

Comment Letter I65

Hingtgen, Robert J

From: Howard Cook <howwcook@yahoo.com>
Sent: Thursday, February 13, 2014 12:47 PM
To: Bennett, Jim
Cc: Hingtgen, Robert J; Donna Tisdale; Mark Ostrander; Jacob, Dianne
Subject: Fw: Soltec PEIR - Additional Information on Construction Water
Attachments: Construction Water Demand AECOM 7-9-13 REVISED_RUGGED_FOR COUNTY.pdf;
 Construction Water Demand AECOM 7-9-13 REVISED_TDS_FOR COUNTY.pdf

Jim and Robert,

On Wednesday, February 12, 2014 4:05 PM, "Bennett, Jim" <Jim.Bennett@sdcounty.ca.gov> wrote:
 Good Afternoon Mr. Cook,

The attached information is being provided per our discussion we had at the Boulevard Planning Group meeting last Thursday night regarding the construction water demand assumptions for the Rugged and Boulevard project sites. The two attached documents provide backup detail to the numbers that were included in the PEIR. These water demand estimates were prepared by AECOM, a consultant hired by Soltec. The Department of Planning & Development Services will provide responses to your comments including those you provided me last Thursday after the public review period has ended.

Thank you,

Jim Bennett, P.G. #7707, CHG#854
 Groundwater Geologist

County of San Diego
 Planning & Development Services
 5510 Overland Avenue, Suite 110, San Diego, CA 92123
 Phone: 858-694-3820 Fax: 858-694-3373

Thank you for following through and sending me the consultant construction water work sheets.

They truly point out why the county should hire a truly independent engineering firm (not associated with Soltec) to find out the true comprehensive construction water costs. Why should we the residents pay for such an analysis? DPLU may have the expertise in house to do this, but it will take time and money? After all our aquifers and citizens ability to live here are at stake.

A few comments on the consultant work sheets - AECOM used the same standard ground moisture levels used at ECO, but if you read page two of the SDG&E 10-01-13 change order you see all the reasons why the consultants and engineering firms were over 300% wrong. There must be a "lessons learned analysis" of these actual construction experiences, with electrical and gen-tie construction water use. Some other brief comments on the missing water estimate items, which the county or someone needs to respond on:

I65-1

I65-2

Response to Comment Letter I65

Howard Cook
 February 13, 2014

I65-1

The comment does not raise specific issues related to the adequacy of the Draft Program Environmental Impact Report (DPEIR). It should be noted that the County of San Diego (County) is the lead agency for the project under the California Environmental Quality Act (CEQA), and as such is responsible for all content and technical analysis in the DPEIR. The County's process for receiving and considering technical information provided by the applicants and their consultants includes a rigorous review by County staff, and certification by the applicants and consultants that the technical studies and the DPEIR utilize accurate and verifiable field techniques and professional work performance standards. Moreover, the County requires certification that the DPEIR and technical studies are in conformance with all applicable CEQA requirements and all applicable County, state, and federal rules, regulations, and laws, and are prepared pursuant to direction from the County and in response to all comments by the County.

I65-2

These concerns have been addressed in common response WR1 and the response to comment letter I32.

<ul style="list-style-type: none"> • Roads - There will be miles of roads inside these project sites, road building with culvert and drainage construction, very water intensive, how many miles of roads, number of culverts and drainage items are there? Must be analyzed and translated to gallonage estimates. Also non road treatment with material laid down adjacent and around the trackers and how many acres of this and gallonage estimate? • Underground electric - how many feet and how many gallons to construct? what was experience at ECO and Boulevard? • Substation Construction at each site. - What was experience at ECO and Boulevard? • Operations and Maintenance buildings - How many square feet and water estimate needed? • Fencing - How many miles of fencing and gate and entrance areas are planned? and what is water estimate? • Ten Acre Cement and rock crushing plant at Rugged - How many units of cement will be produced and water needs? Water washing of equipment and trucks is a big water item, how many trucks visits and washings etc. and gallonage estimates for each. • 14 acre cement and rock crushing plant for Tule and Soitec Joint Tie line uses. • Tie Lines between all sites - How many miles? What is the gallonage estimate per mile? use ECO/ Boulevard experience? <p>Please let myself and Donna Tisdale and myself know how and to what extent you will analyze these and other construction water estimate items? Please also include this E-mail in your administrative record.</p> <p>Thanks again for your prompt reply to previous questions raised</p> <p>Howard W Cook</p>	<p>I65-3 These concerns have been addressed in common response WR1 and the response to comment letter I32. In addition, certain project components for which the commenter has requested revised water use estimates are not part of the Proposed Project and therefore are not included in Proposed Project construction water demand; please refer to the response to comment I21-1.</p> <p>I65-4 The issues raised in this comment letter were considered and were addressed in common response WR1. This letter will be included in the administrative record and will be included in the Final Program Environmental Impact Report (FPEIR) for review by the decision makers.</p>
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AECOM Estimation Sheet	
Project	
Rugged Solar	
Subject	
Construction Water Demand	
Methodology	
From the initial geotechnical investigation of the site, the difference between optimal moisture content and lowest observed value at the site and then multiplying through by dry unit weight determined through the proctor test yield roughly 8.38pcf.	
Estimated Water Use During Clearing, Grubbing and Grinding	
Empirical Rate of Water Used for clearing, grubbing, grinding and dust control (Based 42.1 acre site located near Boulevard, CA)	24,204 GAL/ACRE
Input Total Disturbance (Minus 20% that is low lying grass and already cleared from Sunrise Powerlink). 575 Acres X .20 = 460 acres	460 ACRE
Total water to clear, grub and grind 460 acres	11,135,840 GAL
Conversion to gallons per acre-foot	325,851
Total water to clear, grub and grind 460 acres	34 ACRE-FT
Total water to clear, grub and grind 460 acres	
Input expected duration to clear, grub and grind	40 DAY
Water demand to clear, grub and grind	0.85 ACRE-FT/DAY
Water demand to clear, grub and grind	278,346 GAL/DAY
Estimated Mass grading	
Input quantity of on-site fill used to balance site	29,835 CY
Input optimum moisture content	9 %
Input observed moisture content	2.5 %
Input dry unit weight of on-site fill	129 PCF
Weight of water to reach saturation	8,385 PCF
Water required to hydrate and gain compaction	30 GAL/CY
Input contingency to account for evaporation during summer months	1.667
Water required to hydrate and gain compaction	50 GAL/CY
Water for grading	1,505,012 GAL
Conversion to gallons per acre-foot	325,851
Water required for grading	5 ACRE-FT
Input quantity of Scrapers (CAT 627H @ 24 cubic yards per load)	3 EA
Volume per haul	24 CY/EA
Time per haul	10 MIN
Hauls per hour	18 EA/HR
Grading Rate	432 CY/HR
Grading Rate for each work day	3,456 CY/DAY
Time to complete grading (work days)	9 DAYS
Water demand to complete mass grading	0.54 ACRE-FT/DAY
Water demand to complete mass grading	174,336 GAL/DAY
Estimated Water Use for Concrete	
Quantity of concrete per tracker foundation	2.5 CY
Rate at which trackers are installed	40 EA/DAY
Quantity of concrete placed per day	100 CY/DAY
Percent of water in concrete	20 %
Conversion to gal/cubic yard	202 GAL/CY
Rate for placing concrete	4,040 GAL/DAY
Time to complete tracker foundations	90 DAY
Total water use for concrete	363,600 GAL
Estimated Water Use for Wind Days	
Based on 300 construction days out of 365 day calendar year	18 Wind Days
Dust suppression water demand on wind days	54,000 GAL/DAY
Total water use for wind days	972,000 GAL
Daily Dust Control	
Based on 300 construction days	300 Days
Total Water Use for Daily Dust Control	18,000 GAL/DAY
Total Water Use for Daily Dust Control	5,400,000 GAL
Total Estimated Construction Demand	
Total Water Days 1-40	452,682 GAL Per DAY
Total Water Days 41-50	174,336 GAL Per DAY
Total Project Water Usage	19,374,452 Gallons
	59.46 ACRE-FT

I65-5

I65-5

This comment provides a copy of the AECOM worksheets for construction water estimates. This attachment will be included in the administrative record and will be included in the FPEIR for review by the decision makers.

AECOM Estimation Sheet	
Project	
Tierra Del Sol Solar Farm	
Subject	
Construction Water Demand	
Methodology	
From the initial geotechnical investigation of the site, the difference between optimal moisture content and lowest observed value at the site and then multiplying through by dry unit weight determined through the proctor test yield roughly 8.38pcf.	
Estimated Water Use During Clearing, Grubbing and Grinding	
Empirical Rate of Water Used for clearing, grubbing, grinding and dust control (Based 42.1 acre site located near Boulevard, CA)	24,204 GAL/ACRE
Input Total Disturbance	420 ACRE
Total water to clear, grub and grind 420 acres	10,165,680 GAL
Conversion to gallons per acre-foot	325,851
Total water to clear, grub and grind 420 acres	31 ACRE-FT
Total water to clear, grub and grind 420 acres	
Input expected duration to clear, grub and grind	40 DAY
Water demand to clear, grub and grind	0.78 ACRE-FT/DAY
Water demand to clear, grub and grind	254,142 GAL/DAY
Estimated Mass grading	
Input quantity of on-site fill used to balance site	9,429 CY
Input optimum moisture content	9 %
Input observed moisture content	2.5 %
Input dry unit weight of on-site fill	129 PCF
Weight of water to reach saturation	8.385 PCF
Water required to hydrate and gain compaction	30 GAL/CY
Input contingency to account for evaporation during summer months	1.667
Water required to hydrate and gain compaction	50 GAL/CY
Water for grading	475,641 GAL
Conversion to gallons per acre-foot	325,851
Water required for grading	1.5 ACRE-FT
Input quantity of Scrapers (CAT 627H @ 24 cubic yards per load)	1 EA
Volume per haul	24 CY/EA
Time per haul	10 MIN
Hauls per hour	6 EA/HR
Grading Rate	144 CY/HR
Grading Rate for each work day	1,152 CY/DAY
Time to complete grading (work days)	8 DAYS
Water demand to complete mass grading	0.18 ACRE-FT/DAY
Water demand to complete mass grading	58,112 GAL/DAY
Estimated Water Use for Concrete	
Quantity of concrete per tracker foundation	2.5 CY
Rate at which trackers are installed	40 EA/DAY
Quantity of concrete placed per day	100 CY/DAY
Percent of water in concrete	20 %
Conversion to gal/cubic yard	202 GAL/CY
Rate for placing concrete	4,040 GAL/DAY
Time to complete tracker foundations	63 DAY
Total water use for concrete	254,520 GAL
Estimated Water Use for Wind Days	
Based on 249 construction days out of 365 day calendar year	15 Wind Days
Dust suppression water demand on wind days	54,000 GAL/DAY
Total water use for wind days	810,000 GAL
Daily Dust Control	
Based on 249 construction days	249 Days
Total Water Demand for Daily Dust Control	18,000 GAL/DAY
Total Water Demand for Daily Dust Control	4,482,000
Total Estimated Construction Demand	
Total Water Days 1-40	272,142 GAL Per DAY
Total Water Days 41-49	76,112 GAL Per DAY
Total Project Water Usage	16,187,841 Gallons
	50 ACRE-FT

I65-5
Cont.