

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2004-0113

REQUIRING THE STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME
DARRAH SPRINGS FISH HATCHERY, 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. R5-2004-0112, (NPDES No. CA0004561) for State of California, Department of Fish and Game, Darrah Springs Fish Hatchery, (hereafter Discharger). Waste Discharge Requirements Order No. R5-2004-0112 regulates the discharge of wastewater from a cold-water concentrated aquatic animal production facility to Coleman Canal, a tributary to Battle Creek.
2. Waste Discharge Requirements Order (WDRs) No. R5-2004-0112, Effluent Limitations B.3. includes effluent limitations for copper as follows:
 - “3. Effluent discharges shall not exceed the following limits at Discharge 002, Discharge 003, and Discharge 004:

<u>Constituent</u>	<u>Units</u>	<u>Average Monthly Limit</u>	<u>Maximum Daily Limit</u>
Suspended Solids ¹ (net)	mg/L	5.0	15.0
Settleable Solids	mL/L	0.1	0.2
Formaldehyde	mg/L	0.65	6.7
Copper ²	ug/L	Calculate Limit based on Attachment C	

¹ Effluent limitations for total suspended solids are net values (Net TSS concentration =Effluent TSS concentration less Influent TSS concentration).

² A daily maximum value for copper shall be considered non-compliant with the effluent limit only if it exceeds the effluent limitation and the reported minimum level (ML). The highest acceptable ML for calibration purposes is 0.5 ug/L.”

3. The effluent limitations for copper are dependent on the hardness of the receiving water as shown in Attachment C of Order No. R5-2004-0112. For example, at a hardness of 25 mg/L,

the applicable acute and chronic copper criteria are 3.8 ug/L and 1.9 ug/L respectively. At hardness of 50 mg/L, these criteria increase to 7.2 ug/L (acute) and 3.6 ug/L chronic and at a hardness of 100 mg/L they are 13.4 ug/L (acute) and 6.7 ug/L (chronic).

4. The Discharger uses copper sulfate as a flush treatment to control external parasites and bacteria on fish. Copper sulfate crystals are pre-mixed with water and acetic acid (to dissolve the copper), and the solution is added to the raceway headworks with an estimated 1-hour flush of copper sulfate through a raceway. Results of monitoring conducted by the Discharger shows the discharge contained concentrations of copper ranging from 3 ug/L to a maximum of 160 ug/L during copper treatments. Receiving water hardness ranged from 69 to 94 mg/L at the time of sample collection during 2003. Based on review of the results, the Discharger threatens to violate the effluent limitations for copper.
5. The Discharger has requested a time schedule to come into compliance with the copper limit or to develop a substitute treatment to replace copper. Until a substitute treatment is developed the Discharger indicates there would be a significant loss of fish as a result of parasite and bacterial infestations without the use of copper treatments. The Discharger has determined the minimum concentrations of copper necessary to control the parasite and bacterial infestations and is actively pursuing the development of alternate treatments. The Discharger has also implemented changes in the treatment practices to minimize the concentration of copper in the discharge, such as treating only one raceway at a time.
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 contained in the Waste Discharge Requirements Order No. R5-2004-0112. 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.

Operational changes or alternative treatment actions can be taken to correct the violations that would otherwise be subject to mandatory penalties under CWC Section 13385(h) and (i). The Discharger proposes to develop substitute chemicals or alternatives to treatment to reduce or

eliminate the use of copper. The Discharger needs time to develop substitute treatments and can take reasonable measures to achieve compliance within five (5) years from the date 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 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. A pollution prevention plan addresses only those constituents that can effectively be reduced by source control measures. Copper can be reduced through source control measures.

7. The interim effluent limitation in this Order as a Maximum Daily Effluent Limit (MDEL) is based on the current operations and treatment practices. In developing the interim limitation, where there are ten sampling data points or more, sampling and laboratory variability is accounted for by establishing interim effluent 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 MDEL in this Order is established as the mean plus 3.3 standard deviations of the available data. The data used to develop the interim effluent limitation is summarized in the following table:

INTERIM EFFLUENT LIMITATION	
Number of Samples	21
Minimum Concentration (ug/L)	3
Maximum Concentration (ug/L)	160
Mean	55.90
Standard Deviation	45.78
Multiplier	3.3
Interim (MDEL)	207 ug/L

8. Section 13301 of the CWC 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 effluent 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. R5-2004-0112.
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 Waste Discharge Requirements Order No. R5-2004-0112, Effluent Limitation B.3. for copper:

<u>Task</u>	<u>Compliance Date</u>
Pollution Prevention Plan ¹ -Schedule to develop operational changes and alternative treatments	1 January 2005
Progress Reports ²	1 July of each year
Achieve Full Compliance	1 September 2009

¹ The Pollution Prevention Plan shall meet the requirements specified in CWC Section 13263.3.

² The progress reports shall detail what steps have been implemented to eliminate the use or reduce the discharge of copper to receiving waters, including alternative chemicals used to replace copper, and/or procedures and practices to minimize the concentration of copper in the discharge.

2. The Discharger shall comply with the following interim effluent limitation for copper. The final water quality based effluent limitations will become effective on **1 September 2009**. The maximum daily limitation cited in table below will be the enforceable interim limitation until that time.

<u>Parameter</u>	<u>Unit</u>	<u>Daily Maximum</u>
Copper (Total Recoverable)	ug/L	207

3. The Discharger shall monitor copper during treatments in accordance with Monitoring and Reporting Program No. R5-2004-0112.
4. 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 effluent limit in this Order may be revoked, and the final limits contained in Order No. R5-2004-0112 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.

THOMAS R. PINKOS, Executive Officer