



California Sportfishing Protection Alliance

"An Advocate for Fisheries, Habitat and Water Quality"

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15 February 2008

Mr. Kenneth Landau, Assistant Executive Officer

Mr. James Pedri, Assistant Executive Officer

Mr. Philip Woodward, Sr. Engr. Geologist

Regional Water Quality Control Board

Central Valley Region

11020 Sun Center Drive, Suite 200

Rancho Cordova, CA 95670-6144

VIA: Electronic Submission

Hardcopy if Requested

RE: Tentative Waste Discharge Requirements (NPDES Permit) for Soper Company Spanish Mine, Nevada County.

Dear Messrs. Landau, Pedri and Woodward:

The California Sportfishing Protection Alliance and Watershed Enforcers (CSPA) has reviewed the Central Valley Regional Water Quality Control Board's (Regional Board) tentative NPDES permit (Order or Permit) for Soper Company Spanish Mine (Discharger) and submits the following comments.

CSPA requests status as a designated party for this proceeding. CSPA is a 501(c)(3) public benefit conservation and research organization established in 1983 for the purpose of conserving, restoring, and enhancing the state's water quality and fishery resources and their aquatic ecosystems and associated riparian habitats. CSPA has actively promoted the protection of water quality and fisheries throughout California before state and federal agencies, the State Legislature and Congress and regularly participates in administrative and judicial proceedings on behalf of its members to protect, enhance, and restore California's degraded surface and ground waters and associated fisheries. CSPA members reside, boat, fish and recreate in and along waterways throughout the Central Valley, including Nevada County.

- 1. The proposed Permit fails to contain an Effluent Limitation for copper in violation of the California Toxics Rule, Federal Regulations (40 CFR 122.44), the California Water Code (CWC), Section 13377 and the State's Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP).**

The maximum observed effluent (MEC) concentration for copper was 1400.0 $\mu\text{g/l}$, Table F-5, which exceeds the California Toxics Rule (CTR) water quality standard of 3.5 $\mu\text{g/l}$. In accordance with Federal Regulations, 40 CFR 122.44, the Regional Board is required to establish an effluent limitation if a pollutant is measured in the effluent which presents

a reasonable potential to exceed a water quality standard of objective. In accordance with the SIP, Section 1.3, since the maximum effluent concentration exceeded a water quality standard, an effluent limitation is required. California Water Code, section 13377, requires that: “Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.”

The measured concentrations of copper at 1400.0 $\mu\text{g/l}$ clearly exceed the CTR water quality standard of 3.5 $\mu\text{g/l}$ and in accordance with Federal and State Regulations and the SIP, effluent limitations are required. The proposed Permit inclusion of a Receiving Water Limitation for copper does not meet the legal or technical requirements of an Effluent Limitation. Even if a Receiving Water Limitation were legally allowed, the proposed Permit does not include any information regarding the extensive Basin Plan and SIP requirements for a mixing zone analysis to show that the proposed limitation would be protective of water quality and the beneficial uses of the receiving stream. Federal Regulation, 40 CFR 122.4 (a), (d) and (g) require that no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under the CWA, when imposition of conditions cannot ensure compliance with applicable water quality requirements and for any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA.

2. The proposed Permit fails to contain an Effluent Limitation for zinc in violation of the California Toxics Rule, Federal Regulations (40 CFR 122.44), the California Water Code (CWC), Section 13377 and the State’s Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP).

The maximum observed effluent (MEC) concentration for zinc was 4,300.0 $\mu\text{g/l}$, Table F-5, which exceeds the California Toxics Rule (CTR) water quality standard of 46.0 $\mu\text{g/l}$. In accordance with Federal Regulations, 40 CFR 122.44, the Regional Board is required to establish an effluent limitation if a pollutant is measured in the effluent which presents a reasonable potential to exceed a water quality standard of objective. In accordance with the SIP, Section 1.3, since the maximum effluent concentration exceeded a water quality standard, an effluent limitation is required. California Water Code, section 13377, requires that: “Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.”

The measured concentrations of zinc at 4,300.0 $\mu\text{g/l}$ clearly exceed the CTR water quality standard of 46.0 $\mu\text{g/l}$ and in accordance with Federal and State Regulations and the SIP, effluent limitations are required. The proposed Permit inclusion of a Receiving Water Limitation for zinc does not meet the legal or technical requirements of an Effluent Limitation. Even if a Receiving Water Limitation were legally allowed, the proposed Permit does not include any information regarding the extensive Basin Plan and SIP requirements for a mixing zone analysis to show that the proposed limitation would be protective of water quality and the beneficial uses of the receiving stream. Federal Regulation, 40 CFR 122.4 (a), (d) and (g) require that no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under the CWA, when imposition of conditions cannot ensure compliance with applicable water quality requirements and for any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA.

3. The proposed Permit fails to contain an Effluent Limitation for cadmium in violation of the California Toxics Rule, Federal Regulations (40 CFR 122.44), the California Water Code (CWC), Section 13377 and the State's Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP).

The maximum observed effluent (MEC) concentration for cadmium was 7.2 $\mu\text{g/l}$, Table F-5, which exceeds the California Toxics Rule (CTR) water quality standard of 0.9 $\mu\text{g/l}$. In accordance with Federal Regulations, 40 CFR 122.44, the Regional Board is required to establish an effluent limitation if a pollutant is measured in the effluent which presents a reasonable potential to exceed a water quality standard of objective. In accordance with the SIP, Section 1.3, since the maximum effluent concentration exceeded a water quality standard, an effluent limitation is required. California Water Code, section 13377, requires that: "Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance."

The measured concentrations of cadmium at 7.2 $\mu\text{g/l}$ clearly exceed the CTR water quality standard of 0.9 $\mu\text{g/l}$ and in accordance with Federal and State Regulations and the SIP, effluent limitations are required. The proposed Permit inclusion of a Receiving Water Limitation for cadmium does not meet the legal or technical requirements of an Effluent Limitation. Even if a Receiving Water Limitation were legally allowed, the proposed Permit does not include any information regarding the extensive Basin Plan and SIP requirements for a mixing zone analysis to show that the proposed limitation would be protective of water quality and the beneficial uses of the receiving stream. Federal Regulation, 40 CFR 122.4 (a), (d) and (g) require that no permit may be issued when the

conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under the CWA, when imposition of conditions cannot ensure compliance with applicable water quality requirements and for any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA.

4. The proposed Permit fails to contain an Effluent Limitation for lead in violation of the California Toxics Rule, Federal Regulations (40 CFR 122.44), the California Water Code (CWC), Section 13377 and the State’s Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP).

The maximum observed effluent (MEC) concentration for lead was 120.0 $\mu\text{g/l}$, Table F-5, which exceeds the California Toxics Rule (CTR) water quality standard of 0.6 $\mu\text{g/l}$. In accordance with Federal Regulations, 40 CFR 122.44, the Regional Board is required to establish an effluent limitation if a pollutant is measured in the effluent which presents a reasonable potential to exceed a water quality standard of objective. In accordance with the SIP, Section 1.3, since the maximum effluent concentration exceeded a water quality standard, an effluent limitation is required. California Water Code, section 13377, requires that: “Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.”

The measured concentrations of lead at 120.0 $\mu\text{g/l}$ clearly exceed the CTR water quality standard of 0.6 $\mu\text{g/l}$ and in accordance with Federal and State Regulations and the SIP, effluent limitations are required. The proposed Permit inclusion of a Receiving Water Limitation for lead does not meet the legal or technical requirements of an Effluent Limitation. Even if a Receiving Water Limitation were legally allowed, the proposed Permit does not include any information regarding the extensive Basin Plan and SIP requirements for a mixing zone analysis to show that the proposed limitation would be protective of water quality and the beneficial uses of the receiving stream. Federal Regulation, 40 CFR 122.4 (a), (d) and (g) require that no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under the CWA, when imposition of conditions cannot ensure compliance with applicable water quality requirements and for any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA.

5. The proposed Permit fails to contain an Effluent Limitation for nickel in violation of the California Toxics Rule, Federal Regulations (40 CFR 122.44), the California Water Code (CWC), Section 13377 and the State’s Policy for

Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP).

The maximum observed effluent (MEC) concentration for nickel was 140.0 $\mu\text{g/l}$, Table F-5, which exceeds the California Toxics Rule (CTR) water quality standard of 20.0 $\mu\text{g/l}$. In accordance with Federal Regulations, 40 CFR 122.44, the Regional Board is required to establish an effluent limitation if a pollutant is measured in the effluent which presents a reasonable potential to exceed a water quality standard of objective. In accordance with the SIP, Section 1.3, since the maximum effluent concentration exceeded a water quality standard, an effluent limitation is required. California Water Code, section 13377, requires that: "Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance."

The measured concentrations of nickel at 140.0 $\mu\text{g/l}$ clearly exceed the CTR water quality standard of 20.0 $\mu\text{g/l}$ and in accordance with Federal and State Regulations and the SIP, effluent limitations are required. The proposed Permit inclusion of a Receiving Water Limitation for nickel does not meet the legal or technical requirements of an Effluent Limitation. Even if a Receiving Water Limitation were legally allowed, the proposed Permit does not include any information regarding the extensive Basin Plan and SIP requirements for a mixing zone analysis to show that the proposed limitation would be protective of water quality and the beneficial uses of the receiving stream. Federal Regulation, 40 CFR 122.4 (a), (d) and (g) require that no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under the CWA, when imposition of conditions cannot ensure compliance with applicable water quality requirements and for any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA.

6. The proposed Permit fails to include an Effluent for Cobalt as required by Federal Regulations 40 CFR 122.44 and the permit should not be adopted in accordance with the Clean Water Act and the California Water Code Section 13377.

Federal Regulations, 40 CFR 122.44 (d)(i), requires that; "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." The Water Quality Standard for cobalt is 50 $\mu\text{g/l}$. The wastewater discharge maximum observed concentration was 80.0 $\mu\text{g/l}$. Clearly the discharge exceeds the water quality objective. The proposed Order fails to establish an effluent limitation for cobalt. The

proposed Permit inclusion of a Receiving Water Limitation for nickel does not meet the legal or technical requirements of an Effluent Limitation. Even if a Receiving Water Limitation were legally allowed, the proposed Permit does not include any information regarding the extensive Basin Plan and SIP requirements for a mixing zone analysis to show that the proposed limitation would be protective of water quality and the beneficial uses of the receiving stream. Federal Regulation, 40 CFR 122.4 (a), (d) and (g) require that no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under the CWA, when imposition of conditions cannot ensure compliance with applicable water quality requirements and for any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA. California Water Code, section 13377, requires that: “Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.”

7. The proposed Permit fails to include an Effluent for Iron as required by Federal Regulations 40 CFR 122.44 and the permit should not be adopted in accordance with the Clean Water Act and the California Water Code Section 13377.

Federal Regulations, 40 CFR 122.44 (d)(i), requires that; “Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.” The Water Quality Standard for iron is 300.0 $\mu\text{g}/\text{l}$. The wastewater discharge maximum observed concentration was 35,000 $\mu\text{g}/\text{l}$. Clearly the discharge exceeds the water quality objective. The proposed Order fails to establish an effluent limitation for iron. The proposed Permit inclusion of a Receiving Water Limitation for nickel does not meet the legal or technical requirements of an Effluent Limitation. Even if a Receiving Water Limitation were legally allowed, the proposed Permit does not include any information regarding the extensive Basin Plan and SIP requirements for a mixing zone analysis to show that the proposed limitation would be protective of water quality and the beneficial uses of the receiving stream. Federal Regulation, 40 CFR 122.4 (a), (d) and (g) require that no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under the CWA, when imposition of conditions cannot ensure compliance with applicable water quality requirements and for any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA. California Water Code, section 13377, requires that: “Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material

permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.”

8. The proposed Permit fails to include an Effluent for Manganese as required by Federal Regulations 40 CFR 122.44 and the permit should not be adopted in accordance with the Clean Water Act and the California Water Code Section 13377.

Federal Regulations, 40 CFR 122.44 (d)(i), requires that; “Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.” The Water Quality Standard for manganese is 50.0 $\mu\text{g/l}$. The wastewater discharge maximum observed concentration was 2,100.0 $\mu\text{g/l}$. Clearly the discharge exceeds the water quality objective. The proposed Order fails to establish an effluent limitation for manganese. The proposed Permit inclusion of a Receiving Water Limitation for nickel does not meet the legal or technical requirements of an Effluent Limitation. Even if a Receiving Water Limitation were legally allowed, the proposed Permit does not include any information regarding the extensive Basin Plan and SIP requirements for a mixing zone analysis to show that the proposed limitation would be protective of water quality and the beneficial uses of the receiving stream. Federal Regulation, 40 CFR 122.4 (a), (d) and (g) require that no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under the CWA, when imposition of conditions cannot ensure compliance with applicable water quality requirements and for any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA. California Water Code, section 13377, requires that: “Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.”

9. The proposed Permit establishes a technically invalid defacto mixing zone contrary to the legal requirements of the Basin Plan and the SIP.

By establishing Receiving Water Limitations rather than the legally required Effluent Limitations the proposed Permit allows for dilution within the receiving stream and establishes a defacto mixing zone. The Fact Sheet (page F-12) discussion of *Assimilative Capacity/Mixing Zone* does not address a single requirement of the Basin Plan or the SIP for establishing a technically valid or legal mixing zone. In any case, a technically and

legally defensible mixing zone analysis would result in Effluent Limitations not Receiving Water Limitations.

The Basin Plan, page IV-16.00, requires the Regional Board use EPA's *Technical Support Document for Water Quality Based Toxics Control (TSD)*. The TSD, page 70, defines a first stage of mixing, close to the point of discharge, where complete mixing is determined by the momentum and buoyancy of the discharge. There is no knowledge of whether the wastewater discharge is completely mixed in the first stage. The second stage is defined by the TSD where the initial momentum and buoyancy of the discharge are diminished and waste is mixed by ambient turbulence. The TSD goes on to state that in large rivers this second stage mixing may extend for miles. The TSD, Section 4.4, requires that if complete mix does not occur in a short distance mixing zone monitoring and modeling must be undertaken. The proposed Permit contains no information regarding mixing of the effluent and the receiving stream and it is doubtful that any such information exists since there is no evidence that a mixing zone analysis has been undertaken. The proposed Permit cites a minimum 100 to 1 dilution within the receiving stream, but does not state the source of the flow data and it is doubtful that a receiving stream flow gage is present within Poorman Creek. The proposed Permit does not cite the lowest 10 year instream flow rate as required by the SIP (Table 3) for calculating dilution ratios. The proposed permit does not discuss additive toxicity as required by the Basin Plan.

The extensive SIP, Section 1.4.2.2, requirements for a mixing zone study apply here and must be analyzed before a mixing zone is allowed for this discharge. The proposed Receiving Water Limitations in the proposed Permit are not supported by the scientific investigation that is required by the SIP and the Basin Plan.

SIP Section 1.4.2.2 requires that a mixing zone shall not:

1. Compromise the integrity of the entire waterbody.
2. Cause acutely toxic conditions to aquatic life.
3. Restrict the passage of aquatic life.
4. Adversely impact biologically sensitive habitats.
5. Produce undesirable aquatic life.
6. Result in floating debris.
7. Produce objectionable color, odor, taste or turbidity.
8. Cause objectionable bottom deposits.
9. Cause Nuisance.
10. Dominate the receiving water body or overlap a different mixing zone.
11. Be allowed at or near any drinking water intake.

The proposed Permit's mixing zones have not addressed a single required item of the SIP. A very clear unaddressed requirement (SIP Section 1.4.2.2) for mixing zones is that the point(s) in the receiving stream where the applicable criteria must be met shall be specified in the proposed Permit. The "edge of the mixing zone", the point of compliance, has not been defined.

10. The proposed Permit is wrong in citing Federal Regulation 40 CFR 122.44(k)(3) as allowing best management practices (BMPs) for the discharge in lieu of Effluent Limitations.

The proposed Permit, Finding F Effluent Limitations, cites Federal Regulation 40 CFR 122.44(k)(3) as allowing the establishment of BMPs for this discharge in lieu of Effluent Limitations which are “impracticable”. The proposed permit does not contain a single argument in defense of why Effluent Limitations would be impracticable. The permit writer appears to be confusing their argument that *compliance* with Effluent Limitations is impracticable. The first 8 comments above clearly show not only that Effluent Limitations are practicable, they are legally required. Effluent Limitations should reasonably be established as end-of-pipe limits at the water quality standard or objective, since it appears that there is insufficient evidence or information to properly develop a technically and legally valid mixing zone that would allow for dilution.

We would also disagree that *compliance* with Effluent Limitations is impracticable. The proposed Permit cites the site as an abandoned mine, which is clearly not the case since there is an owner named in the proposed Permit. There are treatment technologies available to treat metals to meet effluent limitations and provide best practicable treatment and control of the discharge as required by the Board’s antidegradation policy (Resolution 68-16). The proposed Permit also cites that electricity is not available to warrant operation of a treatment system. This Finding is technically incorrect since generators are readily available and passive treatment technologies are widely utilized in the mining industry. Some may find the argument interesting that sources of power are always available to conduct industrial activities, but power is an obstacle that cannot be overcome to achieve compliance with environmental regulations. The proposed Permit also cites that the facility is not accessible during periods of heavy snow. If the facility is inaccessible, why does the permit require monthly sampling? Low stream flow conditions typically occur once snow has fallen but has not yet begun to melt, how were the effluent and low flow stream conditions measured to determine that the cited 100 to 1 dilution exists?

Thank you for considering these comments. If you have questions or require clarification, please don’t hesitate to contact us.

Sincerely,



Bill Jennings, Executive Director
California Sportfishing Protection Alliance