

DRAFT

August 3, 2009

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER WQ 2009-

In the Matter of the Petition of

THE CALIFORNIA SPORTFISHING PROTECTION ALLIANCE

For Review of Waste Discharge Requirements Order No. R5-2008-0104 [NPDES Order No. CA0085286] for the Soper Company, Spanish Mine
California Regional Water Quality Control Board,
Central Valley Region

SWRCB/OCC FILE A-1948

BY THE BOARD:

In this Order, the State Water Resources Control Board (State Water Board) remands a National Pollutant Discharge Elimination System (NPDES) permit (Permit) to the Central Valley Regional Water Quality Control Board (Central Valley Water Board) for revisions. The California Sportfishing Protection Alliance (Petitioner) contends that the Central Valley Water Board violated federal NPDES regulations and the State Water Board's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) by failing to include various numeric effluent limitations in the Permit.

The Board has reviewed the record of the proceedings before the Central Valley Water Board and concludes that the Permit should be remanded to the Central Valley Water Board for reconsideration and revisions to include numeric effluent limitations.¹

I. BACKGROUND

A. Site Description and Permit

The Soper Company (Discharger) owns the inactive Spanish Mine, a former gold and barite mine in Nevada County. Underground mining for gold ceased in 1942. Open pit mining for barite ceased in 1988, and the pit was reclaimed and closed. The Discharger obtained the property in 1996 for its timber value and has not conducted any mining operations.

¹ To the extent Petitioner raised issues not discussed in this order, such issues are hereby dismissed as not substantial or appropriate for review by the State Water Board. (See *People v. Barry* (1987) 194 Cal.App.3d 158, 175-177, *Johnson v. State Water Resources Control Board* (2004) 123 Cal.App.4th 1107, Cal. Code Regs., tit. 23, § 2052, subd. (a)(1).)

Acid mine drainage (AMD) originates from the infiltration of precipitation into the subsurface, where it collects in the underground workings and discharges from two point sources, Mine Adit 1 and Mine Adit 3. The Permit regulates this discharge of moderately acidic AMD. Discharges occur seasonally to Poorman Creek and Devils Canyon, both of which are waters of the United States and tributaries to the South Fork of the Yuba River. Devils Canyon is tributary to Poorman Creek.

At the time the Permit was issued, there were no treatment systems or other controls in place for the AMD. The AMD contains arsenic, cadmium, cobalt, copper, iron, lead, manganese, nickel, and zinc in concentrations substantially above water quality objectives.² The discharge may also have low pH. The Permit requires the Discharger to implement best management practices (BMPs) to reduce the quantity of AMD discharged from the adit portals and to develop treatment systems, as necessary, to reduce the concentrations of metals in the AMD. It does not contain numeric effluent limitations for the constituents in the AMD.

The beneficial uses of Poorman Creek and Devils Canyon include municipal and domestic supply (MUN), agriculture supply (AGR), hydropower generation (POW), contact recreation (REC-1) and non-contact recreation (REC-2), cold freshwater habitat (COLD), cold water spawning (SPWN), and wildlife habitat (WILD).

On July 31, 2008, the Central Valley Water Board adopted the Permit to regulate the discharge. The Petitioner filed a timely petition seeking review by the State Water Board.

B. NPDES Permit Program

The Federal Water Pollution Control Act, commonly referred to as the Clean Water Act,³ was enacted in 1972. It established the NPDES permit program.⁴ Under this program, it is illegal to discharge pollutants from a point source⁵ to waters of the United States, except in compliance with an NPDES permit or relevant exemption.⁶ The U.S. Environmental Protection Agency (U.S. EPA) and states with U.S. EPA-approved programs are authorized to issue NPDES permits. California has an approved program.

² Permit Fact Sheet, Table F-5.

³ 33 U.S.C. § 1251 et seq.

⁴ See *id.*, § 1342.

⁵ A "point source" is "any discernible, confined and discrete conveyance", such as a pipe, ditch, channel, tunnel, conduit, or well. (*Id.*, § 1362(14).)

⁶ *Id.*, §§ 1311, 1342.

NPDES permits must include technology-based effluent limitations, as well as any more stringent limitations necessary to meet water quality standards.⁷ Water quality standards, as defined in Clean Water Act section 303(c),⁸ consist of the designated uses of a water body and the water quality criteria necessary to protect those uses.⁹ The criteria can be either narrative or numeric.¹⁰

In California, water quality standards are found in statewide and regional water quality control plans (basin plans).¹¹ In addition, U.S. EPA has promulgated criteria for California in the National Toxics Rule (NTR)¹² and the California Toxics Rule (CTR).¹³ Basin plans contain beneficial use designations, water quality objectives to protect those uses, and a program to implement the objectives.¹⁴ Beneficial uses and water quality objectives are the respective state equivalents of federal designated uses and criteria under Clean Water Act section 303(c).

The SIP establishes implementation provisions for NTR and CTR priority pollutant criteria and for priority pollutant objectives established in basin plans.¹⁵ With respect to the pollutants at issue in the Permit, arsenic, cadmium, copper, lead, nickel, and zinc are priority pollutants, while cobalt, iron, and manganese are not.¹⁶ Thus, the SIP applies to the former group of pollutants but not the latter.

II. CONTENTIONS AND FINDINGS

A. Effluent Limitations

Contention: The Petitioner contends that the Permit improperly includes BMPs as effluent limitations for the discharge in lieu of numeric effluent limitations.

Discussion: We agree with the Petitioner. There is no dispute that the effluent concentrations of arsenic, cadmium, cobalt, copper, iron, lead, manganese, nickel, and zinc are

⁷ *Ibid.*

⁸ *Id.*, § 1313(c).

⁹ U.S. EPA regulations define water quality standards to also include an antidegradation policy. (See 40 C.F.R. § 131.6.)

¹⁰ 40 C.F.R. § 131.3(b) (“[C]riteria are elements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use.”)

¹¹ Wat. Code, §§ 13170, 13170.2, 13240-13247.

¹² 40 C.F.R. § 131.36

¹³ *Id.*, § 131.38.

¹⁴ Wat. Code, § 13050, subd. (j).

¹⁵ SIP at p. 3.

¹⁶ See 40 C.F.R. § 131.36(b)(1) for a list of U.S. EPA priority pollutants.

sufficiently high to present a reasonable potential to exceed the applicable water quality objectives. Therefore, federal regulations require the NPDES permit to contain effluent limitations to implement water quality standards.¹⁷ Pursuant to the SIP, an NPDES permit for non-stormwater discharges must contain numeric effluent limitations for those priority pollutants with reasonable potential.¹⁸ Moreover, federal regulations generally require numeric effluent limitations for non-priority pollutants, but under limited provisions not applicable to this discharge, effluent limitations for non-priority pollutants may be expressed as BMPs.

1. Priority Pollutants

The SIP requires inclusion of numeric effluent limitations in NPDES permits for priority pollutants. The SIP is not applicable to storm water discharges and this Board has held that for storm water discharges, narrative effluent limitations, including implementation of BMPs, are appropriate to implement water quality standards.¹⁹ The Central Valley Water Board first argues that the AMD from this inactive mine is “similar” to storm water, in that the AMD from the mine portals is directly related to precipitation experienced at the site. The Central Valley Water Board argues that even though the mine discharges are not storm water discharges, their similarity supports regulating them in a similar manner, using BMPs instead of numeric effluent limitations. The exception for storm water discharges does not extend to any other discharges, whether they are similar or not. In any event, while the two types of discharges have some characteristics in common, they are distinguishable. It was not appropriate for the Central Valley Water Board to use this rationale to regulate the mine discharge through BMPs in lieu of numeric effluent limitations.

An early federal court decision discussing the infeasibility of numeric effluent limitations for storm water discharges distinguished mine discharges: “EPA has found that in the area of runoff from mining operations, there is sufficient predictability because of a . . . relatively confined nature of the operations that numerical limitations can be established.”²⁰ Thus, the basis for using BMPs in lieu of numeric effluent limitations, which we have cited in various

¹⁷ 40 C.F.R. § 122.44(d).

¹⁸ See 40 C.F.R. § 122.44(d) and SIP, Sections 1.3 and 1.4.

¹⁹ SIP, footnote 1 and Water Quality Orders WQ 91-03 (*Citizens for a Better Environment*), 91-04 (*Natural Resources Defense Council*), 96-13 (*Save San Francisco Bay Assn.*), 98-01 (*Environmental Health Coalition*), 99-05 (*Environmental Health Coalition*), and 2001-15 (*Building Industry Association of San Diego County*). See also *Divers' Environmental Conservation Organization v. State Water Resources Control Board* (2006) 145 Cal.App.4th 246.

²⁰ *Natural Resources Defense Council v. Costle* (1977) 568 F.2d 1369, 1379.

decisions on storm water and which was incorporated into the SIP, does not apply to discharges from mine adits.

U.S. EPA regulations generally require numeric effluent limitations in NPDES permits, but do not have this requirement for storm water permits, or for other permits where inclusion of numeric effluent limitations is infeasible.²¹ The Central Valley Water Board relied upon the infeasibility exception in the federal regulation to authorize BMPs in lieu of numeric effluent limitations in the Permit.²² However, the SIP does not contain this exception.²³ The SIP has been approved by U.S. EPA and is the federally authorized, and thereby required, procedure for implementing water quality standards for priority pollutants in California.²⁴ Even if U.S. EPA had not approved the SIP, where a state water quality provision is more stringent than is required under the Clean Water Act, the more stringent state provision applies.²⁵ Thus, for priority pollutants, there is no exception to the requirement for numeric effluent limitations based on infeasibility.

The SIP does provide for various exceptions to its requirements, in addition to the exception for stormwater.²⁶ However, none of the exceptions is applicable in this case. The SIP contains a case-by-case exception that is comparable to the federal infeasibility exception.²⁷ This exception may only be granted by the State Water Board. Consequently, the Central Valley Water Board could not have relied upon this exception. Moreover, the exception only applies where site-specific conditions in individual water bodies or watersheds differ significantly from statewide conditions and those differences cannot be addressed through other provisions of the SIP.²⁸ The SIP provides that the State Board might appropriately grant this exception "where it is necessary to accommodate wastewater reclamation or water conservation."²⁹ In any event, given the feasibility of establishing numeric effluent limitations (as discussed below) that are based on a substantial dilution credit allowed by the SIP and the high likelihood of

²¹ 40 C.F.R., § 122.44(k)(2) and (3).

²² 40 C.F.R., §122.44(k)(3).

²³ As discussed in the next section, we separately conclude that numeric effluent limitations are feasible for the discharge. This conclusion applies equally to priority pollutants, so even if the infeasibility exception was available under the SIP, the Permit would still require numeric effluent limitations for priority pollutants.

²⁴ 40 C.F.R. § 131.21.

²⁵ 33 U.S.C. § 1370.

²⁶ SIP, Section 5.3.

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*

compliance with water quality objectives by implementing only BMPs and, if needed, passive treatment systems, application of the SIP's case-by-case exception is not appropriate for this discharge.

2. Other Pollutants

The SIP does not apply to cobalt, iron, or manganese because they are not priority pollutants. For these pollutants, the Central Valley Water Board has discretion to apply the federal infeasibility exception to authorize BMPs in lieu of numeric effluent limits if it demonstrates that the infeasibility exception applies.³⁰ The State Water Board, in Order WQ 2006-0012 (*Boeing*), has made clear that "infeasibility" refers to "the ability or propriety of establishing" numeric limits, as opposed to the feasibility of compliance.³¹

The State Water Board's Division of Water Quality (DWQ) reviewed the record and concluded that establishing numeric effluent limitations for both the priority pollutants and other pollutants at issue is feasible in this case. The Central Valley Water Board found that effluent limitations were infeasible because the mine is in a remote location with limited access in winter months, no infrastructure (including electricity), and a highly variable discharge rate.

However, monitoring reports in the record demonstrate that the Discharger has been able to gain access to the site fairly consistently. Despite the lack of infrastructure, by implementing a source control program (e.g., diversion of surface flow that could infiltrate into the underground mine workings), installing concrete bulkhead seals to plug the mine adits, and operating the types of passive biological or physical treatment systems used at other mine sites, the Discharger should be able to comply with protective numeric effluent limitations.

Passive systems do not use pumps, motors, fuel, electricity, or chemical feedstock and are well suited to operate in a remote location. The Central Valley Water Board response to the petition acknowledges that passive systems can significantly reduce the amount of metals entering surface and groundwater.³² The Permit notes that, even with no BMPs implemented, the monitoring data in the receiving water have not indicated an exceedance of water quality objectives (although the measurements have been close to the

³⁰ See Order WQ 2006-0012 (*Boeing*) at p.19 describing regional water board discretion where a water quality control plan, policy or regulation is not legally applicable.

³¹ Nothing in this Order shall be interpreted to invalidate or narrow our conclusion in WQO 2003-0012 (*Los Coyotes and Long Beach Wastewater Reclamation Plants*), in which the Board found that the propriety of numeric effluent limitations for chronic toxicity should be considered in a regulatory setting, e.g., a SIP amendment, rather than through the Permit petition process. The management, regulation, and variability of chronic toxicity arising from municipal wastewater treatment plants statewide is far more technically and economically complex than AMD management.

³² Central Valley Water Board Response to Petition, December 8, 2008, p. 5.

objectives for copper and zinc), so compliance with numeric effluent limitations should not be difficult, particularly after the Discharger implements the BMPs required in the Permit.³³

An exception to the Permit's monitoring requirements may be appropriate if access to a monitoring location poses a threat to safety due to snow or flooding conditions.

B. Receiving Water Limitations

Contention: Petitioner asserts that by establishing receiving water limitations rather than effluent limitations, the Permit allows a de facto mixing zone without having first required the Discharger to perform a mixing zone study, as required by the SIP.

Discussion: We agree with the Petitioner. Section 1.4.2.2 of the SIP requires consideration of numerous factors before a mixing zone is allowed. The record shows that the Central Valley Water Board did not consider most of these factors. Consideration of these factors is necessary to ensure that beneficial uses will be protected before dilution of the waste discharge can be presumed to protect these uses.

The Permit's allowance of a 100:1 dilution credit was inconsistent with the SIP without a mixing zone study. The Permit does require the Discharger to perform a mixing zone study to better quantify the data relied upon by the Central Valley Water Board. However, as noted above, the SIP requires a mixing zone analysis before any dilution credit is granted, not after. If the mixing zone study supports the allowance of a dilution credit, the Central Valley Water Board must apply that credit to calculate effluent limitations, not receiving water limitations.

III. CONCLUSIONS

Based on the above discussion, the State Water Board concludes that:

1. The Permit improperly includes only BMPs for the discharge when numeric effluent limitations are necessary.
2. The Central Valley Water Board improperly relied upon a federal infeasibility exception to authorize BMPs in lieu of numeric effluent limitations for priority pollutants in the Permit. The SIP does not contain this exception.
3. Establishing numeric effluent limitations for both the priority pollutants and other pollutants in the discharge is feasible in this case.
4. The Permit should be revised to include an exception to its monitoring requirements if access to a monitoring location poses a threat to safety due to snow or flooding conditions.

³³ Permit, Fact Sheet, p. F-12.

5. The SIP requires a mixing zone analysis before any dilution credit is granted, not after. If the mixing zone study supports the allowance of a dilution credit, the Central Valley Water Board must apply that credit to calculate effluent limitations, not receiving water limitations.

6. Given the feasibility of establishing numeric effluent limitations that are based on a substantial dilution credit allowed by the SIP and the high likelihood of compliance with water quality objectives by implementing only BMPs and, if needed, passive treatment systems, application of the SIP's case-by-case exception is not appropriate for this discharge.

IV. ORDER

IT IS HEREBY ORDERED that, for the reasons discussed above, Waste Discharge Requirements Order No. R5-2008-0104 is remanded to the Central Valley Water Board for reconsideration and revision, consistent with this Order.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on September 15, 2009.

AYE:

NO:

ABSENT:

ABSTAIN:

DRAFT

Jeanine Townsend
Clerk to the Board