



DEPARTMENT OF PARKS AND RECREATION
Sierra Gold Sector
10556 E. Empire Street
Grass Valley, CA 95945

Ruth Coleman, *Director*

May 5, 2006

Mr. Richard McHenry
California Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

Subject: NPDES No. CA0085171: Tentative Waste Discharge Requirements and Time Schedule Order for State of California, Department of Parks and Recreation, Empire Mine State Historic Park, Nevada County

Dear Mr. McHenry:

Pursuant to the California Regional Water Quality Control Board – Central Valley Region (Regional Board) March 30, 2006 letter, the California Department of Parks and Recreation (CDPR) is providing comments on the tentative Waste Discharge Requirements (WDRs) and Time Schedule Order (TSO) for the Empire Mine State Historic Park.

Background

The Empire Mine State Historic Park is located in the Grass Valley mining district in western Nevada County. Placer gold was found in Wolf Creek in 1848, but the discovery of gold-bearing quartz at Gold Hill in 1850 marked the beginning of hard rock mining in the area.^{1,2} Two of the largest and most productive mining operations in the region were the Empire and the North Star groups.^{1,2}

Although the North Star mine was established in 1851³, the North Star Mining Company acquired surrounding mines including Gold Hill in 1903⁴, Massachusetts Hill in 1894^{2,4}, New Rocky Bar between 1891-1893⁴, and New York Hill, Granite Hill, Larimer and Cincinnati Hill and others.⁵ The North Star Mining Company holdings are reported to have been positioned west and southwest of Grass Valley, covering an area approximately three miles in length, one to two miles wide and comprising 1,200 acres.⁵

In 1929, the North Star and Empire mining interests merged under the ownership of Empire Star Mining Company.² The merger brought over 3,700 acres of mineral rights under single management.⁶ In 1956, the Empire Star Mines ceased operations and constructed underground

¹ Gold Districts of California. <http://museumca.org/goldrush/dist-grassvalley.html>.

² Johnston, W.D. (1940) The Gold Quartz Veins of Grass Valley, California. Geological Survey Professional Paper 194.

³ Conway, M.F. (1981) A History of the North Star Mines, Grass Valley, California, 1851-1929. Nevada County Historical Society.

⁴ North Star Mining Company and Associated Records. <http://webtext.library.yale.edu>.

⁵ Hamilton, Fletcher (1918) Mines and Mineral Resources of Nevada County, California State Mining Bureau.

⁶ McQuiston, Frank W., 1986. Gold: The Saga of the Empire Mine 1850-1956, Empire Mine Park Association, Blue Dolphin Press, Nevada City, CA, p. 64.

dams to separate the mine workings “allowing them to fill with water.”⁷ In May 1957, the “real property and tangible personal property of the Empire Star” were transferred to New Verde Mines, a wholly-owned subsidiary of Newmont Mining Corporation.⁸ The mining properties of New Verde Mines included: the Empire Mine; the Pennsylvania Mine; and the North Star Mine. In 1974, Newmont sold 777 acres of the Empire Mine surface holdings to the California Department of Parks and Recreation.⁹

Magenta Drain, Grass Valley

In its property purchase, the C DPR obtained certain ownership rights (surface rights and mineral rights generally to 100 feet) to land formerly owned and mined by Empire Star Mining Company. A separate parcel with surface rights and mineral rights to a depth of at least 200 feet followed the approximate route of the Magenta Drain, including a mine portal which releases groundwater. Historical documents and maps depict the Magenta Drain as located northwest of the Magenta Mine on an unnamed tributary to the South Fork of Wolf Creek.¹⁰ Other historical mining property maps show that the Magenta Drain falls within the boundaries of the property owned by Empire Star Mines Co. (now known as Newmont Mining Corporation).¹¹ There have been a number of explanations provided for the source of this water, including origination from the Magenta Mine, origination from Empire Mine, surface water infiltration from the overlying stream channel, an underground stream that intersects the Magenta Drain, etc.

The exact source and nature of the origin of the groundwater emanating from the mine portal is being investigated. However, historical information indicates that most mines had a drain tunnel and that much of the water encountered in the mines entered as infiltration. The State Mineralogist documents mining observations prior to 1890 that “bulk of the water in all these mines comes from surface seepage (sic, seepage). Most of the mines have a ‘drain tunnel.’ This is an adit driven from some proximate gulch or cañon, to tap the vein for the purpose of carrying off the surface water that seeps from the upper levels to the horizon of the adit. The water pumped from the lower depths is likewise usually discharged through this drain tunnel.”¹²

In February 2002, the Regional Board staff advised the California Department of Parks and Recreation that a report of waste discharge for the mine portal discharge was required to comply with California Water Code Section 13376. Based on its analysis, the C DPR concluded in April 2002 that due to its origin, the discharge did not require a waste discharge requirement (WDR). Subsequently, Deltakeepers sued the Department and the Regional Board issued a 13267 Order requiring the C DPR to submit a report of waste discharge (ROWD) and apply for an NPDES permit for the “Magenta Drain.” The Regional Board prepared the subject tentative WDR and TSO in response to the C DPR submittals.

⁷ Ibid, p. 77.

⁸ New Verde Mines Company, letter to Commissioner of Internal Revenue, Washington, DC, June 20, 1966.

⁹ McQuiston, F.W., Gold: The Saga of the Empire Mine, 1850-1956, 1986, p. 81.

¹⁰ U.S. Geological Survey Topographic Map, Grass Valley, California, 2003; U.S. Geological Survey Topographic Grass Valley Special Map California, 1896, Reprinted from 1891 Survey.

¹¹ California Division of Mines Map Showing Mining Properties of the Grass Valley Mining District, Nevada County, California, 1930.

¹² Hammond, John Hay, 1890. Mining of Gold Ores in California, 10th Report of the State Mineralogist, 29th Session, p. 871-872.

General Comments

In general, the tentative WDR and TSO reflect a tremendous effort by Regional Board staff to address a multi-faceted complex environmental and permitting issue associated with the legacy mining wastes. The tentative WDR, however, appears to reflect an attempt to adopt standard permitting language for this relatively unique discharge. As explained further below, we recommend that the adoption of the WDR and TSO be postponed until the other interrelated and condition precedent aspects of the environmental issues are addressed.

CDPR, Newmont, the Regional Board and DTSC are working on a voluntary agreement and abatement order (CAO) to address the assessment and any response actions required to address threats to public health and the environment from mine wastes at the EMSHP. It is imperative that objectives and requirements for cleanup activities at the Park are consistent and complimentary across regulatory programs and initiatives.

Operating under the above-mentioned order and obtaining WDRs appear to have conflicting requirements in essence conflict with the goal of the tentative WDRs, i.e., to address the source of the discharge, rather than the effect. To the extent that the metals in the water emanating from the “Magenta Drain” represent a potential impact on water quality, it is not the occurrence of the water on the property owned by the CDPR that is the source of the regulated constituents. If the Magenta Drain were not present, the regulated chemicals would still exist in the groundwater which surfaces at the Magenta Drain. If the tentative WDRs were adopted in their current form, it would inappropriately place the burden for addressing the groundwater conditions caused by the actions of previous property owners on CPDR. The CAO, however, provides a mechanism for investigating and addressing the source of the metals, can require both past and present owners to participate in the abatement.

As noted above, the draft CAO includes requirements that in essence conflict with the goal of the tentative WDRs, i.e., to address the source of the discharge, rather than the effect. To the extent that the metals in the water emanating from the “Magenta Drain” represent a potential impact on water quality, it is not the occurrence of the water on the property owned by the CDPR that is the source of the regulated constituents. If the Magenta Drain were not present, the regulated chemicals would still exist in the groundwater which surfaces at the Magenta Drain. If the tentative WDRs were adopted in their current form, it would inappropriately place the burden for addressing the groundwater conditions caused by the actions of Newmont and its predecessors on CPDR. The CAO, however, provides a mechanism for investigating and addressing the source of the metals, can require both past and present owners to participate in the abatement.

We also have concerns that to the extent the adoption of the tentative WDRs is for a “new source,” it may require a California Environmental Quality Act (CEQA) review. We recommend that the WDRs be postponed, pending the adoption of the CAO, which we anticipate would address both the potentially conflicting requirements between the CAO and WDRs, as well as the CEQA exemption, while providing a similar or better level of water quality protection. Our specific comments are provided below.

In general, the tentative WDR permit is difficult to follow with respect to the list of interim versus final effluent limitations and the frequency and amount of sampling for specific constituents. The tables presented in the body of the permit versus those in the Time Schedule Order are not consistent. Additional parameters are also included in Attachment G (Constituent

Study). A table for all interim effluent parameters and a table for all final effluent parameters, including the amount and timing of the sample collection, would be helpful.

Specific Comments

I. Facility Information - Type of Facility: Industrial (Gold Mine)

The Facility Information should be corrected to reflect that the CDPR operations are not industrial, i.e., CDPR operates a park. While property includes lands that were formerly mined, mining ceased in 1956.

II. Findings, A. Background: CDPR “applied for a National Pollution Discharge Elimination System (System) permit.

The Findings should reflect that the CDPR was ordered by the Regional Board to apply for a NPDES permit.

B. Facility Description: There is currently no treatment provided.

The Findings should reflect that there are other options to compliance in addition to treatment and that there are ongoing concurrent investigations to address the nature and source of the groundwater surfacing at the “Magenta Drain” portal. The discharge from a treatment system for the Magenta Drain may be considered a “new source” as defined by the Clean Water Act, i.e., “any building structure, facility or installation from which there is or may be, a discharge of pollutants, the construction of which commenced after the publication of proposed regulations prescribing a standard of performance under Section 306 of the Act.” If our understanding is correct, the cited CEQA exemption may not apply and may necessitate postponement of the adoption of the tentative WDRs until a CEQA review for the proposed project has been completed.

E. California Environmental Quality Act (CEQA): This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.) in accordance with Section 13389 of the CWC.

It is our understanding that Section 13389 of the California Water Code provides exemptions from CEQA, except for “new sources as defined in the Federal Water Pollution Control Act.” As the permit requires and approves the discharge from a yet to be built facility, the discharge may be considered a new source as defined by the Federal Water Pollution Control Act. If this discharge is deemed a “new source,” the adoption of the tentative WDRs may be an act subject to public review under CEQA and, as such, may need to be deferred until a CEQA review has been completed.

F. Technology-Based Effluent Limitations: This Order includes technology-based effluent limitations based on Effluent Limitation Guidelines and Standards for the Ore Mining and Dressing Point Source Category...

Should the reference to the technology based effluent standards be removed from the tentative WDR? Effluent Limitations Guidelines and Standards for the Ore Mining and Dressing Point Source Category in 40 CFR Part 440, Subpart J—Copper, Lead, Zinc, Gold, Silver, and Molybdenum Ores Subcategory are identified as being applicable to “Mines that produce copper, lead, zinc, gold, etc.” As there are no mining operations at

the Empire Mine State Historic Park, nor is it clear that CDPR has the right to conduct mining of underground assets that remain the “perpetual right and ownership” of Newmont, these categorical effluent limitations might not apply.

N. Antidegradation Policy: “Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings...The permitted discharge is consistent with the antidegradation provision of 40 CFR CFR §131.12 and State Water Board Resolution 68-16.”

It is unclear how the Federal and State antidegradation policies have been applied to this permitted discharge. We do not believe that the CDPR has undertaken any activity that has resulted in the production of waste or pollutants that has resulted in a degradation of water quality. State Water Resources Control Board (SWRCB) Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California, states that “[a]ny activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge...will be required to meet waste discharge requirements.”

The CDPR acknowledges that past mining practices have had impacts to water quality. However, it appears that the CDPR is being required to abate pollutants resulting from historic mining activities. The CDPR understands that under Section 13304 of the California Water Code, the Regional Board can require dischargers, including current property owners, to address past discharges, these requirements also can be applied to prior landowners and operators, e.g., Newmont. Therefore, the CAO might be more appropriate for requiring actions to address the impacts of the historical mining practices on water quality at the Empire Mine State Historic Park.

III. Discharge Prohibitions: A. Discharge of wastewater at a location or in a manner different from that prescribed in the Findings is prohibited.

As the discharge surfacing at the “Magenta Drain” portal originates from groundwater, which may travel through property owned by others, should the Discharge Prohibitions be revised to clarify that CPDR does not have the ability to control where the groundwater surfaces?

III. Discharge Prohibitions: B. The by-pass or overflow of wastes to surface waters is prohibited.

Should the tentative WDRs be modified to clarify that until a system is installed, the discharge is not treated and that this section is not applicable?

III. Discharge Prohibitions: C. Neither the discharge nor its treatment shall create a nuisance as defined in Section 13050 of the California Water Code.

Should the tentative WDRs be modified to clarify that either this prohibition only applies after the installation of the treatment system, or that under current conditions the discharge is not a nuisance?

IV. Effluent Limitations and Discharge Specifications: 2. Interim Effluent Limitations – Discharge Point EFF-01, a. ...the discharge shall maintain compliance with the following interim effluent limitations...

While the proposed interim effluent standards appear to have been developed using best engineering methods and judgment, the CDPR does not have the ability to control the discharge to prevent exceedance of the specified limits. In addition, it is unclear that adequate data exists to demonstrate that it is technically or economically feasible to comply with the effluent limitations and specifications. Therefore, should these requirements either be modified or the nature of the enforcement for violations be specified?

IV. Effluent Limitations and Discharge Specifications: 2. Interim Effluent Limitations – Discharge Point EFF-01, b. ...Acute Toxicity...

See previous comment.

Receiving Water Limitations: A. Surface Water Limitations, 9. Pesticides

Given the historical use of the property and source of the discharge, is the benefit to be obtained by monitoring for pesticides warranted relative to its relative high cost?

V. Receiving Water Limitations: A. Surface Water Limitations, 10. Radioactivity

Is there existing data for radioactivity in the groundwater surfacing from the mine portal? Should the tentative WDRs include effluent standards that may not be technically feasible to achieve?.

V. Receiving Water Limitations: A. Surface Water Limitations, 15. Temperature. The natural temperature to be increased by more than 5° F.

As the receiving water has been influenced by discharge from the Magenta Drain portal, how would “natural temperature” be determined? Is there existing data to support the conclusion that it is technically feasible to achieve compliance with this standard? .

VI. Provisions, A. Standard Provisions: 2. Regional Board Standard Provisions: f. By-pass...is prohibited

Should the tentative WDRs be modified to clarify that this requirement would not apply until a treatment facility had been installed?

VI. Provisions, A. Standard Provisions:2. Regional Board Standard Provisions: j. Neither the treatment nor the discharge shall create a condition of nuisance...

See comment above.

VI. Provisions, A. Standard Provisions:2. Regional Board Standard Provisions, k. Safeguard to electric power failure

Should the tentative WDRs be modified to clarify that this requirement would not apply until a treatment facility had been installed?

VI. Provisions, C. Special Provisions: 6. Other Special Provisions, c. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger shall obtain approval of, or clearance from the State Water Resources Control Board (Division of Water Rights).

Is it necessary to determine the rights and ownership of the flow before the tentative WDRs are adopted, to confirm that CDPR has the right to remove and treat the Magenta Drain portal water?

VII. Additional Provisions – Notification Levels. A. Non-Municipal Facilities. Existing manufacturing, commercial, mining, and silviculture discharges shall notify the Regional Water Board...

Should the tentative WDRs be modified to clarify that this section is not applicable to the operation of the CDPR?

Attachment F – Fact Sheet. I. Permit Information. Type of Facility – SIC Code 1041

The Fact Sheet should be modified to reflect that the “facility” is a State Park.

Attachment F – Fact Sheet. I. A. The State of California, Department of Parks and Recreation (herein Discharger) is the owner and operator of the Empire Mine State Park...a historic gold mine.

The Fact Sheet should be modified to clarify that the CDPR is not an operator of gold mine, but operates a State Park.

Attachment F – Fact Sheet. I. C. State and Federal Regulations, Policies, and Plans. 1. Water Quality Control Plans. “In addition, State Water Resources Control Board (State Water Board) Resolution 88-63 requires that, with certain exceptions, the Regional Board assign municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan.

Would the identified exceptions to the identification of a water body as drinking water supply under State Water Board Resolution 88-63, be potentially applicable to the Magenta Drain portal discharge? Among the exceptions identified in State Water Resources Control Board (SWRCB) Resolution 88-63 to which water bodies are designated for drinking water is the condition where there “is contamination, either by natural processes or by human activity (unrelated to the specific pollution incident) that cannot reasonably be treated for domestic use using either Best Management Practices or best economically achievable treatment practices.”

Would the occurrence of metals in groundwater associated with legacy mining wastes, which surface at the Magenta Drain portal, which may not be capable of being reasonably treated, be an appropriate basis for an exception to SWRCB Resolution 88-63? Empire Mine State Park is located in an area of over 3,700 acres of historic mining properties to which Newmont stills retains the mining rights. To the extent that metals are present above background conditions in surface water in this area, the working of the mines appears to have resulted in the contamination of the groundwater that has surfaced with the metals. Data indicate that occurrence of elevated levels of metals in groundwater may not be a localized problem, but may reflect a regional groundwater contamination issue from historic mining activities. A review of the SWRCB Geotracker database reveals that iron is present in groundwater up to 4,810 micrograms per liter (µg/l) in downtown Grass Valley. Groundwater with similar quality surfaces from mine workings near the City of Grass Valley Wastewater Treatment Plant with iron reported up to 14,000 µg/l and manganese up to 1,320 µg/l. If the vast extent of the mine

workings has impacted groundwater, would the requirement to treat the surface manifestation of the mine-impacted groundwater be technically or economically feasible?

Similarly, if the mine workings remain open to surface water infiltration, groundwater could continue to contact the underground workings and leach metals. The groundwater that surfaces could require treatment ad infinitum, unless the source is addressed. Therefore, would the economic or technical feasibility exception under Resolution 88-63 be potentially applicable in an area where compliance would require all property owners to treat mine-impacted groundwater that surfaces on their property for as long as permit requirements exist?

Attachment F – Fact Sheet, V. Rationale for Receiving Water Limitations, A. Surface Water. “State Water Board Resolution No. 68-16, the Antidegradation Policy, does not allow changes in water quality less than that prescribed in Water Quality Control Plans (Basin Plans)...This Order contains Receiving Water Limitations based on the Basin Plan numerical and narrative water quality objectives...”

Are there adequate data to indicate that beneficial uses are being impacted by the existing discharge? The tributary rule has been applied to the “unnamed tributary to the South Fork of Wolf Creek. However, doesn’t the Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin Basins allow the Regional Board to use judgment in the applying beneficial uses to tributaries? As the water quality of the unnamed tributary has not likely changed since groundwater began surfacing at the portal. Are there data to indicate that improvements in water quality would provide benefit to the people of the State, or that there has been any degradation of water “as of the date on which such [Antidegradation] policies became effective”?

Attachment G – Constituent Study. “Samples shall be collected from the effluent and upstream receiving water and analyzed for the constituents listed in Attachment G, Section II....”

The Regional Board’s definition of “upstream receiving water” should be provided (i.e. background or surface water upstream of the discharge point). This may be difficult to determine, as the source for water emanating from the Magenta Drain may be a combination of waters from several sources.

Summary

The CDPR appreciates the opportunity to provide comments on the tentative WDRs and TSO. While the CDPR has questions regarding the applicability of portions of the subject requirements, we remain committed to working cooperatively with the Regional Board in protecting the beneficial uses of the State's water. The CDPR believes that the most cost-effective means to achieve this goal is through the CAO, which requires parties that have contributed to the problem to participate in the solution, especially with regard to implementation of appropriate source control measures.

If you have any questions regarding these comments, please contact me at (530)273-3884 or RMUNSON@parks.ca.gov.

Sincerely,

Original Signed by

Ron Munson
Park Superintendent