CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2007-XXXX

REQUIRING
CITY OF GRASS VALLEY
WASTEWATER TREATMENT PLANT
NEVADA COUNTY

TO CEASE AND DESIST
FROM DISCHARGING CONTRARY TO REQUIREMENTS

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

1. On 6 June 2003, the Regional Water Board adopted Waste Discharge Requirements (WDRs) Order No. R5-2003-0089, and Cease and Desist Order (CDO) No. R5-2003-0090 prescribing waste discharge requirements and compliance time schedules for the City of Grass Valley (hereafter Discharger) Wastewater Treatment Plant. The Discharger discharges approximately 2.1 million gallons per day (mgd) of treated domestic and industrial wastewater to Wolf Creek, which is tributary to the Bear River. The design flow is 2.78 mgd.

2. WDRs Order No. R5-2003-0089 includes limits for aluminum, chloroform, cyanide, iron, copper, dibromochloromethane, dichlorobromomethane, manganese, methyl tert butyl ether (MTBE), methylene blue active substances (MBAS), nitrite, nitrate plus nitrite, and zinc as contained in Effluent Limitations section B.4, which states in part:

Constituents	*Units*	*Average Monthly*	*Average 4-Day*	*Average Daily*	*Average 1-Hour*
Aluminum [1]	*ug/L*	--	*87*	--	*750*
	lbs/day [2]	--	*2.0*	--	*17.4*
Chloroform	*ug/L*	*1.1*	--	--	--
	lbs/day [2]	*0.026*	--	--	--
Copper (Total Recoverable)	*ug/L*	*Attachment E* [5]	--	*Attachment E* [5]	--
	lbs/day [2]	[6]	--	[6]	--
Cyanide (Total Recoverable)	*ug/L*	*3.6* [5]	--	*9.6* [5]	--
	lbs/day [2]	*0.085*	--	*0.22*	--
Dibromochloromethane	*ug/L*	*0.41*	--	*1.0*	--
	lbs/day [2]	*0.0095*	--	*0.024*	--
Dichlorobromomethane	*ug/L*	*0.56*	--	*1.1*	--
	lbs/day [2]	*0.013*	--	*0.026*	--
Iron (Total Recoverable)	*ug/L*	*300* [5]	--	--	--
	lbs/day [7]	*20* [7]	--	--	--
Manganese (Total Recoverable)	*ug/l*	*50* [5]	--	--	--
	lbs/day [7]	*3*	--	--	--

Constituents	Units	Average Monthly	Average 4-Day	Average Daily	Average 1-Hour
Methyl tert butyl ether (MTBE)	ug/L	5	--	--	--
	lbs/day [2]	0.1	--	--	--
Methylene blue active substances (MBAS)	ug/L	500 [5]	--	--	--
	lbs/day [2]	10	--	--	--
Nitrite (as N)	mg/L	1	--	--	--
	lbs/day [2]	20	--	--	--
Nitrate and Nitrite (as N)	mg/l	10	--	--	--
	lbs/day [3]	200	--	--	--
Zinc (Total Recoverable)	ug/L	Attachment G [5]	--	Attachment G [5]	--
	lbs/day [2]	[6]	[6]	--	--

[1] Acid-soluble or total
[2] Based on design treatment capacity of 2.78 mgd, [(x ug/l)(1 mg/1000 ug)(8.345)(2.78 mgd) = y lbs/day]
[3] Based on design treatment capacity of 2.78 mgd, [(x ug/l)(8.345)(2.78 mgd) = y lbs/day]
[5] To be ascertained by a 24-hour composite
[6] The mass limit (lbs/day) shall be equal to the concentration limit (from corresponding Attachment, for corresponding period) multiplied by the design flow of 2.78 mgd and the unit conversion factor 8.345 and divided by 1000 ug/mg (see footnote 2 for equation)
[7] Based on design equalized peak flow treatment capacity of 7 mgd, [(x ug/l)(1 mg/1000 ug)(8.345)(7 mgd) = y lbs/day]

3. WDRs Order No. R5-2003-0089 included a schedule for achieving compliance with the Effluent Limitations for copper, cyanide, dibromochloromethane, dichlorobromomethane, and zinc by 1 March 2008. The WDRs expire on 1 June 2008, however the Discharger submitted a complete Report of Waste Discharge by 3 December 2007, and therefore the permit is administratively extended.

4. CDO No. R5-2003-0090 included a schedule for achieving compliance with the Effluent Limitations for aluminum, chloroform, iron, manganese, MTBE, MBAS, nitrite, and nitrate-plus-nitrite by 1 March 2008.

5. The Discharger has completed several efforts to attain compliance, including a pretreatment program and implementation of a pollution prevention program, as attempts to reduce overall inflow of contaminants into the treatment plant. The Discharger has also studied the effects of modifying effluent hardness, and is in the process of completing Water Effects Ratio (WER) and translator studies for copper and zinc. The Discharger is planning to construct plant improvements to add ultraviolet light (UV) disinfection and to upgrade the biological nitrogen removal process. The Discharger is also involved in litigation with Newmont USA Limited, owner of the Drew Tunnel, which is the largest source of manganese entering the treatment plant.

6. The Discharger has assessed the current status of improvements at the treatment plant and has reported that:

   - The existing facilities are capable of achieving compliance with final effluent limitations for iron, MTBE, MBAS, and nitrites.

- The hardness, WER, and translator studies will be completed in April 2008. Upon Regional Water Board approval, information from these studies will be used for the development of copper and zinc effluent limitations in the subsequent WDR renewal. WDR Order No. R5-2003-0089 expires in June 2008.

- Construction of plant improvements, including ultraviolet disinfection and biological nitrogen removal process, is proposed to be completed in December 2009. The new facilities are proposed to reduce effluent concentrations of chloroform, cyanide, dibromochloromethane, dichlorobromomethane, and nitrates-plus-nitrites in order for the Discharger to comply with effluent limitations.

- The litigation with Newmont seeking removal of the Drew Tunnel discharge from the treatment plant is ongoing. Pending the outcome of the litigation, the constructed solution of the Drew Tunnel discharge will require approximately two years, placing the completion date in March 2010 at the earliest. Compliance with the aluminum and manganese effluent limitations is currently dependent on the outcome of the litigation.

7. Section 13301 of the California Water Code (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.*"

8. In accordance with California Water Code (CWC) Section 13385(j)(3), the Regional Water Board finds that the Discharger is not able to consistently comply with the effluent limitations for aluminum, chloroform, copper, cyanide, dibromochloromethane, dichlorobromomethane, manganese, nitrate-plus-nitrite, and zinc. The schedules for completing the actions necessary to achieve full compliance exceed the expiration date of the WDR (1 June 2008) and exceed the 1 March 2008 compliance dates in the WDR and CDO. Additional time is necessary to complete site-specific studies, plant improvements, and litigation that will improve the quality and consistency of the effluent and improve compliance with effluent limitations. New time schedules are necessary in a CDO for all the constituents listed above. These limitations were new requirements that became applicable to the Order 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 designed, installed, and put into operation within 30 calendar days.

9. CWC section 13385(h) and (i) require the Regional Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. CWC section 13385(j) exempts certain violations from the mandatory minimum penalties. CWC section 13385(j)(3) exempts the discharge from mandatory minimum 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, if all the [specified] requirements are met.*"

10. Compliance with this Order exempts the Discharger from mandatory penalties for violations of effluent limitations for copper, cyanide, dibromochloromethane, dichlorobromomethane, and zinc, in accordance with CWC section 13385(j)(3). CWC section 13385(j)(3) requires the Discharger to prepare and implement a pollution prevention plan pursuant to section 13263.3 of the California Water Code. Therefore, a pollution prevention plan will be necessary for copper, cyanide, dibromochloromethane, dichlorobromomethane, and zinc, in order to effectively reduce the effluent concentrations by source control measures.

11. Because CDO No. R5-2003-0090 provided the Discharger with almost 5 years to comply with effluent limitations for aluminum, chloroform, manganese, and nitrate-plus-nitrite, the exception from mandatory minimum penalties pursuant to CWC section 13385(j)(3) does not apply for these constituents after 5 June 2008. Pursuant to CWC section 13263.3(d)(1)(D), a pollution prevention plan will be necessary for aluminum, chloroform, manganese, and nitrate-plus-nitrite in order to effectively reduce the effluent concentrations by source control measures.

12. Since the time schedules for completion of actions necessary to bring the waste discharge into compliance exceeds 1 year, this Order includes interim requirements and dates for their achievement. The time schedules do not exceed 5 years.

13. The compliance time schedule in this Order includes interim effluent limitations for aluminum, chloroform, copper, cyanide, dibromochloromethane, dichlorobromomethane, manganese, nitrate-plus-nitrite, and zinc. Interim effluent limitations typically consist of a daily effluent concentration derived using sample data provided by the Discharger. Existing interim average daily limitations for copper, cyanide, dibromochloromethane, dichlorobromomethane, and zinc, as established in WDR Order No. R5-2003-0089, are included in this Order. New interim average daily limitations for aluminum, chloroform, manganese, and nitrate-plus-nitrite, based on effluent monitoring data demonstrating actual treatment plant performance from February 2004 to March 2007, are also included in this Order. To maintain consistency with interim limitations established in existing WDR Order No. R5-2003-0089, interim limitations for all constituents described above are established as average daily effluent limitations. In developing the interim limitations, when 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*). When there are less than ten sampling data points available, the *Technical Support Document for Water Quality- Based Toxics Control* ((EPA/505/2-90-001), 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 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. Thus, when there are less than ten sampling points for a constituent, interim limitations are based on 3.11 times the maximum observed effluent concentration to obtain the daily interim limitation (TSD, Table 5-2). If the statistically-projected interim limitation is less than the maximum observed effluent concentration, the interim limitation is established as the maximum observed concentration.

14. The Regional Water Board finds that the Discharger can undertake source control and treatment plant measures to maintain compliance with the interim limitations included in this Order. Interim limitations are established when compliance with the final effluent limitations cannot be achieved by the existing discharge. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and adversely affect the beneficial uses of the receiving stream on a long-term basis. The interim limitations, however, establish an enforceable ceiling concentration until compliance with the effluent limitation can be achieved.

15. 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.

16. The Discharger has complied with the California Environmental Quality Act by preparing final environmental documents for the wastewater treatment plant improvement project, which was circulated through the State Clearinghouse and adopted by the City of Grass Valley City Council. The City Council approved the Project on August 28, 2007, and filed a Notice of Determination with the Governor's Office of Planning and Research and the Nevada County Clerk on August 29, 2007.

17. Any person adversely affected by this action of the Regional Water Board may petition the State Water Resources Control Board (State Water Board) to review the action. The petition must be received by the State Water Board Office of 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 that CDO No.R5-2003-0090 is rescinded, and, pursuant to CWC section 13301 and 13267:

1. The City of Grass Valley shall comply with the following time schedule to ensure compliance with Order No. R5-2003-0089 effluent limitations for aluminum, chloroform, copper, cyanide, dibromochloromethane, dichlorobromomethane, manganese, nitrate-plus-nitrite, and zinc:

Task	Compliance Date
Complete WER and Translator Studies for copper and zinc	1 March 2008
Submit Pollution Prevention Plan (PPP)[1] pursuant to CWC section 13263.3 for aluminum, chloroform, copper, cyanide, dibromochloromethane, dichlorobromomethane, iron, manganese, MBAs, MTBE, nitrite, nitrate-plus-nitrite, and zinc	1 March 2008
Begin construction of plant upgrades	15 June 2008
Progress Reports	1 January and 1 July, annually
Complete Construction of plant upgrades	1 December 2009
Full Compliance with aluminum, chloroform, copper, cyanide, dibromochloromethane, dichlorobromomethane, manganese, nitrate-plus-nitrite, and zinc effluent limitations	1 March 2010

[1] The PPP shall be prepared and implemented for aluminum, chloroform, copper, cyanide, dibromochloromethane, dichlorobromomethane, manganese, nitrate-plus-nitrite, and zinc, as appropriate, and shall meet the requirements specified in CWC section 13263.3

2. For the compliance schedules required by this Order, the Discharger shall submit to the Regional Water Board on or before each compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, and shall include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the time schedule.

3. The following interim effluent limitations shall be effective immediately, and shall remain in effect through 1 March 2010, or when the Discharger is able to come into compliance with the final effluent limitations, whichever is sooner.

Parameter	Average Daily Effluent Limitation
Aluminum	629 ug/L
Chloroform	42 ug/L
Copper, total	9.1 ug/L
	0.21 lbs/day
Cyanide, total	15 ug/L
	0.35 lbs/day
Dibromochloromethane	2.47 ug/L
	0.057 lbs/day
Dichlorobromomethane	14 ug/L
	0.33 lbs/day
Manganese	249 ug/L
Nitrate plus Nitrite	17 mg/L as N
Zinc	110 ug/L
	2.61 lbs/day

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.

5. Any person signing a document submitted under this Order shall make the following certification:

> *"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."*

I, PAMELA C. CREEDON, 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 XX December 2007.

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PAMELA C. CREEDON, Executive Officer