Hingtgen, Robert J

From: Bennett, Jim
Sent: Monday, February 10, 2014 8:48 AM
To: Fogg, Mindy; Trey Driscoll (tdriscoll@dudek.com); Steve Dickey (sdickey@dudek.com)
Cc: Beddow, Donna; Hingtgen, Robert J; Patrick Brown (patrick.brown@soitec.com); Gungle, Ashley
Subject: RE: Soitec EIR - Groundwater Issue from Last Night

Good Morning Mindy,

I have requested that Dudek provide me detailed backup information for construction demand from both the Rugged and Tierra Del Sol projects by this Wednesday. Per your direction, I will not respond to his comments until after the public review period is over but will give him the additional detailed backup information to better inform his comments.

If you have any additional concerns, please let me know.

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

From: Fogg, Mindy
Sent: Friday, February 07, 2014 5:00 PM
To: Bennett, Jim; Trey Driscoll (tdriscoll@dudek.com); Steve Dickey (sdickey@dudek.com)
Cc: Beddow, Donna; Hingtgen, Robert J; Patrick Brown (patrick.brown@soitec.com); Gungle, Ashley
Subject: RE: Soitec EIR - Groundwater Issue from Last Night

Hi Everyone,
In this situation we have to be careful that we are not responding to comments before the comment period is over. It's good to be thinking about these issues in the meantime though. I will set a meeting with Jim, Ashley and Rob to document this correctly for the record. We also want to reach out to the individual who submitted this to make sure we have a commenter name with contact info and that we have received all of his comments – or clarify anything in the analysis that will help him to submit all of his comments.

Mindy Fogg
858-694-3831

From: Bennett, Jim
Sent: Friday, February 07, 2014 2:36 PM
To: Trey Driscoll (tdriscoll@dudek.com); Steve Dickey (sdickey@dudek.com)
Cc: Beddow, Donna; Hingtgen, Robert J; Patrick Brown (patrick.brown@soitec.com); Fogg, Mindy
Subject: Soitec EIR - Groundwater Issue from Last Night

Hi Trey and Steve,

Attached is a letter from last night. The gentleman who submitted this made assertions that a number of items that will require water were not included in the PEIR.

Can you provide me detailed backup calculations that I can provide back to him to show him a detailed breakdown of the water demand assumptions that were made? I was not able to address his assertions with the info that was provided in the PEIR on its own. If you can provide me the detailed calcs by Wednesday of next week that would be greatly appreciated!

Also, when you send the documentation, please also let me know if the assumptions used in the groundwater investigation covered the items he pointed out as missing.

Thank you and have a great weekend.

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

From: no-reply@sdcounty.ca.gov [mailto:no-reply@sdcounty.ca.gov]
Sent: Friday, February 07, 2014 2:30 PM
To: Bennett, Jim
Subject: Attached Image

The Soitec PEIR construction water estimates are defined in the PEIR Chapter One, page 41, table 1-6. These estimates use a construction work breakdown activity based estimating method. The PEIR Construction Water estimates for all four sub-project locations total: 42,851,000 gallons.

We (the report team) were astonished by the very significant construction water activities construction water estimates missing in Table-6. Some of our identified missing work activities are, however, reflected in the "Construction Schedule" shown in PEIR Chapter One, tables - 8 and 9, page 43. Our identified missing construction water work activities are shown below. The missing construction water estimate activities that are also shown in the Construction Schedule Table are identified below with the PEIR elapsed time estimate in days for the Tierra Del Sol and the Rugged Projects These are shown after the missing work item (Tierra Del Sol first separated by a dash and then Rugged). The **totally missing** construction water work activity estimates are:

- Road building , (shown in construction schedule, but mixed with other activities)
- Underground Electric, 70-100 days
- Site Substation Construction, 25-35 days
- Operations and Maintenance Buildings, 60-80 days
- Punch list and cleanup, 20 – 60 days
- Fencing, drainage and culvert construction, missing from both water and schedule tables
- Electrical Equipment foundations **other** than Trackers and Substation (such as transformers, invertors, electrical pole foundations), missing from both water and schedule tables.
- 10 acre cement and rock crushing plant on Rugged site operating 6 days a week over a 2 year period, missing from both water and schedule tables. **This is a huge amount of water, not estimated.**
- 14 acre cement plant and rock crusher, about a mile from the 10 acre plant, shared with Tule Wind for gen tie line. Missing from both water and schedule table. **Huge amount of water, not estimated.**
- Seven mile gen tie line between Boulevard SS and Tierra Del Sol site, missing from both water and schedule tables. **A major water use**
- Gen Tie Line between Rugged and Boulevard Substations, missing from both water and schedule tables.

- Increased Construction for Lan West and Lan East scaled to Rugged and TDS. The missing construction items above for other two projects must be projected to Lan East and West, missing from both water and schedule tables.

We have difficulty in assigning gallons of water estimates to the "Missing construction water work activities" shown above. Given the magnitude impact of these missing activities **we also, therefore suspect major under estimating for the water gallonage estimates for the included work activities shown in the PEIR and as referenced above.**

We therefore, to measure the water usage, have developed a reasonable total project construction water estimating method. This method uses SDG&E's published 10/11/13 water usage projections to complete the Eco/Boulevard substation project (Tule Wind) with Gen Tie Line. This SDG&E document with "projected water to complete" data is included as Exhibit A. This method and our new revised project wide construction water estimate is shown below in our section C.

C. Alternate total construction water usage method and poor estimating record on water usage

The two substations (Eco, Boulevard) and the gen-tie between them are an integral part of the Soitec electrical delivery system as pointed out in the Soitec PEIR. This Eco/Boulevard substation and gen-tie project are midway towards completion and the heavy early water using activities of the project are drawing to a close. **We therefore can use the actual water history for the Eco/Boulevard project in projecting a total Soitec project water construction estimate.** A comprehensive Work (activity) Breakdown is always best for estimating, but as shown above in our Water Section B we don't have a good or reasonably accurate work (activity) breakdown estimate.

The official SDG&E work change form for the Eco/Boulevard is attached as Exhibit A. It shows an initial water estimate from the Eco/Boulevard project EIR of **30 million gallons of water**. After construction was well along and actual water use was compiled, The 10/11/2013 SDG&E change order records a new projection of **90-95 million gallons of water to complete**. It is instructive, to determine the reasons for the over three times increase in construction water. This will be done later. We, however, will use the Eco/Boulevard Project actual construction water usage in the Eco/Boulevard and project these to a NEW Soitec Construction water estimate. This new estimate is based on the following elements:

- Every one of the five construction activities reflected in the Soitec PEIR table 1-6 plus 10 of the twelve "missing" activities reported in our Section B are also reflected in the mostly complete Eco/Buolevard construction effort, including gen-tie lines. The two "missing" activities not seen in the Eco/Boulevard project are the two cement batch plants planned on site for The Soitec Project whereas the Eco/Boulevard Project purchased their cement.

- The Eco/Boulevard Project roughly totals 100 acres. The projected construction water usage based on actuals to date is 100 million gallons (100,000,000).

- **Therefore, the total projected construction water use for the 1500 acre Soitec Project (without two cement batch plants) = 1,500,000,000 (One billion five hundred million) gallons.**

- **The water usage of two cement and rock crushing plants covering 25 acres on the Tule/Walker Creek watershed aquifers both operating an estimated 15 hours a day for two years must be in the multiple hundreds of millions of gallons of water. This estimate must also be added to the over a billion gallons total above.**

The question of why the SDGE Eco/Bouelvard project water use **jumped by over three hundred percent** after actual experience was discovered is instructive for the Soitec Project construction water estimates Both Eco/Tule and Soitec projects used the same consultants/ engineers (Dudek and Aecom) and the County Engineering/hydrology teams . The SDG&E change document says that errors in judging the depth and the dryness of the alluvial ground of the project were at fault. This does not speak well to the carefulness or the experience level of the consultant/county construction water estimating team on the Soitec Project PEIR. Another reason to not believe the construction water PEIR.

The huge increase in construction water usage estimates and the surrounding facts bring the PEIR estimates further in to question and cause us to insist that the Soitec PEIR team move the Water and Hydrology section of the PEIR from "'Not Significant to the Environment" to the "Significant to the Environment" category.

D. Estimated operational water usage and analysis

The Soitec PEIR in table 1-7 projects a total of 5,698,267 gallons of operational water a year. We believe that the operational estimates are also grossly underestimated and therefore will cause further depletion and environmental damage to our aquifers and therefore to our local environment and to our water supplies.

We question the PEIR Table 1-7 estimates for nine tracker washings a year. We provide the following factors to show that the true CPV washing interval estimates should be closer to 52 times a year because of the following reasons:

- The absence of any other operational Soitec CVP farms mean that all estimates are also "experimental" and judgemental by the Soitec Marketing team.

- The 2014 Soitec website under Soitec CPV Operations and Maintenance says " The modules must be cleaned periodically" also it continues "Module cleaning frequency depends very much on the amount of dust and humidity"