MSWD
Mission Springs Water District

DOCKET
07-AFC-3
DATE JUN 24 2008
RECD. JUN 24 2008

June 24, 2008

John Kessler, Manager
Kessler and Assoc., LLC
c/o California Energy Commission
2801 Shady Lane
Pollock Pines, CA 95726

RE: CPV Sentinel Power Plant – Answers to Alternative Analysis Questions for MSWD dated 6/19/08

Dear Mr. Kessler:

Thank you for allowing the district to answer some questions we consider to be very relevant. There are many aspects to the water management issues in the Coachella Valley that have been and may or may not remain misunderstood. The district feels very strongly that, because of the water supply challenges in the Mission Creek Sub Basin (MCSB), having Mission Springs Water District (MSWD) as the purveyor to this project would greatly help the future management of the Valley's water. Allowing another pumper in this basin will only exacerbate an already difficult situation. The district has always stated that tertiary treated water should be utilized before a potable water source to the fullest extent possible.

With regard to the use of the waste water treatment plant (WWTP) for Coachella Valley Water District or Desert Water Agency, we are unsure, nor can we imagine any circumstance, why consideration would be given to the use of effluent from a WWTP 15+/- miles from the project location, across a major freeway, and not within the Mission Creek Sub Basin. The cost to transport water from either of these locations would be prohibitive.

The following answers are direct responses to questions posed by you regarding the alternative analysis for the Competitive Power Ventures (CPV) Power Plant water plan.

Question 1:
Are they willing to serve reclaimed water to Sentinel?

Answer:
Not only yes, but this may be the only chance this decade for the district to have a reuse water customer. Many issues are resolved with the alternative of reuse water! Not only does it provide a use for our effluent, but it also offsets the situation of another pumper developing a controversial water right in an already overdrafted basin. It also prevents the pumping of an excellent quality, potable water source, which could be much more beneficially served to our customers.

66575 Second Street • Desert Hot Springs • CA 92240 • Tel: 760.329.6448 • Fax: 760.329.2482

Question 2:
What quantity or portion of Sentinel's water demands could be supplied as reclaimed water by the WSD?

Answer:
MSWD has implemented a very aggressive sewer/septic abatement program, which ultimately would add 7,000 more services providing effluent to the Horton Waste Water Treatment Plant (HWWTP) regardless of future development. This translates into an additional 750,000 gallons of effluent that ultimately would have the flows to meet the Sentinel Power Plant peak demands. Currently, the lowest average daily flow for the month is 1.3 million gallons a day (MGD). This flow is projected to grow to 2 MGD by the year 2014 and this projection will likely be accelerated due to our sewering project over the next few years. The current effluent flows would make up the bulk of CPV's projected use with an offset of potable water supplied by MSWD making up the projected difference in the early stages of the power plant operations. Eventually, the HWWTP would account for all demand that is required at the Sentinel Power Plant.

Question 3:
If so, what would be the point of interconnection?

Answer:
The connection or intertie would lie directly at the tertiary treatment discharge point at the HWWTP.

Question 4:
What would be the associated capital costs for facilities that would remain owned by the WD that should be paid by Sentinel (such as a proportional capital cost for tertiary treatment improvements or facility capacity charges for any infrastructure owned by the WD)?

Answer:
MSWD will expand the secondary capacity at its own cost, but CPV would be required to fund the tertiary component at a cost of approximately $3 million. MSWD may chose to share in the remaining cost of approximately $1.37 million to construct purple pipe from the HWWTP to the Sentinel Power Plant site.

Question 5:
Do the WDs have plans to expand the distribution system (pipelines) in a manner that could contribute to serving Sentinel? If so, please explain where to, and to what extent it would be co-funded?

Answer:
MSWD has prepared an assessment report and feasibility report for effluent reuse at the HWWTP. The preliminary design for tertiary treatment is complete, and the final design for the secondary expansion to increase capacity to 3 MGD is 95% complete and under final review. All design work to date has been funded by the district.

The district proposed to CPV that they could use our existing wells 28 and 30 as an additional water supply source for redundancy. We are complete with our rehabilitation of Well 30 and plan to initiate the rehabilitation of Well 28 in the near future. These are essentially newer wells with proven production at 2000 gpm per well. The uranium levels, although within the state drinking water standards, are

high. However, these wells would be ideal for use by CPV and are located approximately 4.5 miles from the Power Plant site. Under this proposal, the district would require two new wells to offset the use of wells 28 and 30 by CPV. These new wells would be located southwest of wells 28 and 30 where we anticipate lower levels of uranium. The district would build the transmission lines from these two new wells to existing transmission lines within our system.

The district has also proposed that the tertiary effluent from the HWWTP be delivered to a recharge facility (either injection or basin technology) just upstream of the Sentinel Power Plant production wells. This proposal has many advantages in that the production wells can be designed to handle the peak flows. The effluent from the HWWTP will be located so that there is some benefit to the MCSB pumping. Furthermore, this option should provide an adequate quality without additional treatment. The issue here is pricing, which could be negotiated but shouldn't be much different than the retail pricing used for all customers.

Question 6:
What would be the unit cost of purchasing reclaimed water ($/AF or equivalent)?

Answer:
Reclaimed water is traditionally not priced on cost to serve, but on the market cost to the customer based on pumping, replenishment, and maintenance costs. This price can be as low as $150 Acre Foot (AF), but the actual cost to serve this water can be as much as three to four times the cost. The customer justifies subsidizing this cost by their offset pumping. In this case however, there would need to be some benefit to the customer, or our pricing must reflect our cost. As an estimate, reuse water could sell for $350 AF, which is an average pricing range based on the lower cost of $150 AF and the cost range near $800 AF for imported water.

Question 7:
When would reclaimed water be available to Sentinel and at what initial and projected rates of flow (projecting when reclaimed water supply would be adequate to meet all project demands and defined in units of mgd available by month and AF/year)?

Answer:
Reclaimed water would be available to CPV following construction of the purple pipe to the Sentinel Power Plant from the HWWTP and the tertiary treatment system. The preliminary tertiary design is complete and the secondary treatment design is at 95%, and in final review. As mentioned before, these costs were all incurred by the district. Based on construction dates, reclaimed water could be available in the spring of 2010 if design began today on the purple pipe. The district would work with CPV through the construction process to provide potable water to ensure that the Sentinel Power Plant is not delayed and tertiary treated water is provided as soon as possible.

Attached is a chart showing the overall availability of reclaimed water by monthly average in AF/YR.

Question 8:
What are historical monthly and annual supplies and demands of reclaimed water over the past 5 years?

Answer:
The water currently discharged at the HWWTP is not sent through any type of reclaimed water system. It is percolated back into the southwest end of the MCSB.

Question 9:
Could they provide water quality data for the reclaimed water supply, with particular attention to TDS and silica?

Answer:
Yes, MSWD can provide current water quality data for our secondary treated water from existing monitoring wells for nitrates and total dissolved solids and the district will also be able to supply all water quality data reports in the future from the tertiary treated water supply. Water quality reports already show that the secondary treated water supply without tertiary treated water is of higher quality than some of the water in the southwestern portion of the basin extracted for local golf courses.

In summary, our premise for CPV purchasing district water for this project comes from a very strong foundation. The District is a non profit public agency supplying water at cost. Furthermore, the District has no other motive but to provide an abundant, reliable, high quality supply of water. Creating competitive pumping in the valley will inevitably complicate our water management efforts.

If you have any questions, or need further clarification on any item, please contact me at (760) 329-6448 Ext 151 or e-mail me at dpatneaude@mswd.org.

Sincerely,

Dan Patneaude
Engineering Manager

Cc: Bill Pfanner, CEC Staff
Chris Dennis, CEC Staff

Avg monthly flow

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
January	0.6867310	0.7202160	0.7309040	0.8000990	0.847136	0.895009	0.910345	0.980732	1.135785	1.178733	1.351473	1.3857	1.3649	Const	Const				
February	0.6873970	0.7204000	0.7592550	0.7954810	0.870890	0.894319	0.901530	1.046973	1.153083	1.194904	1.362967	1.3618	1.3804						
March	0.6613210	0.6989280	0.7330920	0.7773480	0.879457	0.892816	0.884514	1.040062	1.148030	1.165748	1.351816	1.3606	1.3247						
April	0.6371360	0.6933630	0.7356550	0.7961740	0.868177	0.893344	0.902030	1.073327	1.173897	1.198627	1.3547	1.2519	1.2866						
May	0.6519330	0.6963760	0.7440380	0.7785290	0.857670	0.918997	0.906133	1.092903	1.193970	1.233252	1.4021	1.2766							
June	0.6362400	0.6918850	0.7102780	0.7603190	0.870659	0.891912	0.919838	1.077637	1.192433	1.216539	1.3126	1.2903	Design 100%						
July	0.6549530	0.6764190	0.7109580	0.7774630	0.849609	0.876396	0.925044	1.063434	1.190350	1.211826	1.2554	1.3291	1.415757	1.508065	1.606391	1.711127	1.822693	1.941532	2.06812
August	0.6593900	0.7033030	0.7352380	0.7816570	0.866644	0.893792	0.910786	1.085916	1.187541	1.231573	1.3759	1.2658	EIR						
September	0.6856720	0.7131800	0.7914230	0.8159120	0.920601	0.907032	0.928792	1.137668	1.204731	1.254551	1.3731	1.3232	Permits						
October	0.6733620	0.7091610	0.7770050	0.8158660	0.913664	0.906313	0.966072	1.138476	1.219920	1.315506	1.353	1.3329							
November	0.6879020	0.7242060	0.7759270	0.8344800	0.891588	0.922664	1.009885	1.140268	1.216284	1.346692	1.3645	1.3191	Bid						
December	0.6841210	0.6993100	0.7658300	0.8174520	0.891108	0.916541	0.993903	1.110086	1.167499	1.317995	**1.3997**	1.3699	1.459217	1.554358	**1.655703**	**1.763654**	[redacted]		
											December 2006 exceeded current permit 60% prompted pradesign and current design work								
Capacity in MGD	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	2.0000000	2.0000000	2.000000	2.000000	2.000000	2.000000	2.300000	2.300000	2.300000	2.300000	2.300000	2.300000	2.300000
													1.599217	**1.694358**	**1.795703**	[redacted]			

Critical Maintenance Barrier 1.55 MGD
Based on actual cap. of 2.3 & requires immediate Permit change &
by 2010 cannot take largest unit off for maint. anymore
Also an issue during construction (impact increases over time)
Construction Period est. @ 1.5 to 2 yrs.

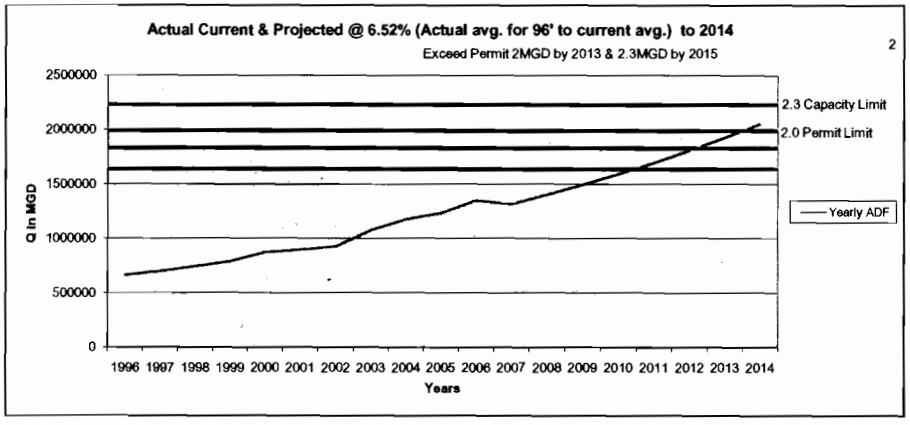
Low Mo.

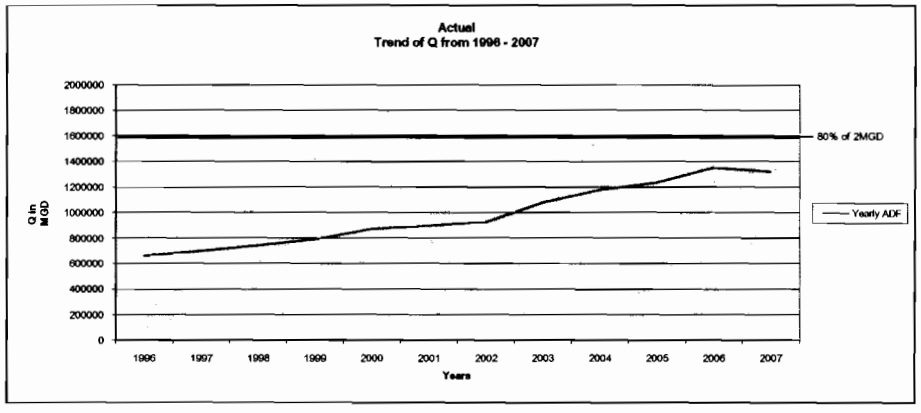
Individual daily flows will be higher than Mo. Avg.
Hi Mo. **80%of 2.0** [redacted] of avg. Mo. Flow
> 80% of 2.3 w/permit chg and over 1 yr earlier w/o @ 2.0 permit

This line Represents adding .14 DC & EL Dorado to Hi Mo.

Percentage of Increase in flow		6%	6%	6%	10%	3%	3%	16%	9%	5%	9%	-2%	6.52%	Actual Avg. Increase from 1996 - Present Est.					
Avg Daily Q gpd	667180	703896	747467	795898	877267	900761	929906	1082290	1181960	1238829	1354771	1322242	1408452	1500283	1598101	1702298	1813287	1931514	2057448
													8%	Actual Avg. Increase for 2000 -2006 High Est.					
													1428021	1521128	1620306	1725949	1838481	1958350	2086035
WWMP Projected MGD											1.37	1.69	2.04	2.42	2.80	3.21	3.60	4.02	4.47

Nota: Number of connections lower without new growth however AD 12 will add approx. 2600 new connections over the next 3 fiscal years over and above any growth..
This on average is equal to the highest year of increase in the past when 805 (04/05) new connections came on line.
Also, sewer latarals will be available to an additional 2000 parcels, 674 of which were not grant assistad and will be required to hookup per the RWQCB.
This further supports the expectation of increases in flows over the next three fiscal years even with flat or no growth. Our projections could be overly conservative in light of this.





CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

WDID NO.: **7A330109021**
ORDER NO.: **01-019**

MONITORING AND REPORTING PROGRAM
FOR MSWD DESERT CREST FACILITY

REPORTING FREQUENCY: **QUARTERLY**

QUARTER: 1st
DATE: 2008

TYPE OF SAMPLE	EFFLUENT MONITORING						
CONSTITUENTS	Total Nitrogen	Nitrate as N					
FREQUENCY:	Quarterly (Q)	Q					
DESCRIPTION:	Grab (G)	G					
UNITS:	mg/L	mg/L					
REQUIREMENTS:							
30-DAY MEAN							
7-DAY MEAN							
MAXIMUM							
DATE OF SAMPLE:							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10	1.1	ND					
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
QUARTER MEAN	**1.1**	**ND**					---
MAXIMUM	---	---	---	---		---	---

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

Signature:_____