 15 at 7AM
- Figure 17: Proposed View from Kop # 7 on January 15 at 12PM
- Figure 18: Proposed View from Kop # 7 on January 15 at 4PM
- Figure 19: Proposed View from Kop # 7 on April 15 at 7AM
- Figure 20: Proposed View from Kop # 7 on April 15 at 12PM
- Figure 21: Proposed View from Kop # 7 on April 15 at 4PM
- Figure 22: Proposed View from Kop # 7 on July 15 at 7AM
- Figure 23: Proposed View from Kop # 7 on July 15 at 12PM
- Figure 24: Proposed View from Kop # 7 on July 15 at 4PM
- Figure 25: Proposed View from Kop # 7 on October 15 at 7AM
- Figure 26: Proposed View from Kop # 7 on October 15 at 12PM
- Figure 27: Proposed View from Kop # 7 on October 15 at 4PM





View from Interstate 8 Looking North



EXISTING VIEW FROM KOP #6  
SOLAR TWO PROJECT

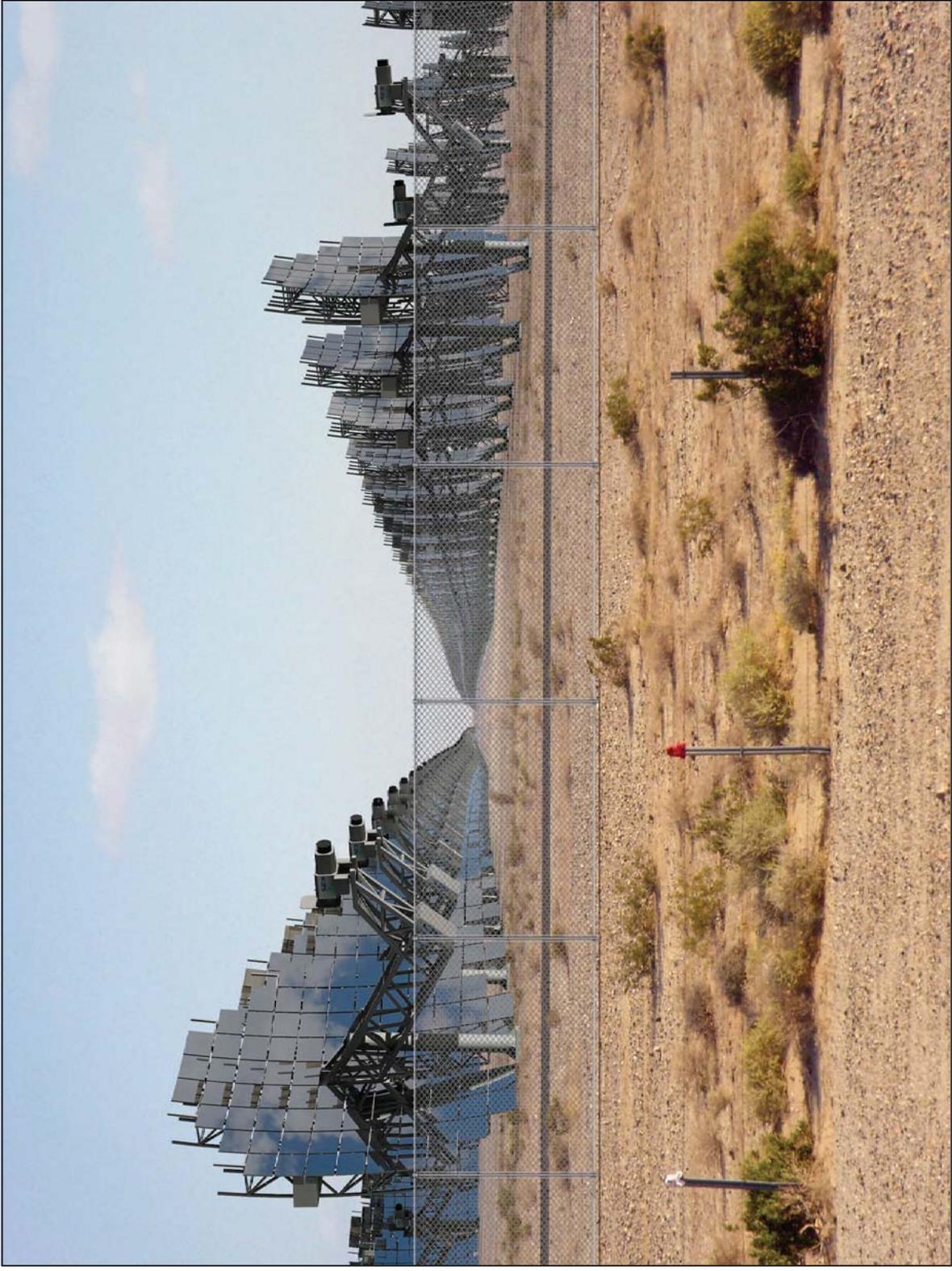
NO SCALE

CREATED BY: CL  
PM: AL

DATE: 4-22-09

FIG. NO:  
2





View from Interstate 8 Looking North



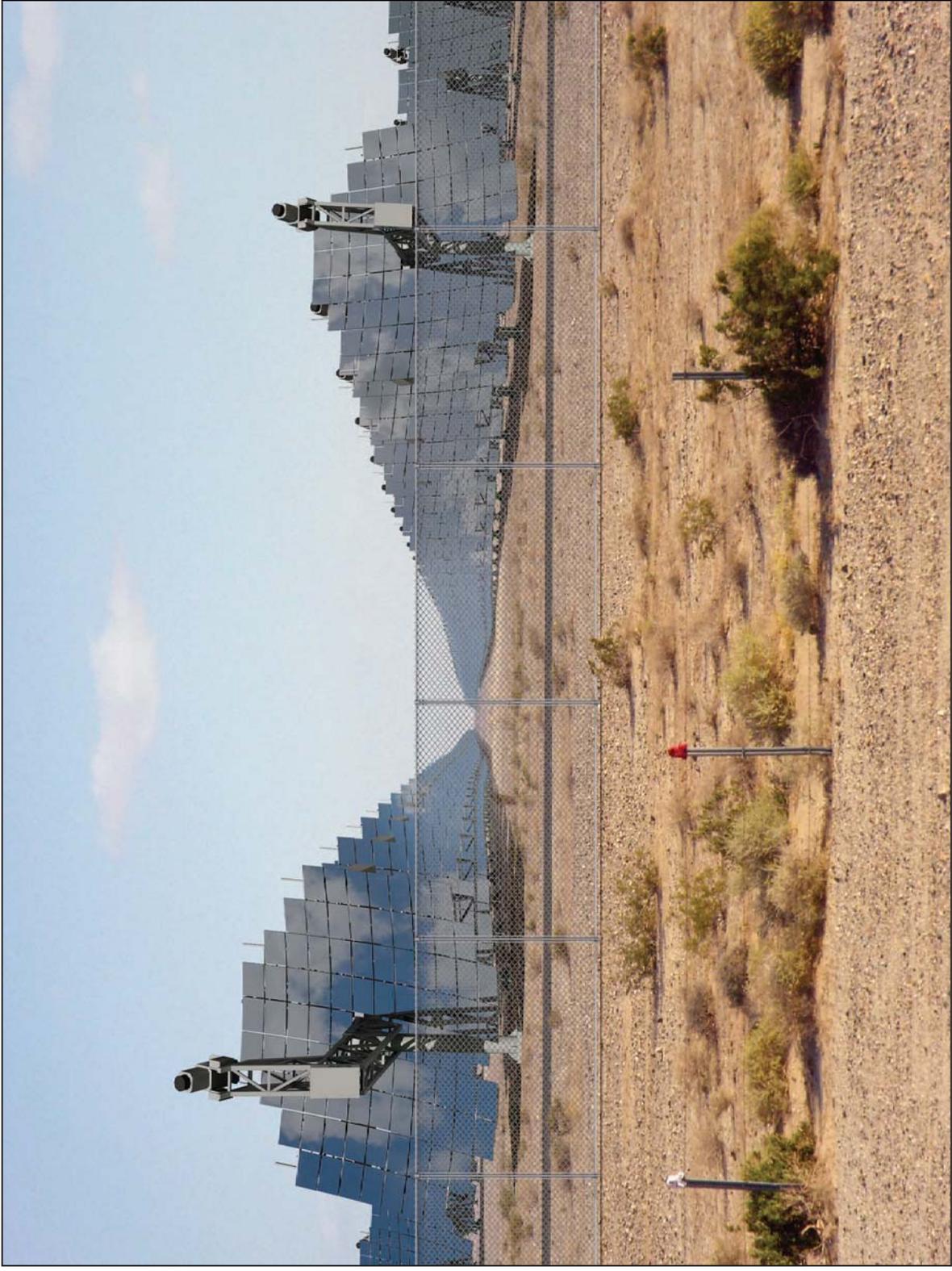
PROPOSED VIEW FROM KOP #6  
ON JANUARY 15 AT 7AM  
SOLAR TWO PROJECT

NO SCALE



CREATED BY: CL DATE: 4-22-09 FIG. NO:

PM: AL PROJ. NO: 27657102.00413 3



View from Interstate 8 Looking North



PROPOSED VIEW FROM KOP #6  
ON JANUARY 15 AT 12PM  
SOLAR TWO PROJECT



NO SCALE

CREATED BY: CL	DATE: 4-22-09	FIG. NO:
PM: AL	PROJ. NO: 27657102.00413	4



View from Interstate 8 Looking North



**URS**

NO SCALE

PROPOSED VIEW FROM KOP #6  
ON JANUARY 15 AT 4PM  
SOLAR TWO PROJECT

CREATED BY: CL	DATE: 4-22-09	FIG. NO:
PM: AL	PROJ. NO: 27657102.00413	5



View from Interstate 8 Looking North

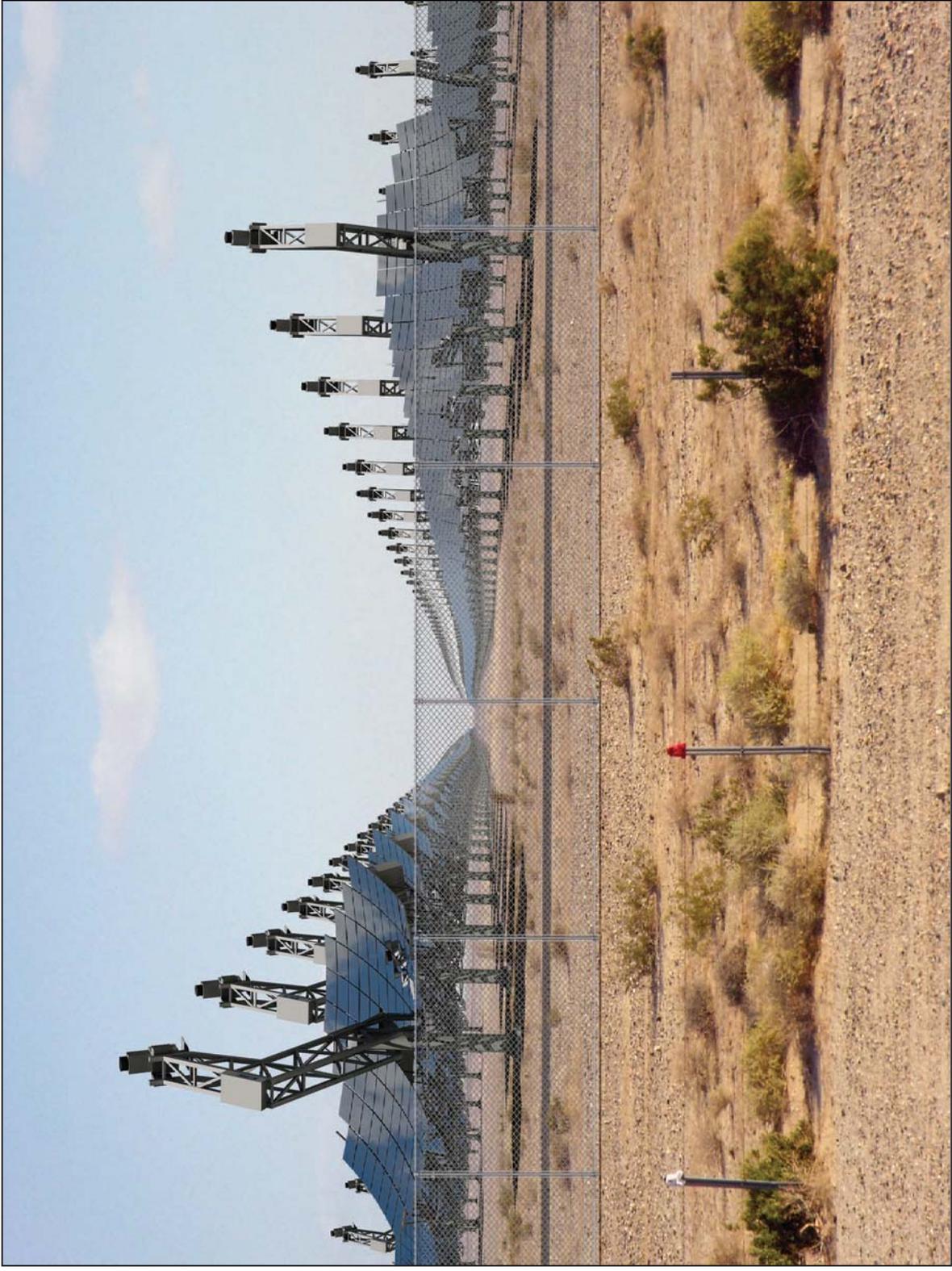


**URS**

NO SCALE

PROPOSED VIEW FROM KOP #6  
ON APRIL 15 AT 7AM  
SOLAR TWO PROJECT

CREATED BY: CL	DATE: 4-22-09	FIG. NO:
PM: AL	PROJ. NO: 27657102.00413	6



View from Interstate 8 Looking North



PROPOSED VIEW FROM KOP #6  
ON APRIL 15 AT 12PM  
SOLAR TWO PROJECT



NO SCALE

CREATED BY: CL	DATE: 4-22-09	FIG. NO:
PM: AL	PROJ. NO: 27657102.00413	7



View from Interstate 8 Looking North



PROPOSED VIEW FROM KOP #6  
ON APRIL 15 AT 4PM  
SOLAR TWO PROJECT

NO SCALE



CREATED BY: CL	DATE: 4-22-09	FIG. NO:
PM: AL	PROJ. NO: 27657102.00413	8



View from Interstate 8 Looking North



PROPOSED VIEW FROM KOP #6  
ON JULY 15 AT 7AM  
SOLAR TWO PROJECT



NO SCALE

CREATED BY: CL

DATE: 4-22-09

FIG. NO:

9

PM: AL

PROJ. NO: 27657102.00413



View from Interstate 8 Looking North



PROPOSED VIEW FROM KOP #6  
ON JULY 15 AT 12PM  
SOLAR TWO PROJECT



NO SCALE

CREATED BY: CL	DATE: 4-22-09	FIG. NO:
PM: AL	PROJ. NO: 27657102.00413	10



View from Interstate 8 Looking North

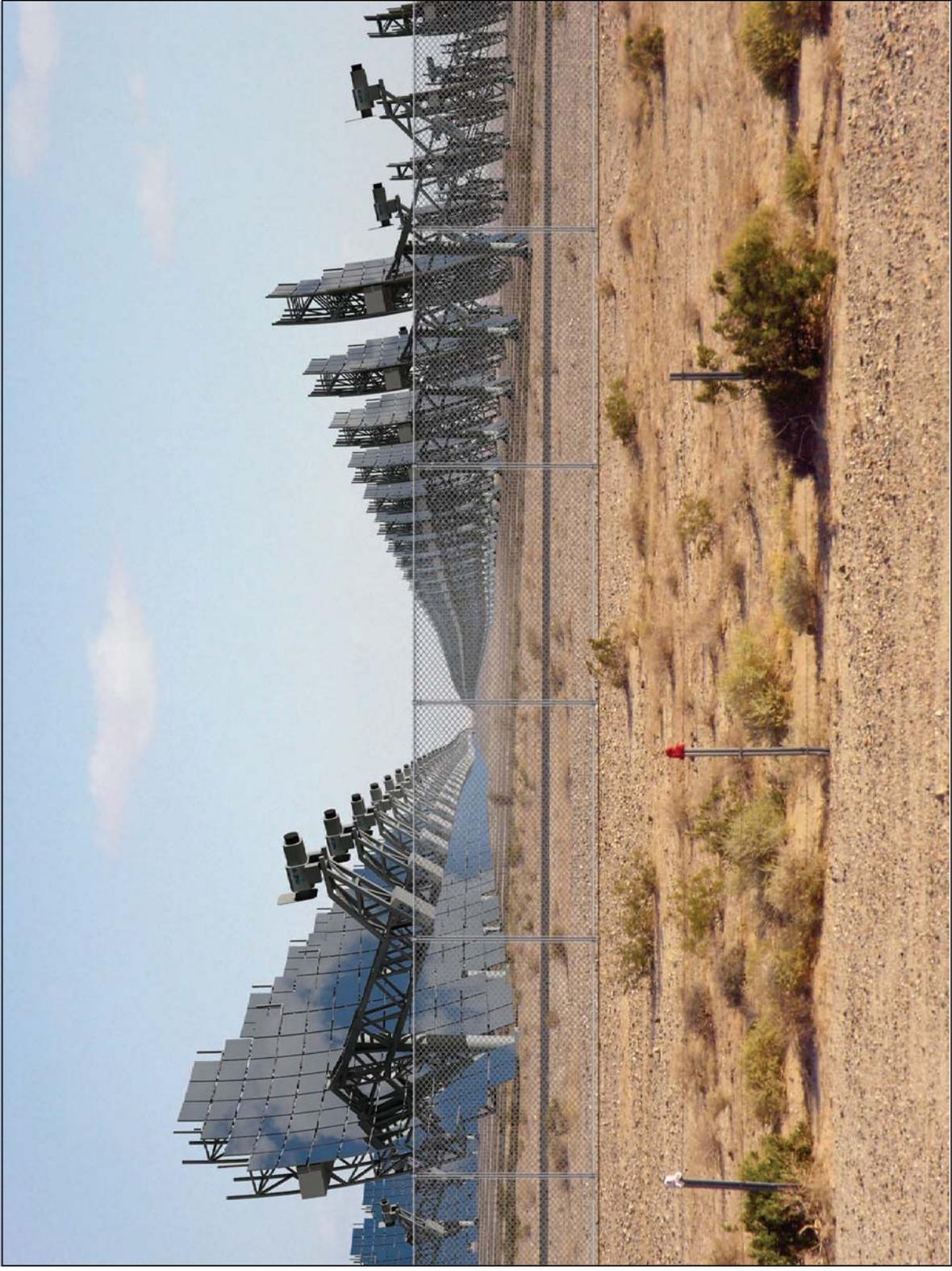


PROPOSED VIEW FROM KOP #6  
ON JULY 15 AT 4PM  
SOLAR TWO PROJECT

NO SCALE



CREATED BY: CL	DATE: 4-22-09	FIG. NO:
PM: AL	PROJ. NO: 27657102.00413	11



View from Interstate 8 Looking North



PROPOSED VIEW FROM KOP #6  
ON OCTOBER 15 AT 7AM  
SOLAR TWO PROJECT

CREATED BY: CL	DATE: 4-22-09	FIG. NO:
PM: AL	PROJ. NO: 27657102.00413	12

NO SCALE



View from Interstate 8 Looking North



PROPOSED VIEW FROM KOP #6  
ON OCTOBER 15 AT 12PM  
SOLAR TWO PROJECT



NO SCALE

CREATED BY: CL	DATE: 4-22-09	FIG. NO:
PM: AL	PROJ. NO: 27657102.00413	13



View from Interstate 8 Looking North



**URS**

NO SCALE

PROPOSED VIEW FROM KOP #6  
ON OCTOBER 15 AT 4PM  
SOLAR TWO PROJECT

CREATED BY: CL

DATE: 4-22-09

FIG. NO:

PM: AL

PROJ. NO: 27657102.00413

14



View from Interstate 8 Looking North



EXISTING VIEW FROM KOP #7  
SOLAR TWO PROJECT

NO SCALE

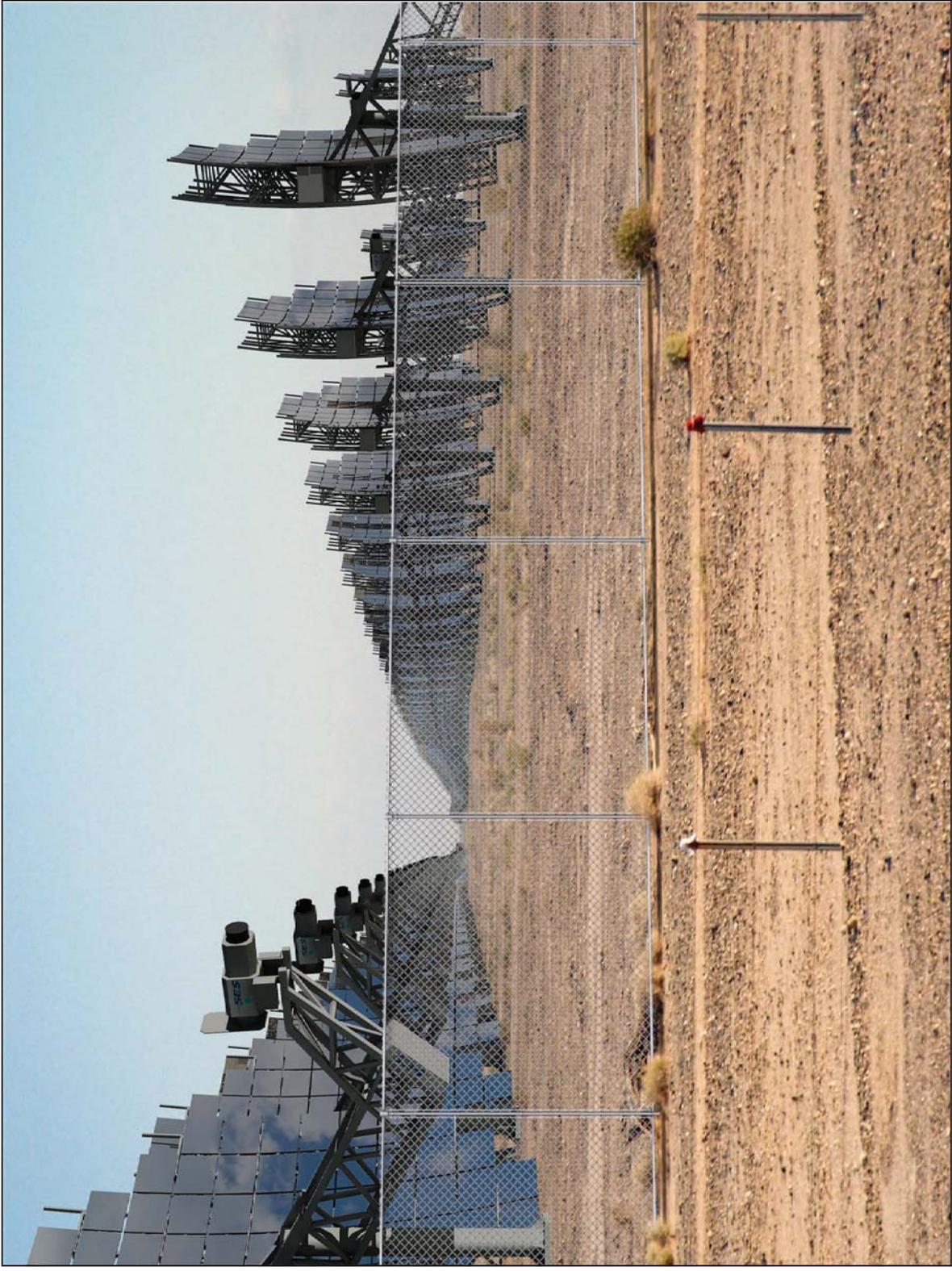
CREATED BY: CL  
PM: AL

DATE: 4-22-09

PROJ. NO: 27657102.00413

FIG. NO:  
15





View from Interstate 8 Looking North

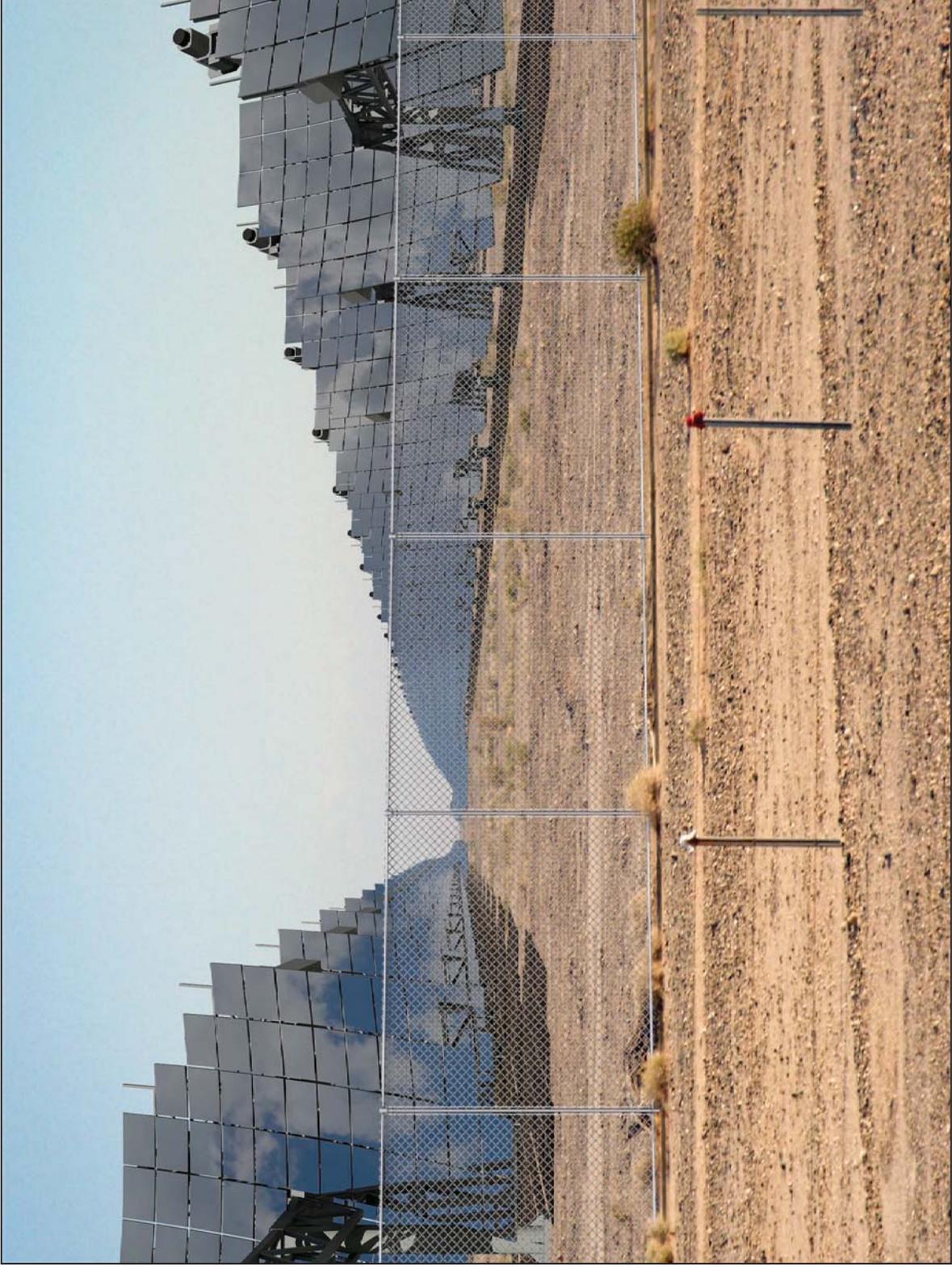


**URS**

PROPOSED VIEW FROM KOP #7  
ON JANUARY 15 AT 7AM  
SOLAR TWO PROJECT

NO SCALE

CREATED BY: CL	DATE: 4-22-09	FIG. NO:
PM: AL	PROJ. NO: 27657102.00413	16



View from Interstate 8 Looking North



PROPOSED VIEW FROM KOP #7  
ON JANUARY 15 AT 12PM  
SOLAR TWO PROJECT

NO SCALE

CREATED BY: CL

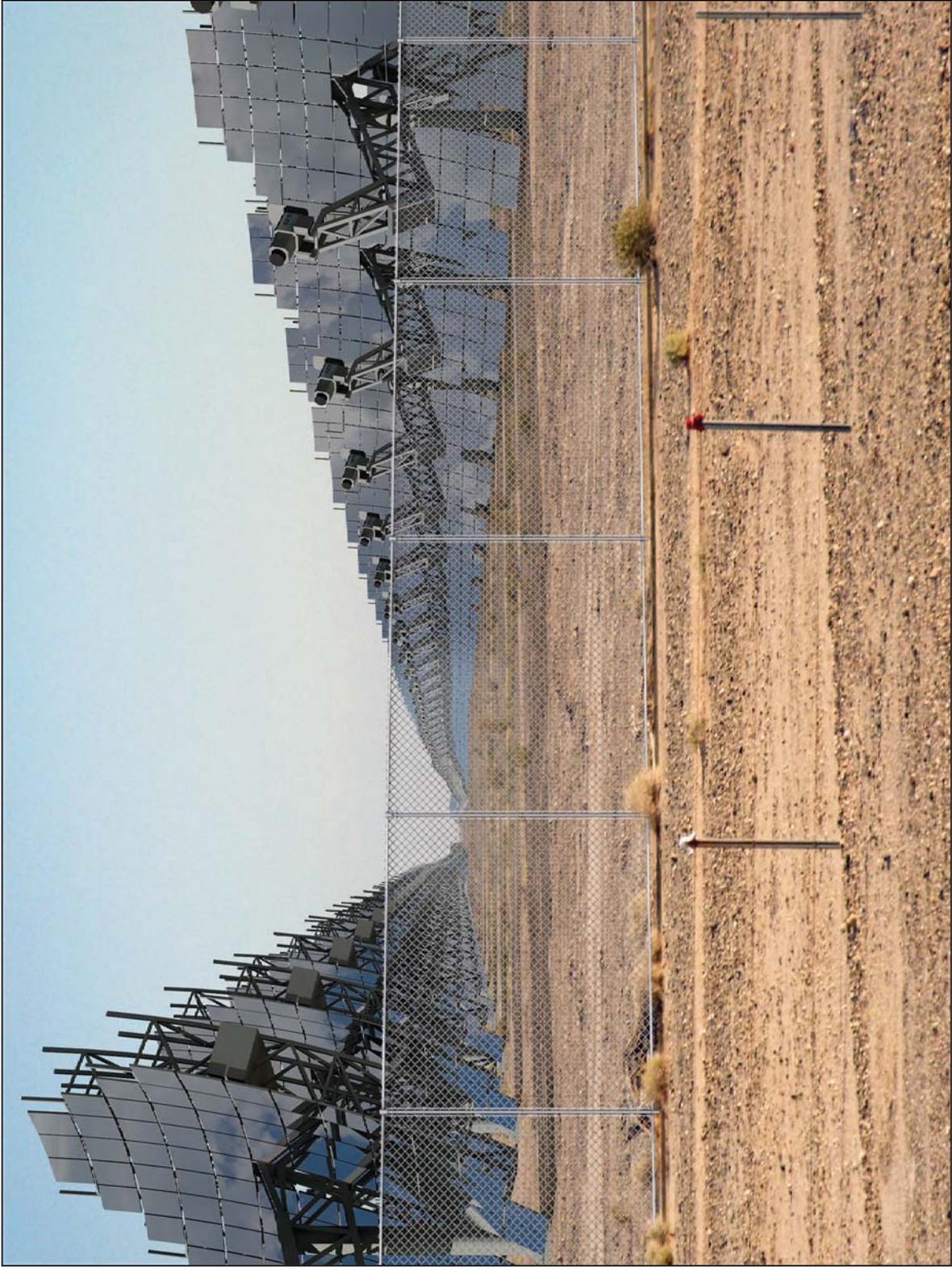
DATE: 4-22-09

FIG. NO:

17



PM: AL PROJ. NO: 27657102.00413



View from Interstate 8 Looking North



PROPOSED VIEW FROM KOP #7  
ON JANUARY 15 AT 4PM  
SOLAR TWO PROJECT



NO SCALE

CREATED BY: CL

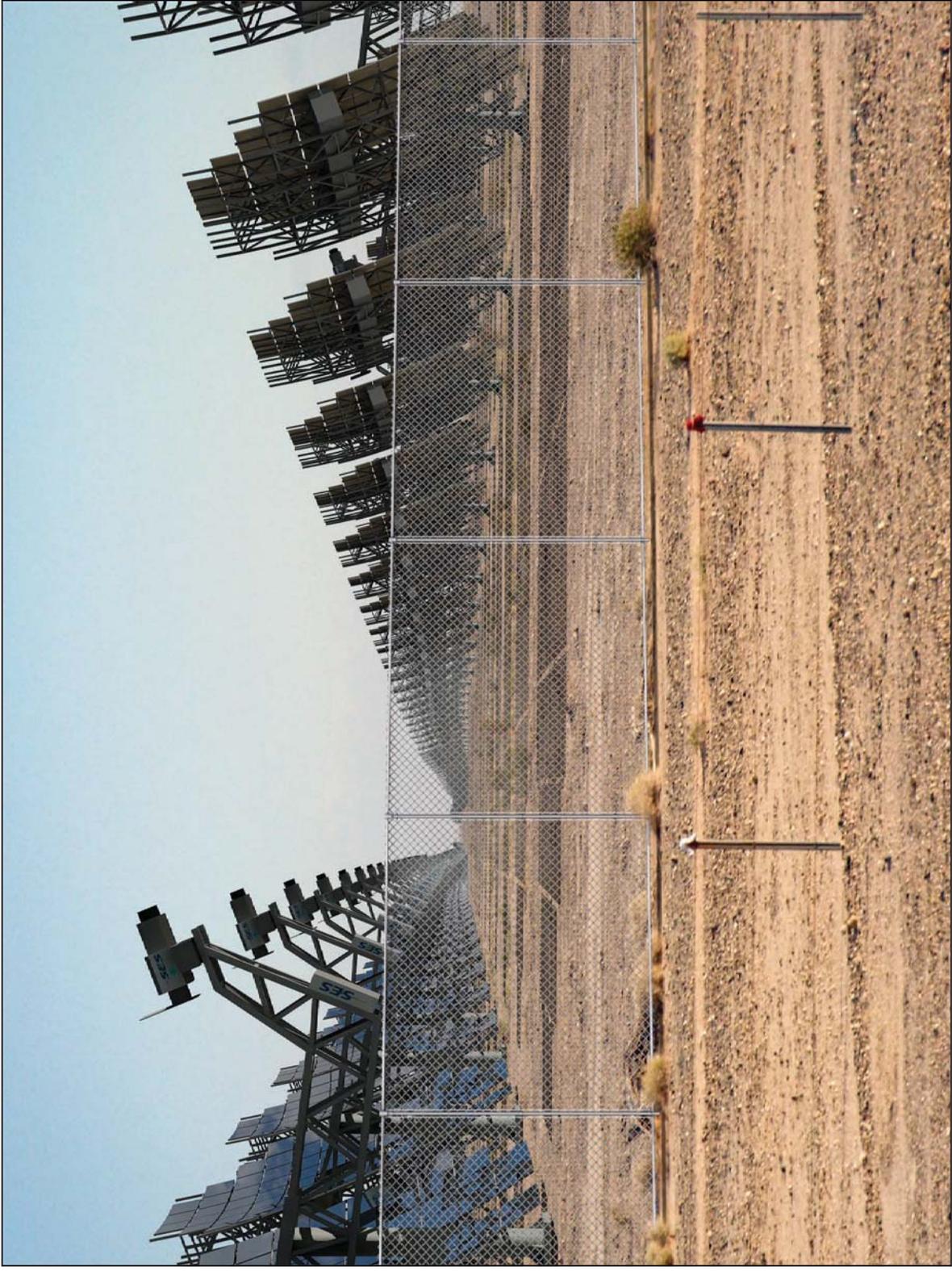
DATE: 4-22-09

FIG. NO:

PM: AL

PROJ. NO: 27657102.00413

18



View from Interstate 8 Looking North

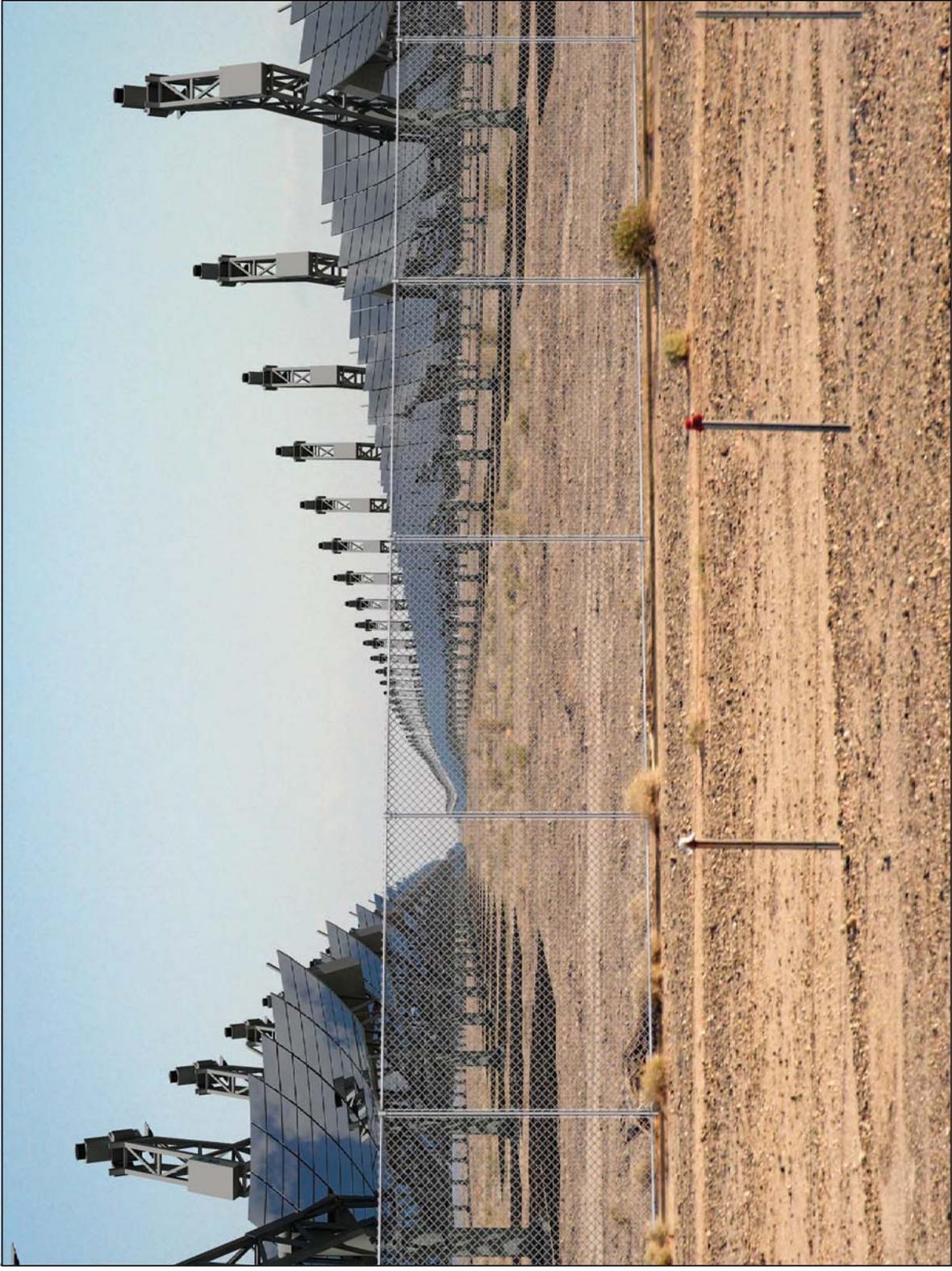


PROPOSED VIEW FROM KOP #7  
ON APRIL 15 AT 7AM  
SOLAR TWO PROJECT



NO SCALE

CREATED BY: CL	DATE: 4-22-09	FIG. NO:
PM: AL	PROJ. NO: 27657102.00413	19



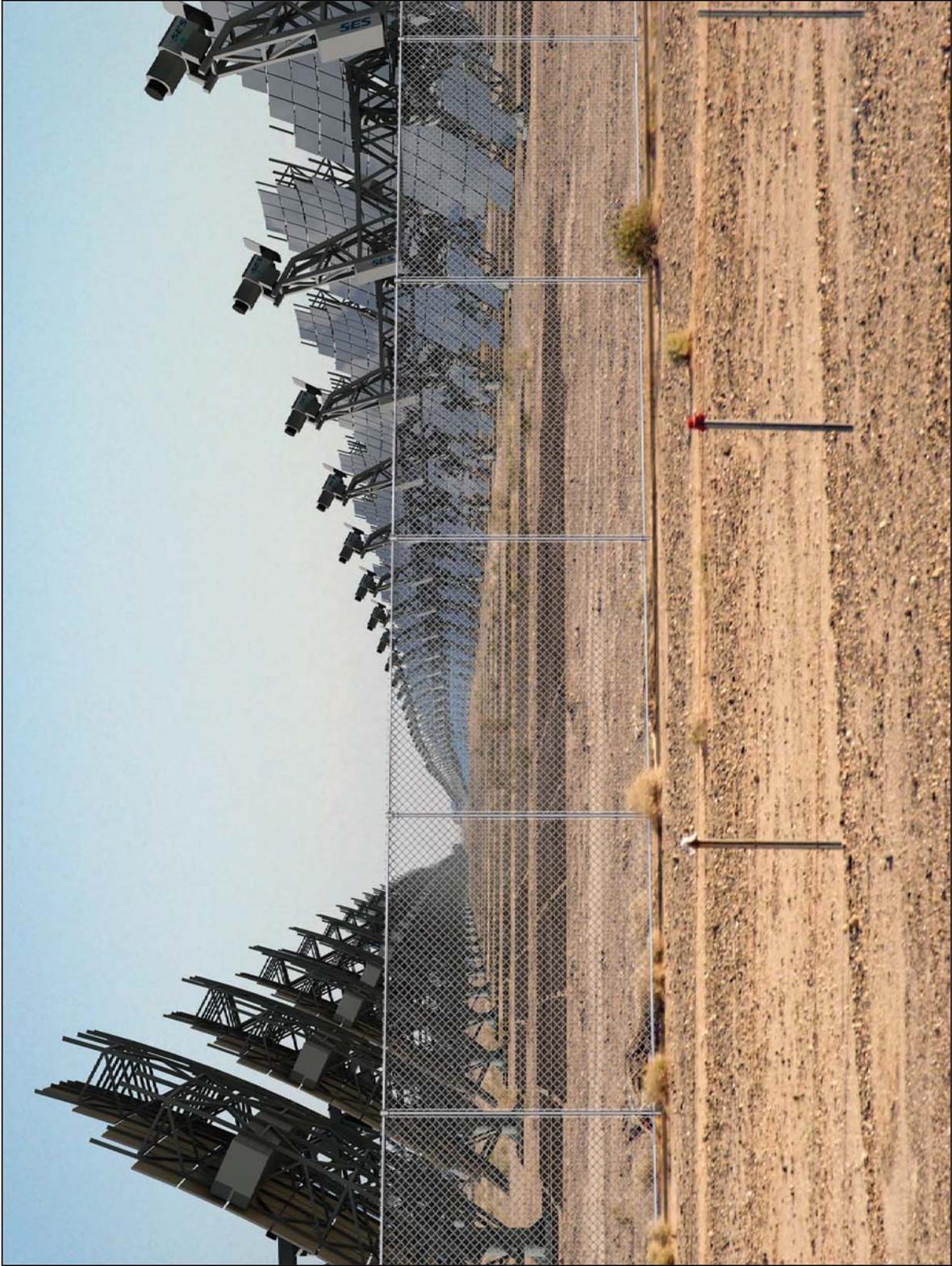
View from Interstate 8 Looking North



PROPOSED VIEW FROM KOP #7  
ON APRIL 15 AT 12PM  
SOLAR TWO PROJECT

CREATED BY: CL	DATE: 4-22-09	FIG. NO:
PM: AL	PROJ. NO: 27657102.00413	20

NO SCALE



View from Interstate 8 Looking North

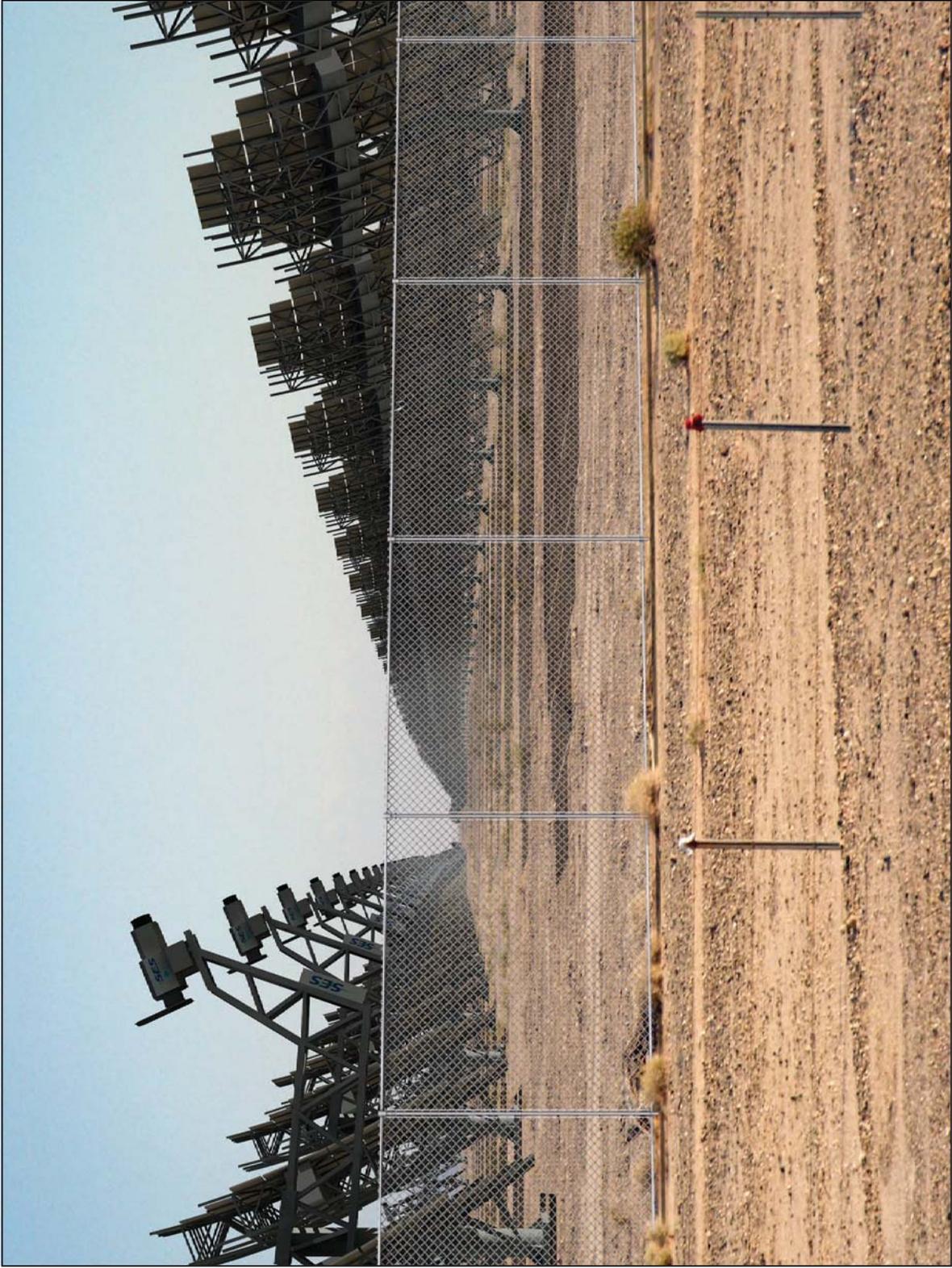


PROPOSED VIEW FROM KOP #7  
ON APRIL 15 AT 4PM  
SOLAR TWO PROJECT

NO SCALE

**URS**

CREATED BY: CL	DATE: 4-22-09	FIG. NO:
PM: AL	PROJ. NO: 27657102.00413	21



View from Interstate 8 Looking North

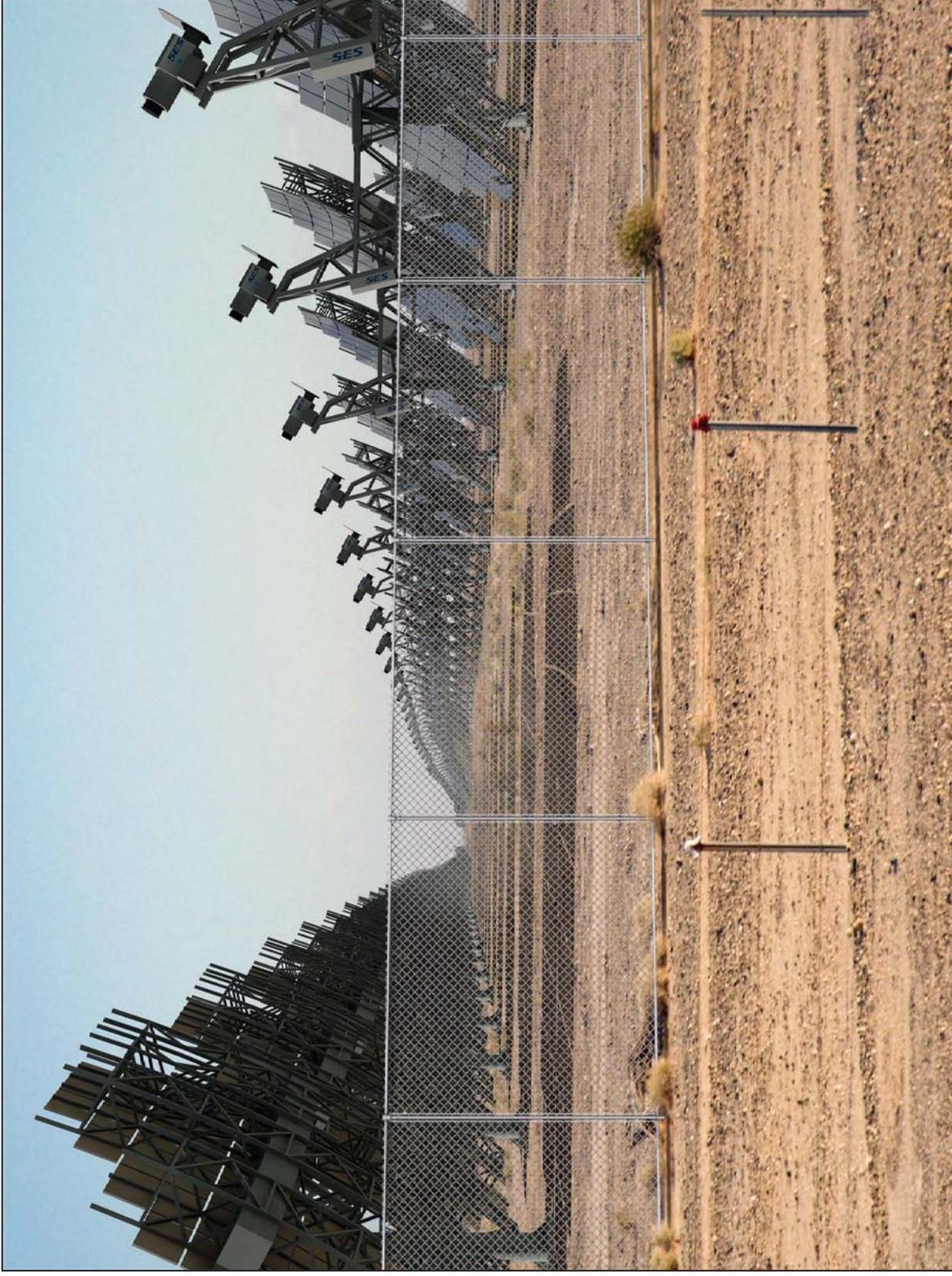


PROPOSED VIEW FROM KOP #7  
ON JULY 15 AT 7AM  
SOLAR TWO PROJECT

NO SCALE

CREATED BY: CL      DATE: 4-22-09      FIG. NO:  
PM: AL      PROJ. NO: 27657102.00413      22





View from Interstate 8 Looking North



**URS**

PROPOSED VIEW FROM KOP #7  
ON JULY 15 AT 12PM  
SOLAR TWO PROJECT

NO SCALE

CREATED BY: CL

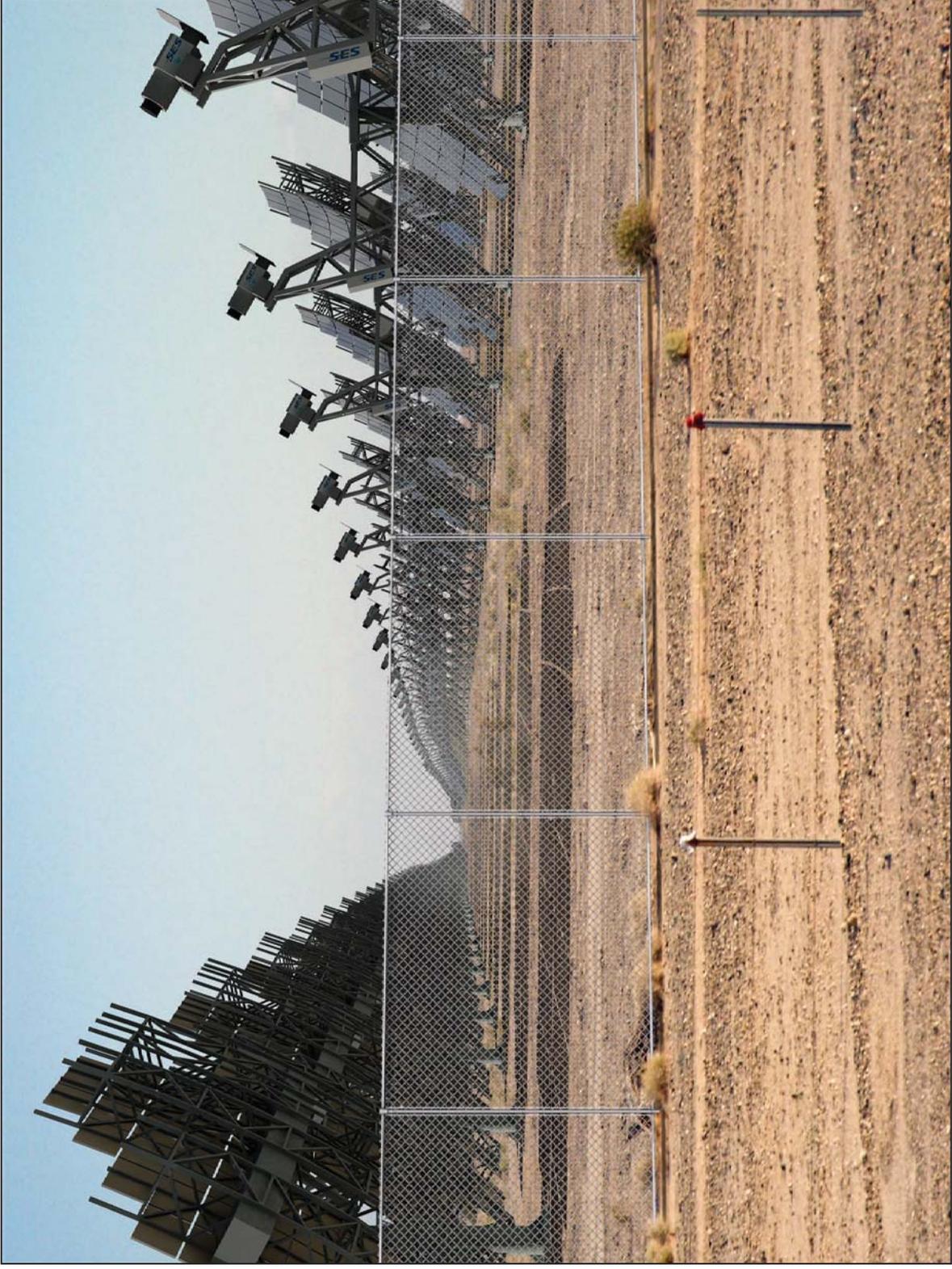
DATE: 4-22-09

FIG. NO:

PM: AL

PROJ. NO: 27657102.00413

23



View from Interstate 8 Looking North



PROPOSED VIEW FROM KOP #7  
ON JULY 15 AT 4PM  
SOLAR TWO PROJECT

NO SCALE

CREATED BY: CL

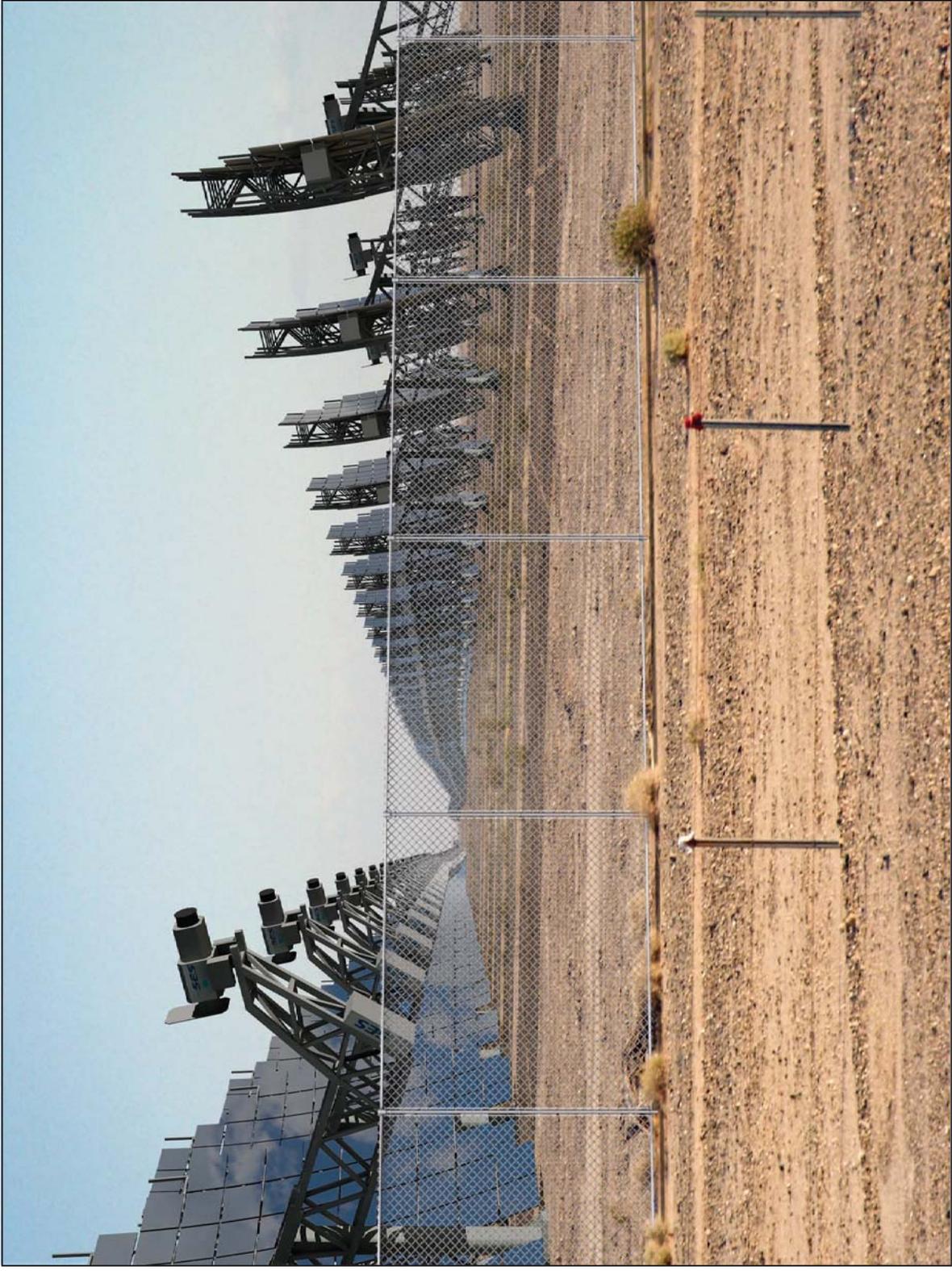
DATE: 4-22-09

FIG. NO:

24



PM: AL PROJ. NO: 27657102.00413



View from Interstate 8 Looking North



PROPOSED VIEW FROM KOP #7  
ON OCTOBER 15 AT 7AM  
SOLAR TWO PROJECT



NO SCALE

CREATED BY: CL	DATE: 4-22-09	FIG. NO:
PM: AL	PROJ. NO: 27657102.00413	25



View from Interstate 8 Looking North



PROPOSED VIEW FROM KOP #7  
ON OCTOBER 15 AT 12PM  
SOLAR TWO PROJECT



NO SCALE

CREATED BY: CL

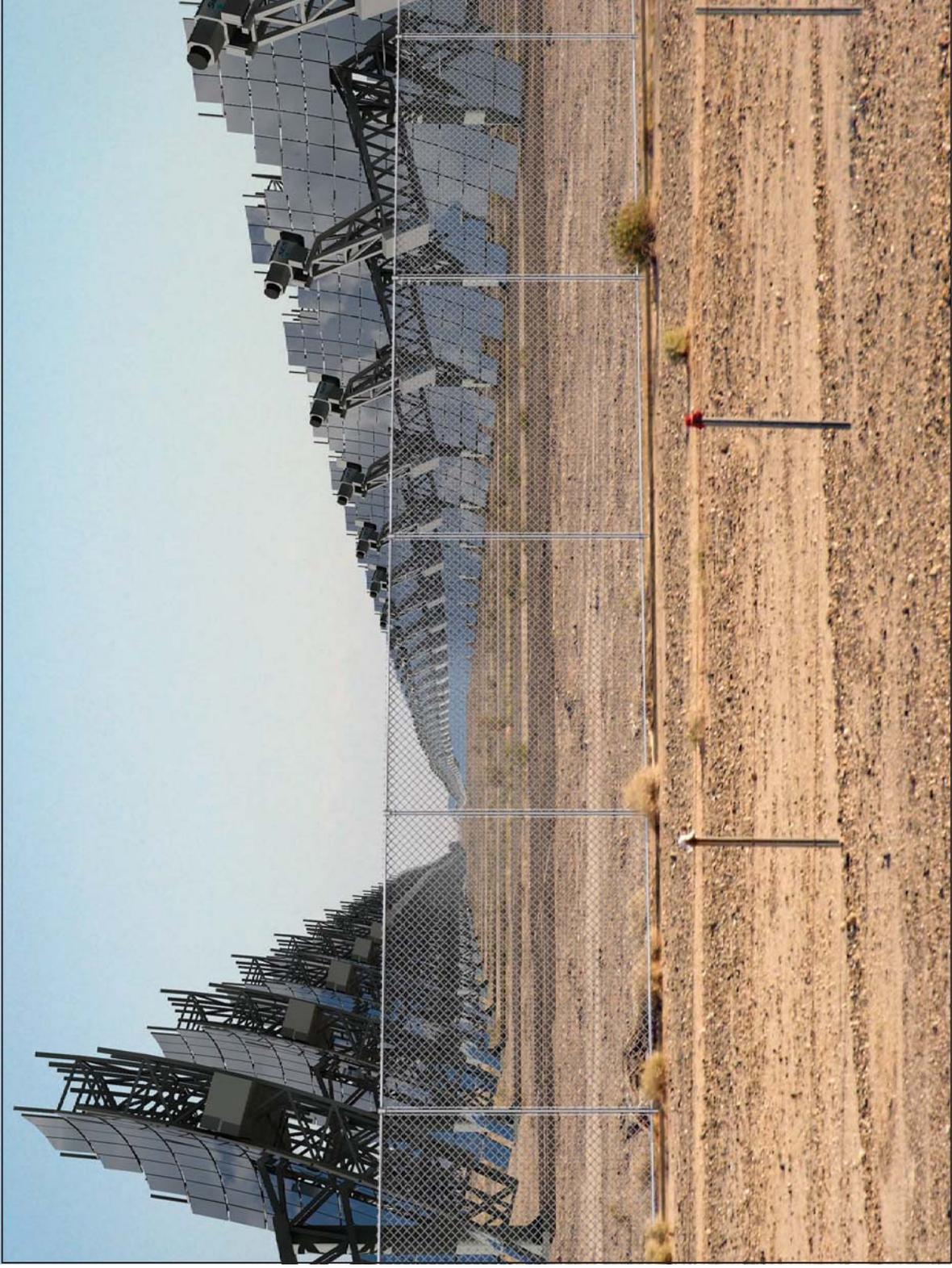
DATE: 4-22-09

FIG. NO:

PM: AL

PROJ. NO: 27657102.00413

26



View from Interstate 8 Looking North



PROPOSED VIEW FROM KOP #7  
ON OCTOBER 15 AT 4PM  
SOLAR TWO PROJECT

NO SCALE

CREATED BY: CL

DATE: 4-22-09

FIG. NO:

27



PM: AL

PROJ. NO: 27657102.00413

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: VISUAL RESOURCES**

**Data Request 128:** Please prepare a glint and glare study that would quantify the intensity of the reflected light on motorists, particularly horizontally directed glare at motorists during operation and during potential equipment maintenance and failure when mirrors may not be positioned at operational angles.

**Response:** A glint and glare study was prepared and is presented as attachment VIS-2 behind this response.

## Glint and Glare Study

Since the SES Solar Two project will be located in proximity to major roadways, there are often questions about whether there is any risk to motorists or spectators from glint shining outside the plant's boundary and if the sun's image can be reflected from the mirrors into oncoming cars or aircraft. Potential glint reflecting off the system is minimal but will be analyzed below.

The SunCatcher is a parabolic dish that tilts in elevation and rotates in azimuth to track the sun. It has the capability to rotate to almost any position. SunCatchers are covered with mirrors that concentrate light on a single point 22 ft from the dish surface. The SunCatcher is designed to efficiently capture and use the sunlight that is incident upon it. During operation, very little light reflected from the mirrors escapes the system.

A glint analysis needs to consider any combination of sun position, dish angle, and observer position. The analysis also needs to consider normal and abnormal operating conditions.

The SunCatcher is designed with its Power Conversion Unit (PCU) at the focal point of the parabolic dish. During operation, by design, the image of the sun is reflected from the mirrors onto the PCU where it is absorbed. The sun light striking the dish mirrors is not reflected in any other direction. It is not possible to see the image of the sun reflected in the mirrors while it is generating power.

When a temporary cloud passes overhead, the SunCatcher enters an offset tracking mode. The SunCatcher repositions 10 degrees off sun while still tracking. This mode is designed to place the focus of the sun 10 degrees above the PCU in order to prevent the PCU from being damaged when the sunlight returns. Beyond the focal point, at the PCU the concentrated light quickly returns to ambient level at approximately 50 ft from the vertex of the parabolic dish. The reflected light at this point is no brighter than the sun light as it strikes the earth. This is illustrated in Figure One.

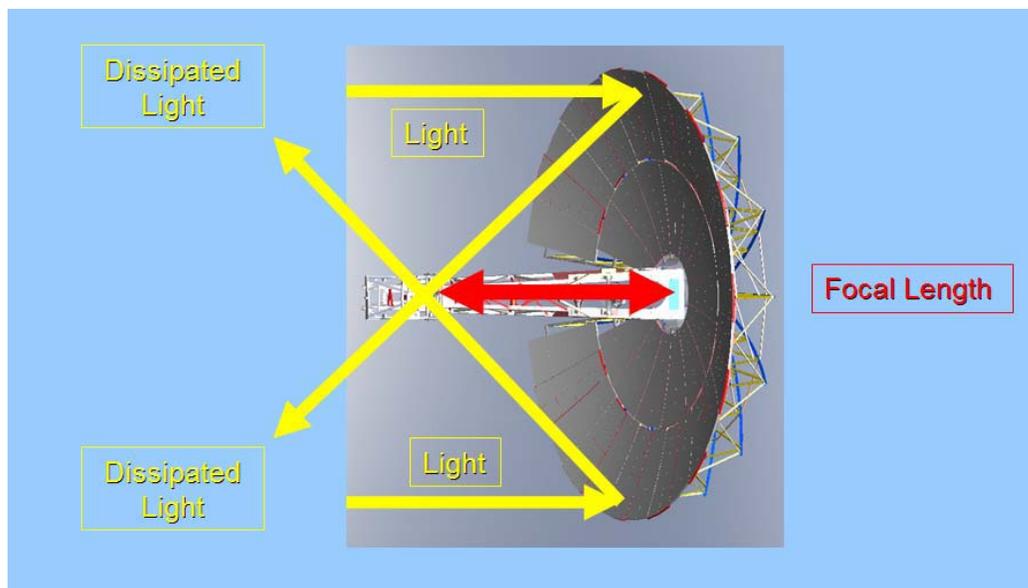


Figure One: Top view of the sunlight reflected during offset tracking

At night, the SunCatchers are stored facing North in the service position where it is tilted down at minus 22 degrees in elevation. This is also the position that the dish will be in when it is undergoing service during evening and night time hours. This position was selected because El Centro has a maximum solar declination of 23.4 degrees so that no matter the position of the sun, the mirrors will always shade themselves.

During windy periods of the day or night, the SunCatchers are stored in “Wind Stow” position with the dish pointing directly up. As the Sun moves across the sky, the light will be focused at approximately 100 ft. (maximum) from the vertex. At distances beyond this focal point, the concentrated light dissipates quickly. At twice the distance from the dish to the point where light focuses, the reflected light will be no brighter than the sun as it strikes the earth surface.

There is no hazard to passing airplanes. Glint from above has been compared to seeing the sun reflected in a lake.<sup>1</sup> Figure 2 below is a picture of the glint of a parabolic trough plant from a small airplane. The SunCatcher field will be similar though the glint will have a more circular appearance.



Figure Two: Image of a parabolic trough plant from a low flying airplane<sup>1</sup>

Occasionally, such as after maintenance work, a SunCatcher will need to move to a different position. Theoretically, the dish can be moved to any position, with the sun at any location, without causing a concentrated image of the sun to be reflected at a passerby outside the boundary fence.

The parabolic dish with the sun hitting it at an angle will focus the light in mid air close to the dish but not at the PCU. Similarly to the “Wind Stow” position, the light dissipates quickly the further away it is from the focus.

If an azimuth or elevation drive fails, the dish may be unable to move but the dish will still focus the light and the focus the light dissipates from the vertex approximately 100 ft. and with in 200 ft. the concentration will return to a normal level.

The boundary line of the Solar Two plant is a minimum of 250 feet away from the nearest SunCatcher. At this distance, any glint will be dissipated to a fraction of the intensity of the sun. The shoulder of I-8 and the Evan Hewes Highway is at least 360 feet from the nearest dish.

The intensity of light at the plant boundary and nearest roadways was calculated using first the nominal focal length of the dish to describe the glint during offset tracking and second using a wind stow or slew case where the focal distance has grown to 100 ft. The results of these calculations are provided in the table below:

Distance from Dish (ft)	Irradiance of Reflected Light Assuming Nominal Focal Distance (kW/m <sup>2</sup> )	Irradiance of Reflected Light Assuming a Worst case Focal Distance of 100 ft (kW/m <sup>2</sup> )
Boundary of Plant (250 ft)	0.009	0.444
Nearest Shoulder of Roadway (360 ft)	0.004	0.147

For comparison, the sun on a bright day typically has an irradiance of 1.000 kW/m<sup>2</sup>.

<sup>1</sup> Letter from Jeff K. Brown, California Department of Transportation, Division of Aeronautics, to Jim Adams, California Energy Commission December 11, 2007

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: VISUAL RESOURCES**

**Data Request 129:** Please identify the graphics software and provide the data input files that were used for the Project's key observation point simulations.

**Response:** The graphics software used to create the Project's simulations were Autodesk Civil 3D 2009, Autodesk 3D Studio Max 2009, and Adobe Photoshop CS3. The data input files have been provided on a DVD titled "Data Request 129 – Visual Simulations Data Files" accompanying this submittal.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: VISUAL RESOURCES**

**Data Request 130:** Please provide documentation of communication with Caltrans about the requested key observation point simulation and the requested glint and glare study for any input they may have about impacts of the project on passing motorists. If there has been no communication with Caltrans, please provide an explanation why not.

**Response:** On 12.15.06 the Applicant and consultants met with Caltrans and discussed the overall project, its location, potential crossings of I-8 by transmission lines, traffic studies, and visual aspects. Caltrans did not expect any impacts from the construction of our project. In May 2008, the Applicant again met with Caltrans and provided information about the project. Visual aspects of the project as well as glint and glare were discussed with Caltrans. In addition, the Applicant has started the encroachment permitting process with Jacob Armstrong of Caltrans. The Applicant will continue discussions with Caltrans throughout the process.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: HAZARDOUS MATERIALS**

**Data Request 131:** Please provide modeling and risk analysis data that has been performed to evaluate the potential impacts of transporting hydrogen for Project use.

**Response:** To reduce truck trips to and on the project site, the project has been redesigned to use a central hydrogen production and distribution system (details of the system will be submitted in Q3, 2009 K bottles and the need to transport them to the site will not be required.

If hydrogen bottles were used, they would be transported in accordance with applicable regulations and with proper identification of the materials transported. Modeling and risk analysis for transporting hydrogen is not required. However, the nature of the risks posed by hydrogen during transportation is essentially similar in nature to the risk posed by cylinders in storage. This modeling and risk analysis is described in Section 5.15.2.3 of the Project AFC. This modeling scenario is set for the release and subsequent explosion of the whole content of one hydrogen bottle. The modeling result indicates an impact radius of 63 feet. Therefore, we can conclude that the impact distance will not go much beyond the area of the freeway. In addition, these events are considered unlikely. For more information please see Section 5.15.2.3 of the Project AFC.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: HAZARDOUS MATERIALS**

**Data Request 132:** Please explain how temperatures will be maintained 125 degrees Fahrenheit if the units are stored outside in the desert environment.

**Response:** In the responses to CEC and BLM data requests 24, 25, and 26 filed in March, 2009, the project was modified to use a centralized hydrogen production and distribution system. K-bottles and an on-site storage facility for the k-bottles will no longer be required. As shown in the responses, there will be a larger hydrogen storage tank located on site. The tank will be located under a canopy and equipped with a pressure relief valve.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: HAZARDOUS MATERIALS**

**Data Request 133:** Please clarify whether bollards and fencing be used. Please provide a diagram and pictorial overview of the storage configuration.

**Response:** With the change in design of the hydrogen system, no bollards and fencing will be required for storage of hydrogen cylinders.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: HAZARDOUS MATERIALS**

**Data Request 134:** Please provide any documentation of communication between SES Solar, LLC and the El Centro Fire Department concerning the hydrogen storage onsite.

**Response:** Fire Chief Chris Petree of the El Centro Fire Department (760-337-4530) was contacted in preparation of the AFC and in subsequent discussions about the project. We have also spoken with the Johnny Romero (760-480-2429), Deputy Fire Marshall of the Imperial County Fire Department, on 07/24/08 and 09/11/08 to discuss the components of our project that included the use of hydrogen on site in storage tanks as well as in "K" bottles on the actual Suncatcher units. More recently, we spoke with Andy Horne (760-482-4727), Deputy County Chief Executive Officer of Imperial County, on 04/23/09 to provide an update concerning our project at which our use of hydrogen was discussed since we were not able to get in touch with Deputy Fire Marshall Johnny Romero who is on sick leave.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: HAZARDOUS MATERIALS**

**Data Request 135:** Please provide a description of whether some of the El Centro Firefighters have special training and equipment to respond to a hydrogen explosion and related injuries.

**Response:** According to the Imperial County Fire Department (communication dates provided in Data Request 134) there were no concerns and the staff has adequate training for incidents related to hydrogen.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: HAZARDOUS MATERIALS**

**Data Request 136:** Please describe whether any modeling and analysis has been done of onsite consequences for the use of hydrogen storage cylinders. If so please provide the modeling and analysis.

**Response:** To reduce truck trips to and on the project site, the project has been redesigned to use a central hydrogen production and distribution system (details of the system will be submitted in Q3, 2009).

A modeling analysis of as onsite consequence of using the hydrogen storage cylinders is provided in Section 5.15.2.3 of the Project AFC. Two scenarios were provided: **Scenario 1:** The contents of one hydrogen cylinder plus the one contained in the engine (210 cubic feet) within a Suncatcher unit at the Project site leak into the atmosphere. **Scenario 2:** The contents of 100 hydrogen cylinder (19,600 cubic feet) in the hydrogen storage room at the Project site leak into the atmosphere. The impact from both scenarios remains on-site. See Figure 5.15-1 in the Project AFC.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: HAZARDOUS MATERIALS**

**Data Request 137:** Please provide documentation of communication with CalTrans concerning the transportation of hydrogen for the Project site.

**Response:** Caltrans was not contacted in regards to hydrogen transportation nor is contact required. The transport of hydrogen k-bottles follows the same procedures as transport of any hazardous material. The transporters will comply with all applicable regulations regarding the transport of hazardous materials and will have proper labeling identifying the nature of the threat or risk. This is further described in Section 5.15 of the Project AFC.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: HAZARDOUS MATERIALS**

**Data Request 138:** Please explain whether any specific routes proposed for transporting hydrogen.

**Response:** No specific routes have been developed between the supplier and the Project site at this time. It is assumed that the transporter will use the most convenient route from the warehouse to the site. All transportation of hydrogen will be in compliance with all applicable regulations as described in Section 5.15 of the Project AFC.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: HAZARDOUS MATERIALS**

**Data Request 139:** Please provide whether the Applicant considered avoiding highway segments located near sensitive receptors.

**Response:** The hydrogen bottles will be transported in accordance with applicable regulations and with proper identification of the materials transported. The transporters will be cognizant of the 63 feet distance to be maintained (possible hydrogen release impact radius during transportation) and will avoid sensitive receptors within that radius to the extent feasible.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: HAZARDOUS MATERIALS**

**Data Request 140:** Please provide all documents that may be available at regulatory agencies regarding the US Gypsum facility adjacent to the subject site that may include sampling data for soil, surface water and groundwater.

**Response:** Please refer to the Applicant's response letter dated 4/27/2009.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: HAZARDOUS MATERIALS**

**Data Request 141:** Please provide a detailed analysis and characterization of the type of waste disposed in the USG waste disposal ponds and the potential for contaminants to be present at the project site at concentrations that would pose a risk to human health. This discussion should include all sampling data collected at and in the vicinity of the ponds.

**Response:** Please refer to the Applicant's response letter dated 4/27/2009.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: HAZARDOUS MATERIALS**

**Data Request 142:** If documents described in Data Request 1 above cannot be provided that would adequately characterize the wastes disposed in the ponds and any resulting soil or groundwater contamination at the project site, please conduct an investigation as recommended in the Phase I ESA. Such an investigation should include groundwater, surface water, and soil sampling. We recommend any investigation be conducted under regulatory oversight.

**Response:** Please refer to the Applicant's response letter dated 4/27/2009.

**SES Solar Two**  
**In Response to CURE Data Requests, Set One**  
**Data Requests 1-143**  
**08-AFC-5**

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**TECHNICAL AREA: HAZARDOUS MATERIALS**

**Data Request 143:** Please provide the amount of particulate emissions and any other airborne emissions that will be generated by the US Gypsum plant and describe how these air emissions will affect the SunCatchers, especially the units nearest the plant.

**Response:** Please refer to the Applicant's response letter dated 4/27/2009.



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT  
COMMISSION OF THE STATE OF CALIFORNIA  
1516 NINTH STREET, SACRAMENTO, CA 95814  
1-800-822-6228 – WWW.ENERGY.CA.GOV**

**APPLICATION FOR CERTIFICATION  
For the SES SOLAR TWO PROJECT**

**Docket No. 08-AFC-5**

**PROOF OF SERVICE**

**(Revised 4/14/09)**

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Public Adviser

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**DECLARATION OF SERVICE**

I, Angela Leiba, declare that on April 14, 2009, I served and filed copies of the attached Responses to CURE Data Requests. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:

**[[www.energy.ca.gov/sitingcases/solartwo](http://www.energy.ca.gov/sitingcases/solartwo)].** The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

**(Check all that Apply)**

**FOR SERVICE TO ALL OTHER PARTIES:**

\_\_\_\_\_ sent electronically to all email addresses on the Proof of Service list;

X by personal delivery or by depositing in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

**AND**

**FOR FILING WITH THE ENERGY COMMISSION:**

X sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (***preferred method***);

**OR**

\_\_\_\_\_ depositing in the mail an original and 12 paper copies, as follows:

**CALIFORNIA ENERGY COMMISSION**

Attn: Docket No. 08-AFC-5  
1516 Ninth Street, MS-4  
Sacramento, CA 95814-5512

[docket@energy.state.ca.us](mailto:docket@energy.state.ca.us)

I declare under penalty of perjury that the foregoing is true and correct.

Original Signed By:

Angela Leiba