**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**
**SAN FRANCISCO BAY REGION**

**RESPONSE TO WRITTEN COMMENTS**
ON THE REISSUANCE OF WASTE DISCHARGE REQUIREMENTS FOR:

South Bayside System Authority
1400 Radio Road
Redwood City, CA 94065
NPDES Permit No. CA0038369

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**I. South Bayside System Authority - December 18, 2006**
**II. United States Environmental Protection Agency – December 13, 2006**
**III. Bay Area Clean Water Agencies – December 18, 2006**
**IV. Baykeeper – December 18, 2006**
**V. Editorial Changes**

Note: The format of this staff response begins with quotations from the party's comments, followed with staff's response. Interested persons should refer to the original letters to ascertain the full substance and context of each comment. Text changes are shown using underline for added text and ~~strikethrough~~ for deleted text.

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## I. South Bayside System Authority (SBSA)

*SBSA Comment 1.*
*Dioxin-TEQ effluent limitations should be deleted from the Tentative Order prior to submittal to the San Francisco Bay Regional Water Board (RWQCB) and should not be included in the Final Order.* [SBSA refers to the following comments attached to their comment letter as Exhibit 1. In Exhibit 1 of the comment letter, these comments are numbered 1 through 4; we have renumbered them 1a through1d for clarity.]

*SBSA Comment 1a. There Is No Empirical Support for Including Dioxin-TEQ in the Tentative Order (Tentative Order).*
*The Tentative Order contains dioxin-TEQ effluent limits (concentration and mass-based limits) on the grounds that the discharge has a reasonable potential to cause or contribute to an exceedance of the Basin Plan narrative objective for bio-accumulative substances*[1]*. In purporting to obtain compliance with the narrative objective, RWQCB staff has used a dioxin-TEQ of 0.014 pg/L. However, there is no empirical basis for doing so because: (i) there is no applicable water quality objective for dioxin-TEQ (also called TCDD equivalents); (ii) the only applicable water quality objective for dioxin compounds is the California Toxics Rule (CTR) objective for 2,3,7,8-TCDD; (iii) 2,3,7,8-TCDD has never been detected in Lower San Francisco Bay at levels that exceed the CTR objective; (iv) 2,3,7,8-TCDD has never been detected in*

[1] *The narrative objective states as follows: "Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered."*

*SBSA's effluent; and (v) the dioxin compounds that have been detected in the SBSA effluent are significantly less toxic than 2,3,7,8-TCDD.*

*Although the State Water Resources Control Board (SWRCB) adopted a water quality objective for TCDD equivalents of 0.014 pg/L in its 1991 Enclosed Bays and Estuaries Plan, in 1994 the Sacramento County Superior Court determined that plan to be invalid because, prior to adopting the objectives, the SWRCB failed to consider economics and other factors required to be considered under Water Code Section 13241, failed to comply with CEQA, and failed to comply with the Administrative Procedures Act (APA). Following the Court decision, the SWRCB rescinded the plan, including the dioxin-TEQ objective of 0.014 pg/L. Thus, the dioxin-TEQ objective that RWQCB staff used to establish effluent limits in the Tentative Order is the same objective that has been invalidated and later rescinded. There is no legal or practical basis for the dioxin-TEQ limitation. Indeed, the Tentative Order concedes the infeasibility of the limitation and offers no reasonable or foreseeable means for overcoming that deficiency (Tentative Order p. F-45).*

Response 1a.

The dioxin-TEQ final limitation is a translation of the bioaccumulation narrative WQO from the Basin Plan into a numerical water quality-based effluent limit (WQBEL). 2,3,7,8-TCDD (i.e., dioxin) and compounds that exhibit similar effects (i.e., dioxin congeners) are bioaccumulative and have been shown to violate the bioaccumulation narrative WQO in San Francisco Bay. Toxic equivalents (TEQ) to 2,3,7,8-TCDD are calculated using Toxic Equivalency Factors (TEFs) published by USEPA and the World Health Organization. Therefore, translation of the narrative bioaccumulation WQO into a WQBEL using dioxin-TEQ is reasonable.

Responses to SBSA's specific enumerated comments are provided below:

i. The applicable WQO for dioxin-TEQ is the Basin Plan's narrative bioaccumulation WQO.

ii. We disagree that the only applicable WQO for dioxin compounds is the CTR objective for 2,3,7,8-TCDD; the Basin Plan's narrative WQOs apply to discharges to waters of the State, and it is reasonable that the narrative bioaccumulation WQO would apply to the dioxin congeners since they bioaccumulate just like 2,3,7,8-TCDD.

iii. SBSA is incorrect. 2,3,7,8-TCDD has been detected in Lower San Francisco Bay at levels exceeding the CTR objective. For example, a January 2002 sample taken at the Dumbarton Bridge station contained 2,3,7,8-TCDD above the objective. Moreover, based on fish tissue sampling data, the Basin Plan's narrative bioaccumulation WQO has been violated by dioxin congeners and dioxin-like polychlorinated biphenyls (PCBs) in San Francisco Bay.

iv. It is true that 2,3,7,8-TCDD has never been detected in SBSA's effluent, but other dioxin congeners, which exhibit similar bioaccumulation and toxicity, have been detected in SBSA's effluent at concentrations and frequencies that result in reasonable potential for its TEQ concentrations to violate the Basin Plan's narrative bioaccumulation WQO.

v. It is true that the dioxin congeners that have been detected in SBSA's effluent are significantly less toxic than 2,3,7,8-TCDD; however, it is not the raw concentrations of those dioxin congeners but their cumulative TEQ concentrations, calculated using the raw concentrations and USEPA-published TEFs and procedures, that have reasonable potential to exceed the narrative bioaccumulation WQO.

We do not claim that the 0.014 pg/L applies as a WQO for dioxin-TEQ. Rather, we rely on the Basin Plan's narrative bioaccumulation WQO. There is no question that the Basin Plan narrative WQO applies. Furthermore, one possible means provided by the Tentative Order to overcome any technical infeasibility to meet the final dioxin-TEQ effluent limit is through a mass offset program.

*SBSA Comment 1b. Inclusion of the Dioxin-TEQ Limit in the Tentative Order Violates Applicable Federal Law.*

*Inclusion of the dioxin-TEQ limit in the Tentative Order is inconsistent with the plain reading of the Clean Water Act ("CWA"). The adoption of water quality-based effluent limitations, including concentration and mass limitations, before the adoption of TMDLs was neither intended by Congress, nor mandated by the CWA. Congress intended water quality-based limits in permits to implement applicable water quality standards (CWA §§302, 304(l)). Congress stated that where water quality standards were not being implemented even after the imposition of technology-based effluent limits, TMDLs were to be established at a level necessary to implement or achieve the standards (CWA §303(d)(1)(C)). This statutory analysis makes clear that Congress intended water quality-based effluent limits to be based on the results of a TMDL process. This interpretation is also consistent with EPA guidance (see, Water Quality-based Approach to Pollution Control, Ch. 7, USEPA's "Water Quality Standards Handbook," 2nd Ed. [1993]). In fact, numerous NPDES permits in the Bay Area have been adopted which defer the establishment of numeric effluent limits until the dioxin TMDL has been developed and approved.*

*By including the dioxin-TEQ effluent limit based on the Basin Plan narrative objective for bioaccumulative substances, the RWQCB staff has acted in a manner that is inconsistent with EPA regulations (40 CFR 131.11(a)(2)). Specifically, prior to translating the narrative objective into a numeric effluent limit, the RWQCB failed to identify in the Basin Plan the method by which it intended to regulate point source discharges of toxic pollutants based on the narrative objective.*

*Discussion in the California Toxics Rule preamble (CTR; Federal Register/Vol. 65, No. 97) regarding dioxin-TEQ effluent limits provides no support for including such limits in an NPDES permit without compliance with State of California or federal legal requirements for establishing such limitations. Statements in the preamble do not constitute binding policy or guidance, let-alone a regulation. The State Implementation Policy (SIP), not the CTR preamble, establishes policies for implementing priority pollutant standards promulgated under the CTR (SIP, Introduction, page 1).*

*Even if it were assumed that the CTR preamble impliedly authorized a dioxin-TEQ limit that implication fails as a basis for a regulation. Specifically, prior to adopting such a provision, the federal Environmental Protection Agency (EPA) must comply with the requirements of federal*

*law governing the adoption of regulations and with the requirements of the CWA and EPA regulations governing the adoption of water quality standards. It has not done so.*

Response 1b.
We disagree with SBSA's contentions that inclusion of the dioxin-TEQ limit is inconsistent with the plain reading of the Clean Water Act, and that adopting WQBELs before the adoption of TMDLs was not intended by Congress and is not mandated by the CWA. By adopting a dioxin-TEQ WQBEL, the Regional Water Board is complying with regulations implementing the Clean Water Act at 40 CFR 122.44 (d), which requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. In addition, SBSA is incorrect that NPDES permits in the San Francisco Bay area defer the establishment of numeric effluent limits until the dioxin TMDL has been developed and approved; rather, they defer the establishment of final numeric effluent limits until **either** the expiration of a compliance schedule **or** the completion of a TMDL.

We also disagree with SBSA's contention that the Regional Water Board failed to identify in the Basin Plan the method by which it intended to regulate point source discharges of toxic pollutants based on the bioaccumulation narrative objective. Chapter 4 of the Basin Plan describes in detail how WQOs are to be implemented, stating that WQBELs will be developed where required to meet WQOs. On page 4-7, the Basin Plan states, "*Water quality-based effluent limitations will consist of narrative requirements and, where appropriate,* ***numerical limits*** *for the protection of the most sensitive beneficial uses of the receiving water.*" A numerical effluent limitation is appropriate to protect the beneficial uses of the receiving water that the bioaccumulation narrative WQO is intended to preserve.

Finally, our approach to the establishment of a dioxin-TEQ WQBEL, as explained above, is consistent with the CTR preamble, but is not based upon it.

*SBSA Comment 1c. Inclusion of the Dioxin-TEQ Limit in the Tentative Order Violates Applicable California Law.*
*Water Code Section 13000 requires that activities affecting water quality "shall be regulated to attain the highest water quality* which is reasonable, *considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible."(emphasis added). The section imposes an overriding requirement on the RWQCB to adopt effluent limits that are reasonable based on consideration of various public interest factors. It is not reasonable to adopt a dioxin-TEQ limit that could limit future economic growth and development in circumstances where: (i) there is no adopted water quality objective for dioxin-TEQ and therefore no requirement to adopt a dioxin-TEQ limit; and (ii) atmospheric sources are the primary source of dioxin compounds, while POTWs, in general, and SBSA, in particular, are acknowledged to be minor sources.*

*Prior to adopting a dioxin-TEQ effluent limit, the RWQCB must comply with Water Code sections 13241 and 13242, including taking into consideration economic effects of the requirement, the level of water quality that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area and the need for developing housing within the region, among other considerations.*

*Here, the RWQCB staff has presumed to establish a* de facto *water quality objective for dioxin-TEQ without complying with Water Code sections 13241 and 13242, CEQA, or the Administrative Procedures Act. In failing to consider economics or the means to attain the objective, as required by Water Code section 13241(d) and 13242, the staff has acted contrary to guidance issued by the RWQCB's Chief Counsel, which states:*

> *"A Regional Water Board is under an* affirmative duty to consider economics *when adopting water quality objectives in water quality control plans or, in the absence of applicable objectives in a water quality control plan,* when adopting objectives on a case-by-case basis in waste discharge requirements*. To fulfill this duty, the Regional Water Board should assess the costs of the proposed adoption of a water quality objective." (Memorandum from William R. Attwater, Chief Counsel, SWRCB, to Regional Water Board Executive Officers and Regional Water Board Attorneys entitled: "Guidance on Consideration of Economics in the Adoption of Water Quality Objectives," January 4, 1994; emphasis added.)*

*Use of a dioxin-TEQ objective that was ruled invalid by the Sacramento Superior Court and rescinded by the SWRCB to interpret compliance with the narrative objective for bio-accumulative substances is inconsistent with the express language of the* San Francisco Bay Basin Plan *and, therefore, is an improper application of the narrative objective. Numerical objectives must be based on extensive technical information that relates concentrations of pollutants in water to adverse effects on beneficial uses (Basin Plan, Chapter 4, "Numeric Water Quality Objectives: Waste load Allocations"). That information has not been obtained for a dioxin-TEQ and reliance upon data and studies acquired to date is not supported by the necessary regulatory procedure and concomitant public review process. Succinctly put, purported reliance upon the Basin Plan for the numeric dioxin-TEQ is lacking and none can be established unless and until the requisite substantial technical information has been acquired and the legally required regulatory procedure followed.*

*RWQCB staff was not constrained by the SIP to include a dioxin-TEQ limit in the Tentative Order The SIP requires water quality-based effluent limitations only where it is determined that the discharge may cause, has a reasonable potential to cause, or contributes to, an excursion above any* applicable priority pollutant criterion or objective *(SIP, Section 1.3). There is no applicable specific priority pollutant criterion or objective for dioxin-TEQ in the CTR or Basin Plan and therefore no requirement under the SIP to adopt effluent limitations for dioxin-TEQ. Moreover, reliance upon the SIP for establishing a dioxin-TEQ limit would be invalid because there was no underlying compliance with the requirements of the CWA, EPA regulations, the Water Code and CEQA in purporting to adopt the limit.*

Response 1c.

Thorough analysis of the public interest factors listed in Water Code Section 13000 and referred to above by SBSA is not necessary for every individual effluent limit. Water quality-based effluent limits are based on existing WQOs, and the factors in WCR 13000, 13241, and 13242 were considered when the existing WQOs were adopted.

While it is true that SBSA and other POTWs are minor sources of dioxin in surface waters, we disagree that the Basin Plan's narrative bioaccumulation WQO does not require a dioxin-TEQ limit. Based on U.S. EPA's determination to add dioxin-TEQ to the Clean Water Act §303(d) list, dioxin-TEQ has been shown by fish tissue sampling data to violate the Basin Plan's narrative bioaccumulation WQO in San Francisco Bay.

Also, we have not adopted a *de facto* WQO or a WQO on a case-by-case basis for SBSA's waste discharge requirements; and we did not use the dioxin-TEQ WQO that was ruled invalid and rescinded. We used instead the Basin Plan's bioaccumulation narrative WQO, which certainly applies: the basis for including a dioxin-TEQ limit is the Basin Plan, not the SIP.

*SBSA Comment 1d. Conclusion.*
*The inclusion of a numeric dioxin-TEQ limit in the Tentative Order is not supported by the extensive technical studies and empirical data required under the SIP, nor has establishment of that limit undergone the requisite regulatory procedure under federal and State law, including providing opportunity for essential public input. Also, aside from procedural defects, it does not comply with statutory substantive requirements including, without limitation, consideration of the factors specified in Water Code Sections 13241 and 13242. Inclusion of the limit is without proper factual or legal basis and is arbitrary and capricious. For the foregoing reasons, it should be deleted from the Tentative Order*

Response 1d.
The numeric dioxin-TEQ final limit is included in the Tentative Order based on the Basin Plan's narrative bioaccumulation WQO, translated to a numerical limit; fish tissue sampling data showing that dioxin-TEQ violates the bioaccumulation WQO in San Francisco Bay; and the requirement to include final effluent limits in the Tentative Order due to the expiration of the dioxin-TEQ compliance schedule within the term of the reissued permit. Final dioxin-TEQ limits apply to all dischargers to San Francisco Bay whose discharges show reasonable potential for dioxin-TEQ, and have compliance schedules set to expire within the term of their permits. Inclusion of a final effluent limit for dioxin-TEQ in this Tentative Order is therefore neither arbitrary nor capricious.

*SBSA Comment 2.*
*SBSA requests the following edits to the total residual chlorine monitoring footnote (2) to Tables 6a and 6b, and footnote (7) to Table E-4. SBSA would like the footnote language to allow the use of the recently installed on-line analyzers that measure residual dechlorination agent. The language describing these edits is found in the Fact Sheet, and the footnotes have been edited below for clarification regarding SBSA's analyzers as well as consistency with the Fact Sheet and the State Water Board's June 2006 Draft Total Residual Chlorine and Chlorine-Produced Oxidants Policy of California which states:*

> *"Dischargers must measure chlorine residual either directly or indirectly. The Regional Water Board shall require continuous monitoring of chlorine residual or dechlorination agent residual concentrations for all facilities unless an exemption is granted…"*

*This change is requested to specify that SBSA may use continuous monitoring to analyze for total chlorine residual OR residual dechlorination agent, as the Policy allows.*

**Tables 6a, b (2):**

*a. This requirement is defined as below the limit of detection in standard test methods, as defined in the latest edition of Standard Methods for the Examination of Water and Wastewater.*

*b. The Discharger may record discrete readings from the continuous monitoring every hour on the hour, and report, on a daily basis, the minimum and maximum concentration observed following dechlorination. Total chlorine dosage (kg/day) shall be recorded on a daily basis. The analyzers shall monitor the final effluent and measure either total chlorine residual or residual dechlorination agent. The Discharger will develop a backup system to demonstrate compliance in case the on-line monitoring system fails.*

*c. For total residual chlorine (TRC) detection levels, the Discharger shall use a method for analysis of TRC ~~that is ideentified as~~ approved by USEPA for analysis of wastewaters at 40 CFR 136. The method of analysis shall achieve a method detection limit (MDL) at least as low as that achieved by the Amperometric Titration Method (4500-Cl D from Standard Methods for Examination of Water and Wastewater, Edition 20). The State Water Board is considering a statewide policy on chlorine residual. This Order may be reopened in the future to reflect any changes relating to chlorine residual.*

*~~d. The Discharger may elect to use a continuous on-line monitoring system(s) for measuring flows, chlorine residual and sodium bisulfite (or other dechlorinating chemical) dosage (including a safety factor) and concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Regional Water Board staff may conclude that these false positive chlorine residual exceedances are not violations of this permit limitation.¶~~*

***Table E-4, (7):***

*(7) Chlorine residual/residual dechlorination agent: The Discharger may record discrete readings from the continuous monitoring every hour on the hour, and report, on a daily basis, the minimum and maximum concentration observed following dechlorination. Total chlorine dosage (kg/day) shall be recorded on a daily basis.*

*(7a) TRC Detection Levels: Discharger shall use a method for analysis of TRC ~~that is identified as~~ approved by USEPA for analysis of wastewaters at 40 CFR 136. The method of analysis shall achieve a method detection limit (MDL) at least as low as that achieved by the Amperometric Titration Method (4500-Cl D from Standard Methods for Examination of Water and Wastewater, Edition 20).*

*(7b) The Discharger may elect to use ~~a~~ continuous on-line monitoring to demonstrate compliance with the effluent TRC limit. The analyzers shall monitor the final effluent and measure either total chlorine residual or residual dechlorination*

*agent. The Discharger will develop a backup system to demonstrate compliance in case the on-line monitoring system fails.* ~~*system(s) for measuring flows, chlorine residual and sodium bisulfite (or other dechlorinating chemical) dosage (including a safety factor) and concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Regional Water Board staff may conclude that these false positive chlorine residual exceedances are not violations of this permit limitation.*~~

Response 2.
We have revised the Tentative Order as requested.

*SBSA Comment 3.*
*SBSA requests that the limit for enterococci bacteria be recalculated following the Basin Plan water quality based effluent limit (WQBEL) procedure, which allows for dilution. The Tentative Order Fact Sheet states that this is a WQBEL, however there is no indication why dilution was not included, since SBSA is a deepwater discharger.*

*The Fact Sheet (page F-38) states that "This Order establishes a water quality based effluent limit for enterococci bacteria" (emphasis added). It also states that, "The limit in this Order, 35 colonies/100 mL, is based on applying the marine water quality standard (WQS) for water contact...". However, the Fact Sheet does not describe how this WQBEL was calculated from the WQS. The Basin Plan, page 4-11, states that "Water quality based effluent limits shall be calculated from water quality objectives based on the following equation:*

$Ce = Co + D(Co - Cb)$

*where:*

*D = assigned dilution ratio,*
*Co = WQO and*
*Cb = background concentration*

*The Basin Plan appears quite clear, and prescriptive, in adhering to this formula. Therefore, dilution should be used in calculating enterococcus WQBELs. Not to do so would effectively convert the WQS directly to a performance based effluent limit.*

*Furthermore, it should be noted that the REC-1 beneficial use (full immersion body contact) that the enterococcus WQS was designed to protect, does not exist near the SBSA outfall within the zone of initial dilution. The point of application is at or near the surface where swimming, board surfing, or other potential full-body contact recreation is likely to occur. It is therefore consistent with REC-1 use to calculate the WQBEL using dilution. SBSA's 1996 receiving water study documented that there was no body-contact recreation occurring in the vicinity of the outfall. That conclusion (summarized on page F- 38 of the Fact Sheet) was the basis for originally establishing the limited contact 500 MPN/100 mL fecal coliform limit in the previous permit. Finally, it should also be noted that enterococcus are non-conservative and subject to relatively rapid die-off in receiving waters. As such, calculating effluent limits using a dilution credit, but without a decay factor, could in fact be considered conservative with respect to*

*protection of recreational beneficial uses. SBSA supports addition of enterococcus monitoring as part of the Regional Monitoring Program for use in NPDES permitting in the Bay.*

Response 3.

The Tentative Order has been corrected to clarify that the enterococci bacteria effluent limit of 35 MPN/100 mL (geometric mean) is technology-based, not water quality-based. Calculation of a WQBEL depends on knowing the background concentration of a given pollutant. In its comment, SBSA assumes that the background enterococci bacteria concentration is zero, but the background enterococci bacteria concentration is not known. Therefore, we cannot establish a WQBEL based on dilution.

Also, the establishment of a bacteria limit different than what is specified in Table 4-2 of the Basin Plan is based on footnote d of that table, which lists technology limits for conventional pollutants. By inference, alternative limits based on footnote d are also technology-based, provided that those limits "not result in unacceptable adverse impacts on the beneficial uses." Therefore, through our best professional judgment, we have set a technology limit that relates to a reasonable level of disinfection economically and technically achievable by six other municipal wastewater treatment plants in this region. Because this limit is equal to the water quality criteria promulgated in the Beach Act, without dilution within the receiving waters, it is likely very conservative in terms of protecting beneficial uses and is thus consistent with footnote d of Table 4-2.

The following revisions have been made to the text of the Tentative Order:

Fact Sheet Section IV.C.8, Fecal Coliform Bacteria, has been renamed "Bacteria" and moved to a new section, Section IV.B.3 to reflect that these limits are technology-based. The last paragraph of the section has been changed as follows:

> This Order establishes a ~~water quality~~technology-based effluent limit for enterococci bacteria. This limit is based on the level currently economically and technically achievable by six other POTWs in the region. Also consistent with Basin Plan Table 4-2, footnote d, this limit will ensure that there are no "unacceptable adverse impacts on the beneficial uses." Enterococci are more closely associated with gastrointestinal disease than fecal coliform bacteria for water contact. The effluent limits in this order, a geometric mean of 35 ~~colonies~~MPN/100 mL~~,~~ is equivalent to ~~based on applying~~ the marine water quality standard for water contact established for the receiving water by USEPA on November 16, 2004, FR Vol 69, No 220 (Beach Act). The USEPA, in the 2004 Beach Act [40CFR 133.41(e)(1)], indicates that the marine criteria apply to coastal waters of California, and defines coastal waters to include coastal estuaries such as such as the receiving water for this discharge. Bacteria concentrations in the effluent are primarily a function of disinfectant application, so the Discharger can meet these limits with its existing technology. Because these technology-base limits do not account for dilution in the receiving waters (we cannot calculate dilution because the background enterococci levels are

unknown), these limits are also likely conservative in terms of protecting beneficial uses and therefore consistent with Table 4-2, footnote d.

*SBSA Comment 4.*
*SBSA requests the following changes for consideration:*

*a. The first paragraph of item V.A.1 on page 15 should be edited as follows:*

*V. RECEIVING WATER LIMITATIONS*

*A. Surface Water Limitations*

*1. Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge~~s~~ shall not be demonstrated to cause the following in Lower San Francisco Bay:*

*b. The last paragraph of item VI.C.1 on page 17 should be edited as follows:*

*C. Special Provisions*

*1. Reopener Provisions*

*The Discharger~~s~~ may request permit modification based on the above. The Discharger~~s~~ shall include in any such request an antidegradation and antibacksliding analysis.*

Response 4
We have corrected the indicated typographical errors (i.e., "Dischargers" rather than "Discharger"). However, we have not added the phrase "be demonstrated to" where indicated. The effluent prohibitions are based on Basin Plan Table 4-1, which does not include the requested qualifier. Furthermore, it is unclear how the prohibitions could be applied to a discharge that could not be demonstrated to violate them, so the requested change is unnecessary.

*SBSA Comment 5.*
*Any changes to the Tentative Order based on comments from SBSA or others should be reflected in the Fact Sheet, to avoid conflicts or ambiguities. Additionally, the following editorial comments are submitted regarding the Fact Sheet.*

*a. All references to dioxin-TEQ effluent limitations should be deleted, as discussed under Item 1, above.*

*b. The Facility Description on page F-4 should be edited as follows for consistency with the main body of the permit:*

## *II. FACILITY DESCRIPTION*

### *A. Description of Wastewater Treatment or Controls*

*The Discharger owns and operates the SBSA Wastewater Treatment Plant (WWTP), an advanced secondary wastewater treatment plant, and its conveyance system. SBSA transports and treats domestic, commercial and industrial wastewater from a service area with a population of approximately 217,000. The following contributors and associated populations contribute to influent flows to the SBSA Wastewater Treatment Plant: West Bay Sanitary District (population 55,000), the cities of Belmont (25,123), San Carlos (22,718), Redwood City (75,402), Woodside (5,352), and San Mateo County (28,637).*

*SBSA's conveyance system consists of four pump stations, which receive wastewater from the satellite wastewater collection systems of four municipal jurisdictions (i.e., West Bay Sanitary District, City of Belmont, City of San Carlos and City of Redwood City), and approximately eight miles of force main that convey wastewater to the WWTP. Influent is gravity fed to the four pump stations located within the four municipal jurisdictions and conveyed through the force main to the SBSA ~~influent pump station~~ treatment facility. The SBSA Joint Powers Authority (JPA) Agreement has established contractual flow limits for each of the four member agencies. This limits the flow entering the four SBSA pump stations. Wastewater passes from the pump stations ~~thorough~~ through the force main to the primary sedimentation basins. During wet weather the Booster Station and the Influent Lift Station may be used to handle elevated flow rates in the force main. One member agency owns a flow equalization basin that may be used by SBSA to reduce that agency's flow to the SBSA force main.*

*Wastewater treatment consists of primary sedimentation using clarifiers, biological treatment using fixed film reactors and activated sludge, secondary sedimentation, effluent filtration using dual- or mono-media filters, disinfection using hypochlorite, and dechlorination using sodium bisulfite. Sludge is treated by gravity thickening, anaerobic digestion and dewatered by high-speed centrifuge or air dried using sludge drying beds. Final sludge cake and air-dried sludge is disposed via landfill~~ing~~ or used as alternative daily cover.*

*Treated wastewater is discharged from Discharge Point 001 through a submerged diffuser located 2.3 miles southeast of the center span of the San Mateo-Hayward Bridge into the Lower San Francisco Bay, a water of the State and United States. The diffuser is located 6,700 feet offshore in the main shipping channel at a depth of 45 feet below the water surface at mean lower low tide. The Foster City shoreline is located 1.7 to 4.0 miles from the discharge point; shellfish beds may exist on the Foster City shoreline. Note: these measurements are derived from NOAA chart no. 18651, San Francisco Bay Southern Part (40th edition July 25, 1995).*

*In 2005, SBSA treated an average of 18.5 mgd with an average dry weather flow of 16.8 mgd and a peak wet weather flow rate of 71 mgd. The dry weather design flow for the facility is 29 mgd.*

*Since 2000, SBSA has produced up to 0.25 mgd of tertiary treated, "unrestricted use" effluent for recycle/reuse by an SBSA landscape impoundment and by the City of Redwood City for landscaping irrigation in the community. An additional chemical coagulation treatment step is used for recycled water. A coagulant polymer is injected ~~through a flash mixer~~ just prior to filtration. Construction is underway to install a 4.3 million gallon storage tank and recycled water chlorine contact tank and to expand the production capacity to meet a recycled water demand estimated at up to 2.5 mgd by midyear 2007. The new facilities are designed to meet future changes in recycled water demand over the foreseeable future. As a producer ~~and distributor~~ of non-potable recycled wastewater, the Discharger must comply with the applicable provisions of Order No. 96-011, General Water Reuse Requirements for Municipal Wastewater and Water Agencies.*

c. *Table F-5 on page F-7 should be edited as follows to include a footnote that briefly describes the text that follows the table. This text says SBSA has submitted evidence that adequate sodium bisulfate was added on these dates and therefore has contested three of the four exceedances listed in Table F-5:*

**Table F- 5. TRC Exceedances**

| Date of Violation [1] | Daily Maximum Effluent Limitation (mg/L) | Total Residual Chlorine Concentration – Instantaneous Maximum (mg/L) |
|---|---|---|
| January 27, 2001[2] | 0.0 | 0.2 |
| February 12, 2001[2] | 0.0 | 0.2 |
| June 25, 2002[2] | 0.0 | 0.3 |
| November 18, 2004 | 0.0 | 2.6 |

[1] Information on TRC violations were compiled by the Regional Water Board.

[2] The Discharger has submitted evidence that adequate sodium bisulfite was introduced and has contested these exceedances as "false positives."

d. *For consistency and clarification, section VI.D.2 on page F-48 should be edited as follows:*

*VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS (PROVISIONS B)*

*D. Whole Effluent Toxicity Testing Requirements*

*2. Chronic Toxicity. Chronic whole effluent toxicity testing is required ~~four~~ four times per year in order to demonstrate compliance with the Basin Plan's narrative toxicity objective.*

Response 5.

Aside from the comment regarding the dioxin-TEQ final limits (as discussed in Responses 1a through 1d above), we have made all the other revisions as requested. Please also see Editorial Revision 1.

## II. United States Environmental Protection Agency

USEPA commented on the compliance schedules in three Tentative Orders, including that for SBSA, as follows:

*USEPA Comment 1.*

*EPA has sent two recent letters to the State Water Resources Control Board (November 29, 2006, and October 23, 2006) clarifying EPA policy on the use of compliance schedules in NPDES permits. Two of the issues discussed in these letters are relevant to the Regional Water Board draft permits currently out for public comment. First, while compliance schedules may extend beyond the term of a 5-year permit, if this is the case, the final limits and the compliance schedule provisions must be placed in the enforceable portion of the permit. Second, it is not appropriate to authorize a compliance schedule in order to accommodate the need to complete a regulatory action such as development of a TMDL or site-specific objective; rather, the purpose of the compliance schedule is to give the permittee time to undertake actions to meet a water quality-based effluent limitation, and the compliance schedule needs to include an enforceable sequence of actions by the permittee to meet that limitation. Please review these letters and clarify how the proposed permits are consistent with EPA policy and 40 CFR 122.47.*

Response 1.

The pollutants for which the Tentative Order proposes to grant compliance schedules (cyanide and dioxin-TEQ) already have final limits and compliance schedule provisions specified in the enforceable portion of the permit. However, to more clearly show the sequence of actions that were originally proposed to be required by the permit, we have revised the Tentative Order by replacing the text of Provision VI.C.2.d, which was based on TMDL development (which U.S. EPA has now disapproved), with the following:

d. Cyanide and Dioxin-TEQ Compliance Schedules

The Discharger shall comply with the following tasks and deadlines:

| Task | Deadline |
|---|---|
| 1. Implement source control measures identified in the Discharger's Infeasibility Report to reduce concentrations of cyanide and dioxin-TEQ to the treatment plant, and therefore to receiving waters. | Upon the effective date of this Order. |
| 2. The Discharger shall evaluate and report on the effectiveness of its source control measures in reducing concentrations of cyanide and dioxin-TEQ to its treatment plant. If previous measures have not been successful in enabling the Discharger to comply with final limits for cyanide and dioxin-TEQ, the Discharger shall also identify and implement additional source control measures to further reduce concentrations of these pollutants. If the cyanide SSO becomes effective and an alternate limit takes effect, the Discharger shall implement any applicable additional pollutant minimization measures described in Basin Plan implementation requirements associated with the cyanide SSO. | Annually in the Annual Best Management Practices and Pollutant Minimization Report required by Provision VI.C.3 |

| | |
|---|---|
| 3. In the event source control measures are insufficient for meeting final water quality-based effluent limits specified in Effluent Limitations and Discharge Specifications A.2 for cyanide and dioxin-TEQ, the Discharger shall submit a schedule for implementation of additional actions to reduce the concentrations of these pollutants. | July 1, 2009 for cyanide and dioxin-TEQ |
| 4. The Discharger shall commence implementation of the identified additional actions in accordance with the schedule submitted in task 3, above. | August 15, 2009. |
| 5. Full Compliance with IV. Effluent Limitations and Discharger Specifications A.2 for cyanide. | April 28, 2010 |
| 6. Full Compliance with IV. Effluent Limitations and Discharger Specifications A.2 for dioxin-TEQ. Alternatively, the Discharger may comply with the limit in IV through implementation of a mass offset strategy for dioxin-TEQ in accordance with policies in effect at that time. | January 31, 2012 |

In support of this compliance schedule provision, we revised the Fact Sheet to indicate that our basis for granting maximum allowable compliance schedules for cyanide and dioxin-TEQ is because of the considerable uncertainty in determining an effective measure (e.g., pollution prevention, treatment upgrades) that should be implemented to ensure compliance with final limits. In our view, it is appropriate to allow the Discharger sufficient time to first explore source control measures before requiring it to propose further actions, such as treatment plant upgrades, that are likely to be much more costly. This approach is supported by the Basin Plan (page 4-25), which states: "In general, it is often more economical to reduce overall pollutant loading into treatment systems than to install complex and expensive technology at the plant."

To reduce overlap with the revised Provision VI.C.2.d, we have also revised Provision VI.C.3.a, Best Management Practices and Pollutant Minimization Program, as follows:

> a. The Discharger shall continue to ~~implement and~~ improve, in a manner acceptable to the Executive Officer, its existing Pollutant Minimization Program to promote minimization of pollutant loadings ~~of cyanide, mercury and dioxin-TEQ~~ to the treatment plant and therefore to the receiving waters. ~~In addition, the Discharger shall implement any applicable additional pollutant minimization measures described in Basin Plan implementation requirements associated with the cyanide SSO if and when this SSO becomes effective and an alternate limit takes effect.~~

The Fact Sheet basis for Provision VI.C.3.a has also been revised to remove the citation to SIP 2.2.1 because it is no longer applicable to that provision.

Furthermore, in response to USEPA's recent disapproval of the SIP's TMDL-based compliance schedule provisions, and to remove duplication with the revised Provision VI.C.2.d, we have deleted Provision VI.C.4 and its associated Fact Sheet basis, and renumbered the subsequent provisions. This provision had required the Discharger support the cyanide SSO and dioxin-TEQ

TMDL efforts, and to submit a report by July 2009 to assure compliance with final limits. The second part of this requirement is now part of revised Provision VI.C.2.d.

## III. Bay Area Clean Water Agencies (BACWA)

*BACWA submitted nine comments on the SBSA Tentative Order*

*BACWA Comment 1.*
***Page 6, Finding F., Technology-Based Limits.*** *The tentative order states that "This Order includes technology-based effluent limitations based on Secondary Treatment Standards at 40 CFR Part 133 ~~and Best Professional Judgment (BPJ) in accordance with 40 CFR §125.3~~." The stricken part of this sentence should be removed as was done in the East Bay Dischargers Authority (EBDA) Permit as a consequence of BACWA comments.*

Response to Comment 1.
We have not made the requested change because the Revised Tentative Order specifies technology-based effluent limits based on BPJ for enterococci bacteria.

*BACWA Comment 2.*
***Page 6, Finding G, Water Quality-based Effluent Limitations.*** *This section should remove the reference to "a proposed state criterion" as proposed state criteria may not be used under state law, because to use "proposed" state criteria before formal adoption would be considered underground rulemaking.*

Response 2.
We have not made the change requested because we disagree with BACWA's contention. 40 CFR 122.44(d)(1)(vi) clearly states, "where a State has not established a water quality criterion …. such a criterion may be derived using a proposed State criterion…." Additionally, the language at issue is template language developed by the State Water Board, and BACWA has provided no convincing reason to change it.

*BACWA Comment 3.*
***Page 8, Finding M, Stringency of Requirements for Individual Pollutants.*** *The first and last sentences of this paragraph should be removed as legal conclusions not supported by evidence in the record. There are several instances where the permit requirements are more stringent than required by the federal Clean Water Act.*

Response 3.
We have not made the requested change because we disagree with BACWA's contention that unspecified requirements of the Tentative Order are more stringent than required by the federal Clean Water Act. BACWA does not specify which permit requirements they claim are more stringent than required by the Clean Water Act; it is therefore impossible make a more specific reply to this comment.

*BACWA Comment 4.*
***Page 9, Discharge Prohibitions A and B.*** *The language for these prohibitions in the EBDA permit adopted August 9, 2006 was made consistent with the new statewide Sanitary Sewer Overflow (SSO) Waste Discharge Requirements (WDR). In particular, the aim was to not incur overlap in the regulatory mechanisms between this NPDES permit and the statewide SSO WDR. To be consistent with the EBDA permit, the prohibitions language should be revised as follows:*

### *III. DISCHARGE PROHIBITIONS*

***A***. *Discharge of treated wastewater at a location or in a manner different from that described in this Order is prohibited.*

***B.*** *Discharge ~~of wastewater into Lower San Francisco Bay,~~ at any point at which the treated wastewater ~~where it~~ does not receive an initial dilution of at least 10:1~~,~~ is prohibited.*

Response 4.
We concur with this comment and have made the requested revisions.

*BACWA Comment 5.*
***Page 11, Bacteria Effluent Limitation.*** *The SBSA Tentative Order has a 35 colonies/100 mL effluent limit in addition to their existing 500 MPN/100 mL fecal coliform limit. The Fact Sheet, page F-38 states that "This Order establishes a* water quality based effluent *limit for enterococci bacteria" (emphasis added). It also states "The limit in this Order, 35 colonies/100 mL, is based on applying the marine* water quality standard *for water contact ... (emphasis added). However, the Fact Sheet is silent on how this water quality-based effluent limit (WQBEL) was calculated from the water quality standards.*

*The Basin Plan, page 4-11, states, "Water quality based effluent limits* shall *be calculated from water quality objectives based on the following equation:*

*Ce = Co + D (Co - Cb) where D = assigned dilution ratio, Co = WQO and Cb = background concentration." (emphasis added)*

*The Basin Plan appears quite clear, and prescriptive, in that this formula and therefore dilution should be used in calculating enterococcus WQBELs. To not do so is contrary to the Basin Plan and would in effect, convert a water quality objective (WQO) directly to a performance-based effluent limit.*

*The REC-1, full immersion body contact beneficial use that the enterococcus WQO was derived to protect, does not exist at the outfall or within the zone of initial dilution. The point of application is at or near the surface at the nearest point where swimming, board surfing, or other potential full body contact recreation is likely to occur. It is therefore completely protective to calculate the WQBEL using dilution.*

*In the case of SBSA, this approach would even be very conservatively protective given that their 1996 receiving water study documented that there was no body contact recreation occurring in the vicinity of their outfall. That conclusion, as summarized on page F-38 of the Fact Sheet, was the basis for originally establishing the limited contact 500 MPN/100 mL fecal coliform limit in the prior permit. The issue of dilution was raised during the process of setting fecal coliform limits for SBSA (and San Mateo) in 1998, but was tabled since it was deemed, at that time, to be more appropriately dealt with through a Basin Plan amendment.*

*Enterococcus WQBELs calculated with dilution were included in the North San Mateo County Sanitation District permit just adopted in November 2006. Similar enterococcus WQBELs (based on dilution) were included in the Sewer Authority Mid-Coastside Permit adopted on December 13, 2007.*

Response 5.
Please see the response to SBSA's Comment 3. Also, the permits adopted for the North San Mateo County Sanitation District and the Sewer Authority Mid-Coastside were based on the Ocean Plan, because NSMCSD and SAM discharge to the Pacific Ocean rather than the San Francisco Bay. The Ocean Plan establishes background concentrations for certain pollutants and declares the background concentrations of all others, including enterococcus bacteria, to be zero. This allows the calculation of an enterococcus bacteria limit with dilution for ocean dischargers. Conversely, we cannot calculate an effluent limit with dilution under the Basin Plan without knowing the background concentration, and the background concentration of enterococcus bacteria is not known. Furthermore, as explained in our response to SBSA Comment 3, the basis for the enterococcus limit is technology-based and not water quality-based.

*BACWA Comment 6.*
***Page 14, Mercury Mass Limits.*** *BACWA incorporates by reference earlier legal arguments made in BACWA petitions for review of Bay Area permits adopted from 2000 through 2003 (e.g. Petition for Review of Central Contra Costa County Sanitation District's Permit, Appeal No. OCC A-1399 (a)), in order to preserve BACWA's legal rights to challenge the mercury mass limits should the mercury TMDL not be timely adopted or should it be adopted in a manner different than that currently proposed. BACWA intends to withdraw this comment or any legal action taken to enforce this comment once an acceptable mercury TMDL has been timely adopted and implemented.*

Response 6.
The State Water Board has upheld the Regional Water Board's imposition of mercury mass limits on all four occasions when it reviewed this issue. Specifically, the State Water Board upheld mercury mass limits in its decisions on the permits for Tosco (WQ 2001-06), Napa (WQ 2001-16), Chevron (WQ 2002-0011), and East Bay Municipal Utility District (WQ 2002-0012).

*BACWA Comment 7*
***Page 19, Paragraph VI.C.3. Best Management Practices and Pollutant Minimization Program.*** *Words such as "conduct," "implement," and "implementation" must be removed from this section of the permit related to Pollutant Minimization Programs (PMP) and Pollution Prevention Plans (PPP) in accordance with the SWRCB's precedential order in the Tosco Avon Refinery case, Order No. 2001-06. Under this case, the Regional Water Board lacks the authority to require incorporation of or "implementation" of a PMP or PPP in a state-issued permit.* See *Water Code §13263.3(k) ("a regional board . . . may not include a pollution prevention plan in an waste discharge requirements or other permit issued by that agency"); Order No. 2001-06 at 38-40 and 60, para. 9 (March 7, 2001)("The Regional Board cannot require in a permit that a discharger implement a pollution prevention plan.")(all emphasis added).*

*Under the Tosco decision, the State Board made no differentiation between PPPs and PMPs.* See *Order No. 2001-06 at 39 ("the Board treats a waste minimization plan the same as if it were labeled a pollution prevention plan."). The state law proscription against including PPPs in permits was to ensure that the contents of PPPs are not subject to citizen suits under the Clean Water Act.* Id. *In that case, the Board found that state law, at Water Code §13263.3, did not prevent a requirement in a permit to* prepare *a PPP/PMP.* Id. *at 40. However, a requirement to* implement *the plan was inconsistent with the process set forth in section 13263.3 because the Regional Water Board can only require a discharger to comply with the PPP "after providing an opportunity for comment at a public proceeding with regard to that plan."* Id. citing *Water Code §13263.3(e).*

*The only way to avoid this inconsistency with the law is for the permit to not include words such as implement or conduct or for the permit to expressly state that for any PPP or PMP, the permit does not incorporate this plan by reference into the permit.*

*In addition, BACWA requests that language be revised to reflect more realistic goals for pollutant loadings. Language should be revised to be consistent with the recently adopted Vallejo permit as follows:*

> a. *The Discharger shall continue to ~~implement and~~ improve, in a manner acceptable to the Executive Officer, its existing Pollutant Minimization Program to ~~reduce~~ promote minimization of pollutant loadings of copper, cyanide, mercury, and nickel to the treatment plant and therefore to the receiving waters. In addition, the Discharger shall implement any applicable additional pollutant minimization measures described in the Basin Plan's implementation requirements associated with the copper SSO and cyanide SSO if and when each of those SSOs become effective and alternate limits takes effect.*

*The "promote minimization of" language is consistent with the Vallejo Sanitation and Flood Control District permit adopted on August 9, 2006.*

Response 7.

We disagree with BACWA's contentions. The Pollutant Minimization Program (PMP) required by Provision VI.C.3 of the Tentative Order is different than the Pollutant Prevention Plan (PPP) authorized by CWC section 13263.3, and is also different from the PMP required in the Tosco permit and the associated State Water Board Order WQ 2001-06. In order to be a PPP within the ambit of CWC section 13263.3, it must be authorized under that section and meet the requirements of what a PPP must contain. The PMP is neither authorized under section 13263.3, nor does it satisfy the required elements for what a PPP must include under subsection (d)(3). Instead, the PMP in the SBSA Tentative Order is authorized under SIP 2.2.1 and 2.4.5 (see Fact Sheet at F-49). Both SIP 2.2.1 and 2.4.5 provide the Regional Water Board with the authority to require a PMP as defined in the SIP. For pollutants with compliance schedules, SIP 2.2.1 states that the Regional Water Board "may also impose interim requirement to control the pollutant, such as pollutant minimization and source control measures." When there is evidence that a pollutant is above an effluent limit, SIP 2.4.5 states, "Dischargers shall be required to conduct a Pollutant Minimization Program …."

We have revised Section VI.C.3.a of the Tentative Order consistent with BACWA's second request as follows:

a The Discharger shall continue to ~~implement and~~ improve, in a manner acceptable to the Executive Officer, its existing Pollutant Minimization Program to promote minimization of pollutant loadings ~~of copper, cyanide, mercury, and nickel~~ to the treatment plant and therefore to the receiving waters. ~~In addition, the Discharger shall implement any applicable additional pollutant minimization measures described in Basin Plan implementation requirements associated with the copper SSO and cyanide SSO if and when each of those SSOs become effective and alternate limits take effect.~~

*BACWA Comment 8.*

***Page 16 and F-28, VI.C.4., Requirement to Support SSO and TMDL, and Assure Compliance with Final Limits.*** *BACWA believes it is inappropriate to require, in advance, pollutant reductions by permittees starting July 1, 2009, in the event site-specific objectives and TMDLs are not developed. In some cases, municipal governments around the Bay Area have contributed millions of dollars to conduct studies, the technical work is complete, and peer review is complete. The only activity that remains is the Basin Plan Amendment adoption and approval process, over which the permittees have no control. In other cases, such as the dioxin TMDL, work has not even begun, through no fault of BACWA, or the agencies it represents. In addition, this provision assumes that wholly new technologies capable of reducing trace contaminants from POTW effluent can be developed in a few months. Moreover, the need for these technologies is extremely doubtful, and in any event no agency should be put in the position of having to develop technologies that would obviate the need for TMDLs. BACWA has supported timely and appropriate action by the Regional Water Board to adopt TMDLs and SSOs. Completion of this critical work will render this entire issue moot. If these BPA are not approved in a timely manner, we hope that together we can consider what the next steps will be. We request that the language should revised as follows:*

*(page 21)*

4. ***Requirement to Support SSO and TMDL, and Assure Compliance with Final Limits.***

*This Order grants a compliance schedule for cyanide, alternate final limits for cyanide and copper based on pending SSOs, and dioxin-TEQ based on TMDLs. The Discharger shall participate in and support the development of the cyanide SSO, copper SSO, and dioxin-TEQ and PCB TMDLs.* ~~*In the event the cyanide SSO, or copper SSO, or dioxin-TEQ TMDL are not developed by July 1, 2009, the Discharger shall submit by July 1, 2009, a schedule that documents how it will further reduce cyanide, copper, and/or dioxin-TEQ concentrations as necessary to 1) ensure compliance with the final limits specified in Section IV, Effluent Limitations and Discharge Specifications, or 2) through a mass offset strategy in accordance with policies in effect at that time. Under the latter scenario, a permit amendment will be necessary to implement the strategy.*~~

*(page F-50)*

4. ***Requirement to Support SSO and TMDL, and Assure Compliance Schedules with Final Limits***

   *…~~However, should the TMDL and SSO not be completed in time, the Discharger will need to reduce its discharge concentrations to meet the final WQBELs in this Order. As such, this requirement is necessary to identify additional steps for the Discharger to take to comply with the final limits specified in this Order. Finally, because of the ubiquitous nature of the sources of dioxin-TEQ, this provision also allows the Discharge to address compliance with calculated WQBELs through other strategies such as mass offsets.~~*

Response 8.
Compliance schedules are intended to allow dischargers time to come into compliance. If dischargers cannot comply with WQBELs, actions are necessary to achieve compliance with final limits. The requested revisions amount to exempting the Discharger from final limits on the contaminants in question. For compliance schedules that end within the term of the permit, SIP Section 2.2.1 and federal regulations require that permits contain final limits.

*BACWA Comment 9.*
***Page F-33, Dioxin-TEQ.*** *BACWA is very concerned that the Regional Water Board has included a numeric final effluent limit for dioxin TEQ in the SBSA Tentative Order. There are numerous legal issues that do not support this action as referenced in the SBSA comment letter (Exhibit 1). BACWA recommends, primarily because there is no approved numeric limit for dioxin TEQ, that the numeric final effluent limit be removed. BACWA requests that the permit be changed to be consistent with recently adopted permits for discharges with reasonable potential based on dioxin TEQ, such as the Vallejo Sanitation and Flood Control District NPDES permit adopted on August 9, 2006. There should be no mass or concentration effluent limit for dioxin-TEQ.*

Response 9.
Please see the responses above to SBSA's Comments 1a through 1d.

While the reasonable potential analysis for the Vallejo Sanitation and Flood Control District (VSFCD) resulted in reasonable potential for dioxin-TEQ, the data were not sufficient to calculate either final or interim effluent limits. VSFCD's NPDES permit therefore requires additional monitoring for dioxin and furan compounds, and contains a provision to reopen the permit to include interim and final limits, as appropriate, when additional data become available. This is not the case for SBSA, whose data not only demonstrate reasonable potential for dioxin-TEQ, but is also sufficient to calculate final and interim limits.

## IV. Baykeeper

Baykeeper provides summaries of its main points in the introduction to its comment letter with details in separate sections that follow. The responses below address only the detailed comments to avoid duplication. Also, Baykeeper's comments are numbered A through J, with sub-comments indicated by Arabic numerals. We have renumbered them 1 through 10, and indicated sub-comments by lowercase letters where necessary. This is for clarity and consistency with the rest of this Response to Comments.

*Baykeeper Comment 1. The Compliance Schedule Provisions are Inconsistent with Federal and State Law.*

a. *No legal basis exists for the granting of compliance schedules for dioxin-TEQ and cyanide.*

*The Tentative Order's compliance schedules and interim limits for dioxin-TEQ and cyanide are not authorized by law. The federal Clean Water Act allows states to provide permitees time to comply with permit limitations based upon new or revised water quality standards as long as applicable laws or standards clearly provide for such compliance schedules. 33 U.S.C. § 1313(e)(3)(A), (F); 40 C.F.R. § 130.5(b)(1), (6). Compliance schedules in permits issued by the San Francisco Regional Water Board ("Regional Board") may be based on (1) the California Toxics Rule, 40 C.F.R. § 131.38(e); (2) the State's implementation plan for the control of toxic pollutants ("SIP"), Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, Section 2, p. 20 (2005); or (3) the San Francisco Basin Plan. Neither the CTR, the SIP nor the Basin Plan, however, provides a basis for the compliance schedules contained in the draft permit.*

*The draft permit contains a compliance schedule and final effluent limit for dioxin-TEQ based on the CTR and the CTR criteria of 1.4 x 10-8 µg/L. The CTR provision authorizing compliance schedules, however, expired on May 18, 2005. 40 C.F.R. § 131.38(e)(8). The federal rule provides that compliance schedules can only be issued after May 2005, if (1) the State Board adopts and EPA approves a policy authorizing compliance schedules, and (2) EPA acts to "stay the authorizing compliance schedule provisions in [the CTR]." 65 Fed. Reg. 31704 (May 18, 2000). While EPA has approved the some portions of the SIP, the agency has not acted to stay the sunset of the CTR compliance schedule provisions. Therefore, no permit issued after May 18, 2005, including this one, can contain compliance schedules for water quality based effluent limits ("WQBELs") based on CTR-criteria.*

*The Tentative Order's compliance schedules for dioxin-TEQ and cyanide are also inconsistent with the Basin Plan. The San Francisco Bay Basin Plan provides that the Board may consider compliance schedules for "newly adopted objectives or standards as NPDES permit conditions." The numeric criteria relied upon in the permit for dioxin-TEQ was published in the CTR in 2000, and the cyanide criteria was published in the National Toxics Rule ("NTR") in 1996. 40 C.F.R. § 131.38(b)(1); 40 C.F.R. § 131.36(b)(1). Clearly, the bases for the dioxin-TEQ and cyanide WQBELs are not new. Therefore, the Basin Plan does not authorize compliance schedules for these limits.*

Response 1a.
We have not made changes in response to this comment because the Tentative Order proposes compliance schedules that are lawfully granted. The Tentative Order specifies compliance schedules for cyanide and dioxin-TEQ. As noted in the Fact Sheet, the cyanide water quality criterion is based on the NTR, and the dioxin-TEQ water quality objective is based on the Basin Plan narrative water quality objective for bioaccumulation (not the CTR criteria for 2,3,7,8-TCDD), translated into a numeric limit expressed in terms of 2,3,7,8-TCDD equivalents. In both cases, the compliance schedules are based on the Basin Plan's compliance schedule provision in Chapter 4. The preamble to the NTR states that schedules of compliance for NTR criteria are not provided in the NTR but are available if authorized by State law. The Basin Plan states that compliance schedules are timed from when new objectives and standards take effect. The Regional Water Board has reasonably construed this provision to authorize compliance schedules for new interpretations of existing standards, such as for cyanide, if the new interpretations result in more stringent limits, which construction has been upheld by the State Water Board in Order WQ 2001-06 (the "Tosco Order") and recently by the California Court of Appeal in Communities for a Better Environment, et al. v. State Water Resources Control Board, et al., 2005 WL 2065306 (Cal. App. 1 Dist.)

In this case, the adoption of the SIP results in new interpretations of the existing standards for cyanide and more stringent limits. The effective date of this new interpretation is the effective date of the SIP (April 28, 2000). For dioxin-TEQ, because it is translated from a narrative objective, the effective date is when it was first placed in the previous permit.

The table below illustrates how the Basin Plan water quality objective for cyanide was made more stringent as a result of the SIP (all units in ug/l).

| Cyanide Objective | Basin Plan WQBEL | | SIP WQBEL | |
|---|---|---|---|---|
| | MDEL | AMEL | MDEL | AMEL |
| 1.0 | 10 | not required | 6.4 | 3.3 |

*b. The compliance schedules and interim limits lack enforceable interim requirements likely to lead to compliance.*

*Even if the use of compliance schedules is lawful, the permit's schedules and interim limitations are inadequate to meet federal and state requirements. The Clean Water Act defines compliance schedules as "an enforceable series of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard." 33 U.S.C. §1362(a). Similarly, the SIP directs the Regional Board to "establish interim requirements and dates for their achievement in the NPDES permit." SIP at 22. Both regulations clearly contemplate that a compliance schedule contains specific, enforceable milestones that will eventually lead to attainment of applicable standards. See also letter to Tom Howard, Acting Executive Director, SWRCB from Alexis Strauss, Water Division Director, EPA, dated November 29, 2006 ("the Regional Board, when it issues permits, must nevertheless establish enforceable requirements leading to compliance with the final effluent limitation").*

*No provision of the current Tentative Order requires SBSA to undertake actions that are designed or otherwise intended to lead to compliance with the final effluent limitations. Rather, the permit merely requires the discharger (1) provide status reports on their efforts in support of SSOs or TMDLs, (2) continue to implement and improve their existing Pollutant Minimization Programs, and (3) submit, by July 1, 2009, a schedule of how it will reduce cyanide, copper and dioxin-TEQ to ensure compliance with the final limits. None of these actions are likely to result in compliance within the timeframe required by the permit. In fact, the required study is not even required until ten months before the final cyanide limits become effective. We ask that, if compliance schedules are included in the permit, that they consist of concrete, required actions that, if implemented in a timely manner, will lead to attainment of WQBELs.*

Response 1b.

Please see the response to U.S. EPA's comment for the revisions we have made to the Tentative Order to more clearly describe the enforceable interim requirements that were originally proposed and that are intended to lead to compliance with the cyanide and dioxin-TEQ final limits.

*c. Inadequate information exists to determine infeasibility.*

*Demonstration of infeasibility to immediately comply with final effluent limitations is a perquisite to the issuance of compliance schedules. The Regional Board's infeasibility analyses for cyanide and dioxin-TEQ are impermissibly based solely on the discharger's past discharge monitoring data, which showed concentrations in the effluent that exceed the WQBELs. The fact sheet recites no evidence and provides no analysis of whether SBSA could feasibly comply with WQBELs by changing operations and maintenance practices, installing equipment, changing administration of its pretreatment program, improving staff training, or taking other available measures. It is insufficient to assume, without any evidence or analysis, that a history of discharging pollutant levels exceeding a WQBEL means compliance with a WQBEL is infeasible.*

*Moreover, the fact sheet lacks any evidence or analysis concerning what measures SBSA should or could employ to comply with the WQBELs and the minimum time SBSA could reasonably be required to employ these measures. Rather than limiting the compliance schedule to the time SBSA could reasonably be expected to come into compliance with WQBELs, the draft permit allows SBSA's compliance schedule to last until the last possible date. In so doing, the Regional Board has failed to comply with 40 C.F.R. §§ 122.47(a)(1) and 131.38(e)(4) which require that compliance schedules "require compliance as soon as possible."*

*Additionally, the fact sheet improperly concludes that upgrades to reduce dioxins and furans would be "overly burdensome and [] not cost effective for the benefits received." The record, however, lacks any evidence supporting this assertion. The fact sheet does not identify any consideration of changes to operation and maintenance or capital infrastructure that might reduce the level of dioxins discharged. The fact sheet also lacks*

*any analysis of the costs of meeting the dioxins limit or the value of reductions. Finally, under the Clean Water Act, it is impermissible for the Regional Board to evaluate the costs of complying with water quality standards as a basis for setting WQBELs. The latter are to be set at the level needed to attain applicable standards, regardless of cost.*

Response 1c.
The Board is not merely assuming that it is infeasible for SBSA to comply. SBSA's discharge record shows that it cannot comply and that there have been exceedances of its cyanide and dioxin limits. SBSA operates a well-maintained advanced-secondary treatment POTW, producing a significant volume of unrestricted-use reclaimed effluent, and meeting limits, such as those for total suspended solids and carbonaceous biological oxygen demand, that are more stringent than those for many secondary POTWs. Even so, it may not be possible to increase removal of dioxin and furan compounds without further upgrades to the facility. Dioxins and furans compounds are in laundry graywater and domestic waste. These sources are not within SBSA's control. For cyanide, SBSA has already implemented a pretreatment program, which has resulted in a significant decrease in cyanide levels entering (and thus being discharged from) the plant. The foregoing, combined with SBSA's past exceedances, strongly supports the finding that it is infeasible for SBSA to immediately comply with the final WQBELs for cyanide and dioxin-TEQ.

As indicated above, the final WQBELs for cyanide and dioxin-TEQ are difficult technical challenges that SBSA needs time to meet. The compliance schedules for these pollutants are therefore set at the maximum legal duration. We believe this is the most reasonable approach to take because of the difficulty involved in meeting the final limits.

To address Baykeeper's final concern in the above comment, the conclusion that plant upgrades "could be overly burdensome and not cost effective for the benefits received" has been struck from the Fact Sheet. We reiterate that it is the infeasibility for SBSA to comply immediately with the WQBEL for dioxin-TEQ, not the cost to comply, that is our criterion for granting SBSA a compliance schedule.

*Baykeeper Comment 2.*
*Relaxation of limits for copper, nickel, and cyanide violates the CWA's prohibition on backsliding.*

*The Clean Water Act's antibacksliding policy was adopted in order to implement the Act's "national goal that the discharge of pollutants into the navigable waters be eliminated by 1985." 33 U.S.C. § 1251; 49 Fed. Reg. 37,898, 38,019 (September 26, 1984). It states that a permit may not be renewed or reissued with less stringent effluent limitations than those contained in the previous permit. 33 U.S.C. § 13429(o), 40 C.F.R. § 122.4(l)(1). The draft permit violates the antibacksliding policy by relaxing the limits for copper, nickel, and cyanide. The sole justification offered for the higher limits—that the previous ones were interim limits—is unpersuasive. Implicit in the notion of interim limits is the understanding that subsequent limits will be more, not less stringent. Increasing the amount of a pollutant that a facility can discharge based solely on the fact that the permit lacked a final limit runs counter to the purpose of the antibacksliding policy and the goals of the Clean Water Act.*

Response 2.
We disagree with Baykeeper's assertion that the new limits for copper, nickel, and cyanide violate the CWA's prohibition against backsliding.

The interim limits for copper and nickel in Order 01-012 were based on the 99.87$^{th}$ percentile of the distribution of effluent pollutant concentrations during the term of the previous Order (i.e., were performance based). They are thus not comparable to a WQBEL (or a technology-based limit). No WQBEL was ever previously imposed for copper, nickel, or cyanide emitted by this Discharger. Therefore, there is no comparable effluent limit from which to backslide for these pollutants.

The final limits for copper and nickel are WQBELs calculated by applying site specific translators and water effects ratios (WER) developed by the Clean Estuary Partnership (CEP), as stated in Fact Sheet Sections IV.C.2.f, IV.C.4.d(1)(c), and IV.C.4.d(3)(c). The final limits for copper and nickel are therefore based on sounder scientific data and more accurate calculations of effluent limits than the previous interim limits. These final limits are imposed immediately because it is feasible for the Discharger to comply with them.

Order 01-012 did not include a final effluent limit for cyanide due to a lack of background data. Compliance with the proposed WQBELs for cyanide calculated according to SIP procedures is not feasible at this time. Cyanide is therefore still subject to interim limits per the terms of its compliance schedule. Because the applicable most stringent criteria for cyanide are established by the NTR rather than the CTR, it is subject to the compliance schedule provisions of the Basin Plan rather than the SIP, and the Basin Plan is silent on how interim limits are to be developed. Although we do not agree that the proposed interim limit of 21 ug/L would violate the prohibition against backsliding, to be conservative we have amended the Tentative Order to retain the previous interim limit for cyanide of 18 ug/L. We have revised the Tentative Order accordingly as follows:

Table 8: Interim Effluent Limitations

**Table 8. Interim Effluent Limitations**

| Parameter | Units | Effluent Limitations | | | |
|---|---|---|---|---|---|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum |
| Cyanide (1) | µg/L | --- | 18~~21~~ | --- | --- |
| Dioxin-TEQ | (2) | (2) | (2) | (2) | (2) |

Fact Sheet Section IV.C.4.e.(4).(e)

(e) *Interim Effluent Limitation*. Because it is infeasible for the Discharger to immediately comply with the final WQBELs for cyanide, an interim effluent limitation is required. ~~Regional Water Board staff considered the Discharger's effluent data from April 2003 through March 2006 and established the 99.87$^{th}$ percentile of the data set (21 µg/L) as a~~

~~maximum daily interim effluent limitation, replacing t~~The interim limitation of a maximum daily concentration of 18 µg/L is being retained from Order No. 01-012.

Fact Sheet Section IV.E.1.c

Determination of Interim Effluent Limitations. Interim effluent limitations were derived for cyanide as the Discharger has shown infeasibility of complying with final limitations and has demonstrated that compliance schedules are justified based on the Discharger's source control and pollution minimization efforts in the past and continued efforts in the present and future. The SIP requires that interim numeric effluent limitations for cyanide be based on either interim performance-based limitations or previous permit limitations, whichever is more stringent.

Regional Water Board staff considered the Discharger's effluent data from April 2003 through March 2006 and ~~established~~ found that the 99.87th percentile of the data set (21 µg/L) exceeded the existing ~~as a~~ maximum daily interim (performance-based) effluent limitation~~, replacing the interim limitation~~ of 18 µg/L is from Order No. 01-012. The more stringent limit of 18 ug/L is retained by this Order.

The proposed alternate effluent limits for cyanide, calculated based on site-specific data, if imposed, would not violate the prohibition against backsliding for the same reasons the copper and nickel final limits do not.

*Baykeeper Comment 3*

*The permit fails to demonstrate how compliance with the dioxin-TEQ limit will be determined. Based on the permit and accompanying monitoring provisions, it is unclear how compliance with the dioxin-TEQ effluent limit will be determined for two reasons. First, the numeric limit for dioxin is expressed as a monthly mass limit, yet effluent monitoring is required only twice a year. Nothing in the monitoring provisions or the fact sheet indicates how compliance with monthly mass limit can be determined through yearly monitoring and whether this frequency of monitoring will produce representative results. The permit should be amended to require monthly monitoring and a demonstration that monthly grab samples will generate data that is representative of the discharge.*

*Second, the ML for dioxin TEQ is unclear and not reflected in Table E-1 of the monitoring provisions on page E-3 of the Tentative Order Although the permit states that the ML is one half of that specified for EPA Method 1613, it should contain an actual numeric ML. EPA regulations approving Method 1613 support an ML of 10 x $10^{-15}$. 62 Fed. Reg. 48395, 48399 (September 15, 1997). Therefore, the ML for dioxin-TEQ should be 5 x $10^{-15}$ and should be included in Table E-1.*

Response 3

Regardless of the frequency at which dioxin-TEQ is monitored, the Regional Water Board would still be in the position of extrapolating the results to determine compliance with limits based on different time frames, e.g., in the case of a single monthly sample being used to evaluate compliance with a monthly average; or, conversely, a monthly sample being used to evaluate compliance with a daily maximum. The dioxin-TEQ monitoring frequency required by the Tentative Order is consistent with monitoring requirements for dioxin-TEQ and other priority pollutants in other Region 2 permits. Dioxin-TEQ analytical results will be used to evaluate

compliance during the month that each sample is collected. Semi-annual sampling should occur once in the wet season and once during the dry season, as specified in MRP Section X.B, Dioxin Monitoring, providing a representative result from each season.

Dioxin-TEQ is calculated using TEFs applied to the concentrations of each dioxin and furan congener, and the MLs vary between congeners. It is therefore not possible to specify a numerical ML for dioxin-TEQ. Instead, we have specified that the ML for each congener must be ½ that specified by EPA Method 1613. This also due to the fact that the MLs specified by EPA 1613 are based on the past performance of nationwide laboratories, and lower MLs are now commercially achievable at California laboratories.

*Baykeeper Comment 4a*
*The Bypass/Blending provisions are contrary to applicable regulations.*

*a. The draft permit must specify under what conditions no feasible alternatives exist for anticipated bypasses.*

*The draft permit authorizes anticipated bypasses but fails to include the required feasibility determination. Anticipated bypasses may be allowed provided that they meet all the requirements of 40 C.F.R. § 122.41(m)(4), which requires, in part, that no feasible alternatives exist. As the EPA pointed out in their comments on the recently-approved East Bay Dischargers Authority permit, anticipated bypasses may only be approved in the permit after analysis and implementation of all feasible alternatives. Letter to Lila Tang from EPA regarding NPDES Permit No. CA 0037699, July 12, 2006. Furthermore, the conclusions of the feasibility analysis must be stated in the permit findings and the permit must include the specific conditions under which the discharge may occur, including minimum wet weather flow rates. Id. In order to comply with federal regulations, the draft permit must be amended to include a thorough feasibility analysis if it is to authorize anticipated bypasses.*

Response 4a.
The Regional Water Board does not anticipate that SBSA will bypass raw or partially (i.e., less than secondary) treated sewage around the plant or around any major treatment unit within the plant. A feasibility analysis for anticipated bypasses is therefore unnecessary. SBSA's flow capacity of 29 MGD average and 71 MGD peak is well over their average flow of 18.5 MGD and peak flow of 49.6 MGD in 2005. Although this does not eliminate the possibility of a bypass (e.g., due to a natural disaster), it leads us to expect that routine wet weather bypasses of biological treatment units will not occur.

The Commentor may be referring to Section III.C of the Tentative Order, which includes the following text:

> *"Taking portions of process units out of service and partial bypassing of dual- or mono-media filters performed in accordance with provisions of an Operational Plan submitted by the Discharger and approved by the Executive Officer shall not be considered "bypasses" or violations of this Order."*

This refers to taking some process tanks from service for either preventative or corrective maintenance; or placing process tanks on stand-by during dry weather conditions; or routing

some secondary effluent around the filtration units during significant wet weather events. All SBSA effluent receives full secondary treatment, and must meet stringent effluent limits at all times. This does not constitute 'bypass' prohibited by federal law.

*Baykeeper Comment 4b*

*b. Monitoring of bypasses should be required for all pollutants for which the permit contains effluent limits.*

*The draft permit allows bypasses in certain situations provided that discharge and receiving water limitations are achieved, yet the permit appear to not require any chemical monitoring. Dischargers must monitor bypasses for all parameters in order to demonstrate compliance. Section X.B.1.2 of the Monitoring and Reporting Program should be amended to either require monitoring for all effluent constituents for which there are permit effluent limitations.*

Response 4b.

Revision of the Tentative Order is unnecessary. Attachment G *Self-Monitoring Program, Part A*, at section C.2.h. already requires that "when any type of bypass occurs, composite samples shall be collected on a daily basis for all constituents at all affected discharge points which have effluent limits."

*Baykeeper Comment 4c*

*c. The Operational Plan exemption for bypasses is illegal.*

*The following provision in the draft permit is illegal, objectionable and should be deleted: "taking portions of process units out of service and partial bypassing of dual- or mono-media filters performed in accordance with provisions of an Operational Plan submitted by the Discharger and approved by the Executive Officer shall not be considered "bypasses" or violations of this Order." Discharge Prohibitions, ¶ III.C. First, this clause authorizes the Executive Officer unilaterally, without public notice or comment, to amend the permit to authorize certain discharges that the permit, as currently framed, does not authorize. The Executive Officer will receive and approve the Operational Plan, thus amending the Permit, without giving the public an opportunity to comment on the Plan and perhaps persuade the Executive Officer to reject or require modification to the Plan. This violates 40 C.F.R. §§ 124.5(c), 124.6(d) and 124.10 and 23 Cal. Code of Reg. § 2235.2 ("Waste discharge requirements for discharge from point sources to navigable waters shall be issued and administered in accordance with the currently applicable federal regulations for the ... NPDES program") which mandate that the Regional Board issue public notice and take and respond to public comment before modifying an NPDES permit. Envtl. Def. Ctr., Inc. v. EPA, 344 F.3d 832 (9th Cir. 2003). Two, this clause fails to limit the Executive Officer to approving only such Operational Plans as would allow bypasses that comport with 40 C.F.R. § 122.41(m).*

Response 4c.

We disagree that this provision of the permit allows the Executive Officer to unilaterally authorize discharges that the permit as currently framed does not. This provision, retained from Order 01-012, merely clarifies that taking portions of process units out of service temporarily and partially bypassing full mono- or dual-media filtration as part of a planned operations

program consistent with terms of the Tentative Order and approved by the Regional Water Board, does not constitute a 'bypass' prohibited by federal law. At no time will influent wastewater to the SBSA plant receive less than secondary-level treatment. The conditions of the permit will be in effect at all times and the Discharger will be subject to enforcement action for any violations of its terms, including those prohibiting bypass, that may occur, regardless of the Operational Plan. It is in the Discharger's best interest to propose an Operational Plan that will not lead to violations of the terms of this permit.

Also, we disagree that the Operational Plan, or any other routine report or plan submitted to the Regional Water Board, need go through public comment, as it does not affect the permit's prohibitions, limitations, or provisions. The Operational Plan will be a public document and will be obtainable through a public records request (either formal or informal) if anyone wishes to see it.

We also disagree that this clause fails to limit the Executive Officer to approving only such Operational Plans as would allow bypasses that comport with 40 C.F.R. § 122.41(m). First, the text in this section (Section III.C) explicitly prohibits bypass that does not comport with 40 CFR 122.41(m), and specifically states that taking portions of process units out of service or partial bypassing of dual- or mono-media filters consistent with an approved Operational Plan isn't a bypass pursuant to 40 CFR 122.41(m). Second, the Executive Officer does not have the power to amend federal (or State) law; therefore, approval of an Operational Plan allowing bypass that does not comport with 40 C.F.R. § 122.41(m) would be illegal. Any bypass that violates 40 C.F.R 122.41(m), or any of the federal Standard Provisions (Attachment D) would be illegal and subject to enforcement action regardless of the Operational Plan.

*Baykeeper Comment 5*
*The Tentative Order should incorporate the State Board's Waste Discharge Requirements for Sanitary Sewer Systems.*

*All permits issued to wastewater collection facilities should thoroughly address and incorporate the requirements of the State Water Resource Control Board's Statewide General WDR for Wastewater Collection Agencies ("General Order"). Order No. 2006-0003-DWQ (May 2, 2006). The primary goal of the General Order is to provide a basis for a consistent statewide approach to regulation of sanitary sewer overflows ("SSOs"). Because the draft permit also regulates SSOs, it should be explicitly reconciled with the terms of the General Order. Incorporating the applicable General Order requirements into the permit will ensure consistency and reduce confusion. For example, the SSO reporting requirements of Region 2 differ from those laid out in the General Order. To minimize uncertainty, the permit should specifically explain how those two reporting requirements are to be reconciled.*

*In order to ensure consistency and reduce confusion, Baykeeper recommends the following changes as a starting point to reconciling the permit with the General Order. These changes are not intended to be exhaustive.*

*a. Amend Section III– Discharge Prohibitions– to incorporate the General Order's two prohibitions on the discharge of waste as the result of SSOs.*

*b. Change Section VI.7.c– Sanitary Sewer System Overflow and Sewer System Management Plan– to state that the Discharger's collection system is subject to the General Order.*

*c. Remove the sentence in Section VI.7.c that states that compliance with the General Order constitutes compliance with the permit's federal NPDES requirements.*

*d. Amend the Monitoring and Reporting Program to incorporate the General Order requirements and reconcile any applicable Region 2 requirements.*

Response 5

Where the Commentor refers to Section VI.7.c, Sanitary Sewer System Overflow and Sewer System Management Plan, we believe they intended to refer to Section VI.C.6.c, Sanitary Sewer System Overflow and Sewer System Management Plan.

Regarding a and d above, we are denying this request because the Discharger is already required to enroll in the State Water Board's General Collection System WDR, so incorporating these requirements in the NPDES Permit would be duplicative. Additionally, in adopting the General Collection System WDR, the State Water Board made a choice to establish the requirements through Waste Discharge Requirements, not an NPDES Permit. The reason was that not all sanitary sewer overflows will result in discharges to surface water leading to violations of the Clean Water Act. Furthermore, the State Water Board indicated that, even though collection systems have the potential to overflow to surface waters, this is not grounds for including such requirements under an NPDES Permit. This is because the United States Court of Appeals for the 2nd Circuit called into question the states' and USEPA's ability to regulate discharges that are only "potential" under an NPDES Permit. For these same reasons, we believe it is appropriate to not incorporate the elements of the General Collection System WDR into individual NPDES Permits.

Regarding b above, Section VI.C.6.c, Sanitary Sewer Overflows and Sewer System Management Plan, states *"While the Discharger* must comply with both the General Waste Discharge Requirements for Collection System Agencies (General Collection System WDR) *and this Order, the General Collection System WDR more clearly and specifically stipulates requirements for operation and maintenance and for reporting and mitigating sanitary sewer overflows"* (emphasis added). Thus, the permit does state that the Discharger's collection system is subject to the General Collection System WDR.

Regarding c above, the statement "Compliance with these requirements will also satisfy the federal NPDES requirements specified in this Order" does not appear in the Tentative Order.

*Baykeeper Comment 6*

*The permit should require 85% BOD removal from October 1 through April 30.*

*The draft permit requires 85% percent removal of carbonanceous biological oxygen demand (CBOD) during the timeframe, May 1 to September 30, when the permit imposes a CBOD limit. While the permit is ambiguous, it appears to impose no CBOD or biochemical oxygen demand (BOD) percent removal requirement from October 1 to April 30. Deletion of the maximum daily limitations for CBOD and total suspended solids (TSS) that the Regional Board included in the prior permit violates the CWA's anti-backsliding prohibition. The permit should be amended to specify an 85% BOD removal requirement from October 1 to April 30. Additionally, please clarify why the permit uses CBOD rather than BOD for effluent limits in summer months.*

Response 6

The Tentative Order as written requires 85% CBOD removal year round. Discharge limitations and requirements apply year-round unless otherwise specified (as in Tables 6a and 6b, which list effluent limitations for the periods May 1 through September 31, and October 1 through April 30, respectively.) The reference to a BOD effluent limit rather than CBOD effluent limit in Table 6b was a typographical error and has been corrected to CBOD in the Revised Tentative Order

*Baykeeper Comment 7*

*Actual receiving water monitoring should be required.*

*In this permit, as with previous permits, the discharger is allowed to participate in the Regional Monitoring Program ("RMP") in order to fulfill receiving water monitoring requirements. Baykeeper is concerned that the RMP may not be an adequate surrogate for gathering site specific data related to individual dischargers' impacts. In addition to participating in the RMP, all dischargers should be required to study the receiving water impacts of their own discharge.*

Response 7

We are denying this request because our view is that the RMP is actual receiving water monitoring, which not only satisfies permit requirements but also provides regional context for sampling efforts. This provision is consistent with the Discharger's previous permit, and because the RMP gives us enough information to protect beneficial uses and perform reasonable potential analysis. RMP data may also be augmented with data from special studies conducted to support SSOs or TMDLs.

*Baykeeper Comment 8*

*The permit should include an effluent limit for chronic toxicity.*

*The Tentative Order inappropriately omits a chronic toxicity limit. EPA regulations mandate the inclusion of whole effluent toxicity limits in NPDES permits whenever a discharge "causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative criterion within an applicable State water quality standard." 40 C.F.R. § 122.44(d)(1)(v). The record supports that SBSA's discharge has such reasonable potential. It has been EPA policy for over a decade that whole effluent toxicity includes both acute toxicity and chronic toxicity and that the latter be measured using EPA-identified protocols that employ appropriately sensitive species from a suite of three or more tested species.*

Response 8
We disagree that reasonable potential for the Discharger to exceed the chronic toxicity narrative objective exists. The Discharger monitors chronic toxicity in its discharge quarterly using EPA protocols and employing appropriately sensitive species, and compares the results to trigger values of a three-sample median of 10 chronic toxicity units (TUc), and a single-sample maximum of 20 TUc. The triggers are consistent with Table 4-6 of the Basin Plan. The Discharger's monitoring history from 2002 to 2006 shows that there were no exceedances of the chronic toxicity triggers. The Tentative Order includes a reopener clause allowing the Regional Water Board to amend the Tentative Order if, after consistent detection of chronic toxicity in excess of the triggers, the Discharger fails to aggressively implement all reasonable control measures in its TRE workplan.

*Baykeeper Comment 9.*
*Clarify whether the mass limit for mercury is a performance-based interim limit.*

*The permit and the fact sheet contain inconsistent provisions relating to the mass emission limit for mercury. Subparagraph (c) on page F-30 states that the order establishes a new mass emissions limit for mercury that reflects SBSA's mass emissions allowance in the mercury TMDL. Subparagraph (f), however suggests that the limit is a performance-based interim mass loading effluent limit. EPA recently disapproved TMDL-based compliance schedules and, therefore, any mercury mass emission limit must be final and water quality based. Please clarify whether the mercury limit is a final water quality based effluent limit or an interim limit.*

Response 9
The mass emission limitation for mercury is an interim limit, but it is not strictly performance-based. The interim mercury mass emission limitation is consistent with the mercury TMDL, which considers facility performance. The statement that the interim mercury mass emission limitation is performance based was correct for the interim mass emission limit in Order 01-012, but is not correct for the more stringent interim mass emission limit in this Tentative Order. The compliance schedule for mercury mass emission is not TMDL-based; instead, the compliance schedule is based on the SIP and the Basin Plan. Therefore, this interim mass emission limitation is allowed.

The Fact Sheet Section IV.C.4.c.(2), Mercury, has been revised as follows for clarity:

(2) Mercury

(a) *Mercury WQC*. The most stringent applicable water quality criteria for mercury are established by the Basin Plan for protection of salt water aquatic life – 2.1 µg/L and 0.025 µg/L, acute and chronic criteria respectively.

(b) *RPA Results*. This Order establishes final water quality-based effluent limitations ~~for~~ on mercury concentrations, as the maximum observed effluent concentration of 0.026 µg/L exceeds the applicable chronic criterion for this pollutant, demonstrating reasonable potential by Trigger 1, as defined previously.

(c) *Mercury WQBELs*. Final WQBELs for mercury, calculated according to SIP procedures, and the interim effluent limitations on both for mercury concentration and mercury mass emission from ~~the expiring permit (~~Order No. 01-012~~)~~ are summarized in the following table. Because mercury is a bioaccumulative pollutant, the final WQBELs ~~effluent limitations~~ are calculated without credit for dilution.

**Table F-14. Effluent Limitations for Mercury**

| Effluent Limitations for Mercury | | |
|---|---|---|
| | **AMEL** | **MDEL** |
| Order No. 01-012 (1) | -- | 0.06 µg/L (interim limit) |
| Final Limits | 0.023 µg/L | 0.034 µg/L |

(1) Order No. 01-012 also included a final mercury mass limit of 0.24 kg/month, expressed as a running annual average.

The SIP also suggests that mass emission limits should be established for bioaccumulative pollutants that have been included on the 303 (d) list for the receiving water. Because mercury is bioaccumulative and is included in the 303(d) list for Lower San Francisco Bay, Order No. 01-012 established a mass emission limit for mercury of 0.24 kilograms per month, as stated in Footnote 1 above. This Order establishes a new mass emission~~s~~ limit for mercury (0.044 kg/month), which reflects SBSA's mass emission~~s~~ allowance (0.53 kg/yr) in the mercury TMDL.

(d) *Immediate Compliance Feasible*. Statistical analysis of effluent data for mercury concentrations, collected over the period of April 2003 – March 2006, shows that the 95$^{th}$ percentile mecury concentration (0.017 µg/L) is less than the AMEL (0.023 µg/L); the 99$^{th}$ percentile mercury concentration (0.02 µg/L) is less than the MDEL (0.034 µg/L); and the mean mercury concentration (0.011 µg/L) is less than the long term average of the projected lognormal distribution of the effluent data set after accounting for effluent variability (0.02 µg/L). The Regional Water Board therefore concludes~~, therefore,~~ that immediate compliance with final ~~effluent limitations~~ WQBELs for mercury concentrations is feasible, and final ~~effluent limitations~~ WQBELs for mercury concentrations will become effective upon adoption of this Order.

(e) *Mercury TMDL.* The current 303(d) list includes Lower San Francisco Bay as impaired by mercury due to high mercury concentrations in the tissue of fish from the Bay. Methyl-mercury, the highly toxic form of mercury, is a persistent bioaccumulative pollutant. There is no evidence to show that the mercury discharged is taken out of the hydrologic system by processes such as evaporation before reaching Lower San Francisco Bay. Absent this evidence, the Regional Water Board assumes that the mercury

reaches the Bay through either sediment transport or water flows. The Regional Water Board has established a TMDL process that will lead toward overall reduction of mercury mass loadings into Lower San Francisco Bay. The final mercury ~~effluent~~ mass emission limitations will be based on the Discharger's WLA in the TMDL. While the TMDL is being developed, the Discharger will comply with final mercury concentration and interim mass-based limitations to cooperate in maintaining current ambient receiving water conditions.

(f) *Mercury Source Control Strategy.* The Regional Water Board is developing a TMDL to control mercury levels in Lower San Francisco Bay. The Regional Water Board, together with other stakeholders, will cooperatively develop source control strategies as part of TMDL development. Municipal discharge point sources are not a significant source of mercury to Lower San Francisco Bay. Therefore, the currently preferred strategy is to apply interim mass loading limitations to point source discharges while focusing mass reduction efforts on other more significant sources. While the TMDL is being developed, the Discharger will cooperate in maintaining ambient receiving water conditions by complying with interim ~~performance-based mercury~~ mass emission limits for mercury. Therefore, this Order includes an interim mass emission ~~loading effluent~~ limitation for mercury.

(g) *Final Mercury Limitations.* Final mercury limitations may be revised/established to be consistent with the WLA assigned in the final mercury TMDL. While the TMDL is being developed, the Discharger will comply with the final WQBELs and interim mass~~-based~~ emission limitations to cooperate in maintaining current ambient receiving water conditions.

(h) *Antibacksliding/Antidegradation*. Antibacksliding and antidegradation requirements are satisfied, as Order No. 01-012 did not include final~~,~~ ~~concentration-based effluent limitations~~WQBELs for mercury; and this order establishes a more stringent interim mass emission limit calculated based on SBSA's mass emissions allowance in the mercury TMDL.

*Baykeeper Comment 10.*
*The permit must include more stringent fecal coliform limits and a single sample enterococci limit.*

*As noted in the permit's findings, designated beneficial uses of applicable receiving waters include shellfish harvesting, water contact recreation (REC1) and non-contact water recreation (REC2). Accordingly, Basin Plan water quality objectives for shellfish harvesting, water contact recreation (REC1) and non-contact water recreation (REC2) apply to SBSA's discharge. The most stringent of these water quality objectives is for shellfish harvesting: five consecutive samples equally spaced over a 30-day period must have fecal coliform values that are less than*

*14 MPN/100 ml and the 90th percentile fecal coliform value of this five sample array must be less than 43 MPN/100 ml. The permit as drafted violates the Basin Plan by providing for much more lenient limits, that five day geometric mean fecal coliform density shall not exceed 500 MPN/100 ml and that the 90th percentile value of the last ten values shall not exceed 1100 MPN/100 ml. In addition, the Basin Plan and/or federally promulgated applicable water quality standards known as the Beach Act Rule establish an enterococci water quality objective in heavily used recreational waters, which includes lower San Francisco Bay, a single sample maximum enterococci value not to exceed 104 MPN/100ml. 40 C.F.R. § 131.41. Thus, the permit as drafted violates this Basin Plan requirement by only including a monthly geometric mean enterococci limit.*

Response 10

We disagree that the fecal coliform limits in the Tentative Order violate the Basin Plan. The fecal coliform limits in the Tentative Order were developed based on a study approved by the Regional Water Board and conducted by the Discharger in 1996. This is consistent with the Basin Plan, Table 4-2, Footnote d(1), and Order 01-012. The conclusions of the Discharger's report on the approved study (*Chlorination Reduction Evaluation and Recommendations for Modified Effluent Coliform Limitations,* January 1998) were that 1) except for a few samples collected during wet weather, the receiving water met REC-1 water quality objectives for fecal coliform at all times, including when the effluent fecal coliform concentration approached the target of 500 MPN/100 mL (note that the Basin Plan, Table 4-2, Footnote d(2) states, *"The Regional Water Board may consider establishing less stringent requirements for any discharges during wet weather"*), and 2) the data showed no relationship between effluent fecal coliform concentrations from SBSA and shoreline fecal coliform concentrations, including at the nearest areas of known or historic shellfish harvesting along the Foster City shoreline. The results of the study are discussed in more detail in the Fact Sheet, Section IV.C.8, Fecal Coliform Bacteria.

With respect to the need for a single sample maximum limit, although U.S. EPA established single sample maximum criteria for enterococci bacteria, this Tentative Order implements only the geometric mean criterion of 35 colonies per 100 ml as an effluent limitation. When these water quality criteria were promulgated, U.S. EPA expected that the single sample maximum values would be used for making beach notification and beach closure decisions: "Other than in the beach notification and closure decision context, the geometric mean is the more relevant value for assuring that appropriate actions are taken to protect and improve water quality because it is a more reliable measure, being less subject to random variation …" [69 Fed Reg. 67224 (November 16, 2004)]. Applying the single sample maximum criterion as an effluent limitation is inappropriate because, as stated in U.S. EPA's criteria document, "…a decision based on a single sample … may be erroneous…."

## V Editorial Changes

1. The maximum 2005 wet weather flow in Section II.B, Facility Description, and the Fact Sheet Section II.A, Description of Wastewater Treatment or Controls, was erroneously written as 71 MGD. This has been revised to the correct figure of 49.6 MGD.

2. The Fact Sheet Section VII.C.6.a, Sanitary Sewer Overflows and Sewer System Management Plan, incorrectly referred to Section VI.C.11 of the Tentative Order The reference has been corrected to Section VI.C.6.c, Sanitary Sewer Overflows and Sewer System Management Plan.