CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2004-0111

REQUIRING
BELLA VISTA WATER DISTRICT
WATER TREATMENT PLANT
SHASTA COUNTY
TO CEASE AND DESIST
FROM DISCHARGING CONTRARY TO REQUIREMENTS

The California Regional Water Quality Control Board, Central Valley Region (hereafter referred to as Regional Board), finds:

1. On 10 September 2004, the Regional Board adopted Waste Discharge Requirements Order No. R5-2004-0110, (NPDES No. CA0080799) for Bella Vista Water District, (hereafter Discharger). Waste Discharge Requirements Order No. R5-2004-0110 regulates the discharge of settled filter backwash from a potable water treatment plant to Dry Gulch, a tributary of Boulder Creek, thence Churn Creek, thence the Sacramento River.

2. Waste Discharge Requirements Order (WDRs) No. R5-2004-0110, includes effluent limitations for copper and other pollutants, in Effluent Limitations B.1a, which reads as follows:

"1. Discharge 001

a. Effluent from Discharge 001 shall not exceed the following limits.

Constituent	Units	AMEL (30-Day Avg)	MDEL (Max Daily)
Settleable Solids	mL/L	0.1	0.2
Suspended Solids	mg/L	30	50
	lbs/day[a]	375	625
Chlorine	mg/L	0.01	0.02
	lbs/day[a]	0.1	0.3
Dichlorobromomethane[b]	µg/L	0.6	1.1
	lbs/day[a]	0.008	0.01
Copper	µg/L	Variable based on water hardness. Must calculate. **See Attachment B**.	
	lbs/day[a,c]		

[a] Based on a design flow through wastewater handling and treatment systems of 1.5 mgd.
[b] Final effluent limitations. Interim effluent limits may supercede as described in this Order.
[c] To calculate lbs/day, multiply ug/L limit by 8.34, then multiply by 1.5 (design flow), then divide by 1000."

3. The effluent limitations for copper are dependent on the hardness of the receiving water as shown in Attachment B-Copper of Order No. R5-2004-0110. For example, at a hardness of 23 mg/L, the applicable maximum daily and average monthly effluent limits for copper are 3.5 ug/L and 1.8 ug/L, respectively. At a hardness of 50 mg/L, these limits increase to 7.2 ug/L and 3.6 ug/L, respectively.

4. Copper has been detected in the effluent at concentrations that have the reasonable potential to cause the receiving water to exceed applicable water quality standards for copper.

5. The Discharger has requested a time schedule to come into compliance with the copper limit or to conduct studies, such as a site-specific translator study, to demonstrate that the effluent limitations for copper should be modified.

6. California Water Code (CWC) Section 13385(h) and (i) require the Regional Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. CWC Section 13385(j) exempts certain violations from the mandatory penalties. CWC Section 13385(j)(3) exempts the discharge from mandatory penalties "where the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300 or Section 13308, if all the [specified] requirements are met."

   In accordance with CWC 13385(j)(3), the Regional Board finds that the Discharger is not able to consistently comply with copper limitations contained in the Waste Discharge Requirements Order No. R5-2004-0110. The copper effluent limitations are new requirements that became applicable to the permit after the effective date of adoption of the waste discharge requirements, and after 1 July 2000, for which new or modified control measures are necessary in order to comply with the limitation, and the new or modified control measures cannot be completed, and put into operation within 30 calendar days. As the copper limitations are based on existing Basin Plan water quality objectives that were adopted prior to 25 September 1995, compliance schedules for these effluent limitations must be placed in a Cease and Desist Order.

   The Discharger needs time to develop reasonable measures to achieve compliance with the final effluent limits for copper. The Discharger may also conduct studies, such as a site-specific translator study, to demonstrate that the final effluent limits for copper should be modified. The development of measures to achieve compliance and study periods require up to five (5) years from the effective date of the waste discharge requirements. Since the time schedule for completion of actions necessary to achieve full compliance exceeds one year, interim requirements are included in and by this Order. A time schedule for compliance is included in this Order. In accordance with CWC Section 13385 (j) (3) this Order requires the Discharger to prepare and implement a pollution prevention plan pursuant to Section 13263.3 of the CWC.

7. The interim limitations in this Order are based on the Discharger's current operations and treatment practices. The current operations and treatment practices result in effluent concentrations of copper as high as 4.0 ug/L as measured on 20 May 2002. In developing the interim limitation, where there are ten sampling data points or more, sampling and laboratory variability is accounted for by establishing interim limits that are based on normally distributed data where 99.9% of the data points will lie within 3.3 standard deviations of the mean (*Basic Statistical Methods for Engineers and Scientists, Kennedy and Neville, Harper*

and Row). Therefore, the interim limitations would be established as the mean plus 3.3 standard deviations of the available data. Where actual sampling shows an exceedance of the 3.3-standard deviation interim limit, the maximum detected concentration would be established as the interim limitation. When there are fewer than ten sampling data points available, as is the case for the Bella Vista water treatment plant, the TSD recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of ten data points is necessary to conduct a valid statistical analysis. The multipliers contained in Table 5-2 of the TSD are used to determine a maximum daily limitation based on a long-term average objective. In this case, the long-term average objective is to maintain, at a minimum, the current plant performance level. Therefore, when there are less than ten sampling points for a constituent, interim limitations are based on 3.11 times the maximum observed sampling point to obtain the daily maximum interim limitation (*TSD, Table 5-2*). The MDEL interim limitation for copper is 12.4 µg/L, total recoverable (4.0 µg/L x 3.11). The interim limitation is summarized in the following table.

INTERIM EFFLUENT LIMITATION	
Number of Samples	2
Minimum Concentration (*u*g/L)	2.8
Maximum Concentration (*u*g/L)	4.0
Multiplier	3.11
Interim Limit (MDEL)	12.4 ug/L

8. Section 13301 of the California Water Code states, in part:

> "When a regional board finds that a discharge of waste is taking place or threatening to take place in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventative action. In the event of an existing or threatened violation of waste discharge requirements in the operation of a community sewer system, cease and desist orders may restrict or prohibit the volume, type, or concentration of waste that might be added to such system by dischargers who did not discharge into the system prior to the issuance of the cease and desist order. Cease and desist orders may be issued directly by a board, after notice and hearing, or in accordance with the procedure set forth in Section 13302."

9. Compliance with this Order exempts the Discharger from mandatory minimum penalties for violations of the copper limitations, in accordance with CWC Section 13385 (j)(3).

10. On 10 September 2004, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Regional Board conducted a public hearing at which evidence was received to consider a Cease and Desist Order pursuant to CWC Section 13301

to establish a time schedule to achieve compliance with waste discharge requirements in Order No. R5-2004-0110.

11. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.), in accordance with Section 15321 (a)(2), Title 14, California Code of Regulations.

12. Any person adversely affected by this action of the Regional Board may petition the State Water Resources Control Board to review this action. The petition must be received by the State Water Resources Control Board, Office of the Chief Counsel, P.O. Box 100, Sacramento, CA 95812-0100, within 30 days of the date in which the action was taken. Copies of the law and regulations applicable to filing petitions will be provided on request.

IT IS HEREBY ORDERED PURSUANT TO CALIFORNIA WATER CODE SECTION 13301, THAT:

1. The Discharger shall comply with the following time schedule to assure compliance with Effluent Limitation B.1a for copper contained in Waste Discharge Requirements Order No. R5-2004-0110, as described in the Findings of this Order. Additionally, the Discharger may propose and conduct studies to demonstrate that the final effluent limits for copper should be modified.

Task	Compliance Date
Identify potential sources by water quality monitoring of raw water, product water at various stages of treatment, and the various wastewater streams.	**One year after the effective date of Order No. R5-2004-0110.**
Develop and implement a Pollution Prevention Plan.[1]	**Two years after the effective date of Order No. R5-2004-0110.**
Implement pollution prevention measures and evaluate treatment upgrades necessary to achieve compliance with the final effluent limitations.	**Three years after the effective date of Order No. R5-2004-0110.**
Submit annual progress reports.[2]	**15 July of each year**
Implement selected operational measures and/or treatment upgrades to achieve full compliance with the final effluent limitations.	**Five years after the effective date of Order No. R5-2004-0110.**

[1] The Pollution Prevention Plan shall meet the requirements specified in California Water Code Section 13263.3.

[2] The progress reports shall detail what measures are planned, and what measures have been implemented to reduce the discharge of copper to receiving waters and achieve compliance with the final effluent limitations.

2. The Discharger shall comply with the following interim effluent limitation for copper. The final water quality based effluent limitations will become effective **five years after the effective date of Order No. R5-2004-0110**. The maximum daily effluent limitation cited in the table below will be the enforceable interim limitation until that time.

Parameter	Unit	Daily Maximum
Copper (Total Recoverable)	ug/L	12.4

4. The Discharger shall monitor the effluent for copper in accordance with Monitoring and Reporting Program No. R5-2004-0110.

5. If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may apply to the Attorney General for judicial enforcement or issue a complaint for Administrative Civil Liability. Additionally, the interim limit in this Order may be revoked, and the final limits contained in Order No. R5-2004-0110 will immediately become fully applicable.

I, THOMAS R. PINKOS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 10 September 2004.

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THOMAS R. PINKOS, Executive Officer

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