

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

CEASE AND DESIST ORDER NO. R5-2010-0050  
(NPDES PERMIT NO. CA0079898)

CITY OF GRASS VALLEY  
WASTEWATER TREATMENT PLANT  
NEVADA COUNTY

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

1. On 12 June 2009, the Central Valley Water Board adopted Waste Discharge Requirements (WDR) Order No. R5-2009-0067 and Cease and Desist Order (CDO) No. R5-2009-0068, prescribing waste discharge requirements and compliance schedules for the City of Grass Valley, Nevada County. For the purposes of this Order, the City of Grass Valley is hereafter referred to as “Discharger” and the Wastewater Treatment Plant is hereafter referred to as “WWTP.”
2. The Discharger owns and operates a wastewater collection, treatment, and disposal system, and provides sewerage service to the City of Grass Valley with a population of approximately 8,500. The treatment system consists of an equalization pond, bar screening; primary sedimentation; alkalinity adjustment; biological treatment by activated sludge, including nitrification and denitrification; secondary sedimentation; filtration; and ultraviolet light (UV) disinfection. The outfall is equipped with a streamside cascade aerator. Sludge is treated in an anaerobic digester and dewatered using a belt filter press. Wastewater is discharged from Discharge Point 001 to Wolf Creek, a water of the United States, and a tributary to the Bear River within the Bear River Watershed.
3. WDR No. R5-2009-0067 contains final effluent limitations in Section IV.A.1. Final Effluent Limitations – Discharge Point 001, in part, as follows:

<i>Parameter</i>	<i>Units</i>	<i>Effluent Limitations</i>				
		<i>Average Monthly</i>	<i>Average Weekly</i>	<i>Maximum Daily</i>	<i>Instantaneous Minimum</i>	<i>Instantaneous Maximum</i>
<i>Chloro-dibromomethane</i>	<i>µg/L</i>	0.41	--	0.97	--	--
	<i>lbs/day<sup>1</sup></i>	0.0095	--	0.022	--	--
<i>Cyanide, Total Recoverable</i>	<i>µg/L</i>	4.1	--	9.0	--	--
	<i>lbs/day<sup>1</sup></i>	0.095	--	0.21	--	--
<i>Dichloro-bromomethane</i>	<i>µg/L</i>	0.56	--	1.2	--	--
	<i>lbs/day<sup>1</sup></i>	0.013	--	0.028	--	--
<i>Nitrate + Nitrite (as N)</i>	<i>mg/L</i>	10	--	--	--	--
	<i>lbs/day<sup>1</sup></i>	232	--	--	--	--

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Nitrite (as N)	mg/L	1	--	--	--	--
	lbs/day <sup>1</sup>	23	--	--	--	--

<sup>1</sup> Based on a design flow of 2.78 mgd.

**g. Total Coliform Organisms.** Effluent total coliform organisms shall not exceed:

- i. 2.2 most probable number (MPN) per 100 mL, as a 7-day median;
- ii. 23 MPN/100 mL, more than once in any 30-day period; and
- iii. 240 MPN/100 mL, at any time.

**h. Manganese.** Effluent manganese shall not exceed 50 µg/L as an annual average.

4. An abandoned mine portal, Drew Tunnel, owned by Newmont USA Limited, was exposed on the Discharger's property during excavation for a facility upgrade project in 2000. The Discharger was not sure where the flow was originating, so it routed the water to the WWTP for treatment. The mine drainage, which ranges from 0.3-1.0 mgd, is piped to the storage reservoir and pumped to the aeration basins for treatment prior to discharge to Wolf Creek. The mine drainage contains elevated levels of aluminum, iron, manganese, and is low in pH and temperature. During rainfall events, Drew Tunnel can introduce large volumes of cold, low pH water to the aeration basins, which impacts plant operational functionality as it greatly reduces the effectiveness of the nitrification and denitrification biological system and can result in elevated metals concentrations in the effluent.
5. CDO No. R5-2009-0068 includes a compliance schedule for the final effluent limitations for cyanide, chlorodibromomethane, dichlorobromomethane, manganese, nitrate plus nitrite, nitrite, and total coliform organisms<sup>1</sup> required in WDR No. R5-2009-0067. The final compliance date is 1 March 2010. As of 1 September 2009, when the UV disinfection and the upgrade to the biological nitrogen removal process came online, the Discharger has demonstrated compliance with the final effluent limitations for cyanide, chlorodibromomethane, dichlorobromomethane, nitrite, and total coliform organisms. However, the Discharger is still not able to consistently comply with effluent limits for manganese and nitrate plus nitrite due to discharges from Drew Tunnel. Additionally, although the Discharger has not exceeded its final total coliform organisms effluent limitations since the installation of the UV disinfection system in September 2009, the UV disinfection requires minimal turbidity to be effective. A large influx of sediment laden mine discharge from Drew Tunnel could cause exceedances of final effluent limitations for total coliform organisms due to increased turbidity. Therefore, on 24 November 2009, the Discharger submitted a request for the extension of the

<sup>1</sup> CDO No. R5-2009-0068 includes interim limits for total coliform organisms that expire on 1 March 2010. The CDO, however, omits total coliform organisms in the compliance schedule (Item 1), which appears to be typographical error.

compliance schedule for meeting the final effluent limitations for manganese, nitrate plus nitrite, and total coliform organisms until the Drew Tunnel discharge is removed from the WWTP.

6. Since the adoption of WDR No. R5-2009-0067 and CDO No. R5-2009-0068, through litigation and subsequent settlement negotiations between the Discharger and Newmont, it has been determined that the Drew Tunnel discharge is the responsibility of Newmont. Newmont has agreed to re-route the Drew Tunnel discharge to a new treatment facility which it will own and operate. The flow from Drew Tunnel will continue to discharge in the Grass Valley Wastewater Treatment Plant until Newmont completes the construction of the new treatment facility. To isolate and treat the mine discharge Newmont needs to complete several tasks which include land and right-of-way acquisition, California Environmental Quality Act (CEQA) documentation, construction of piping and treatment facilities, NPDES permit approval, and plant start up. The current projected schedule for completion of these tasks is 2014.

Based on effluent data from August 2003 to January 2010, it is evident that the Drew Tunnel discharge is affecting the WWTP's ability to consistently comply with the final effluent limitations for manganese and nitrate plus nitrite. Therefore, this Order provides a compliance schedule for these constituents until 1 June 2014, which coincides with Newmont's schedule to remove the Drew Tunnel discharge from the WWTP. However, based on effluent data prior to and since operation of the UV disinfection system, the WWTP has consistently complied with the final effluent limitations for total coliform organisms. The only period of non-compliance was associated with an extraordinary event that occurred on 24 January 2009.

The Discharger provided information explaining that on 24 January 2009, an unexpectedly large volume of mine drainage discharge flowed from the Drew Tunnel into the WWTP, carrying a heavy sediment load of soil and fines. The discharge lasted for approximately 4 to 6 hours and severely impacted treatment processes. The Discharger provided supporting data indicating that 2.1 million gallons from the Drew Tunnel entered the WWTP processes on 24 January 2009 whereas daily flow totals before and after that day ranged from 0.35 to 0.75 million gallons. According to the Discharger, the large flow volume was caused by the accumulation of water in Drew Tunnel, possibly because of a blockage within the tunnel, which was suddenly released after water pressure increased sufficiently to dislodge the blockage. Central Valley Water Board compliance and enforcement staff inspected the site and determined, based on extensive mining engineering experience, that the explanation provided by the Discharger was reasonable. Even after mitigation efforts by the Discharger to minimize impacts to Wolf Creek, the single operational upset resulted in violations of the final total coliform organisms effluent limitations between 31 January and 2 March 2009.

The Discharger requested relief from mandatory minimum penalties, in accordance with California Water Code (CWC) Section 13385(j)(1)(B), based on the consideration that the Drew Tunnel discharge on 24 January 2009 was an unanticipated natural phenomenon that could not have been prevented or foreseen by the Discharger. On

12 November 2009, the Central Valley Water Board issued Administrative Civil Liability Complaint R5-2009-0569, granting the Discharger relief from mandatory minimum penalties for this particular discharge event based on CWC Section 13385(j)(1)(B).

The Central Valley Water Board finds that a compliance schedule is not necessary for total coliform organisms, because the WWTP has demonstrated consistent compliance with the final effluent limitations, except for the extraordinary, unforeseen circumstance, such as occurred in January 2009. In the event of a reoccurrence of the Drew Tunnel discharge episode that occurred in January 2009, it is anticipated that a finding similar to that issued in ACL Complaint R5-2009-0569 would again be appropriate.

### **Mandatory Minimum Penalties**

7. CWC section 13385(h) and (i) require the Central Valley Water Board to impose mandatory minimum penalties (MMPs) 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...For the purposes of this subdivision, the time schedule may not exceed five years in length...”*
8. By statute, a Cease and Desist Order or Time Schedule Order may provide protection from MMPs for no more than five years. This Order extends the final compliance date for manganese and nitrate plus nitrite to allow for the future removal of the Drew Tunnel discharge by Newmont. However, since CDO No. R5-2003-0090 and CDO No. R5-2009-0068 already provided the Discharger with five years to comply with the effluent limitations for manganese and nitrate plus nitrite, the exemption from MMPs pursuant to CWC section 13385(j)(3) does not apply for these constituents in this Order.

### **Interim Limitations**

9. The compliance time schedule in this Order includes interim effluent limitations for manganese and nitrate plus nitrite. 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*). A data set composed of monthly samples collected between August 2003 and December 2009 were used to calculate a maximum annual average interim limit for manganese based on a rolling average. For nitrate plus nitrite, a data set comprised of monthly sample results between April 2004 and January 2010 was used to establish a maximum daily interim limit. The data distribution for both constituents is best represented by a log-normal distribution and the resulting mean, standard deviation and interim limit are shown below:

Parameter	Number of Data Points	Mean (log normal)	Standard Deviation (log normal)	Interim Limit
Manganese (µg/L)	66	3.82	0.313	Maximum Annual Average: 130
Nitrate plus Nitrite (mg/L)	75	2.02	0.533	Maximum Daily: 44

10. The Central Valley Water Board finds that the Discharger can undertake 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, could significantly degrade water quality and adversely affect the beneficial uses of the receiving stream if implemented on a long-term basis. The interim limitations, however, establish an enforceable short-term ceiling concentration until compliance with the effluent limitation can be achieved.
11. The Discharger submitted an update to its Pollution Prevention Plan (PPP) for cyanide, chlorodibromomethane, dichlorobromomethane, manganese, nitrite, and nitrate plus nitrite on 29 October 2009. In a cover letter submitted with the PPP, the Discharger indicates that compliance with manganese and nitrate plus nitrite effluent limitations are dependent on completion of the project to remove the Drew Tunnel discharge from the WWTP.

### Other Regulatory Requirements

12. This Order modifies CDO No. R5-2009-0068 in the following ways: it establishes interim effluent limitations based on new data and it provides deadlines for the Discharger to cease and desist from violating an existing order. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) ("CEQA") for the following reasons, each of which is an independent basis for exemption.
  - This Order does not modify any compliance dates or other requirements of NPDES Order No. R5-2005-0067, which requires compliance with the effluent limitations addressed by this Order. This Order serves to enforce Order No. R5-2005-0067. This Order is exempt from CEQA under Water Code Section 13389, since the adoption or modification of a NPDES permit for an existing source is exempt and this Order only serves to implement a NPDES permit. (*Pacific Water Conditioning Ass'n, Inc. v. City Council of City of Riverside* (1977) 73 Cal.App.3d 546, 555-556.).
  - This Order does not have the potential to cause a significant impact on the environment (Title 14 CCR section 15061(b)(3)) and is not a "project" as defined by CEQA. This Order enforces preexisting requirements to improve the quality of ongoing discharges that are part of the CEQA "baseline"; and includes interim effluent limitations to ensure that discharges do not increase above the CEQA

baseline. This Order imposes requirements that will maintain the CEQA baseline while the Discharger attains compliance with the existing requirements. The PPP has identified source control measures in order to meet the preexisting effluent limitations. Since the compliance schedule is as short as possible and any actions to comply with the existing requirements are already required under WDRs Order No. R5-2009-0067 and other prior orders, this Order does not cause or allow any environmental impacts to occur; those impacts would occur regardless of this Order.

- Which source control measures the Discharger will identify or select for implementation as a result of source control review in the PPP is indefinite and uncertain. In addition, the Discharger is required to study alternatives and potential adverse impacts in its PPP, under Water Code Section 13263.3(d)(2).
- This Order is exempt pursuant to CEQA Guidelines Section 15321. The discharges subject to this Order are not “hazardous materials.” Also, the discharges occur offsite and do not occur at the site itself.

13. On **27 May 2010**, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which evidence was received to consider an amendment to a Cease and Desist Order under CWC section 13301 to amend a time schedule to achieve compliance with waste discharge requirements.

**IT IS HEREBY ORDERED THAT:** Cease and Desist Order No. R5-2009-0068 (NPDES No. CA0079898) is rescinded, except for enforcement purposes, and, pursuant to CWC Section 13301:

1. The City of Grass Valley shall comply with the following time schedule to ensure compliance with the effluent limitations for manganese and nitrate plus nitrite required in Waste Discharge Requirements Order No. R5-2009-0067:

<b>Task</b>	<b>Compliance Date</b>
a. Submit Progress Reports for manganese and nitrate plus nitrite <sup>1</sup> .	<b>1 June, annually, beginning 1 June 2010</b>
b. Full compliance with the effluent limitations for manganese and nitrate plus nitrite.	<b>1 June 2014</b>

<sup>1</sup> The progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance by the final date.

2. Compliance with the effluent limitations for manganese and nitrate plus nitrite is dependent on actions by Newmont, as described in Finding 6 above. If Newmont fails to meet its schedule for construction of new treatment and conveyance facilities that will allow the removal of the Drew Tunnel discharge from the Discharger’s WWTP, this Order may need to be modified to adjust the compliance schedule accordingly. For the

compliance schedules required by this Order, the Discharger shall submit to the Central Valley 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 Central Valley 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 31 May 2014, or when the Discharger is able to comply with the final effluent limitations, whichever is sooner.

Parameter	Units	Effluent Limitations	
		Annual Average	Maximum Daily
Manganese, Total Recoverable	µg/L	130	--
Nitrate plus Nitrite, Total (as N)	mg/L	--	44

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.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday (including mandatory furlough days), the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

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 27 May 2010.

*Original Signed by*  
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PAMELA C. CREEDON, Executive Officer