CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESPONSE TO WRITTEN COMMENTS

On Amendment to Add PCBs Waste Discharge Requirements for
Municipal and Industrial Wastewater Discharges of Mercury to San Francisco Bay
("Tentative Order")

The Regional Water Board received timely written comments on the Tentative Order distributed on December 16, 2010, for public comment from the following groups and agencies in the order received.

1. **Western States Petroleum Association (WSPA) – January 25, 2011**
2. **U.S. Environmental Protection Agency (USEPA) – January 26, 2011**
3. **Vallejo Sanitation and Flood Control District (Vallejo) – January 28, 2011**
4. **Fairfield-Suisun Sewer District (Fairfield-Suisun) – January 28, 2011**
5. **C&H Sugar – January 28, 2011**
6. **South Bayside System Authority (SBSA) – January 31, 2011**
7. **San Francisco Baykeeper (Baykeeper) – January 31, 2011**
8. **City of Palo Alto (Palo Alto) – January 31, 2011**
9. **Bay Area Clean Water Agencies (BACWA) – January 31, 2011**
10. **East Bay Municipal Utility District (EBMUD) – January 31, 2011**

The comments are organized by subject instead of commenter. This is to provide context to revisions to the Tentative Order because some of the comments touch on the same subject but in opposing ways. The organization of the comments corresponds to sections of the Tentative Order followed by a general section and future revision of effluent limits section as follows:

This Response to Comments summarizes each comment in *italics* (quoted where possible, or paraphrased for brevity) followed by Regional Water Board staff's response. Each comment is keyed to the commenter(s) using the initials for the commenter(s) listed above. For the full context and content of the comment, please refer to the comment letters associated with this item available at www.waterboards.ca.gov.

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I. PCBS EFFLUENT LIMITATIONS

Comment 1: (USEPA, Vallejo, SBSA, Palo Alto, BACWA, and EBMUD by reference) *USEPA supports the Tentative Order's numeric limits. On the flip side Vallejo, SBSA, Palo Alto, and BACWA all indicate that numeric effluent limits should not be included at this time for various reasons primarily related to the limited dataset, analytical variability and changes since completion of the TMDL, and concerns about ability to comply. Each specific comment is detailed below.*

(USEPA) *USEPA supports the Water Board's expeditious implementation of the PCBs TMDL through the watershed permit for mercury and appreciates the time spent reviewing the statistics of the TMDL wasteload allocations and proposed performance-based effluent limits. USEPA is pleased that the draft permit contains both numeric average monthly and maximum daily effluent limits for PCBs, consistent with 40 CFR 122.45(d). EPA indicates that this is central to its support for the permit.*

(Vallejo) *Vallejo commends Water Board staff for their efforts in developing this permit amendment, but requests that the Regional Water Board delay applying numeric limits in the permit amendment until additional data are collected to calculate more accurate performance-based limits. Vallejo indicates that it is not feasible to calculate numeric limits at this time due to the very limited and out of date data available.*

(SBSA) *A better alternative to the proposed T.O. would be to do long term sampling, over several years, to establish the actual levels of PCBs in the wastewater discharge utilizing Method 1668c, and then set discharge limits that are tied to the individual POTW's discharge and ability to affect that discharge.*

In general, SBSA believes the proposed T.O. for PCBs Waste Discharge Requirements is premature, unsupported by accurate and sufficient data, and poorly devised. It does not address the individual capabilities of each POTW in the Bay Area and takes the approach of "one size fits all." SBSA encourages the Regional Water Quality Control Board to return the proposed T.O. to staff for modifications to address the issues raised, and especially to obtain specific data for each POTW to be applied to that POTW only, and to collect that data over a much longer period of time than two years.

*(**Palo Alto**) Palo Alto indicates that the Tentative Order includes effluent limits that are inappropriately based on insufficient and inaccurate data. Specifically, Palo Alto indicates that the Amendment should not include numeric effluent limits for the following reasons:*

- *The amount of available data is insufficient to calculate appropriate effluent limits,*
- *The accuracy of data used in the development of the TMDL is inadequate to calculate meaningful effluent limits,*
- *The results of the three different analytical methods incorporated into the TO are not comparable, and*

- *Additional monitoring data indicate that compliance with the proposed effluent limits is infeasible.*

On insufficient data, the City of Palo Alto indicates that the Tentative Order (TO) includes proposed effluent limits that are based on current performance, and that they were calculated based on the same data that were used in the development of the TMDL (Page F-7). However, the Final Staff Report for the Proposed Basin Plan Amendment implementing the TMDL for PCBs in San Francisco Bay (Staff Report) (Regional Water Board, 2008) clearly indicates (three times in one paragraph), that it is not feasible to calculate effluent limits for individual dischargers that are representative of current treatment plant performance based on these data (Page 71).

> *Effluent limits in NPDES permits will be based on current performance; however, it's not feasible to calculate such limits as this time. The wasteload allocations were derived from a limited data set used to estimate the total PCBs annual load to San Francisco Bay from all wastewater discharges. The data set was limited due to the technical difficulty and associated costs of measuring very low concentrations of PCBs in wastewater. Furthermore, the individual allocations, which were based on each facility's fraction of the total yearly wastewater discharged to the Bay, do not represent actual performance of individual dischargers. Consequently, implementation of the individual wasteload allocations as effluent limits is not feasible at this time. NPDES permits will require individual facilities to collect data in order to calculate daily or monthly average effluent limits that are consistent with the annual load allocations, and possibly recalculation of individual wasteload allocations based on these data. However, calculation of these limits is not feasible at this time." (Emphasis added)*

In addition, Palo Alto indicates that the Basin Plan Amendment to Establish a Total Maximum Daily Load and Implementation Plan for PCBs in the San Francisco Bay (Basin Plan Amendment) (Resolution R2-2008-2012) indicates that municipal and industrial NPDES permits are to include (1) effluent limits based on current performance, and (2) a requirement for quantification of PCBs loads to the Bay in order to determine attainment of the wasteload allocations. (Page A-7) Subsequent language is quick to discredit this intent, informing the reader that: "In the absence of actual discharger performance data sufficient to calculate such limits, the Water Board will apply appropriate uncertainty factors to the individual wasteload allocations." (Emphasis added) Without sufficient data for each (or any) individual discharger, it is impossible to determine that the chosen uncertainty factor was indeed "appropriate" (i.e., that its use resulted in limits that are even close to being representative).

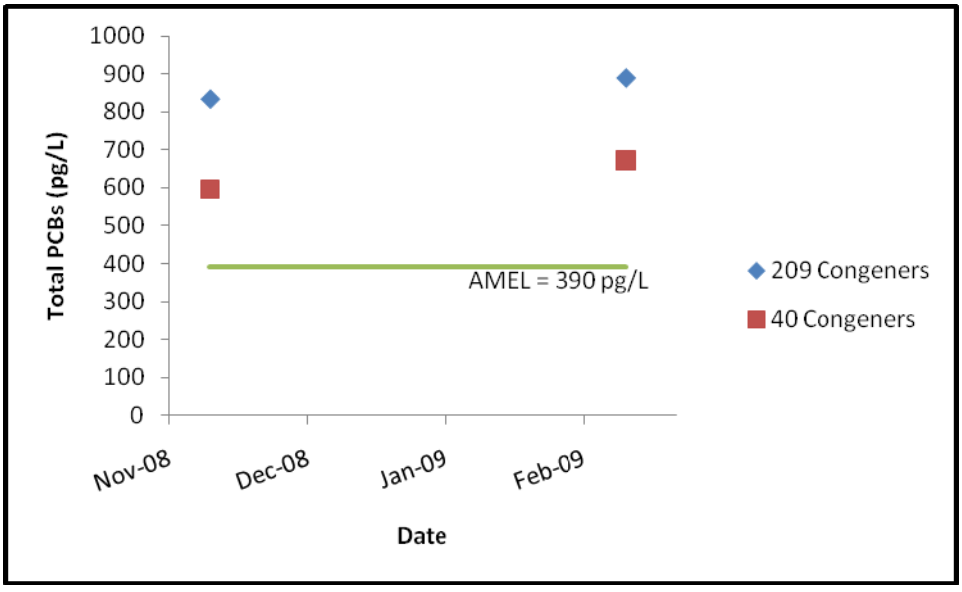
On data quality, the City of Palo Alto indicates that the data used in the development of the TMDL and the Amendment were drawn from the South Bay/Fairfield-Suisun Trace Organic Contaminants in Effluent Study conducted by the San Francisco Estuary Institute (2001 SFEI Report). As part of this study, split samples were sent for analysis to different laboratories. The results provided by these labs were notably different. For this

reason, the report concludes that: "Despite the use of methods that are generally considered state-of-the-art, the inter-lab differences found in these results indicate that careful consideration of reported results in the context of historic data and other internal and external checks requiring a degree of professional judgment are still needed in addition to more routine evaluations of accuracy and precision."

In addition, the Staff Report acknowledges that "low-level analysis of PCB congeners in water at detection limits that allow comparison to USEPA criterion are still non-routine, can have poor precision, and are relatively expensive." (Page 20). These recognized data quality issues do not instill confidence in the validity of the proposed wasteload allocations or effluent limits.

Uncertainty regarding the accuracy of data from the 2001 SFEI Report led to the Regional Water Board's decision not to include effluent limits for dioxins in the 2003 reissuance of the three South Bay POTW NPDES permits (see Page 18 of Order No. R2-2003-0078). Including effluent limits for PCBs based on data from this same study with very similar data quality issues is not consistent with the Regional Water Board's 2003 decision.

On compliance infeasibility, Palo Alto indicates that the TO includes a proposed AMEL of 0.00039 µg/L (390 pg/L) and a proposed MDEL of 0.00049 µg/L (490 pg/L) for the City. Several effluent samples were collected by the City subsequent to development of the TMDL for informational purposes. "Total PCBs" were calculated in two ways based on the results of 1668a analyses: first, as the sum of all 209 congeners, and secondly, as the sum of the 40 congeners typically measured by the RMP. Despite the use of the 99% upper confidence limit on the mean of the data set in the calculation of effluent limits, the two data points were well above the proposed AMEL, as shown in ***Figure 1****, below.*



Although these data are also limited, Figure 1 illustrates that (1) it cannot be concluded that the AMEL is representative of current performance, and (2) "Total PCBs" values resulting from the summation of different sets of congeners are not comparable.

The City of Palo Alto also indicates that critical data needs should be addressed before effluent limits are issued. Specifically, the City of Palo Alto points out that the Staff Report supports the idea that effluent limits should not be calculated until a robust and reliable data set has been obtained (Page 71):

> *Developing effluent limits for PCBs that accurately reflect treatment system performance require a substantial data set that accounts for system variability of a difficult to measure pollutant that is present at very low levels…*

Palo Alto points out that the Mercury Watershed Permit is scheduled to expire and is expected to be reissued in 2012. This two-year timeframe will not be adequate to collect PCBs data sufficient for calculating limits that accurately reflect performance for individual dischargers. The anticipated timeframe for reducing external loads to the Bay is 30 years. In light of this relatively long timeframe, it would not be unreasonable to put off calculating effluent limits until the 2017 expected permit reissuance, at the earliest.

Finally, Palo Alto indicates that the San Francisco Estuary Institute's (SFEI's) PCB Conceptual Model project description (http://www.sfei.org/projects/3676, accessed January 24, 2011), and the Staff Report indicate that appropriate next steps including addressing critical data needs in order to answer questions related to the fundamental assumptions included in the development of the TMDL. SFEI's PCB Conceptual Model project description includes examples of some of these questions, such as: "What are the present loads and long-term trends in loading from each of the major pathways?" and, "What is the most appropriate index for sums of PCBs?" It is not appropriate to issue effluent limits that carry significant enforcement ramifications until these fundamental questions are addressed.

(BACWA and EBMUD by reference) *BACWA indicates that numeric limits on discharges of PCBs is inappropriate at this time. BACWA recognizes that it has been the San Francisco Bay Regional Water Quality Control Board's (Regional Water Board) intent to implement Wasteload Allocations (WLAs) for POTWs via National Pollutant Discharge Elimination System (NPDES) permits containing numeric effluent limits that represent current performance. BACWA asks, however, that the Regional Water Board delay applying numeric limits until additional data are collected to calculate more accurate performance based limits. Issuing this Tentative Order without numeric limits is allowed by law, recognizes the paucity of data available to calculate performance based limits and conduct reasonable potential analyses, and is consistent with approaches taken in other areas of the country. This approach also does not foreclose the Regional Water Board from reissuing the permit with numeric limits once more data on PCB concentrations in wastewater are available.*

BACWA indicates that the Tentative Order's statement that "NPDES permits must include numeric effluent limitations, based on current performance, that are consistent with the wasteload allocations in the TMDL" is misleading. While numeric limits are often preferred because they provide the permittee, regulatory agency and the public with a straightforward and transparent mechanism for ascertaining compliance with regulations, they are not mandatory or appropriate in all circumstances. Federal regulations require only that permits contain effluent limitations that are "consistent with the assumptions and requirements of any available wasteload allocation for the discharge." 40 C.F.R. § 122.44(d)(vii)(B). These limitations, however, do not have to be numeric. See also, Communities for a Better Environment (CBE) v. State Board/Tesoro, 109 Cal.App.4th 1089, 1103–07 (2003) (40 C.F.R. § 122.44(d) does not mandate numeric limitations; the definition of "effluent limitation" refers to any restriction and does not specify that the limitation must be numeric).

Moreover, federal regulations explicitly allow permit writers to express limitations as best management practices (BMPs) when numeric limits are infeasible to calculate. 40 C.F.R. § 122.44(k) (3). Numeric limitations for PCBs are infeasible to calculate at this time due to the outdated and small data set currently available. The final effluent limits in the Tentative Order were calculated using the same data used to determine WLAs in the TMDL. This data set comprises only nine samples from five secondary treatment plants, and fourteen samples from four advanced secondary treatment plants.

BACWA points out that this small data set represents only 23 percent of the municipal permittees being regulated. A total of 77 percent of the municipal permittees are not represented at all in the data set. Additionally, the final effluent limits were based on samples analyzed for approximately 40 PCB congeners using Method 1668a (or similar). However, the permit amendment requires Method 608, which permittees have previously utilized, and includes the nine aroclors (groups of various congeners consistent with manufactured products), as well as Method 1668c, with the requirement to report all 209 congeners. As a result of this disparity between the basis for the final effluent limits and the analyses to be conducted under the permit, the effluent limits are unsubstantiated. Finally, the data set from the advanced secondary municipal wastewater treatment plants was documented in a study which concluded that significant variability existed among the three laboratories receiving split samples for PCBs. The study report concluded that "[d]espite the use of methods in this study that are generally considered state-of-the-art, the inter-lab differences found in these results indicate that careful consideration of reported results in the context of historic data and other internal and external checks requiring a degree of professional judgment are still needed in addition to more routine evaluations of accuracy and precision." See South Bay/FairfieldSuisun Trace Organic Contaminants in Effluent Study, p. 31, (March 28, 2001). In deference to the report conclusions, these data should not be used for the development of final effluent limits that have serious compliance and enforcement ramifications. Even with the selected upper confidence limit, this data set is too small and the variation too great to conclude that the proposed limits accurately reflect current performance.

Finally, BACWA indicates that the proposed limits are inconsistent with the TMDL implementation plan's statement that they will be based on current performance. Therefore, BACWA requests that the permit not contain numeric limits until additional data can be collected. This approach is consistent with applicable regulations, it recently has been used in other parts of the country. For example, in 2010, the United States Environmental Protection Agency (USEPA) issued a permit to the District of Columbia Water and Sewer Authority for their Blue Plains Wastewater Treatment Plant (NPDES Permit Number DC002119). The TMDL WLA that the permit implemented was based on four samples from the facility and, in lieu of numeric limits, requires that the permittee monitor for PCBs and develop and implement BMPs to reduce sources of PCBs. See NPDES Permit Number DC002119 at page 10. BACWA believes that a similar approach is warranted here.

Response: We appreciate USEPA's support of the numeric performance-based effluent limits and have not made changes in response to the other comments. As pointed out by BACWA, under 40 CFR 122.44(d)(vii)(B) federal regulations require that permits contain effluent limitations that are "consistent with the assumptions and requirements of any available waste load allocation for the discharge." While BACWA correctly points out that effluent limits are not required to be numeric, they must be numeric unless infeasible (40 CFR 122.44(k)(3)).

While there is considerable uncertainty with the performance of individual facilities, this doesn't mean that it's infeasible to calculate numeric limits. Based on the data set available, the effluent limits included in the Tentative Order are a reasonable reflection of current performance. This is because the proposed effluent limits account for uncertainty associated with the limited data set (i.e., we used a 99% upper confidence limit on the mean to calculate them). Even so, we share concerns regarding the limited amount of data available, intra-laboratory variability, and data quality. As such, we recognize that as dischargers collect more PCBs data, the Water Board may need to refine effluent limits. However, at this time, we must implement the aggregate waste load allocations that are included in the PCBs TMDL (i.e., 2.0 kg/year for municipal wastewater dischargers and 0.035 kg/year for industrial wastewater dischargers). The inclusion of concentration-based limits is the most reasonable regulatory mechanism at this time to ensure that such allocations are met.

Additionally, Section 1.4 of the SIP requires that, if a TMDL is in effect, the Water Board must assign a portion of the loading capacity of the receiving water to each identified source of the pollutant, point and nonpoint, based on the TMDL. In the case of the PCBs TMDL, municipal and industrial wastewater dischargers have been identified as sources, and therefore, the Water Board must include limits to implement the TMDL based on the allocations.

To address Palo Alto's concern that effluent limits should not be implemented until critical data needs are addressed by San Francisco Estuary Institute's PCBs Conceptual Model, we want to point out that the Conceptual Model pertains to the collection of data to affect future modifications or revisions to the TMDL. With the Tentative Order, we

are required to implement the current TMDL waste load allocations. We are proposing to do this in a manner that accounts for uncertainty associated with the assumptions that these waste load allocations were based on, namely by using the 99% upper confidence limit of the mean of the performance data.

Finally, we do not agree with Palo Alto's assertion that compliance with the proposed effluent limits is infeasible. In its comments, Palo Alto shows two post-TMDL data points that indicate effluent concentrations well above the average monthly effluent limitation proposed in the Tentative Order. In its assessment, Palo Alto included estimated concentrations when it calculated the effluent concentrations. However, consistent with regulations, the Water Board does not and would not use estimated values to evaluate compliance with effluent limits (see section VI Compliance Determination of Order No. R2-2007-0077). Without the estimated values, Palo Alto's two data points show effluent levels of 193 pg/L and 111 pg/L, which are both well below the proposed effluent limits (390 pg/L and 490 pg/L).

Comment 2: (USEPA) *USEPA recommends that the permit include mass emissions effluent limits for the overall discharge category.*

Response: We have not made changes in response to this comment. The inclusion of mass emission limits for each discharge category is not feasible or reasonable at this time because any exceedance of such a limit would make every discharger in that category liable including those dischargers who did not cause the exceedance.

Comment 3: (SBSA) *SBSA indicates that the proposed limits are not mass-based performance limits based on the historical PCB discharge data for each discharger. The POTWs in each group all share the same concentration based limits irrespective of historical performance. The POTWs that serve areas with more industry or historical industrial sites are likely to have more residual PCBs in their system when compared to a POTW with mostly residential customers. The application of mass-based performance limits is not an appropriate method of assigning permit compliance. New permit limits should always be based on the flow and treatment capacity, along with the influent loadings and effluent discharge of each individual POTW.*

Response: We have not made changes in response to this comment. To develop performance-based limits, the Tentative Order pooled data into categories of treatment that are similar to reduce the likelihood of penalizing dischargers that have implemented effective control measures and are already performing well. It's certainly possible that some sewersheds in the Bay Area have higher loadings of PCBs to their treatment plants. To move forward with the approach suggested by SBSA of considering influent loadings in developing effluent limits would require a much more robust monitoring program than currently proposed in the Tentative Order. It is unlikely that such monitoring would be welcomed by other dischargers and affordable (Method 1668c costs about $1,000 per sample), especially for minor dischargers.

Comment 4: (Baykeeper) *Baykeeper points out that the Tentative Order fails to reduce the overall concentrations of PCBs in the Bay. The purpose of the PCBs TMDL is to reduce the concentration of PCBs in San Francisco Bay. Under this Order, effluent limitations for municipalities and industrial sources do not change. We understand that the effluent limits are based on maintaining "current performance" and that the TMDL does not require a reduction in loads from municipalities and industrial wastewater sources. However, we do not agree with the approach in this Order or the TMDL. In order to reduce PCB loading to the Bay, municipal and industrial sources should be reduced in addition to reducing other sources. The TMDL states that currently, municipal wastewater contributes approximately 2.3 kg of PCBs per year, which is not an insignificant amount.*

The TMDL asserts that NPDES permits for municipal and industrial wastewater dischargers shall require implementation of BMPs to "maintain optimum treatment performance" for removing solids and PCBs. Thus, the Order should also specifically require "optimum treatment performance" to remove PCBs from wastewater. For municipal dischargers, reaching an optimum level of treatment would most likely require the use of tertiary treatment and/or polishing wetlands. Baykeeper supports at least beginning this discussion now, in order to achieve significant reductions of PCBs and other pollutants, including contaminants of emerging concern ("CECs"), at major regional wastewater treatment plants ("WWTPs").

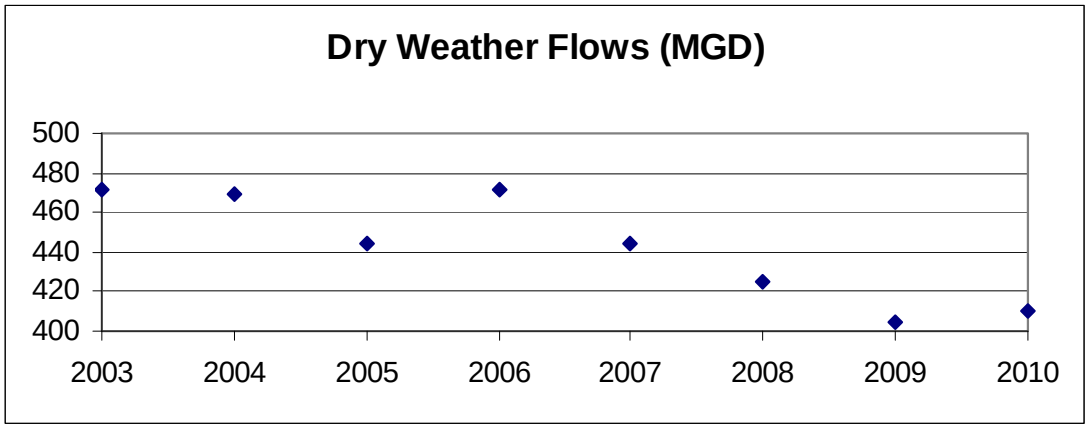
Response: We have not made changes in response to this comment. The Tentative Order is implementing the PCBs TMDL that has already been approved by the State Water Board and USEPA. Under the PCBs TMDL, municipal and industrial dischargers are required to maintain current performance. It is not appropriate for the Tentative Order to mandate reductions from municipal and industrial wastewater treatment plants when the TMDL process determined that these facilities need only to maintain current performance.

While the TMDL requires that municipal and industrial dischargers "maintain optimum treatment performance" for removing solids, this requirement for optimum solids removal is already met in individual NPDES permits that all include limits for total suspended solids. Baykeeper's assertion that this would require all facilities to upgrade to tertiary treatment is not supported by the TMDL, which only requires that facilities "maintain optimum treatment performance [emphasis added]."

Comment 5: (Baykeeper) *Wasteload allocations ("WLAs") were calculated based on the amount of flow from each discharger, and were based on sampling done ten years ago. If the dischargers have an increased amount of flow today, then the actual load could be higher than the WLA. How does the Order take into account changes in flow? It would be helpful to include flow data on each discharger in the Order, and to require the dischargers to report daily flow to the Board. This flow data should be evaluated to determine if the effluent limitations are adequate for each discharger to meet the WLA in the TMDL.*

Response: We have not made changes in response to this comment. On accounting for changes in flow, the Tentative Order does not specifically address this issue because with constraints in water supply and increased efforts at water conservation and water recycling, it is unlikely that any meaningful increase in treated wastewater flow to San Francisco Bay will occur. To illustrate this point, Figure 1 below shows a declining trend in municipal wastewater discharges to San Francisco Bay. These data are from nearly all of the municipal wastewater treatment plants in the Region. These dischargers report electronically and represent about 90% of total treated wastewater flow. The figure shows only flow from June through September of each year to eliminate variability from extremely wet or dry years.

Figure 1: Dry Weather Flows from Municipal Wastewater Treatment Plants



While individual wastewater treatment plants may be granted small increases in flow, the TMDL is based on overall loadings to San Francisco Bay. As indicated in Figure 1, the concentration-based approach proposed in the Tentative Order is protective since overall treated wastewater flows to San Francisco Bay are not increasing and may in fact be decreasing.

On Baykeeper's suggestion to require dischargers to report daily flows, we note that individual permits for each municipal and industrial wastewater treatment plant already require daily monitoring and reporting of flow in self-monitoring reports.

Comment 6: (BACWA and EBMUD by reference) *BACWA requests that the Water Board revise section 1.C. (PCBs Effluent Limitations and Discharge Specifications) to explain that the limits are to reflect current performance. Suggested revision:*

> *"Each Discharger subject to PCBs effluent limitations shall comply with the PCBs limitations set forth in Tables 6A and 8A, below, with compliance measured at the monitoring location described in the MRP (Attachment E) of that Discharger's individual permit for treatment plant effluent or treated wastewater as discharged. <u>The limitations set forth in Tables 6A and 8A are intended to be</u>*

reflective of current performance, and will be revised should new information become available demonstrating that they are not."

Response: We have not made changes in response to this comment. This language is not appropriate or necessary for the effluent limits section of the Tentative Order. The Fact Sheet already describes how the Water Board derived effluent limits and the assumptions used. It would also be inappropriate to pre-commit to what a future Water Board may do with new information that becomes available.

II. PCBs MONITORING & REPORTING REQUIREMENTS

Comment 7: (Vallejo, BACWA, and EBMUD by reference) *These comments from Vallejo and BACWA both request that the Water Board delay monitoring requirements using USEPA Method 1668c.*

(Vallejo) *Vallejo requests that the permit delay EPA 1668c monitoring. Vallejo points out that EPA 1668c is not currently an approved method and is performed by a limited number of laboratories. To generate consistent and comparable data, it is necessary for the sampling and analysis protocols to be defined by all parties involved. The delay would allow Vallejo to work with the Regional Water Board and analytical laboratories to ensure reliable and consistent data are generated and used to refine the TMDL waste load allocations and permit limits.*

(BACWA and EBMUD by reference) *Similarly, BACWA requests that the Water Board delay monitoring requirements until a Method 1668c Sampling Analysis Plan is prepared and implemented. BACWA indicates that on September 23, 2010, the U.S. Environmental Protection Agency issued a draft rule approving Method 1668c, but has yet to finalize the rule or address concerns raised about the interlaboratory validation of that method. 75 Fed. Reg. 58024. Until this rule is approved by EPA it is appropriate for permittees to conduct analyses with Method 608.*

If, however, the Regional Water Board requires 1668c monitoring, BACWA requests that reporting not be required until at least the third quarter of 2011. In the absence of an EPA approved method, it is necessary to establish sampling and analysis protocols in order to generate high quality, consistent and comparable data. Obtaining results can take four to eight weeks after sample collection. A slight delay in sampling and reporting will allow BACWA a window of several months to work with the Regional Water Board, agency and contract laboratories, and sampling experts to develop standardized sampling and analytical requirements, such as those developed by the Delaware River Basin Commission. This consistency will improve the data available to refine the TMDL WLAs and to calculate future permit limits.

Response: While we are concerned with the ability of dischargers to generate consistent, comparable, and representative data, we have not made changes in response to this request. This is because Vallejo and BACWA have not provided a strong basis as to why additional time is necessary. As BACWA and the dischargers are aware, the TMDL

Implementation Plan directed that monitoring begin in January 2009. BACWA and the dischargers should already have collaborated to prepare sampling plans to ensure that they collect valid data. This is especially important as many of the comments we received on the Tentative Order focus on the lack of data.

Comment 8: (USEPA, Palo Alto, BACWA and EBMUD by reference) *These comments concern monitoring frequency. While USEPA supports the proposed frequencies, Palo Alto and BACWA believe it is too burdensome and both request reducing the quarterly frequency to semi-annual.*

(USEPA) *USEPA supports the proposed monitoring frequencies for the 209 PCB congeners using EPA proposed method 1668c.*

(Palo Alto) *The City of Palo Alto indicates that the monitoring frequency for major dischargers should be reduced to semi-annually. Specifically, the City of Palo Alto points out that Table E-2A in the TO includes a proposed monitoring frequency for major dischargers with a design flow greater than 5 MGD of quarterly (for Total PCBs as congeners). However, it is noted on Page F-8 that the Regional Water Board considered that monthly monitoring of this sort would not be a reasonable or prudent use of resources, because wastewater dischargers are a small source of PCBs to the Bay relative to the high cost of analysis (which is on the order of $1,000 per sample). However, Palo Alto believes that quarterly sampling is also overly burdensome, and requests that this monitoring requirement be reduced to semi-annually. This approach would also be consistent with similar requirements for dioxin (which requires a similarly expensive analysis).*

(BACWA and EBMUD by reference) *Similarly, BACWA requests consistent monitoring for all major POTWs. Specifically, BACWA requests that the frequency of monitoring using Method 1668c be the same for all major permittees, at a semi-annual frequency. The Tentative Order's rationale that increased monitoring is justified based on agency resources is not persuasive as larger POTWs do not necessarily have more financial resources to undertake this expensive analysis than do smaller ones.*

Response: We appreciate USEPA's support of the proposed monitoring frequencies, and have not made changes in response to the other comments for a reduced frequency. Accurately determining municipal dischargers contribution of the PCBs load to the Bay is essential to implementation of the TMDL. At this time, municipal dischargers contribute about 7% of the PCBs load to the Bay; however, since they are only required to maintain current performance, their contribution over time could reach as high as 20% after other sources achieve their required load reduction. As such, more frequent monitoring is appropriate for larger facilities (i.e., greater than 5.0 mgd) because this will provide more data and more precision on PCBs loads from facilities that contribute the largest portion of municipal and industrial loads to the Bay.

On BACWA's comment about the resource issue for larger facilities, our understanding is that wastewater treatment is subject to economies of scale. In other words, larger communities with higher wastewater flows tend to have lower treatment costs on a per

gallon basis and would thus be able to afford two more samples per year relative to smaller facilities. That said, the main reason the Tentative Order proposes more frequent monitoring from larger facilities is to better quantify PCBs loads to the Bay, not simply because these facilities may have more resources available.

Comment 9: (BACWA and EBMUD by reference) *BACWA requests that the Water Board revise Footnote 4, Table E-2A (page 7) to clarify that permittees need only report results for the 209 congeners, not a summation of Total PCBs. Suggested revision: "This monitoring is for informational purposes only. For these informational purposes, Dischargers shall use USEPA Proposed Method 1668c and report the results for ~~all~~ each of the 209 congeners. A summation for Total PCBs is not required."*

Response: We revised the Tentative Order to incorporate the suggested changes. To clarify that reporting of each of the 209 congeners may involve reporting multiple congeners together (with USEPA Proposed Method 1668c some congeners co-elute), we added the following language to Footnote 4 before "A summation of Total PCBs is not required":

> "For congeners that co-elute, Dischargers shall report the sum of these congeners."

Comment 10: (Baykeeper) *Baykeeper indicates that the Tentative Order's analytical testing method for PCBs is inadequate. The Order requires dischargers to use EPA Method 608 to analyze PCB concentrations in their wastewater. Specifically, footnote 2 in Table E-2A states that dischargers shall use Method 608, and the data will be used for assessing compliance with the effluent limits in Tables 6A and 8A. Method 608 has a detection limit for PCBs of 0.5 µg/L. Considering that all of the effluent limitations are below the detection limit, it will be impossible to demonstrate compliance. Each discharger could show a PCB concentration that is non-detectable but in actuality is above the effluent limitation. Compliance with effluent limitations should be demonstrated using a method with a picograms per liter detection limit. EPA Method 1668a is a more appropriate test because it has a lower detection limit of 0.00005 µg/L, so dischargers will actually be able to demonstrate whether they are in compliance. Method 1668a should be the required analytical method until EPA approves the proposed Method 1668c. As soon as that approval occurs later this year, the Order must be updated to require the new method.*

Response: We have not made changes in response to this comment. While we agree that Method 608 has its limits, it is the currently approved analytical method in 40 CFR 136 for PCBs, and the permit must abide by federal regulations. Method 1668a has not been approved by USEPA, and we do not have the regulatory authority to compel dischargers to use an unapproved method for Clean Water Act compliance purposes.

III. PCBs SOURCE IDENTIFICATION AND CONTROL

Comment 11: (Baykeeper and BACWA) *Baykeeper and BACWA both commented on the source identification and control measures proposed by the Tentative Order. Baykeeper requests that the Tentative Order include more robust source control measures; whereas, BACWA requests that the Tentative Order recognize that source control options are limited for PCBs.*

(Baykeeper) *Baykeeper indicates that the Tentative Order's section on source identification and control is inadequate. Baykeeper indicates that the Tentative Order fails to require dischargers to act following identification of PCBs sources.*

Specifically, Baykeeper points out that the Section on source identification and controls on page 7 of the Order does not actually require controls to be implemented. It states that dischargers "shall evaluate and identify controllable sources of PCBs to its treatment system." Without any requirement to address these sources, there is no incentive for dischargers to act.

Baykeeper also indicates that the Section on source identification and controls identifies two potential sources of PCBs: (1) industrial uses of equipment that contain PCBs, and (2) buildings with PCB containing sealants that are scheduled for remodeling or demolition. The only source control options to deal with these potential sources would include properly disposing of old equipment, transmitters, and building materials. This Section could be improved by including a longer list of potential PCB sources and a list of suggestions for how the dischargers can address the sources. Including examples and suggestions could help dischargers identify more sources and reduce PCBs.

Baykeeper urges the Board to require dischargers to submit an annual report to the Board on sources identified and any actions that the discharger plans to take to reduce PCBs at each source. The reports should require Board review and approval to make sure that dischargers are adequately identifying and implementing source controls. If the Board is concerned about delaying discharger action while awaiting Board review and approval of the reports, the Board could tentatively approve the dischargers' reports. Then, dischargers could begin implementation while the Board is reviewing the report. Information from the annual reports could be used to update the Board's list of examples and suggestions to all dischargers for identifying and implementing source controls. At a minimum, if the Board declines to require approval of these plans, then the permit should provide more guidance for appropriate source identification and controls, as discussed, above.

Finally, Baykeeper indicates that identifying potential sources of PCBs is critical to decreasing the concentration of PCBs to the Bay. We urge the Board to amend the Order to require source identification on an annual basis instead of every two years. For example, buildings slated for demolition will change from year to year, and should be updated appropriately.

(BACWA and EBMUD by reference) *BACWA requests that Water Board recognize that source control options are limited. BACWA indicates that POTWs do not generate PCBs, but are conduits for PCBs that have been inadvertently introduced into wastewater collection systems. Removal of PCBs from effluent is accomplished primarily through solids removal, which is why the TMDL indicates that POTWs will be required to "maintain optimum treatment performance for solids removal." See TMDL at A-7. Other than solids removal, few source control measures are available to POTWs. In light of the absence of source control options available to POTWs, the Tentative Order should only require optimization of solids removal.*

If, however, the Regional Water Board feels that additional requirements are necessary, BACWA recommends the following changes to the source control requirements, at pages 7 and F-10 of the Tentative Order respectively. As PCBs have been phased out, significant changes in sources are not expected, therefore, evaluating possible sources once every permit cycle should be sufficient.

> ***7. PCBs Source Identification and Control***
> *By February 28, 2012, and once every permit cycle ~~every two years~~ afterwards, each Discharger subject to PCBs effluent limitations of this Order shall evaluate and identify cost effective pollution reduction strategies for controllable sources of PCBs to its treatment system (e.g., any contributions to wastewater from industrial ~~uses of~~ equipment ~~that~~ containing PCBs, any contribution to wastewater from buildings with PCB containing sealants that are scheduled for remodeling or demolition). Each Discharger shall submit the results of this evaluation, including any proposed control actions as needed, shall be included in the Discharger's ~~its~~ annual pollution prevention reports required by its individual NPDES permit.*
>
> ***Basis for Source Control***
> *The PCBs TMDL requires that Dischargers identify and manage controllable sources. Therefore, this Order requires Dischargers to implement cost effective source control programs as needed to identify, evaluate, and control manageable sources to reduce PCBs loads to their respective treatment plants.*

Response: We have made changes in response to these comments. Specifically, we revised the section on PCBs Source Identification and Control as shown below:

> "By February 28, 2012, and every ~~two~~ years afterwards, each Discharger subject to PCBs effluent limitations of this Order shall evaluate and identify controllable sources of PCBs to its treatment system (e.g., any contributions to wastewater from industrial ~~uses of~~ equipment that contains PCBs, any contributions to wastewater from buildings with PCB-containing sealants that are scheduled for remodeling or demolition) and implement measures in a timely manner to control such sources. Each Discharger shall submit the results of this evaluation, including any proposed control actions with an implementation schedule, in its annual

pollution prevention reports required by its individual NPDES permit."

While we agree with BACWA that source control options for POTWs are limited, the sources that are identifiable can change from year to year as Baykeeper correctly points out. So the "once a year" suggested by Baykeeper is more appropriate than the less frequent "once per permit cycle" suggested by BACWA. On the same token, because these sources are limited, the task of identifying them once a year should not be overly burdensome.

On Baykeeper's suggestion to expand the list of controllable PCBs sources in the Tentative Order, we have not. We are not aware of other measures beyond those already included that can be reasonably implemented to limit PCBs to wastewater treatment systems, because PCBs are no longer manufactured or used in commerce. In 1978 Congress banned the manufacture, processing, and distribution in commerce of PCBs. Use of PCBs was restricted to totally enclosed applications, and non-totally enclosed applications were only allowed with USEPA exemptions. In 1979, USEPA passed regulations that defined totally enclosed applications as intact, nonleaking electrical equipment. USEPA banned the manufacture and distribution in commerce of materials containing any detectable PCBs in 1984.

On Baykeeper's suggestion to subject these reports to Water Board approval, we do not believe that this is necessary. The Water Board has the discretion to approve or disapprove reports whether or not it is acknowledged in the permit. Given our limited staff resources, we are concerned that dischargers would delay implementation of source control efforts if each of these reports requires Water Board approval.

IV. PCBs DISCHARGE ADJUSTMENT

Comment 12: (Baykeeper) *Baykeeper indicates that there are potentially negative impacts of the Order's credit for recycled wastewater and urban runoff treatment. Baykeeper thinks that the Recycled Water and Runoff Adjustments seem like a good approach to encouraging industrial water recycling and municipal runoff diversion to wastewater treatment plants. Recycling water and increasing storm water flow to treatment plants can help reduce the amount of PCBs entering the Bay. However, Baykeeper has a couple of concerns about the impacts of these programs.*

Baykeeper is concerned that diverting flows to WWTPs would create fewer sources of PCBs with greater concentrations at each source. For example, if storm water is diverted to a WWTP, PCBs will be in higher concentration in the WWTP's discharge. Instead of a more even distribution of PCBs, the WWTP will have a disproportionately high concentration of PCBs in its discharge. Baykeeper's concern is one of Environmental Justice, because these discharges could disproportionately affect disadvantaged communities in the immediate vicinity if the dischargers were located in their neighborhoods or areas where people fish or swim. How will the Order address this issue?

Baykeeper indicates that the Order allows dischargers to apply a PCB adjustment when using recycled wastewater or to municipal dischargers that accept and treat diverted urban

runoff. Baykeeper understands that the purpose of providing an adjustment is to encourage the recycling of wastewater and diversion of storm water to WWTPs. A discharger would be unlikely to recycle wastewater if that wastewater would then result in a violation of PCB effluent limitations. Similarly, a municipal discharger needs an incentive to treat storm water since the increase in PCBs could lead to a violation. It is Baykeeper's understanding that in the situation of a municipal discharger accepting and treating storm water, both the municipal discharger and the storm water discharger receive an adjustment. The credit system could be improved by also requiring that municipalities meet specific numeric criteria for PCBs in their storm water discharges. We do not want the Order to discourage any efforts to decrease PCBs in storm water.

Response: It's not within the scope of this permit to determine if municipal storm water permits should be subject to numeric PCBs limits. On the environmental justice issue, the treatment of storm water or recycled water at wastewater treatment plants is unlikely to increase PCBs concentrations in the vicinity of the discharge. This is because the infrastructure to divert storm water or recycled water is extremely costly and can only economically be done at discharge points that would otherwise be nearby. In the case of storm water, this is normally discharged near the shoreline, whereas wastewater is often discharged via deepwater diffusers where treated wastewater is rapidly mixed in Bay waters. In other words, routing storm water to municipal wastewater treatment plants should reduce areas that currently receive higher levels of PCBs. As the concern with PCBs is consumption of fish over a long time period, it seems extremely unlikely that communities would suffer from programs that require local treatment of storm water or reuse of treated wastewater.

Comment 13: (BACWA and EBMUD by reference) *BACWA requests that the Water Board allow mercury and PCBs adjustments for treatment of stormwater and landfill leachate. BACWA points out that the Tentative Order allows POTWs that may accept and treat municipal separate storm sewer system (MS4) flows to apply an adjustment to their PCBs discharge concentrations when determining compliance with limits. The treatment of MS4 flows will also remove mercury, another pollutant of concern that is associated with solids. A similar adjustment, therefore, should be allowed for mercury. Additionally, some POTWs in the San Francisco Bay area treat leachate from landfills; BACWA requests that these POTWs also be allowed to take this into account when calculating and reporting Total PCBs concentration in their effluent.*

Response: We have not made changes in response to this request. The Tentative Order is consistent with the PCBs TMDL, which allows POTWs to receive an allocation for treating storm water. The PCBs TMDL does not include an allocation for POTWs that treat landfill leachate, and therefore, it's not possible to include such an allocation at this time. Similarly, the mercury TMDL does not allow credits for treatment of storm water or landfill leachate, and this Tentative Order was not publicly noticed to amend any aspects of the mercury requirements. Therefore, this amendment cannot include such allocations. However, we are interested in requirements that do not disincentivize treatment of polluted urban runoff. BACWA or others may raise this issue during the permit reissuance in 2012 with additional supporting information (such as data showing a

need for adjustments, estimates of net decrease in loads from runoff treatment, and suggested requirements that would ensure consistency with the mercury TMDL).

V. PCBs RISK REDUCTION PROGRAMS

Comment 14: (Baykeeper) *Baykeeper indicates that the section on risk reduction in the Fact Sheet should be included in the Tentative Order. The TMDL requires dischargers to develop and implement effective programs to reduce PCB-related risks to humans and quantify the resulting risk reductions from these activities. The risk reduction requirements are mentioned in the Order's Fact Sheet (F-10). Baykeeper supports the inclusion of these program requirements. However, it thinks the section on risk reduction should be included in the actual order in addition to the fact sheet, so it is enforceable. The Order should mandate that dischargers comply with the requirements of Order No. R2-2007-0077, including developing and implementing programs to reduce PCB-related risks to humans and to quantify the resulting risk reductions from these activities.*

Response: We have made changes in response to this comment. Specifically, we added a new provision that states the following:

> **"Add to Order No. R2-2007-0077, at section V.C.4 Risk Reduction Programs the following new subsection:**
>
> **A. PCBs Risk Reduction Programs**
>
> The Dischargers shall continue to implement and participate in effective programs to reduce PCB-related risks to humans and quantify the resulting risk reductions from these activities. Because the implementation plan put forward by the Dischargers to address risk reduction for mercury also addresses PCBs, Dischargers shall continue to follow the risk reduction requirements for mercury in Order No. R2-2007-0077. The risk reduction program must continue to include both mercury and PCBs."

VI. FACT SHEET

Comment 15: (WSPA) *WSPA requests that references to "Design Flow" or "Permitted Flow" within the Tentative Order be replaced with "Maximum Reported Daily Flow". This provides an accurate description of the cited flow while maintaining the integrity of the groupings assigned by the Tentative Order.*

Response: We included a footnote to indicate that the flows listed in Table F-1B Industrial Facility Information represent the maximum reported daily flow for refineries. Additionally, we corrected the maximum reported daily flow for treated refinery wastewater from ConocoPhillips. It should equal 8.9 mgd instead of 33.7 mgd.

Comment 16: (C&H Sugar) *C&H Sugar indicates that the effluent description identified in Table F-1B for the C&H Sugar and Crockett Community Services District discharge is incorrect. C&H Sugar indicates that the effluent is secondary treated wastewater and should reflect "Industrial – Cane Sugar Refining" and "Municipal –*

Community of Crockett."

Response: We revised the Fact Sheet to include this correction.

Comment 17: (C&H Sugar) *C&H Sugar indicates that Table F-1B lists a permitted flow of 0.93 mgd, which is incorrect. C&H Sugar points out that the joint treatment plant has a design capacity of 1.78 million gallons per day and an average discharge flow of 0.93 million gallons per day.*

Response: We revised the Fact Sheet to make this correction.

Comment 18: (BACWA and EBMUD by reference) *BACWA requests that the Water Board clarify that the risk reduction program underway to comply with Order No. R2-2007-0077 will also communicate risks related to PCBs contamination. Suggested revision at pages F-10: "As such, there is no need to amend the risk reduction program required by Order No. R2-2007-0077 because projects underway and planned ~~it~~ already addresses ~~es~~ PCBs."*

Response: We revised the Fact Sheet to include the suggested clarification.

Comment 19: (BACWA and EBMUD by reference) *BACWA requests that the Water Board revise the section title on page F-7 to reduce confusion regarding the basis of the effluent limits. Suggested revision: "Basis for PCBs ~~WQBEL~~ Effluent Limitation Calculations."*

Response: We have incorporated the suggested change because the deleted qualifier is not necessary. However, for the record, because the performance-based limits implement the PCBs TMDL, they are also water quality-based effluent limits.

Comment 20: (BACWA and EBMUD by reference) *BACWA requests that the Water Board explain how the analytical methods used to derive the WLAs differ from those to be used to refine them. Suggested revisions to Table F-4 (pages F-8 and F-9):*

> "*Finally, it should be noted that the limits are based on data for 40 congeners that are representative surrogates for PCBs that are causing impairment. These 40 congeners are the same ones monitored in the Regional Monitoring Program (using Method 1668a) that formed the basis for the impairment. As some other congeners coelute with these 40 congeners (using Method 1668c), the concentrations of as many as 66 congeners (shown in Table F4 below) form the basis for the limits. Therefore it would be reasonable and consistent with the PCBs TMDL (if USEPA Proposed Method 1668c is an approved method at the time of the next permit reissuance) that any future compliance with effluent limits be determined using the same congeners that were used in the derivation of the limits specified in this Order."*

Response: We revised the Fact Sheet to incorporate the suggested changes.

Comment 21: (BACWA and EBMUD by reference) *BACWA indicates that Water Board needs to revise the contacts for Crockett Community Services District, Port Costa Wastewater Treatment Plant, the City of American Canyon, the City of Benicia, and the City of San Mateo.*

Response: We revised the Fact Sheet to include these corrections.

VII. GENERAL

Comment 22: (Fairfield-Suisun) *Fairfield-Suisun indicates that it has not monitored for PCBs using EPA Proposed Method 1668c, which evaluates the presence of 209 congeners. Although this monitoring is proposed for information purposes, any detected levels of PCBs could result in reasonable potential for limit consideration during future permit applications. Fairfield-Suisun is unsure of its compliance status utilizing the proposed method, which carries an evaluation cost of over $1,000 per sample and results in considerable variability when analysis is performed by different labs.*

Response: We recognize that there are challenges with USEPA Proposed Method 1668c. As pointed out by Fairfield-Suisun, data generated by Method 1668c would only be used for informational purposes at this time. The generation of such data is necessary to inform the Water Board on the need to revise effluent limits in the future. As for concerns regarding reasonable potential for limit considerations, it should be noted that under Section 1.3 of the SIP, the Water Board does not evaluate priority pollutants for reasonable potential if a TMDL has been developed. In such cases, the Water Board assigns a portion of the loading capacity (see Section 1.4 of the SIP). For PCBs, this is being accomplished through concentration-based effluent limits.

Comment 23: (Fairfield-Suisun) *Fairfield-Suisun indicates that it currently monitors PCBs semi-annually using EPA Method 608. Both the Average Monthly Effluent Limit (AMEL) and Maximum Daily Effluent Limit (MDEL) listed for Fairfield-Suisun are lower than the 608 method detection limit. Fairfield-Suisun indicates that laboratories cannot detect PCBs near the proposed permit limits.*

Fairfield-Suisun indicates that if it is possible to detect data at the concentration levels of the permit limits, a single data point that results in a detected value above a permit limit, would require additional sampling to ensure that the AMEL is achieved. In the event that daily samples exceed the MDEL, Fairfield-Suisun could face multiple MDEL violations. Fairfield-Suisun indicates that it is unclear if data below the EPA minimum level of 0.1 µg/L would be considered nondetect.

Response: Only those results that show levels above the method minimum or reporting level (of 0.5 µg/L) would be considered out of compliance and would trigger accelerated monitoring. The minimum level or reporting level for Method 608 is 0.5 µg/L. Section VI, Compliance Determination, of Waste Discharge Requirements for Municipal and Industrial Wastewater Discharges of Mercury to San Francisco Bay (Order No. R2-2007-0077) states: "For purposes of reporting and administrative enforcement by the Regional

and State Water Boards, a Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL)."

Comment 24: (SBSA) *Based on the proposed use of EPA Method 608 for PCB analysis, SBSA and many other POTWs expect to be "in compliance" with the proposed limits. This compliance, however, could be seen as artificial since the analytical method has such high method detection limits that most analyses return "non-detect" results for wastewater effluents. The larger issue is whether compliance will be based on Method 1668c at some point in the future. SBSA believes there are POTWs in the Bay Area who would not meet the proposed limits if Method 1668c is used for future compliance. Due to the extremely high analytical cost of approximately $1,000 per sample, most POTWs have not conducted any Method 1668c analysis and do not know whether they would be in compliance using that more sensitive analytical method.*

Response: We have not made changes in response to this comment. If Method 1668c is promulgated, federal regulations would direct that the Water Board consider requiring its use for compliance purposes. This would need to be done through Water Board consideration of a permit amendment or as part of the next permit reissuance. On SBSA's comment that it believes there are POTWs who would not meet the proposed limits using 1668c, SBSA has not provided any evidence to support its belief. Palo Alto raised similar concerns in its comment, but the data Palo Alto provided showed that compliance was feasible (see response to comment #1).

Comment 25: (Palo Alto) *Palo Alto indicates that three analytical methods are included in discussions of "Total PCBs" in the TO and supporting documents (USEPA Methods 608, 1668a, and 1668c), which have been used to measure different sets of PCB congeners at different levels of sensitivity. "Total PCBs" may refer to the sum of any of these sets of congeners, although data have not supported the conclusion that they are comparable. On the contrary, Total PCBs results tend to increase along with the numbers of congeners included in the analysis.*

Palo Alto also indicates that effluent limits for advanced secondary facilities were calculated based on 14 data points that were drawn from the 2001 SFEI Report. Each of these data points is an average of split sample results for "Total PCBs" (in this case the sum of approximately those congeners typically measured by the SFEI's Regional Monitoring Program (RMP)), from three different labs (Staff Report, Page 44 and 2001 SFEI Report, Appendix A Tables 7 and 8). The use of these averages as the data set that serves as the basis of effluent limits calculations decreases the coefficient of variation which in turn results in a lower AMEL and MDEL. In addition, results from any of the three labs were not included in totals and averages if they were much greater than those measured by the other two (2001 SFEI Report, Page 10), even when "no obvious causes could be found or corrected" to explain these differences (SFEI 2001 Study, Page 13). This practice also resulted in an overall lower long-term average, and therefore lower effluent limits. It should also be noted that each of the three labs chose different analytical techniques to measure PCBs (2001 SFEI Report, Page 9), and that it was

estimated that the "Total PCBs" measured by the RMP typically accounts for slightly over half of "Total PCBs" that include all 209 congeners (2001 SFEI Report, Page 2).

Palo Alto points out that the TO indicates that Method 608 is required for compliance monitoring, while additional monitoring for 209 congeners using Method 1668c is required "for informational purposes". Comparing data resulting from different analytical methods is inappropriate and unfair in the context of compliance and enforcement. If and when effluent limits are required, it is important that congeners included in compliance monitoring are the same as those used in the derivation of the limits, and analyzed using the same method.

Response: We have not made changes in response to this comment. There is no data comparison or compliance consequence because the Tentative Order does not propose to use data from Method 1668c for compliance purposes, and we do not intend to mix data from Method 608 with data from 1668c. As clearly stated in the Fact Sheet of the Tentative Order, Method 1668c data will be used to "verify assumptions and evaluate the need to further refine wasteload allocations in the TMDL."

On Palo Alto's comment that congeners included in compliance monitoring be the same as those used in limits derivation, we agree. The Fact Sheet states, "it would be reasonable and consistent with the PCBs TMDL (if USEPA Proposed Method 1668c is an approved method at the time of the next permit reissuance) that any future compliance with effluent limits be determined using the same congeners that were used in the derivation of limits." This means that we are aware of this technical issue and will more fully address data comparison issues during the next iteration of the limits when we review the collected data.

Comment 26: (BACWA and EBMUD by reference) *BACWA indicates that reasonable potential has not been demonstrated for all permittees. National Pollutant Discharge Elimination System (NPDES) permits must contain effluent limitations for all pollutants which are discharged at levels that "will cause, have the reasonable potential to cause, or contribute to an excursion above any Statewater quality standard." 40 C.F.R. § 122.44(d)(1)(i). To determine whether a discharge has "reasonable potential" the permitting authority must consider existing controls on point and non-point sources, the variability of the pollutant in the effluent and the dilution of the effluent in the receiving water." 40 C.F.R. §122.44(d)(1)(ii). A 303(d) listing alone is inadequate to require an effluent limitation if the permittee is not causing or contributing to that impairment. See accord Tosco Order, SWRCB Order No. WQ 2001-06 at page 20. Permittees without the reasonable potential to cause or contribute to an instream exceedance of an applicable water quality standard are not required to be subjected to effluent limitations. See State Water Resources Control Board Order No. 2003 – 0012 at 1516; Order Granting Writ of Administrative Mandamus, City of Woodland v. CRWQCB for Central Valley Region, Alameda County Sup. Ct., Case No. RG04-188200 (May 16, 2005) at 4, 13. Inadequate data are available to determine reasonable potential for all POTWs covered by the permit. The Tentative Order contains effluent limitations for all POTWs despite effluent data only being available for the nine plants whose effluent data served as the basis for*

the TMDL WLAs. By automatically presuming reasonable potential for all permittees in Table 1, the Regional Water Board's requirements are more stringent than mandated by federal law and inconsistent with recent practice by this Regional Water Board. Additional analysis under Water Code section 13263, including the factors contained in Water Code section 13241, is therefore required.

Moreover, it has been this Regional Water Board's practice to require collection of data prior to imposing effluent limits when data are limited. For example, while the Regional Water Board was waiting for municipal permittees to collect priority pollutant data pursuant to a 13267 letter issued on August 6, 2001, effluent limits were not mandated in permits when data were not available. Now that those (non-PCB) data have been collected and are available, the Regional Water Board has issued NPDES permits with effluent limits for these parameters when reasonable potential exists.

Response: We have not made changes in response to this comment. In accordance with Section 1.3 of the SIP, the Water Board would not evaluate priority pollutants for reasonable potential if a TMDL is in effect, which it is for PCBs. In such cases, the Water Board would assign a portion of the loading capacity (see Section 1.4 of the SIP). For PCBs, we are proposing that this be accomplished through concentration-based effluent limits. Additionally, 40 CFR 122.44(d)(1)(vii) requires that permits include limits to implement waste load allocations. This applies independent of 40 CFR 122.44(d)(1)(i) and (ii).

Comment 27: (BACWA and EBMUD by reference) *BACWA request that we extend the effective date to April 1, 2016. BACWA indicates that the Tentative Order gives an effective date for the permit amendment, but does not modify the expiration date. Since the Order is being renewed and no substantial changes to the mercury-elated provisions are anticipated or needed, BACWA recommends that the Regional Water Board use this opportunity to conserve staff resources by considering this amendment a reissuance of the entire permit and establishing a termination date of April 1, 2016.*

Response: We have not made changes in response to this request. While we do not envision substantial changes to the mercury-related provisions, we would have had to public notice the mercury-related requirements of the permit if we were to extend the termination date to April 1, 2016. Additionally, all dischargers covered by the mercury watershed permit would have to agree to have their permit reissued before its expiration date.

Comment 28: (EBMUD) *EBMUD believes it is improper for the Tentative Order to be based on wasteload allocations. EBMUD indicates that it and others filed a lawsuit EBMUD et al. v. SWRCB et al., Alameda Superior Court Case No. RG10512151 challenging the wasteload allocations in the Basin Plan Amendment. EBMUD incorporates the pleadings, briefs and administrative record in the Lawsuit by reference. EBMUD therefore requests that all references to the wasteload allocations – and all reliance on them – be eliminated from the Tentative Orde*r.

Response: We have not made changes in response to this comment. 40 CFR 122.44(d)(vii)(B) requires that permits contain effluent limitations that are "consistent with the assumptions and requirements of any available waste load allocation for the discharge." The limits proposed were developed in accordance with this federal requirement. Thus, it would be inappropriate for the Tentative Order or the Fact Sheet to state otherwise as EBMUD suggests that we do. Moreover, it is quite clear in the Fact Sheet that the effluent limits do not rely directly on the individual wasteload allocations in the TMDL that are the subject of EBMUD's lawsuit, but on the source category allocations (i.e., municipal wastewater, industrial wastewater).

VIII. FUTURE REVISION OF EFFLUENT LIMITS

Comment 29: (WSPA and USEPA) *Both WSPA and USEPA expressed concern that effluent limits are based on a small data set and may need to be refined in the future.*

(WSPA) *WSPA points out that the proposed numeric limits were derived from a limited set of data and are intended to maintain each discharge category's current performance. While the Regional Water Board's use of a 99% upper confidence limit accounts for some of the uncertainty due to this limited data set, WSPA indicates that it is unknown if this factor is adequate to set a feasible limit that represents the current performance of the various discharge categories in the Tentative Order. Therefore, WSPA is concerned about the ability of dischargers to maintain compliance with the limits prescribed in the Tentative Order.*

As such, it is WSPA's expectation that the Regional Water Board address this uncertainty by verifying the assumptions made in the PCBs TMDL using the Method 1668c data collected as part of this Tentative Order. Based on this review, WSPA expects the Regional Board to make any necessary revisions to effluent limits and/or wasteload allocations of PCBs so that they are feasible and based on current performance.

(USEPA) *Over time, USEPA expects that the Water Board will use these data to refine the upper confidence limit on the mean concentration for each discharge category and improve the performance-based effluent limits.*

Response: We recognize that implementing the PCBs TMDL will be an adaptive process. At this time, the effluent limits included in the Tentative Order are based on a reasonable assessment of current performance given the limited data set. As indicated in the Tentative Order, PCB Method 1668c will only be used for information purposes because it has not been formally approved by USEPA. These data will inform the Water Board on the need to revise effluent limits and wasteload allocations.

Comment 30: (SBSA) *SBSA indicates that the proposed PCB provisions would be added to the regional mercury permit which expires on 12/31/2012. Since the permit will need to be reissued at that time, SBSA has several concerns regarding possible changes that may be implemented:*

- *Will the effluent limitations be recalculated at that time based on the "informational monitoring" using EPA method 1668c (Table E-2A, fn 4), from which there will be very little - virtually no - historical data to substantiate any new permit requirements?*

- *If the limits are recalculated upon permit reissuance, will the limits be true performance based waste load allocations ("WLAs") for each discharger and based on the Method 1668c monitoring for each discharger in 2011 and 2012? Again, this would result in permit requirements that are based on extremely limited and insufficient data. SBSA recommends collecting individual POTW data for a minimum period of five (5) years and not establishing WLAs until sufficient data for each discharger has been established.*

- *If the limits are recalculated, how many congeners will be included in the limits? EPA Method 1668c reports 209 congeners, the use of this Method, as a basis for calculating WLAs, could result in many more congeners than those used for the proposed T.O. effluent limits.*

- *Will Method 1668c be used for compliance determination instead of Method 608 at some point in the future? The proposed T.O. does not specify any change in the test method used for permit compliance. However, there appears to be no justification for testing under the Method 1668c parameters unless that data is intended for calculating permit compliance limits in the future. If Method 1668c is to be used in the future, we again state that more than two years of data is needed to determine the limits and the congeners proposed for monitoring should be identified and set as part of the monitoring process.*

Response: We have not made changes in response to this comment. The Tentative Order proposes monitoring with Method 1668c to generate data that will allow the Water Board to evaluate whether or not loadings estimated under the TMDL and translated into concentration-based limits are appropriate. Based on these new data, it's possible that the Water Board may refine effluent limits during the next permit reissuance.

The Water Board does not intend to calculate performance-based limits for each discharger because to do so in a timely manner would require a monitoring frequency of at least monthly or twice monthly. Since analyses with Method 1668c are very costly, we don't believe that this is an appropriate allocation of resources, especially for minor dischargers.

The TMDL based waste load allocations for PCBs on 66 congeners (including congeners that co-elute). The Fact Sheet of the Tentative Order specifically states the Water Board's intent: "It would be reasonable and consistent with the PCBs TMDL (if USEPA Proposed Method 1668c is an approved method at the time of the next permit reissuance) that any future compliance with effluent limits be determined using the same congeners that were used in the derivation of limits."

Under the Tentative Order, the method for compliance determination is Method 608. This is because this is the current USEPA-approved analytical method for PCBs. While we cannot predetermine how a future Water Board will act, it's likely that Method 1668c will be used for compliance determination if at the time of the next permit reissuance, it is an approved USEPA Method.

Comment 31: (Baykeeper) *Baykeeper indicates that effluent limits should be reevaluated and updated following the first year of implementation. Baykeeper understands that little data on PCB loads from municipal and industrial wastewater dischargers exist, which makes it difficult for the Board to set effluent limits. Therefore, the Board should look at sampling data in addition to flow data from each discharger to determine if the PCB load allocations in the TMDL are being met. When more data are available, the Board should be able to consider amending effluent limitations to further reduce PCBs to the Bay, which is ultimately the goal of the TMDL. At a minimum, effluent limitations should be evaluated prior to the renewal of the mercury permit (R2-2007-0077) in 2012.*

Response: We have not made changes in response to this comment. As part of all permit reissuances, the Water Board will reevaluate the appropriateness of the limits based on information available at that time. The permit to be amended by the Tentative Order is scheduled for reissuance in 2012. This is roughly six months after the first year of implementation of the requirements proposed in the Tentative Order. We do not consider the difference in six months to be that meaningful.