

CAWELO WATER DISTRICT

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RWQCB-CVR
FRESNO, CALIF.David R. Ansolabehere
General Manager

November 10, 2006

California Regional Water Quality Control Board
1685 "E" Street
Fresno, CA 93706

Attn: Mr. W. Dale Harvey, Senior WRC Engineer

Re: Tentative Water Discharge Requirements (WDRs) for Valley Waste Disposal
Company and Cawelo Water District
Comments and Recommendations

Dear Mr. Harvey:

The sequence of the following comments and recommendations conform with the
format of the Waste Discharge Requirements.

I. Findings

1.) Page 3, Finding 12:

The second and following sentences should read:

"Surface water blended in Reservoir "B" consist of Kern River, SWP and
CVP waters delivered from the Beardsley Canal through Lerdo Pumping
Station "B". CWD delivers blended water to farms for irrigation of crops
within the CWD. Through use of its distribution canal, CWD may
discharge blended water to Poso Creek for recharge of the groundwater
basin in the Winter months when irrigation demand is low.

The surface water that is blended in Reservoir "B" consists of other waters as noted in
addition to Kern River water. The water that may be discharged in Poso Creek is
blended water, and as previously advised, Poso Creek West of State Highway 65, Kern
County, California, was determined to be non-jurisdictional by letter dated April 26,
2004, copy attached.

2.) Page 5, Finding 15.:

The fifth sentence has been revised to conform with the Agreement Between CWD, NKWSD, and SWSD:

“CWD, by agreement with NKWSD and SWSD, has the right to the first 135 cfs, as measured at State Highway 65. Flows greater than 135 cfs. at State Highway 65 are allocated to NKWSD and SWSD until said flow exceeds 685 cfs, after which, the flow is allocated to SWSD, NKWSD and CWD relative to remaining demands.”

3.) Pages 9 and 11, Findings 34. and 47.:

We disagree that neither the 1994 study, nor the 2003 study, do not quantify the annual average increase in EC of groundwater underlying the CWD. The data has been provided for the conditions of the study in both studies and as you recited in Finding 32. The 1994 Study”reclaimed produced water would increase salinity in the groundwater aquifer by 2.3 umhos/cm annually”...

4.) On page 11, Finding 47., last sentence of the page the word “Regional” is misspelled.

5.) Page 9, Finding 35.:

The following statement therein is incorrect and needs to be restructured.

“The large number of monitoring wells, the variability of well construction specifications and screening intervals, the fact that different wells are sampled each year, and the 400 foot vadose zone make it difficult to determine what actual effect the recent increases in use and the poorer quality of produced water have on the quality of groundwater throughout the CWD.”

The Produced Water Reclamation Project, Kern County, Monitoring and Reporting Program, Annual Report, covering 10 years of monitoring (1995-2005) utilized 58 landowner wells appropriately spaced for coverage of the entire district. The same wells are measured annually dependent upon the well being operable and running. Although exhaustive evaluation of well logs was not conducted for selection, the groundwater basin of CWD is a continuous aquifer without confining clay layers, but containing interspersed clay lenses.

The mineral analysis of the groundwater samplings, as provided by the certified laboratory, Precision Analytical, Bakersfield, California, has been the source for determination of chloride, boron and electrical conductivity. Annually, the electrical conductivity, chloride, boron and sodium concentration of each well, as provided by the laboratory, are plotted on separate CWD maps and lines of equal concentration are developed therefrom. The constituent concentration at the northeast corner of each section is interpolated from the lines of equal concentration, after which the District average of all section corner concentrations is computed. Although the landowner wells sampled for quality may vary annually from 30 to 50 wells, the average is based upon 86 interpolated points.

The CRWQCB Order No. 95-031 required the groundwater monitoring plan shall:

“Provide a means for determining the annual average incremental increase (or decrease) in electrical conductivity using data from the most recent 5-year period.”

Therefore the initial 5-year base average of 711.3 umhos was obtained from the annual average computation for the 5-year period 1995 through 1999.

II. Order

6.) Pages 16/17 D. Receiving Water Limitations:

“Receiving water limitations are based upon water quality objectives contained in the basin plan. As such, they are a required part of this permit”

We suggest a change in the following statement:

“The Poso Creek receiving water at Discharge 003 shall not result in the following conditions:”

7.) Page 18, D. Receiving Water Limitations, Item 18:

We suggest the following language:

“At such times CWD is discharging in Poso Creek (Discharge 003), Poso Creek downstream of the CWD boundary shall not exceed the following:”

8.) Page 21, F. Provisions, 7.:

The requirements should be identified for Discharge 001 only.

9.) Page 21, F. Provisions, 9.:

It is our opinion the technical study update for the CRWQCB dated July 2003 provided the evaluation and quantification of the impact of the discharges on surface water and groundwater for demonstration of compliance with the basin plan. By letter dated 06 November 2006, we responded relative to the California Environmental Quality Act requirements.

The 2003 technical study may be updated and modified for conformance with the current VWDC request and for the increased flow of Chevron for satisfaction of this section. We suggest a meeting with the CRWQCB staff for agreement on criteria for the study.

10.) 9.e. does not read well and needs revision.

III. Information Sheet

11.) Page 4, second paragraph, second line:

"Surface water blended in Reservoir "B" consists of Kern River, SWP and CVP waters delivered from the Beardsley Canal through Lerdo Pumping Station B."

12.) Page 4, II Beneficial Use of Receiving Water, first paragraph, second sentence:

The statement is incorrect:

"In certain places downstream of CWD, Poso Creek has been filled and leveled to facilitate farming operations."

13.) Page 9/10:

The following statements have been provided without statistical and computational support and we believe they are incorrect:

"Using the model of the 1994 study, Reclamation Water Board staff have estimated that discharges of imported surface water, produced water, and pumped groundwater at levels allowed by permits currently in effect have the potential to increase the EC of groundwater in the CWD by possibly as much as 16 umhos/cm per year."

and,

"The 2003 study does not indicate what impact the proposed increases in effluent limits will have on the EC of groundwater underlying the CWD. In the absence of this information and the lack of demonstration of consistency with the Basin Plan necessary to qualify an exemption, the Regional Water Board staff estimates the effect of the requested increases as a gross annual EC increase in groundwater of 18 umhos/cm per year."

14.) Page 12:

We take issue with and request the following statement be rewritten:

"However, due to the large number of monitoring wells, the variability of well construction specifications and screening intervals, the depth to groundwater, and that different wells are sampled each year, the monitoring is not a reliable indicator at this point of the effect reclamation of produced water has had or will have on the quality of groundwater underlying the CWD."

Thank you for your consideration of our comments and recommendations.

Very truly yours,



R. L. Schäfer

RLS/mep

enclosure

cc: David Ansolabehere, Cawelo Water District
Larry Bright, Valley Waste Disposal Company
Mike Glavin, Vintage Production