

**STATE WATER RESOURCES CONTROL BOARD
BOARD MEETING SESSION – OFFICE OF CHIEF COUNSEL
NOVEMBER 17, 2009**

ITEM 8

SUBJECT

CONSIDERATION OF A PROPOSED ORDER REGARDING THE PETITION OF CALIFORNIA SPORTFISHING PROTECTION ALLIANCE, WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2008-0104 [NPDES ORDER NO. CA0085286] FOR THE SOPER COMPANY, SPANISH MINE, NEVADA COUNTY, ISSUED BY THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CENTRAL VALLEY REGION. (SWRCB/OCC FILE A-1948.)

DISCUSSION

The Soper Company (Discharger) owns the inactive Spanish Mine. The Discharger obtained the property in 1996 for its timber value and has not conducted any mining operations. 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. The National Pollutant Discharge Elimination System (NPDES) permit (Permit) at issue 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.

At the time the Permit was issued, there were no treatment systems or other controls in place for the AMD. The AMD contains metals in concentrations substantially above water quality objectives. 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 California Sportfishing Protection Alliance (Petitioner) contends that the Permit improperly includes BMPs as effluent limitations for the discharge in lieu of numeric effluent limitations and 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.

The draft order concludes that:

1. The Permit improperly includes only BMPs for priority pollutants in the discharge.
2. The Central Valley Regional Water Quality Control Board (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 Statewide Implementation Policy (SIP) does not contain this exception.
3. The Central Valley Water Board must either establish numeric effluent limitations for the priority pollutants or submit to the State Water Board a proposed except to the SIP.
4. The Central Valley Water Board properly applied the federal infeasibility exception to authorize BMPs in lieu of numeric effluent limitations for non-priority pollutants.

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 the receiving water limitations.

POLICY ISSUE

Should the State Water Board adopt the draft order remanding the Permit to the Central Valley Water Board?

FISCAL IMPACT

None.

REGIONAL BOARD IMPACT

Yes, the Central Valley Water Board would be required to revise the Permit.

STAFF RECOMMENDATION

Adopt the draft order.

State Water Board action on this item will assist the Water Boards in reaching Goal 6 of the Strategic Plan Update: 2008-2012 to enhance consistency across the Water Boards, on an ongoing basis, to ensure processes are effective, efficient, and predictable, and to promote fair and equitable application of laws, regulations, policies, and procedures.

DRAFT

~~September 3, 2009~~ November 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 [Order No. R5-2008-0104 [NPDES Order No. CA0085286] (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, either to include numeric effluent limitations or to comply with the applicable requirements for including best management practices (BMPs) in lieu of numeric effluent limitations.¹

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 [239 Cal.Rptr. 349], *Johnson v. State Water Resources Control Board* (2004) 123 Cal.App.4th 1107 [20 Cal.Rptr.3d 441], Cal. Code Regs., tit. 23, § 2052, subd. (a)(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. The discharge is moderately acidic acid mine drainage (AMD) containing metals. 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. 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, which 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 permit assumes a maximum flow of 0.12 million gallons per day. The Permit includes numeric receiving water limitations, which ensure that water quality standards will be met in Poorman Creek downstream from the points of discharge.

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. This is the first permit that has been issued for this discharge. The Petitioner filed a timely petition seeking review by the State Water Board.

² Permit Fact Sheet, Table F-5.

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.⁶ The U.S. Environmental Protection Agency (EPA) and states with EPA-approved programs are authorized to issue permits. California has an approved program.

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, 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

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.

⁷ *Ibid.*

⁸ *Id.* § 1313(c).

⁹ 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 CFR 131.36

¹³ 65 Fed. Register 31682-31719 (May 18, 2000), adding Section 131.38 to 40 C.F.R.

¹⁴ Wat.Code. § 13050, subd. (j).

¹⁵ SIP at p.3.

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.

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II. CONTENTIONS AND FINDINGS

A. Effluent Limitations

Contention: The Petitioner contends that the Permit ~~improperly violates the SIP and federal regulations by includes including~~ BMPs as effluent limitations for the discharge in lieu of numeric effluent limitations.

Discussion: We agree with the Petitioner that the Permit does not comply with the SIP, which requires that numeric effluent limitations be included for constituents for which there is reasonable potential to cause or contribute to exceedance of water quality standards, unless an exception to the SIP is granted. The SIP applies only to priority pollutants. For non-priority pollutants and where an exception to the SIP has been granted, BMPs may be issued in lieu of numeric effluent limitations in compliance with federal regulations. As we shall discuss, the Central Valley Water Board did discuss in the Permit and Fact Sheet compliance with the applicable federal regulations, but failed to address the need for an exception to the SIP. There is no dispute that the effluent concentrations of arsenic, cadmium, cobalt, copper, iron, lead, manganese, nickel, and zinc are sufficiently high to present a reasonable potential to exceed the applicable water quality objectives. Therefore, numeric effluent limitations are required for each of these constituents pursuant to EPA’s NPDES regulations (for non-priority pollutants) or the SIP (for priority pollutants). Both the SIP and the federal regulations have procedures that can be applied to allow the use of BMPs in lieu of numeric effluent limitations.¹⁷

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,

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

¹⁷ See 40 C.F.R., § 122.44 (d) and SIP, Sections 1.3 and 1.4.

are appropriate.¹⁸ 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.”¹⁹ Thus, the basis for using BMPs in lieu of numeric effluent limitations, which we have cited in various decisions on storm water and which was incorporated into the SIP, does not apply to discharges from mine adits as a general rule.

~~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.²⁰ 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.²¹ However, the SIP does not contain this exception. Where a state water quality provision is more stringent than is required under the Clean Water Act, the more stringent state provision applies.²² 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.²³ ~~However, none of the exceptions is applicable in this case.~~ The

¹⁸ SIP, footnote 1 and Water Quality Orders WQ 91-03, 91-04, 96-13, 98-01, 99-05, and 2001-15. See also *Divers’ Environmental Conservation Organization v. State Water Resources Control Board* (2006) 145 Cal.App.4th 246, 51 Cal.Rptr.3d 497.

¹⁹ *NRDC v. Costle* (1977) 568 F.2d 1369, 1379.

²⁰ 40 C.F.R., §122.44(k)(2) and (3).

²¹ 40 C.F.R., §122.44(k)(3).

²² A Clean Water Act section 510 (33 USC 1370)

²³ SIP, Section 5.3.

SIP contains a case-by-case exception that is comparable to the federal infeasibility exception.²⁴ This exception may only be granted by the State Water Board. Consequently, the Central Valley Water Board could not have ~~relied upon~~ applied 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.~~²⁵ ~~The SIP provides that the State Board might appropriately grant this exception “where it is necessary to accommodate wastewater reclamation or water conservation.”~~²⁶ ~~In any event, 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. While the Central Valley Water Board is not empowered to grant a case-by-case exception, it could provide the State Water Board with the documentation necessary to grant the exception.~~

In reviewing the Permit and determinations of the Central Valley Water Board in this matter, it appears that a strong argument can be made for the issuance of a case-by-case exception. In particular, we note that the rationale provided in the Fact Sheet for applying BMPs in lieu of numeric effluent limitations can form the basis for an exception to the SIP. As noted in the Fact Sheet, this is a small mine in a remote mountainous location that was abandoned many years ago and for which BMPs, including passive treatment systems, may be most appropriate. It is the first permit to be issued for discharges from the mine’s adits and the BMP requirements are thorough. Also, the receiving water limitations act to ensure that water quality standards will be met in the receiving waters. It is appropriate for the Central Valley Water Board to prepare a request to this Board for consideration of a case-by-case exception to the SIP. Any such request should include all documentation, including compliance with CEQA, necessary for the State Water Board to grant the exception. The Central Valley Water Board may, of course, require the discharger to submit document necessary to the exception.

The SIP authorizes the State Water Board to grant case-by-case exceptions where “site-specific conditions in individual water bodies or watersheds differ sufficiently from statewide

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.*

conditions and those differences cannot be addressed through other provisions of [the SIP].²⁷ While this language appears to imply that the distinction for sites where an exception is warranted depend on a difference in the water quality in the area of the discharge, the examples provided by the SIP illustrate that the distinction may be in the type of discharge. Thus, the SIP provides examples of situations where a case-by-case exception would be appropriate are “where it is necessary to accommodate wastewater reclamation or water conservation.”²⁸ As a matter of practice, we have found that for certain types of discharges, a case-by-case exception may be appropriate.²⁹ In order to grant a case-by-case exception, the State Water Board must determine that the exception will protect beneficial uses of receiving waters and that the public interest will be served. The exception must also comply with the California Environmental Quality Act (CEQA) and the United States Environmental Protection Agency must concur.

²⁷ SIP, at page 33.

²⁸ *Ibid.*

²⁹ See, e.g., WQ Order 2006-0008-DWQ (utility vault permit).

2. Other Pollutants

The SIP does not apply to cobalt, iron, or manganese because they are not priority pollutants. It is appropriate to apply federal regulations concerning issuance of BMPs in lieu of numeric effluent limitations for these constituents. 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.³⁰ 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.³¹ For these pollutants, we agree that 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.³² 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.³³

~~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. The Central Valley Water Board also discussed its Basin Plan provision that recommends BMPs for control of acid mine drainage from abandoned mines.³⁴ Finally, the Board made findings that the required BMPs reflect applicable technology-based standards and that the numeric receiving water limitations will ensure protection of water quality standards.

~~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~~

³⁰ 40 C.F.R., §122.44(k)(2) and (3).

³¹ 40 C.F.R., §122.44(k)(3).

³² 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.

³³ 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 of chronic toxicity arising from municipal wastewater treatment plants statewide is far more technically and economically complex than AMD management.

³⁴ Resolution No. 79-149, Amendment to Water Quality Control Plan and Action Plan for Mining. We note that this is an inactive mine rather than an abandoned mine, in that there is a known property owner. Nonetheless, the fact that the owner is not engaged in mining and apparently has no plans to mine makes it appropriate to consider this Basin Plan provision.

~~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 easily comply with protective numeric effluent limitations.~~

The BMPs required in the Permit appear to be appropriate to the location and protective of water quality. 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~~ states that passive systems can significantly reduce the amount of metals entering surface and groundwater.³⁵ 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 objectives for copper and zinc), so ~~compliance with numeric effluent limitations should not be difficult~~ protection of water quality should be assured, particularly after the Discharger implements the BMPs required in the Permit.³⁶

~~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. We agree that, until the mixing zone study is completed, it is appropriate to protect water quality by including receiving water limitations that are at least as stringent as the water quality

³⁵ Central Valley Water Board Response to Petition, December 8, 2008, p. 5.

³⁶ Permit, Fact Sheet, p. F-12.

~~standards. If Following completion of 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~~ reconsider the receiving water limitations to ensure that they are as stringent as necessary to fully protect the receiving waters.

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~~ of priority pollutants.
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~~ The Central Valley Water Board must either revise the Permit to include numeric effluent limitations for priority pollutants or submit to the State Water Board a proposed exception to the SIP.
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~~ The Central Valley Water Board properly applied the federal regulations to include best management practices rather than numeric effluent limitations for non-priority pollutants.
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~~ the 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.~~

DRAFT

~~September 3, 2009~~ November 3, 2009

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~~ November 17, 2009.

Jeanine Townsend
Clerk to the Board