



Linda S. Adams
Secretary for
Environmental
Protection

California Regional Water Quality Control Board Central Valley Region

Karl E. Longley, ScD, P.E., Chair

11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Phone (916) 464-3291 • FAX (916) 464-4645
<http://www.waterboards.ca.gov/centralvalley>

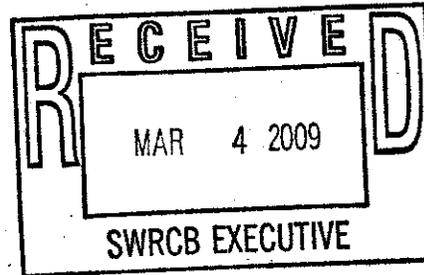
Public Comment
City of Tracy / A-1846(a) & (b)
Deadline: 3/4/09 by 12 noon



Arnold
Schwarzenegger
Governor

4 March 2009

Ms. Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor 95814
Sacramento, CA 95812-0100



COMMENTS FOR PETITION OF WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2007-0036 FOR THE CITY OF TRACY WASTEWATER TREATMENT PLANT, SWRCB/OCC FILE NO. A-1846(a) and A-1846(b) – 17 MARCH 2009 STATE WATER RESOURCES CONTROL BOARD MEETING

Thank you for the opportunity to comment on the 2 February 2009 draft State Water Board Water Quality Order (Draft Order) referenced above.

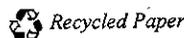
The Central Valley Regional Water Quality Control Board (Regional Water Board) agrees with portions of the Draft Order, but has concerns with some issues. The Regional Water Board comments are discussed below.

The City of Tracy has recently completed a major expansion of its wastewater treatment plant, including construction of tertiary filtration for pathogen removal, and nitrification/denitrification treatment units to address water quality issues in the southern Delta.

Electrical Conductivity

The City of Tracy's discharge has elevated levels of salinity, which led the Regional Water Board to conclude that the discharge has reasonable potential to cause or contribute to an exceedance of the Bay-Delta Plan's water quality objectives for electrical conductivity in the South Delta. Federal regulations require water quality-based effluent limitations be included in the permit based on the Bay-Delta Plan objectives. The City could not immediately comply with such limitations; therefore, a compliance schedule is necessary. In this case, a compliance schedule cannot be included in the permit, because the Bay-Delta Plan objectives are existing requirements. A compliance schedule is required in a separate enforcement order, such as a time schedule order. To comply with the requirements of CWC 13385(j)(3), which allows for an exemption from the issuance of mandatory minimum penalties, the time schedule could not exceed five years. The draft Order suggests adopting a TMDL or basin plan amendment if source reduction and/or treatment are not feasible. Recent experience suggests that five years is not adequate time to consider the salt reduction study and other alternatives, and complete a planning process that would resolve the City of Tracy's noncompliance. Modification of the south Delta salinity objectives has already been under active consideration for at least four years. (Order WQ 2005-0005 [*City of Manteca*]; *Notice of Public Staff Workshop* at http://www.waterrights.ca.gov/baydelta/docs/southerndeltasalinity/notice_021809.pdf.)

California Environmental Protection Agency



The Regional Water Board has initiated basin plan amendments to implement a Salinity Management Plan that will apply throughout the entire Central Valley including the Delta. This effort has been underway for two years and is expected to be brought to the Board for consideration in 2015. The amendments will establish beneficial uses and new or revised objectives for salts and nutrients. (http://www.waterboards.ca.gov/centralvalley/water_issues/salinity/index.shtml)

The draft Order recognizes the dilemma faced by Tracy and the Regional Water Board. There is clearly Reasonable Potential for salinity, and the receiving water objectives are clear, but the City cannot comply with salinity effluent limitations now or in the foreseeable future. Modeling study results contained in the record demonstrate the salinity concentrations in the City's discharge contributes a relatively small impact to the receiving water, and that impact will decrease as the City increases its use of lower salinity water supplies. Limited water supply data indicates that the average *water supply* electrical conductivity (EC) of the combined water sources is 700 umhos/cm (~500 mg/L TDS), which is the effluent limitation for part of the year. Based solely on water supply salinity and a common increase of 500 umhos/cm (~380 mg/L TDS) in salinity for domestic use of water, Tracy's discharge would exceed the Bay-Delta Plan's irrigation and non-irrigation season standards. Time schedules will allow the City to identify and control salinity discharges to the wastewater collection system, but there is no reasonable expectation that the City can achieve compliance with the salinity effluent limitations without treatment to remove salts.

If the draft Order is not modified in accordance with the discussion above, we suggest a minor language change. The draft Order concludes at the top of page 10 that one solution is to increase the salt objectives through a site-specific objective or basin plan amendment. However, the Bay-Delta Plan "supersedes the regional water quality control plans to the extent of any conflict between this plan and the regional water quality control plans." (Bay-Delta Plan, p. 3.) Therefore, we suggest the following clarification, at the top of page 10: "... site-specific water quality objectives; a or other basin plan amendment to the basin plan and/or Bay-Delta Plan; or, if the timing allows, the results of the State and Central Valley Water Boards' joint study and planning process regarding management of salt in the watershed (CV-SALTS, Central Valley Salinity Alternatives for Long-Term Sustainability)."

Dilution Credits

We agree that the Fact Sheet uses a "complete mixing" analysis for the human health mixing zone, and must be revised to include appropriate findings based on site-specific data and studies showing that the discharge completely mixes and is as small as practicable, and to specify the mixing zone boundaries. However, we believe the record already includes site-specific studies that satisfy the SIP's definition of a "mixing zone study" for purposes of the human health mixing zone in question. The draft Order states that the record does not include the appropriate studies to support a site-specific analysis based on the SIP methodology for incompletely mixed discharges. For the following reasons, we request several minor modifications to the draft Order to avoid the unintended consequence of requiring the Discharger to submit additional studies, if information already in the record can support appropriate findings.

Very precise modeling is necessary to allow dilution credits for aquatic toxicity criteria, in order to ensure protection of the beneficial uses of the receiving water. This is because adverse

¹ Fact Sheet, at pp. F-22 – F-23

effects of the discharge can occur very close to the outfall and the exposure periods are short (i.e. one hour for acute toxicity and four days for chronic toxicity). The same level of detail, however, is not necessary for human health criteria where the only exposure pathway (in this case, a drinking water intake) is far downstream from the discharge and exposure periods are very long. This is consistent with EPA guidance, which recommends dilution credits for human health criteria include reasonable assumptions regarding exposure pathways.² In this case, the closest drinking water intake is over 10 miles downstream at the Tracy Pumping Plant in the Delta Mendota Canal.³ While the SIP requires a "mixing zone study" for incompletely mixed discharges, it does not provide any guidance on what an appropriate mixing zone study must include for different types of criteria. Similarly, the SIP does not preclude the use of a study to justify dilution credits for long-term human health merely because that study does not adequately justify a mixing zone for constituents based on protection of aquatic life (e.g., because it does not confirm adequate fish passage).

The SIP defines mixing zone studies, without limitation, as, "...tracer studies, dye studies, modeling studies, and monitoring upstream and downstream of the discharge that characterize the extent of actual dilution." (SIP, § 1.4.2.1.) The site-specific modeling performed by the Department of Water Resources to evaluate the Discharger's impact on salinity demonstrates that "actual dilution" (complete mixing) occurs within the mixing zone.⁴ The modeling includes data that show the point in the receiving water where the effluent completely mixes with the receiving water. The modeling focused on salinity⁵, a conservative pollutant, so it provides an additional margin of safety for dibromochloromethane and dichlorobromomethane. These constituents are volatile organic compounds that degrade over time, in addition to mixing into the receiving water. Nothing in the SIP prohibits defining a mixing zone boundary based on a calculated location where monitoring, dye studies or – as in this case – modeling indicates where complete mixing occurs. Such calculations, in appropriate cases such as this one, are "modeling studies ... that characterize the extent of actual dilution."

We believe that the record includes adequate information to support findings consistent with the draft Order. We are not requesting the State Water Board to consider these substantive conclusions at this time, because they are not included or explained in the findings of the Permit. However, we are concerned that the draft Order, in its current form, unintentionally precludes the Regional Water Board from relying on information that is already in the record. Therefore, we suggest the following changes to the draft Order:

On page 10, in the last paragraph (beginning with "**Discussion:**"), delete the following sentence: "These are not in the record."

On page 12, in the carryover paragraph, revise the second-to-last sentence to read, "The record findings does not demonstrate that an independent mixing-zone

² Water Quality Standards Handbook: Second Edition, EPA-823-B94_005a, p. 5-7

³ The Delta Mendota Canal serves water to the lower San Joaquin Valley (including providing a portion of the drinking water supply for Tracy). The State Water Project intake is only a few miles further to the north. During reasonable worst-case flow conditions in the south Delta, water quality modeling has shown that very little of the Tracy effluent reaches these export pumps.

⁴ As noted above, we agree that this is not a completely-mixed discharge as defined by the SIP, and the Permit must specify the mixing zone boundary.

⁵ A "mixing zone study" need not be specific to any particular constituents in the effluent, since the SIP allows tracer and dye studies.

study was conducted to establish this dilution credit/mixing zone for the priority pollutant human health criteria."

On pages 12-13, revise the carryover paragraph to read:

The Central Valley Water Board inappropriately considered the discharge to be a "completely-mixed discharge" without making findings that document an adequate demonstration and verification that the discharge completely mixes. On remand, an appropriate dilution credit should be determined using procedures detailed for incompletely-mixed discharges, which requires site-specific data and an independent mixing zone study, and should contain the appropriate parameters. Until the Unless the Central Valley Water Board can make appropriate findings based on the existing record, or the Discharger provides study results that are complete and acceptable to the Central Valley Water Board, the discharge should be granted no dilution credit for priority pollutant human health criteria.

Chronic Ammonia Effluent Limitation

We agree that using a median receiving water pH to calculate the 30-day average chronic criterion may not be adequately protective of the aquatic life beneficial uses of the receiving water. Further evaluation of the ammonia effluent limitations should be conducted and the permit modified accordingly.

Chronic Toxicity Effluent Limit

We agree that a narrative effluent limitation for chronic toxicity must be added to the permit. However, the Draft Order also requires the permit to be revised to include a re-opener provision to allow implementation of a numeric chronic toxicity limitation when one is available. The adopted permit already includes a re-opener provision (Section VI.C.1.e, p.20) that allows the permit to be re-opened to allow implementation of a numeric chronic toxicity effluent limitation if the State Water Board revises the SIP's toxicity control provisions to require the establishment of numeric chronic toxicity effluent limitations. The reopener language is based on Order WQO 2003-0012 (*Los Coyotes/Long Beach*), and is the same as the reopener language the State Water Board approved in WQ 2008-0008 (*City of Davis*). (See, Order WQO 2003-0012, pp. 9-10, and Order WQ 2008-0008, pp. 6-7.) We suggest the following change to the Draft Order starting at the last sentence of the first paragraph of page 17:

... This Permit already includes the appropriate re-opener provision, but must also include a similar narrative effluent limitation.

On remand, the Central Valley Water Board must include a narrative chronic toxicity limitation in the City's permit, ~~with an appropriate re-opener for a numeric limitation when one is available.~~

In addition, paragraph 4 on page 19 should be changed to read:

4. Amend the Permit to ensure that it contains a narrative chronic toxicity limitation ~~objective with an appropriate re-opener for a numeric limitation when one is available;~~

Bis(2-ethylhexyl)phthalate

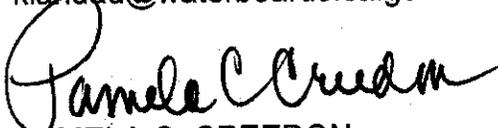
As discussed in Section IV.C.3.g. of the Fact Sheet (p. F-32), there is insufficient information to conduct a reasonable potential analysis due to uncertainty in the sample results. The CTR criterion for bis(2-ethylhexyl) phthalate is 1.8 µg/L. Of the four samples available at the time the permit was adopted, only one gave any indication that the effluent exceeded the CTR criterion, and there is evidence in the record that this sample result is suspect.

In this case, there were four samples collected in 2002. Although there were detections of bis(2-ethylhexyl) phthalate, the only value greater than the CTR criterion was an estimated value (i.e. j-flagged). As indicated on the lab sheets, duplicate effluent samples were collected and sent to two separate labs to measure for bis(2-ethylhexyl) phthalate. The two labs were Montgomery Watson Laboratories and Caltest Laboratories. Caltest reported a j-flagged value of 2 µg/L, with a reporting level (RL) of 5 µg/L and a method detection level (MDL) of 0.3 µg/L. Sample results above the MDL, but below the RL, are only estimates (i.e. j-flagged), and are not quantified. If the Caltest result were the only result, the 2 µg/L *estimated* concentration would exceed the 1.8 µg/L CTR criterion, and reasonable potential could be found if the Regional Water Board found that the estimated value was a reliable indicator that the bis(2-ethylhexyl) phthalate was present at or above 1.8 µg/L. However, as shown in the record, Montgomery Watson's analysis of the duplicate sample was an actual *measured* concentration of only 1.4 µg/L, with a reporting level of 0.6 µg/L. There is a higher degree of confidence in the measurement from Montgomery Watson, because the concentration was above the reporting level.

Bis(2-ethylhexyl) phthalate is particularly subject to false positive results. Based on monitoring data provided by other dischargers, the Regional Water Board has found that sampling and lab contamination for bis(2-ethylhexyl) phthalate is common and has resulted in many false-positive results for this constituent. Samples can be easily contaminated with bis(2-ethylhexyl) phthalate when plastic piping and containers are used or by the use of rubber gloves. Given this evidence, the Regional Water Board can and should use its discretion when evaluating reasonable potential for this constituent.

Therefore, the permit concluded that sufficient information did not exist to determine reasonable potential. The Regional Water Board is allowed this discretion by the SIP in Section 1.2, which states, "The RWQCB shall have discretion to consider if any data are inappropriate or insufficient for use in implementing this Policy. Instances where such consideration is warranted include, but are not limited to, the following: evidence that a sample has been erroneously reported or is not representative of effluent or ambient receiving water quality; questionable quality control/quality assurance practices; and varying seasonal conditions." (Emphasis added). The adopted Order appropriately required monthly monitoring for bis(2-ethylhexyl) phthalate using clean techniques to ensure that valid, representative data would be available to conduct a reasonable potential analysis. We request that the proposed State Board Order be revised to delete all references to bis(2-ethylhexyl) phthalate.

If you have any questions, please contact Kenneth Landau at (916) 464-4726 or klandau@waterboards.ca.gov.


PAMELA C. CREEDON
Executive Officer

cc: Mr. Bill Jennings, California Sportfishing Protection Alliance, Stockton
Mr. Adam Lazar, Esq., Environmental Law Foundation, Oakland
Mr. James R. Wheaton, Esq, Environmental Law Foundation, Oakland
Mr. Mike Jackson, Esq., Law Office of Mike Jackson, Quincy
Mr. Andrew Packard, Esq., Law Office of Andrew Packard, Petaluma
Mr. Doug Eberhardt, Chief, Permits Office, U.S. EPA, Region 9, San Francisco
Ms. Elizabeth Miller Jennings, Esq., Office of Chief Counsel, State Water Board
Mr. Steven H. Blum, Esq., Office of Chief Counsel, State Water Board
Mr. Steven Bayley, City of Tracy Department of Public Works, Tracy
Ms. Debra E. Corbett, Esq., City of Tracy, Tracy
Ms. Melissa A. Thorne, Esq., Downey Brand LLP, Sacramento