

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

RESPONSE TO WRITTEN COMMENTS

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

The Regional Water Board received timely written comments on a Tentative Order distributed on September 26, 2012, for public comment from the following groups and agencies:

- 1. GenOn Delta LLC, Pittsburg Generation Station (GenOn) – October 18, 2012**
- 2. City of Palo Alto (Palo Alto) – October 29, 2012**
- 3. U.S. Environmental Protection Agency (USEPA) – October 29, 2012**
- 4. Crockett Community Services District (Crockett) – October 29, 2012**
- 5. Bay Area Stormwater Management Agencies Association (BASMAA) – October 29, 2012**
- 6. Bay Area Clean Water Agencies (BACWA) – October 29, 2012**

This Response to Comments organizes the comments by subject instead of commenter. This is to provide context to revisions to the Tentative Order because some of the comments from different commenters touch on the same subject. The organization of the comments corresponds to sections of the Tentative Order followed by a general section, future revision of effluent limits section, and a staff-initiated revisions section as follows:

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The comments are 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 or shortened names 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

http://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2012/December/12-12-12_Board_Meeting.pdf.

I. Monitoring & Reporting Requirements

Comment 1: (USEPA, BACWA, and Palo Alto) *USEPA, BACWA, and Palo Alto support reducing PCB congener monitoring from all 209 PCB congeners to the 40 that are primarily responsible for impairment and were used to develop the PCBs TMDL.*

Response: We appreciate the support for targeted PCB congener monitoring.

Comment 2: (USEPA) *USEPA indicates that without continued use of draft Method 1668c as a permit monitoring requirement, the Regional Water Board would not be able to evaluate discharger performance relative to the wasteload allocations in the PCBs TMDL.*

Response: We agree and the Tentative Order proposes to continue to require dischargers to monitor with draft Method 1668c.

Comment 3: (BACWA and Palo Alto) *BACWA and Palo Alto both expressed concerns with the quality of PCBs data using Method 1668c.*

(Palo Alto) *Palo Alto has concerns with the validity of data. Palo Alto has seen drastically different PCB effluent concentrations. This variation can be partially attributed to elevated blank method levels. Method 1668c does not, however, allow for blank correction based on the results of one method blank. Palo Alto has noted a significant difference between blank and non-blank corrected data. Additionally, Palo Alto has calculated that up to 81% of reported sample concentrations could be attributed to method blank contamination. Due to these issues, it is possible that the City of Palo Alto's data listed in Appendix F-3 of the Tentative Order does not accurately represent Palo Alto's data. The City feels that the data in Appendix F-3 should be footnoted or flagged as experimental data which contains high blank values. Additionally, based on the effluent concentrations published in Appendix F-3, one could incorrectly conclude that the City of Palo Alto exceeds the average monthly effluent limit and maximum daily effluent limits for PCBs. Flagging the high blank data as experimental would eliminate any confusion.*

(BACWA) *BACWA indicates that PCBs data gathered via Method 1668c are of poor quality. BACWA points out that Method 1668c was considered for promulgation by USEPA in 2012. USEPA received 35 comment letters on the method. Of these comments, 5 supported the approval of the method, and 30 opposed citing various reasons including the many shortcomings of the inter-laboratory study conducted by USEPA, data reproducibility, ubiquitous problem of background contamination, etc. USEPA deferred the promulgation of this method, and BACWA indicates that USEPA staff has stated the method will not be promulgated until after an inter-laboratory validation study.*

Additionally, in the packet of March 9, 2011, Water Board hearing when the PCB requirements were adopted into the Watershed Permit, Water Board staff also expressed that "...we share concerns regarding the limited amount of data available, intra-laboratory variability, and data quality."

Two contract laboratories have analyzed more than 95 percent of the samples gathered since Spring 2011. Agencies that used one of the laboratories obtained results showing consistently higher PCB concentrations, and a higher degree of blank contamination, than agencies that used the other laboratory. This apparent bias may reflect differences

in the actual concentrations between the two sets of POTWs, but it is reasonable to question whether it is due to differences in sample handling and reporting. Because it is important there be confidence in the data set generated by the monitoring program, it is necessary to investigate the potential reasons for this apparent systematic difference between results from the two laboratories. Preliminary investigations by individual member agencies are ongoing to identify the reasons for these differences, but a regional effort will be required to ensure the consistency of future analytical results.

Until these differences are investigated and the sampling, analytical and reporting protocols for Method 1668c are further refined, the data gathered is of insufficient quality for a reevaluation of wasteload allocations should Method 1668c be promulgated. BACWA requests that the permit allow that some of the resources used for routine monitoring be reallocated to fund a special inter-laboratory comparison study, and that the permit acknowledge the insufficient quality of the data collected.

Response: We have made one change in response to this comment to acknowledge blank contamination. However, despite USEPA's decision to defer approval of Method 1668c, the PCBs TMDL requires gathering of information on loads. Method 1668c remains the best, and only, available method for doing so.

On the issue of blank contamination, we added a footnote to the PCBs data included in Appendix F-3 to state, "Some of the PCBs data included in Appendix F-3, such as from the City of Palo Alto, contained high levels of blank contamination that may have resulted in the Regional Water Board overestimating PCB loads."

Concerning the suggestion for reducing PCBs monitoring to allow dischargers to fund a special inter-laboratory study, the Tentative Order already proposes to reduce PCB congener monitoring to 40 PCB congeners instead of 209, which is about a 30 percent cost savings by some estimates. So, if adopted, this reduction should allow dischargers to reallocate some of the funds saved by reduced congener monitoring to help fund a special study, if they deem that one is necessary to improve data quality.

One the issue of USEPA's deferred promulgation of Method 1668c, in the records for that deferral, USEPA stated its support for continued use of Method 1668c by experienced laboratories. Specifically, USEPA gave examples of two laboratories in New Jersey that were providing recoveries and precision with Method 1668c that were comparable to other approved methods. Also, in its conclusion, USEPA stated the following:

EPA is still evaluating the large number of public comments and intends to make a determination on the approval of this method at a later date. In the meantime, the Agency has decided to go forward with the promulgation of the other proposed analytical methods to expedite their implementation by the regulated community and laboratories. This decision does not neglect the merits of this method for the determination of PCB congeners in regulatory programs or for other purposes when

analyses are performed by an experienced laboratory. (Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act; Analysis and Sampling Procedure, Deferral of Action on EPA Method 1668c, 77 Federal Register 97, May 18, 2012, page 29763)

Finally, USEPA has indicated that without monitoring requirements for Method 1668c, the Regional Water Board would be unable to track PCB loads and would not be adequately implementing the PCBs TMDL. Therefore, we must continue to require dischargers to monitor with Method 1668c to ensure that PCB loadings from municipal wastewater treatment plants are below the aggregate allocation included in the PCBs TMDL.

Comment 4: (Palo Alto) *Palo Alto indicates that it plans to conduct an inter-laboratory study. In November 2012, Palo Alto plans to send out split samples to at least three separate laboratories to be analyzed by Method 1668c. Sample results and method blank results will be compared to one another. Based on the results received, Palo Alto may consider switching labs if it is determined that the current lab analysis is not representing Palo Alto's data accurately. Concurrently, Palo Alto strongly encourages a more extensive interagency study that will provide more scientifically defensible data. The inter-laboratory study may also show that it is not possible to get accurate results using 1668c Method.*

Response: We appreciate Palo Alto's proactive response to ensuring that it is submitting representative data for PCBs.

Comment 5: (BACWA) *BACWA indicates that PCB sampling requirements are disproportionate to loads. Under the current watershed permit, and carried forward into this Tentative Order, POTWs are required to collect PCB samples between one and four times per year depending on their facility's design flow. This totals 106 samples per year for the POTW community, which will cost approximately \$400,000 per five year permit cycle, assuming an average per-sample analysis cost of \$800 for 40 congeners.*

Meanwhile, the stormwater community, which is responsible for 60 percent of PCB loads, compared to less than 7 percent from the POTW community is required to collect a minimum of 16 samples per year. The Stormwater community performed a reconnaissance survey and collected 91 samples from 16 candidate watersheds. Based on the results of this survey, 6 watersheds were ultimately chosen for future monitoring. They were selected based on being representative of other watersheds, containing management opportunities, being named as MRP sites, and the feasibility of collecting samples.

This type of targeted monitoring makes sense to obtain the maximum value from funds spent on monitoring. Monitoring frequency for POTWs should be based on loads rather than flow, which would allow the community to reduce the total number of samples without sacrificing loading data. This would also mean that the highest monitoring costs would be borne by facilities with the highest loads. While the data have been collected

since the adoption of Order No. R2-2011-0012 needs refinement as described in the comment above, it is sufficient to provide the type of order-of-magnitude loading information that would allow a redistribution of monitoring effort to maximize loading information per monitoring dollar.

Response: We have revised the monitoring frequency for PCBs for the three municipal dischargers with a design flow of less than 0.1 million gallons per day (i.e., Crockett Community Services District (Port Costa), Paradise Cove, and St. Helena) from annual to once every five years considering the cost of monitoring (~\$1,000 per sample) and size of these discharges.

The proposed monitoring requirements for the other dischargers are the bare minimum necessary to track PCB loads and to allow future refinements to the limits. The Tentative Order includes concentration-based effluent limits for PCBs that are based on a 99% upper confidence level on the mean. With the next permit reissuance, USEPA has stated its expectation that the Regional Water Board will improve performance-based limits that are based on extreme percentiles and/or upper confidence limits (see comment 18, below). To ensure that we are accurately capturing discharge variability, the proposed monitoring frequency is necessary and reasonable.

Comment 6: (Crockett) *Crockett requests that it be allowed to monitor for mercury annually instead of quarterly because of the high costs for a community with an average flow rate of only 15,000 gallons per day.*

Response: We agree that the burden of quarterly mercury monitoring from small communities outweighs the benefit. Therefore, we modified the Tentative Order to require annual mercury monitoring for municipal wastewater treatment plants with a design flow of less than 0.1 million gallons per day (i.e., Crockett Community Services District (Port Costa), Paradise Cove, and St. Helena).

II. Risk Reduction Programs

Comment 7: (BACWA and BASMAA) *These comments concern the requirements for risk reduction in the Tentative Order. Both BACWA and BASMAA believe these requirements should not be in the purview of agencies whose mission is to protect the environment.*

(BASMAA) *BASMAA states the risk reduction provision included in the Tentative Order and points out that the MRP includes a similar provision for stormwater agencies. MRP permittees have complied with the provision through a task in BASMAA's Clean Watersheds for a Clean Bay project designed to match the MRP provision requirements as well as with additional BASMAA resources to participate in and help guide the effort. Likewise, wastewater permittees have complied with the related provision in their permit through the provision of public agency resources via BACWA.*

BASMAA recognizes this provision is included in permits because it is named as an

implementation action in the mercury and PCBs TMDL Implementation Plans. Having met the requirement in the MRP and implemented this aspect of the TMDL Implementation Plans, BASMAA is concerned with the proposed continuation of this requirement for another 5 years and recommends that it be removed before the Tentative Order is adopted. BASMAA's concern is based on the following facts:

- *Many of our members believe it is neither the mission nor the expertise of wastewater and stormwater agencies to fund and manage public health programs. Funds provided to our public agencies by taxpayers are intended to be spent directly on environmental protection. To address this, BASMAA has and will continue to support efforts to provide funding from appropriate sources to public health agencies for risk communication and exposure reduction work.*
- *Reducing risks to humans is a worthy endeavor but it is a post-discharge activity. So any reduction in risks to human health from BASMAA's efforts cannot be counted toward reducing its loads to the Bay or meeting its TMDL wasteload allocations. As a result, there is a lost opportunity cost to BASMAA as well. Any effort BASMAA puts toward funding and managing public health programs reduces the effort it can put towards meeting its wasteload allocations.*
- *Despite these significant concerns, BASMAA agreed to a provision in the MRP adopted in 2009 requiring stormwater agencies to "...develop and implement or participate in effective programs to reduce mercury-related risks to humans...". With the help of a portion of a grant from EPA, BASMAA agencies have done so. One of BASMAA's member agencies, the Contra Costa Clean Water Program, has a duplicate requirement to contribute resources towards this type of effort in the Central Valley as result of the Delta Methylmercury TMDL.*
- *One of the key findings of the risk communication and exposure reduction task in the Clean Watersheds for a Clean Bay project was the recognition by the agencies overseeing the project (EPA, BASMAA, BACWA, California DPH, Regional Water Board) that agencies and community groups whose mission is public health protection were the most qualified and ideally positioned to effect real risk reduction to consumers of contaminated Bay fish.*

Therefore, based on these facts and findings, BASMAA strongly recommends the following revision to the Risk Reduction Programs provision in the Tentative Order for Wastewater Discharges of Mercury and PCBs to San Francisco Bay:

Dischargers shall continue to implement and participate in programs to reduce mercury and PCB-related risks to humans from consumption of San Francisco Bay/Delta fish. This requirement may be satisfied by use of the products of the San Francisco Bay Fish Project in the dischargers' public education efforts ~~a combination of related efforts through the Regional Monitoring Program~~ or other similar collaborative efforts. Dischargers shall describe the progress of their efforts in the Annual Self-Monitoring Report. Alternatively, the Bay Area Clean Water Agencies (BACWA) may fulfill the annual reporting requirement by providing a summary of annual risk reduction program efforts for agencies that choose to participate through BACWA.

BASMAA also recommends that the Regional Water Board encourage its sister public health agencies to incorporate the lessons learned from the Clean Watersheds for a Clean Bay project and the San Francisco Bay Fish Project into efforts led by public health agencies, public health professionals, and public health community groups.

(BACWA) BACWA indicates that risk reduction efforts should not be the purview of POTWs. BACWA points out that POTWs contribute very little to the mercury and PCBs in San Francisco Bay, yet are responsible for a large fraction of the funds allocated to public health campaigns, the results of which are unclear. POTWs have expertise such that these funds could be better leveraged towards other facets of the mercury and PCB problem, such as helping to validate method 1668c.

Mercury and PCB contamination are a major statewide issue, and risk reduction is best dealt with on a statewide level. It cannot continue to be dealt with on a Regional Board-by-Regional Board basis. For example, the Central Valley Water Board's September 2012 Mercury Exposure Reduction Program Strategy states that "[d]uring initial MERP activity period, staff will seek opportunities to integrate future Delta MERP activities with San Francisco Bay efforts to create a more regional program and/or any broader efforts that develop as a result of the Statewide mercury policy currently under development."

NPDES permitting is not the appropriate nexus for these risk reduction efforts. Over the next permit cycle, BACWA encourages the Water Board to work with its sister public health agencies at the State level to develop a robust approach and appropriate funding apparatus where responsibility for risk reduction is sensibly allocated.

Response: We have not made changes in response to this comment. We disagree with BASMAA's suggested changes as they remove opportunities for collaboration. Over the past few years, we have been working collaboratively with dischargers to implement this requirement, and the existing language allows us to continue to do so. On the request to eliminate the risk reduction requirement, this is not possible at this time. This is because the Mercury and PCBs TMDLs require dischargers to support actions to reduce mercury and PCB-related risks to humans.

III. General

Comment 8: (GenOn Delta LLC) *GenOn indicates that specific sections of the Tentative Order should reflect the correct names of GenOn Delta, LLC and remove references to the Potrero facility included in Tables 6A, F-3, F-9, F-12, and Attachment C.*

Response: We corrected the above tables in the Tentative Order; however, we did keep the reference to the Potrero facility in Table F-9. This is because Table F-9 is a historical reference to mercury allocations that were included in the TMDL.

Comment 9: (USEPA) USEPA offered some general supporting comments for the Tentative Order. USEPA indicates that effluent limits for mercury and PCBs are central to its support for the permit. Additionally, EPA supports the reduction in average annual aggregate mass emission effluent limits to account for industrial facilities with TMDL wasteload allocations that have stopped discharging. Finally, USEPA supports removing the mercury compliance schedule contained in the 2007 permit, as municipal wastewater dischargers are already in compliance with their final average annual aggregate mass emission effluent limit for mercury of 11 kg/year.

Response: We appreciate USEPA’s support for these aspects of the Tentative Order.

Comment 10: (BACWA) On the first line of page E-5 of the Tentative Order, BACWA indicates that the first sentence should be clarified to read: “If a Discharger monitors effluent mercury or PCBs more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.”

Response: We made this requested clarification.

Comment 11: (BACWA) On Table E-2 Monitoring Requirements of page E-3 of the tentative Order, BACWA indicates that the sample type for mercury could be inconsistent with the pretreatment monitoring requirements specified in the individual dischargers’ NPDES Permits. BACWA recommends modifying footnote 6 of Table E-2 to read: “(6) Grab Samples: If allowed in the Pretreatment and Biosolids Monitoring Requirements of the dischargers’ NPDES Permit, grab samples shall be coincident with composite samples collected for the analysis of other regulated parameters.”

Response: We have made the requested clarification. Specifically, we revised footnote 6 to read as follows:

6) Grab Samples: If allowed in the Pretreatment and Biosolids Monitoring Requirements of the Dischargers’ individual NPDES permits, grab samples shall be collected coincident with composite samples collected for the analysis of other regulated parameters.

Comment 12: (Crockett) Crockett points out that it was not listed on the Regional Board’s distribution list, even though the District is listed as a discharger along with C&H on the permit for the Joint Use Philip F. Meads Water Treatment Plant (JTP). The District is operated by the Port Costa Sanitary Department, who did not receive notification. The notice was sent to the prior Chief Plant Operator for the Port Costa Wastewater Treatment Plant (PCWWTP). The District notified the State Water Resources Control Board on September 4, 2012, that Ryan LaMunyon replaced Dennis Moniz as the Chief Plant Operator for the PCWWTP pursuant to Title 23, Division 3, Chapter 26, Article 2, Section 3676 of the California Code of Regulations but this information was not updated on the distribution list. Thankfully, C&H notified the District on September

26, 2012, that a public hearing was announced and a Tentative Order was available for review. Because the Regional Water Board did not initially include the District in its public review process, and because the District never had an opportunity to provide comments on an administrative draft order, the District is understandably concerned about its due process rights during this quasi-adjudicative matter. As a result, the District asks that the Regional Water Board carefully review its comments and work with the District to resolve the issues raised before the forthcoming hearing.

Response: We regret that we inadvertently neglected to send a copy of the Tentative Order directly to Crockett. While not on the distribution list, we did provide notification of the Tentative Order on September 26, 2012, to Michael Kirker, the Port Costa Sanitary Department Manager. We appreciate Crockett's input, and our responses to its specific comments are below.

Comment 13: (Crockett) Crockett indicates that in Tables 1A, 2A, and 4A the Regional Water Board that refer to "Contra Costa Sanitary District No. 5, Port Costa" should read "Crockett Community Services District, Port Costa Sanitary Dept." Additionally, Crockett points out that the facility contact, title, phone number, and mailing address need to be corrected to refer to Michael Kirker, Port Costa, Dept. Manager.

Response: We have made these changes to the Tentative Order.

Comment 14: (Crockett) Crockett indicates that Tables 1B, 2B, and 4B that refer to "C&H Sugar and Crockett Community Services District" should be clarified to read "C&H Sugar and Crockett Community Services District, Crockett Sanitary Dept." Crockett also points out that the name of the facility should be revised as follows: "Joint Use Philip F. Meads Water Treatment Plant." Finally, Crockett also requests that we add the following contact information for the Crockett Community Services District:

Facility Contact: Dale McDonald
Title: General Manager
Phone: (510) 787-2992
Mailing Address: Crockett Community Services District
Crockett Sanitary Department
P.O. Box 578
Crockett, CA 94525

Response: We have made these changes to the Tentative Order.

Comment 15: (Crockett) Crockett points out the Regional Water Board will be considering a Tentative Order for C&H Sugar and the District's NPDES Permit No. CA0005240 at the November 14, 2012, Board hearing. Crockett requests that we update Attachment B to reflect the outcome of that hearing.

Response: We revised Attachment B to reflect the most current permit for C&H Sugar and Crockett Community Services District.

Comment 16: (Crockett) *Crockett points out that the discharge point name will be changed in C&H Sugar and Crockett’s permit from M-002 to EFF-002 and requests that Table E-1 of the Tentative Order be modified to include this correction.*

Response: We made this change to the Tentative Order.

Comment 17: (Crockett) *Crockett indicates that Table F-1B of the Fact Sheet should clarify that C&H, as operator of the Joint Treatment Plant, is responsible for submitting self-monitoring reports. Additionally, Crockett points out that the authorized person to sign and submit reports for the discharger “C&H Sugar and Crockett Community Services District, Crockett Sanitary Dept.” is Tanya Akkerman, Environmental Manager, C&H Sugar Company, Inc. (510) 787-4352.*

Response: We have not made changes in response to this comment. Both co-permittees share the responsibility for submitting self-monitoring reports. By mutual agreement between the co-permittees, they may arrange between themselves for C&H Sugar Company to submit the reports on behalf of both parties.

IV. Future Revision of Effluent Limits

Comment 18: (USEPA) *USEPA indicates since its adoption in 2007 and modification in 2011, the watershed permit has collected effluent performance data for municipal and industrial discharges of mercury and PCBs to San Francisco Bay. During the term of the proposed permit, USEPA expects the Regional Water Board to allocate the necessary resources to evaluate more recent effluent monitoring data in order to: (1) refine mercury and PCBs TMDL wasteload allocations based on performance for each discharge category, and (2) improve performance-based effluent limits that rely on extreme percentiles and/or upper confidence limits, to better demonstrate that permit limits are consistent with the TMDLs (40 CFR 122.44(d)(1)(vii)) and meet the antidegradation water quality standard.*

Response: Comment noted.

V. Staff-Initiated Revisions

To ensure that dischargers do not backslide and continue to implement source control for mercury and PCBs, we revised Provision C.2 Mercury and PCBs Source Control Program to read as follows:

Each Discharger shall evaluate whether there are controllable sources of mercury or PCBs to its wastewater system. For PCBs, controllable sources can be industrial equipment containing PCBs. For mercury, controllable sources can be the cumulative process discharges from

amalgam-generating dental practices in a municipal wastewater service area. The Discharger shall continue to implement and look for opportunities to improve existing measures to control such sources. Each Discharger shall submit the results of this evaluation, including any proposed control actions and implementation schedules, in its annual pollution prevention reports required by its individual NPDES permit.

We also revised the Fact Sheet to clarify that different PCB congeners will co-elute with the 40 congeners measured by the Regional Monitoring Program depending on the GC column used by the contract laboratory. Specifically, we revised page F-26, to read as follows:

Finally, as in Order No. R2-2011-0012, 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 co-elute with these 40 congeners (using Method 1668c), the concentrations of as many as 66 congeners, if the laboratory uses a SB-Octyl column (shown in Table F-14 below), or as many as 59 congeners, if the laboratory uses a DB-1 column (shown in Table F-15 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.

Table F-14
PCB Congeners, Including Co-Elution (IUPAC No.) with SB-Octyl Column for TMDL Development

| | | | | |
|---------|---------|---------|---------|---------|
| PCB 005 | PCB 061 | PCB 099 | PCB 149 | PCB 181 |
| PCB 008 | PCB 066 | PCB 101 | PCB 151 | PCB 182 |
| PCB 018 | PCB 070 | PCB 105 | PCB 153 | PCB 183 |
| PCB 020 | PCB 073 | PCB 106 | PCB 156 | PCB 187 |
| PCB 021 | PCB 074 | PCB 110 | PCB 158 | PCB 190 |
| PCB 028 | PCB 076 | PCB 115 | PCB 160 | PCB 194 |
| PCB 031 | PCB 080 | PCB 116 | PCB 163 | PCB 195 |
| PCB 033 | PCB 086 | PCB 118 | PCB 164 | PCB 196 |
| PCB 043 | PCB 087 | PCB 127 | PCB 168 | PCB 201 |
| PCB 044 | PCB 089 | PCB 128 | PCB 169 | PCB 203 |
| PCB 049 | PCB 090 | PCB 132 | PCB 170 | |
| PCB 052 | PCB 093 | PCB 138 | PCB 174 | |
| PCB 056 | PCB 095 | PCB 139 | PCB 177 | |
| PCB 060 | PCB 097 | PCB 141 | PCB 180 | |

Table F-15
PCB Congeners, Including Co-Elution (IUPAC No.) with DB-1
Column for TMDL Development

| | | | | |
|----------------|----------------|----------------|----------------|----------------|
| <u>PCB 005</u> | <u>PCB 061</u> | <u>PCB 110</u> | <u>PCB 160</u> | <u>PCB 196</u> |
| <u>PCB 008</u> | <u>PCB 066</u> | <u>PCB 117</u> | <u>PCB 161</u> | <u>PCB 201</u> |
| <u>PCB 018</u> | <u>PCB 069</u> | <u>PCB 118</u> | <u>PCB 162</u> | <u>PCB 203</u> |
| <u>PCB 020</u> | <u>PCB 070</u> | <u>PCB 125</u> | <u>PCB 163</u> | |
| <u>PCB 021</u> | <u>PCB 074</u> | <u>PCB 128</u> | <u>PCB 164</u> | |
| <u>PCB 028</u> | <u>PCB 076</u> | <u>PCB 132</u> | <u>PCB 170</u> | |
| <u>PCB 031</u> | <u>PCB 087</u> | <u>PCB 138</u> | <u>PCB 174</u> | |
| <u>PCB 033</u> | <u>PCB 090</u> | <u>PCB 139</u> | <u>PCB 177</u> | |
| <u>PCB 043</u> | <u>PCB 095</u> | <u>PCB 141</u> | <u>PCB 180</u> | |
| <u>PCB 044</u> | <u>PCB 097</u> | <u>PCB 149</u> | <u>PCB 182</u> | |
| <u>PCB 049</u> | <u>PCB 099</u> | <u>PCB 151</u> | <u>PCB 183</u> | |
| <u>PCB 052</u> | <u>PCB 101</u> | <u>PCB 153</u> | <u>PCB 187</u> | |
| <u>PCB 056</u> | <u>PCB 105</u> | <u>PCB 156</u> | <u>PCB 194</u> | |
| <u>PCB 060</u> | <u>PCB 106</u> | <u>PCB 158</u> | <u>PCB 195</u> | |

Additionally, Regional Water Board staff has made minor editorial and formatting changes to the Tentative Order.