May 20, 2010

Eric Solorio
Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

RE: Ridgecrest Solar Power Project (RSPP), Docket No. 09-AFC-9, Ridgecrest Evaluation of CN Value

Dear Mr. Solorio:

Attached please find a letter to Psomas that provides updated information regarding the on-site CN values that will be assigned to the pre and post-development project as a result of further investigation and site view.

This has been docketed in accordance with CEC requirements.

If you have any questions, please feel free to contact me at 510-809-4662 (office) or 949-433-4049 (cell).

Sincerely,

Billy Owens
Director, Project Development

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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 *RIDGECREST SOLAR POWER PROJECT*

Docket No. 09-AFC-9

PROOF OF SERVICE
(Revised 4/30/2010)

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DECLARATION OF SERVICE

I, Elizabeth Copley, declare that on May 20, 2010, I served and filed copies of the attached Ridgecrest Evaluation of CN Value. 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:

[http://www.energy.ca.gov/sitingcases/solar_millennium_ridgecrest].

The documents have 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:

X sent electronically to all email addresses on the Proof of Service list;

_ by personal delivery;

X by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date 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. 09-AFC-9
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.

AECOM
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Orange, CA 92868
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May 19, 2010

Mr. John Thornton, P.E.
Vice President, Natural Resources
Psomas
3 Hutton Centre Drive, Suite 200
Santa Ana, Ca 92707

**Subject: Ridgecrest Solar Power Plant, Ridgecrest, CA –
Soil and Water Condition # 8A**

Dear John,

This letter is written to provide updated information regarding the on-site CN values that will be assigned to the pre and post-development project as a result of further investigation and site review. Resolution of the CN value is a requirement of Soil & Water Condition # 8A and we are herewith submitting this information for your review and concurrence.

The Ridgecrest Drainage Report dated February 22, 2010 provided CN values for both the pre-development and post development project site condition. The on-site CN values that were initially established were 95 for the pre-development project site and 95 for the post development project site. It is still our belief that these values are reasonable and valid and they are further validated by the additional soils information (Kleinfelder Addendum 1) that was provided to your office. However, we have also further evaluated the site conditions, soil densities, and vegetation cover and anticipate making a change to an on-site CN value of 91.4 in the pre-development condition and a CN value of 94 in the post development condition.

The primary factors that affect the CN value include the soil permeability, the slope of the site, and the vegetation cover. The addendum letter noted that the existing on-site soils are nearly impermeable and that the post development soils will have this same characteristic; which would infer a similar CN value for both conditions. The slope of the pre-development site is steeper than the post development site, which would generally indicate that the CN value for the post development site should have a lower CN value than the pre development site with the resultant run-off from the site being less in the post development condition. The density of the soil was also noted in this addendum to likely be less in the post development condition than in the pre development condition, which would also infer a lower CN value for the post development site compared to the pre development site. The vegetation cover for the post development site will be 0% compared to the pre development vegetation cover of approximately 35%, which would require a CN value in the post development condition to be higher than the pre development condition. Based on the site conditions and the soils information, the primary factors that affect the CN value for this site have a 'blended' result.

AECOM

As previously noted, we reviewed the data in the soils report as well as in the addendum letter, and cross referenced this information with the Kern County Hydrology Manual and we have attached the summary calculations of the proposed CN values. The pre-development site condition will have a CN value of 91.4 and the post development condition will have a CN value of 94. We believe these values represent an evaluation consistent with local and regional codes and criteria as well as incorporating the site specific conditions documented in the soils report and addendum. A 1 acre detention basin has also been incorporated into the power block area to catch and detain runoff from the impervious area of the power block. A CN value of 95 will be used for the impervious areas inside the power block. The off-site CN values will not change between the pre development and post development condition inasmuch as there are no changes being proposed off-site that would affect these values. A recent off-site soil survey was conducted by Kleinfelder and the results of this investigation were provided to the CEC as Addendum #2 to the Soils Report.

Please review and comment on the proposed modifications to the on-site CN values associated with the drainage report. Upon your concurrence we will issue revised calculations for the primary channels associated with the site and include a summary sheet comparing the revised pre and post development flows. We will also incorporate any changes to the off-site CN values as part of our revised calculations to your office.

Please do not hesitate to contact me at 714-567-2618 with any questions you may have.

Sincerely,

William C. Hagmaier P.E.
Sr. Project Manager

AECOM

JOB TITLE RIDGECREST SOLAR POWER PLANT
JOB NO. _____ CALCULATION NO. D-3
ORIGINATOR BILL H DATE 5-12-10
REVIEWER Dennis L DATE 5-14-10
SCALE N/A SHEET NO. 1 OF 6

EVALUATION of CN VALUE FOR ON-SITE AREA PRE-DEVELOPMENT & POST DEVELOPMENT

USE REGIONAL CODE: KERN COUNTY HYDRO MANUAL
REF: FIG C-2, C-1, C-7 (ATTACHED)

PRE-DEVELOPMENT

- ON-SITE AREA EXIST VEGETATIVE COVER IS APPROX 25%-50% BY VISUAL EXAMINATION.
  [THIS IS CONSISTENT WITH OFF-SITE COVER OF 25%-50% PER GEOTECHNICAL ADDENDUM #2 (SEE FIGURE 5 ATTACHED)]
- % of EXIST AREA THAT IS BARREN = 62.5%
- % of EXIST AREA THAT HAS COVER = 37.5%
- EXIST COVER IS CHAPARRAL-NARROWLEAF
- EXIST SOILS ARE IMPERMEABLE - SOIL GROUP D

CALC AVG CN: (FIGURE C-2)
(62.5% AREA) x 94 + (37.5% AREA) x 91 = 92.9
CALC CN: (FIGURE C-7) CN = 90
→ AVERAGE OF METHODS ⇒ CN = 91.4

POST-DEVELOPMENT

- ON-SITE COVER WILL BE 0%, BARREN GROUND FOR FULL SITE
- ON-SITE SOILS ARE IMPERMEABLE - SOIL GROUP D

→ USE 94.0 FOR CN POST-DEVELOPMENT

Curve[1] Numbers of Hydrologic Soil-Cover Complexes For Pervious Areas-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group A	B	C	D
NATURAL COVERS -					
Barren (Rockland, eroded and graded land)		77	86	91	94
Chaparral, Broadleaf (Manzonita, ceanothus and scrub oak)	Poor	53	70	80	85
	Fair	40	63	75	81
	Good	31	57	71	78
Chaparral, Narrowleaf (Chamise and Redskank)	Poor	71	82	88	91
	Fair	55	72	81	86
Grass, Annual or Perennial	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadows or Cienagas (Areas with seasonally high water table, principal vegatation is sod forming grass)	Poor	63	77	85	88
	Fair	51	70	80	84
	Good	30	58	71	78
Open Brush (Soft wood shrubs-buckwheat,sage,etc.)	Poor	62	76	84	88
	Fair	46	66	77	83
	Good	41	63	75	81
Woodland (4) (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent)	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	30	55	70	77
Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent)	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
URBAN COVERS -					
Residential or Commercial Landscaping (Lawns, shrubs, etc.)	Good	39	61	74	80
Turf (Irrigated and mowed grass)	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80

KERN COUNTY
Hydrology Manual

CURVE NUMBERS FOR PERVIOUS AREAS

FIGURE C-2 (1 of 2)

Curve[1] Numbers of Hydrologic Soil-Cover Complexes For Pervious Areas-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group A	B	C	D
AGRICULTURAL COVERS -					
Fallow (Bare Soil)		77	86	91	94
Close Seeded (alfalfa, sweetclover, timothy, etc.)	Poor	66	77	85	89
	Good	58	72	81	85
Orchards, Evergreen (Citrus, avacodos, etc.)	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Pasture (Grassland or range, continuos forage for grazing)	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Row Crops (Straight row, non-contoured)	Poor	72	81	88	91
	Good	67	78	85	89
Small Grain (Straight row, non-contoured)	Poor	65	76	84	88
	Good	63	75	83	87

Notes:

1. Average runoff condition, Ia = 0.2(S)

2. Poor: Heavily grazed, regularly burned areas, or areas of high burn potential. Less than 50 percent of the ground surface is protected by plant cover or brush and tree canopy.

   Fair: Moderate cover with 50 percent to 75 percent of the ground surface protected. In wooded areas the woods are grazed but not burned, and some forest litter covers the soil.

   Good: Heavy or dense cover with more than 75 percent of the ground surface protected. In wooded areas the woods are protected from grazing, litter and brush adequately cover soil.

3. See Figure C-1 for definition of cover types.

KERN COUNTY
Hydrology Manual

CURVE NUMBERS FOR PERVIOUS AREAS

FIGURE C-2 (2 of 2)

Residential Landscaping (Lawn, Shrubs, etc.) - The pervious portions of commercial establishments, single and multiple family dwellings, trailer parks and schools where the predominant land cover is lawn, shrubbery and trees.

Row Crops - Lettuce, tomatoes, beets, tulips or any field crop planted in rows far enough apart that most of the soil surface is exposed to rainfall impact throughout the growing season. At plowing, planting and harvest times it is equivalent to fallow.

Small Grain - Wheat, oats, barley, flax, etc. planted in rows close enough that the soil surface is not exposed except during planting and shortly thereafter.

Legumes - Alfalfa, sweetclover, timothy, etc. and combinations are either planted in close rows or broadcast.

Fallow - Fallow land is land plowed but not yet seeded or tilled.

Woodland - grass - Areas with an open cover of broadleaf or coniferous trees usually live oak and pines, with the intervening ground space occupied by annual grasses or weeds. The trees may occur singly or in small clumps. Canopy density, the amount of ground surface shaded at high noon, is from 20 to 50 percent.

Woodland - Areas on which coniferous or broadleaf trees predominate. The canopy density is at least 50 percent. Open areas may have a cover of annual or perennial grasses or of brush. Herbaceous plant cover under the trees is usually sparse because of leaf or needle litter accumulation.

Chaparral - Land on which the principal vegetation consists of evergreen shrubs with broad, hard, stiff leaves such as manzonita, ceanothus and scrub oak. The brush cover is usually dense or moderately dense. Diffusely branched evergreen shrubs with fine needle-like leaves, such as chamise and redchank, with dense high growth are also included in this soil cover.

Annual Grass - Land on which the principal vegetation consists of annual grasses and weeds such as annual bromes, wild barley, soft chess, ryegrass and filaree.

Irrigated Pasture - Irrigated land planted to perennial grasses and legumes for production of forage and which is cultivated only to establish or renew the stand of plants. Dry land pasture is considered as annual grass.

Meadow - Land areas with seasonally high water table, locally called cienegas. Principal vegetation consists of sod-forming grasses interspersed with other plants.

Orchard (Deciduous) - Land planted to such deciduous trees as apples, apricots, pears, walnuts, and almonds.

Orchard (Evergreen) - Land planted to evergreen trees which include citrus and avocados and coniferous plantings.

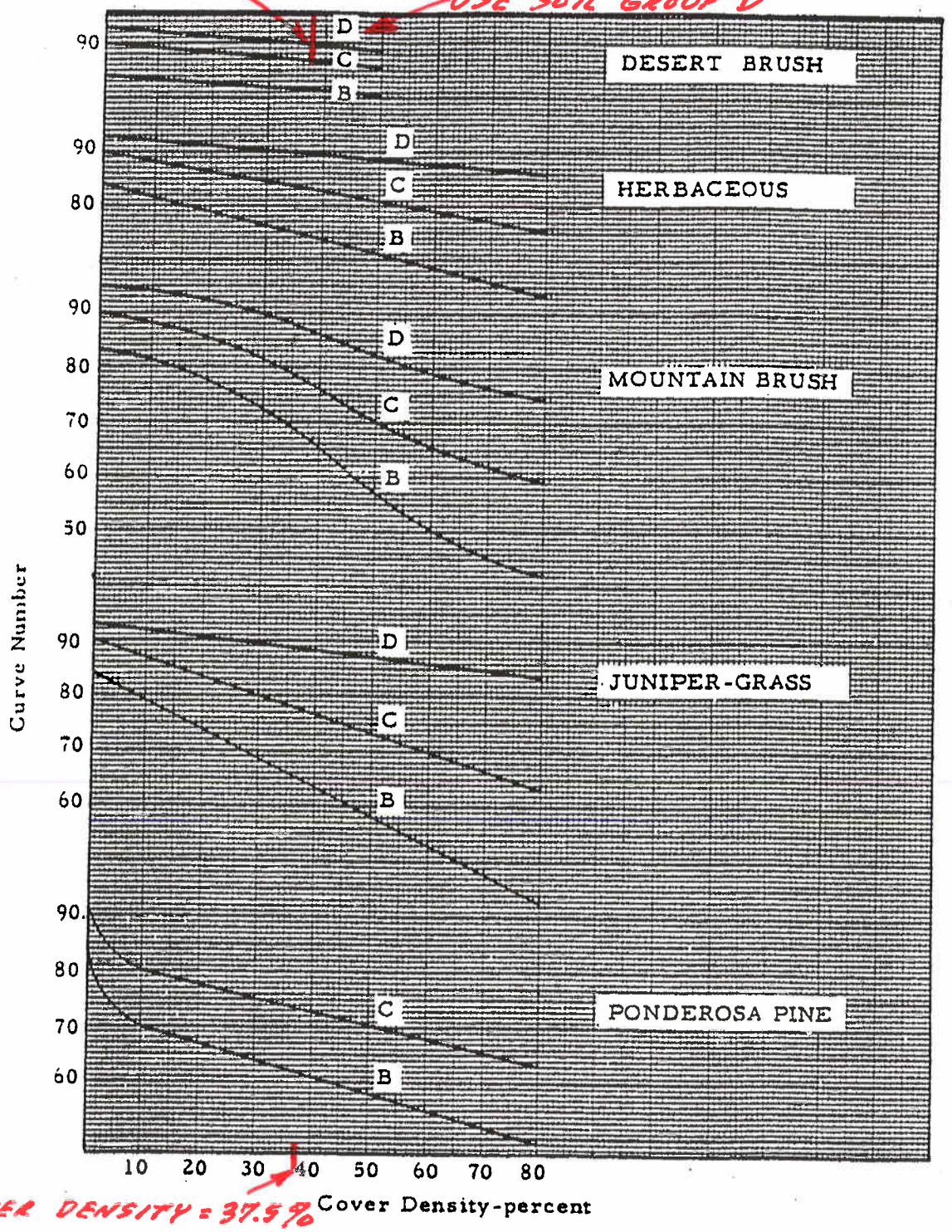
Turf - Golf courses, parks and similar lands where the predominant cover is irrigated mowed close-grown turf grass. Parks in which trees are dense may be classified as woodland.

KERN COUNTY

HYDROLOGY MANUAL

SCS
COVER TYPE
DESCRIPTIONS

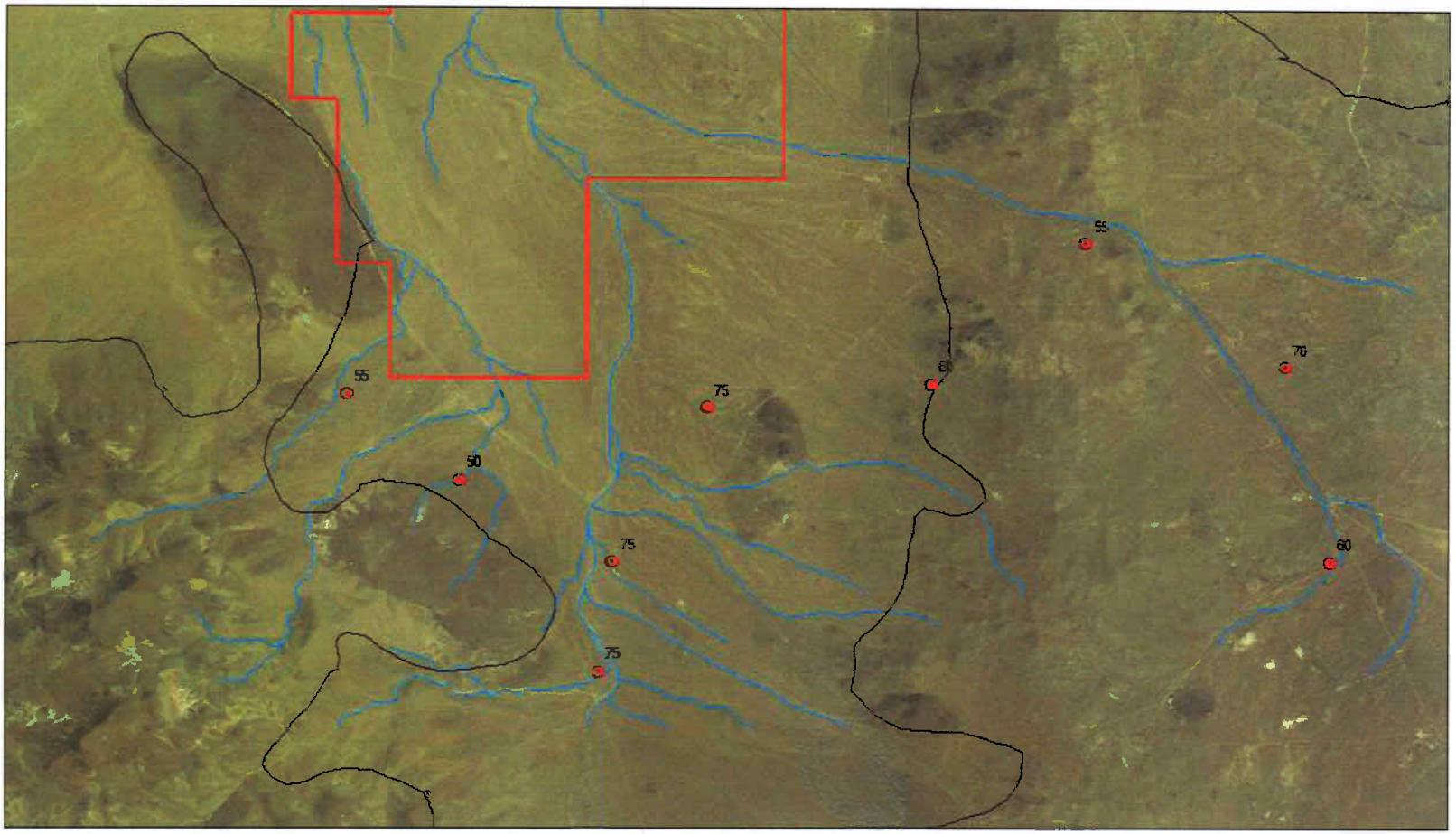
FIGURE C-1



KERN COUNTY
HYDROLOGY MANUAL

HYDROLOGIC SOIL COVER COMPLEXES AND ASSOCIATED CURVE NUMBERS

FIGURE C-7



KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.	104961
DRAWN:	SCC
DRAWN BY:	SCC
CHECKED BY:	
FILE NAME:	

Percentage Bare Ground

Ridgecrest Supplemental
Soil Assessment
Ridgecrest, CA

FIGURE
5