CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESPONSE TO WRITTEN COMMENTS
ON THE REISSUANCE OF NPDES PERMIT AND ADOPTION OF CEASE AND DESIST ORDER FOR DISCHARGE IN VIOLATION OF NPDES PERMIT FOR:

City of San Mateo Wastewater Treatment Plant
2050 Detroit Drive
San Mateo, CA 94404
NPDES Permit No. CA0037541

I. City of San Mateo – September 12, 2007
II. Bay Area Clean Water Agencies – September 13, 2007
III. Editorial Changes

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

I. City of San Mateo

City of San Mateo Comment 1.
Section II.G, Water Quality-Based Effluent Limitations: Proposed State criteria should not be used to develop water quality-based effluent limitations.

For section II.G, Water Quality-based Effluent Limitations, the reference to "a proposed state criterion" should be removed since a proposed state criterion may not be used under state law. Using "proposed" state criteria before formal adoption would be considered underground rulemaking.

Response 1.
Section II.G of all of the Regional Water Board's NPDES permits contain this reference to "a proposed state criterion." We have not removed this reference because it is consistent with CFR 122.44(d)(1)(vi), as referenced in Section II.G of the Tentative Order (TO). Specifically, CFR 122.44.(d)(1)(vi) states that, regarding establishment of effluent limits for pollutants with reasonable potential to cause or contribute to an excursion above a narrative criterion, a calculated numeric water quality criterion may be used. It further states that "Such a criterion may be derived using **a proposed State criterion,** [emphasis added] or an explicit State policy or regulation interpreting its narrative water quality criterion …."

City of San Mateo Comment 2.
Section II.M, Stringency of Requirements for Individual Pollutants: There are several instances where the permit requirements are more stringent than required by the federal Clean Water Act.

The first and last sentences of Finding M, Stringency of Requirements for Individual Pollutants, should be removed as legal conclusions not supported by evidence in the record.

Response 2.
We do not agree that the TO includes requirements that are more stringent than those required by the federal Clean Water Act. In addition to requiring minimum technology-based effluent limits, and water quality-based effluent limits where necessary to protect water quality, the Clean Water Act prohibits backsliding from already established effluent limits unless certain conditions are met, and prohibits degradation of existing water quality even where water quality already meets or exceeds federal standards. Requirements for individual pollutants that comply with anti-backsliding or anti-degradation prohibitions, or that implement water quality based effluent limits where needed to meet water quality standards, therefore, are not more stringent than required by the federal Clean Water Act.

City of San Mateo Comment 3.
Section IV.A.2.a, Table 6c, Toxic Substances Effluent Limitations: The City requests that the dioxin-TEQ final limits be removed.

The City requests that the dioxin-TEQ numeric final effluent limit be removed because there is no approved numeric water quality objective for dioxin-TEQ. The congeners detected in the fish tissue samples which form the basis for the dioxin 303(d) listing and the congeners detected in publicly-owned treatment works are different. It is uncertain whether or not the City can meet this limit. There is no value in developing a numerical standard at this time since dioxin at these levels cannot even be measured. The recognized source of dioxin is air emissions and combustion. The City does not have the authority to control or prevent these sources.

Response 3.
The numeric effluent limits for dioxin-TEQ are reasonable and appropriate. We derived them in accordance with 40 CFR 122.44(d)(1)(vi); they are based on the CTR objective for 2,3,7,8-TCDD and other relevant information. The TO includes dioxin-TEQ effluent limits because state and federal laws and regulations require them. By adopting the dioxin-TEQ limits, the Regional Water Board is complying with regulations implementing the Clean Water Act at 40 CFR 122.44(d), which require that permits include effluent limits for all pollutants that may be discharged at levels with a reasonable potential to cause or contribute to exceedances of water quality standards, including narrative objectives, such as the Basin Plan's bioaccumulation objective. The Basin Plan states, "Water quality-based effluent limitations will consist of narrative requirements and, where appropriate, numerical limits for the protection of the most sensitive beneficial uses of the receiving water."

Dioxin and similar compounds have bioaccumulated in San Francisco Bay fish in violation of the Basin Plan's narrative bioaccumulation water quality objective. Therefore, a numeric effluent limit is appropriate to protect San Francisco Bay's beneficial uses, which the bioaccumulation objective is intended to preserve. We used Toxic Equivalency Factors (TEFs) published by U.S. EPA and the World Health Organization, together with the CTR water quality objective for 2,3,7,8-TCDD (the most toxic of the dioxins) to translate the Basin Plan's narrative bioaccumulation objective into numeric water quality-based effluent limits. Although the dioxin congeners detected in the fish tissue samples that form the basis of the 303(d) listing are different

from those typically detected in POTW effluent, those congeners all bioaccumulate in the same way to contribute to violation of the Basin Plan's narrative bioaccumulation water quality objective. It is therefore reasonable to apply the dioxin-TEQ effluent limit to all of them.

We do not intend to enforce compliance with the dioxins limits in situations where we cannot determine whether the limits are exceeded. However, neither 40 CFR 122.44(d) nor the Basin Plan allows consideration of whether analytical methods can actually measure dioxin-TEQ at concentrations as low as the limits. The Basin Plan states, "…when pollutant concentrations in waters are relatively low, the limits of quantification will be taken into account in determining compliance with, rather than the calculation of, effluent limits." Following this policy and the State Implementation Policy's Minimum Level (ML) concept, we developed effluent limits consistent with the water quality objective. We will use analysis-based Minimum Levels for compliance determination and enforcement.

We recognize that the ultimate sources of most dioxins in San Francisco Bay are mostly combustion-related air emissions, and that these sources are outside of the City of San Mateo's direct control. In the context of the Basin Plan's narrative bioaccumulation objective, however, we disagree that dioxins cannot be controlled. The Basin Plan states, "Controllable water quality factors are those actions, conditions, or circumstances resulting from human activities that may influence the quality of the waters of the State and that may be reasonably controlled." U.S. EPA concluded that dioxins are controllable when it placed San Francisco Bay on the 303(d) list of impaired waters due to dioxin concentrations in fish and other aquatic organisms. Air emissions, which are created through combustion, are a source of dioxins, but wastewater treatment plants are also sources of dioxins discharged to San Francisco Bay. Dioxins in wastewater are primarily a result of human activity and their discharge to waters can be controlled by removing solids from wastewater (dioxins are hydrophobic and bind to particles). Additional dioxin removal could result from plant upgrades. This could be burdensome and may not be cost effective at this time; however, such actions could be necessary to control dioxin discharges in the future.

<u>City of San Mateo Comment 4.</u>
Section IV.A.2.a, Table 7, Minimum Levels for Pollutants with Effluent Limitations: The City requests the removal of the reference to U.S. EPA's ML's for dioxin-TEQ.

The ML for Dioxin-TEQ, set at "1/2 the U. S. EPA specified ML's for Method 1613" should be removed, since the MLs for individual congeners are indicated.

<u>Response 4</u>
We have removed the reference to U.S EPA's ML for dioxin-TEQ from Table 7 as requested.

<u>City of San Mateo Comment 5.</u>
Section IV.A.4, Chronic Toxicity, and Page F-41, Fact Sheet Section VI.C.2, Chronic Toxicity: Chronic toxicity monitoring frequency requirements should be consistent throughout the permit. The following edits should be made for consistency with Monitoring and Reporting Plan (MRP) Table E-4, which requires semi-annual chronic toxicity monitoring:

Section IV.A.4.a.(2):

(2) Accelerate monitoring after exceeding a single-sample maximum of 10 TUc, consistent with Table 4-5 of the Basin Plan for dischargers monitoring chronic toxicity ~~monthly~~semi-annually. Accelerated monitoring shall consist of monthly monitoring.

Fact Sheet Section VI.C.2:

2. Chronic Toxicity. *Chronic whole effluent toxicity testing is required semi-annually~~quarterly~~ in order to demonstrate compliance with the Basin Plan's narrative toxicity objective.*

Response 5.
We have revised the TO as requested.

City of San Mateo Comment 6.
Section IV.A.2.a, Table 6c, Toxic Substances Effluent Limitations, and Page F-30, Fact Sheet Section IV.C.4.d.(4): The City requests that the permit include alternative cyanide limits that would come into effect with the cyanide site-specific objective.

The City supports the method for calculating final limits for cyanide, as discussed in Fact Sheet Section IV.C.4.d.(4), which incorporates information from the City's recent dilution study and recognizes the rapid degradation of cyanide in receiving water. However, the City understands that new cyanide limits would also apply when the new site-specific objective is approved and becomes fully effective. As a result, the City requests that the Regional Water Board add a footnote to Table 6c that includes the applicable alternative final limits for cyanide calculated based on the adopted site-specific water quality objectives for cyanide. The alternative final limits have also been included in other recent permits.

Response 6.
We have revised Table 6c as follows:

Table 6c. Toxic Substances Effluent Limitations

Parameter	Units	Effluent Limitations (1, 4)				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Priority Pollutants						
Copper (2)	µg/L	72	---	96	---	---
Mercury	µg/L	0.020	---	0.043	---	---
Nickel	µg/L	30	---	71	---	---
Cyanide(5)	µg/L	12	---	20	---	---
Dioxin-TEQ (3)	µg/L	1.4×10^{-8}	---	2.8×10^{-8}	---	---
Ammonia (Total as N)	mg/L	66	---	120	---	---

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(5) Alternate Effluent Limits for Cyanide

a. If a cyanide SSO for the receiving water becomes legally effective, resulting in adjusted saltwater criteria CCC of 2.9 µg/l (based on the assumptions in Draft Staff Report on Proposed Site-Specific Water Quality Objectives and Effluent Limit Policy for Cyanide for San Francisco Bay, dated December 4, 2006), upon its effective date, the following limitations shall supersede those cyanide limitations listed in Table 6c (the rationale for these effluent limitations can be found in the Fact Sheet [**Attachment F**]).

MDEL of 38 µg/L, and AMEL of 22 µg/L.

b. If a different cyanide SSO for the receiving water is adopted, the alternate WQBELs based on the SSO will be determined after the SSO effective date.

We have revised Fact Sheet Section IV.C.4.d.(4).(e) and (f) as follows:

(4) Cyanide

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(e) Alternative Limit for Cyanide. As described in the Staff Report on Proposed Site-Specific Water Quality Objectives and Effluent Limit Policy for Cyanide for San Francisco Bay, dated December 4, 2006, the Regional Water Board has developed site-specific criteria for cyanide. In the Basin Plan amendment approved by the Regional Water Board, the proposed site-specific criteria for marine waters are 2.9 µg/L as a four-day average, and 9.4 µg/L as a one-hour average. Based on these assumptions, a dilution ratio of 10:1, and the Discharger's current cyanide data (coefficient of variation = 0.42), final WQBELs for cyanide will be 38 µg/L as a MDEL, and 22 µg/L as an AMEL. These alternative limits will become effective only if the SSOs adopted for cyanide and approved by the State Water Board and U.S. EPA are the same as in the Basin Plan Amendment approved by the Regional Water Board on December 13, 2006.

(f)~~(e)~~ Antibacksliding. Antibacksliding requirements are satisfied because Order No. 01-071 did not include final effluent limitations for cyanide. If the alternate effluent limits come into effect, antibacksliding requirements will be satisfied because (1) the alternate effluent limits are based on new information, (2) water quality standards for cyanide in San Francisco Bay are attained, and (3) the alternate effluent limits comply with antidegradation requirements.

City of San Mateo Comment 7.

Section VI.C.6, Corrective Measures to Minimize Blending Events, and Fact Sheet Section VII.C.6, Corrective Measures to Minimize Blending Events: The City requests a completion date for capacity evaluation that is relative to the effective date of the order and is consistent with the

schedule presented in the No Feasible Alternatives Analysis. The City requests the following edits to Section VI.C.6:

Tasks	*Completion Date*
1. Capacity Evaluation. Evaluate the capacity of the collection system and the flows anticipated at the treatment plant after collection system improvements. Develop alternatives for handling increased flows.	*18 months after the effective date of this Order~~July 1, 2009~~*
2. Collection System Improvements. Complete sewer rehabilitation and relief sewer projects. Projects currently scheduled include: *a. Sewer Rehabilitation ($2 million/year)* *b. Las Prados Relief Sewers* *c. South Trunk System Upgrade* *d. El Cerrito Relief Line* *e. Force Main, Dale Avenue to WWTP*	*Budgeted in Capital Improvement Plan (CIP)*:* *a. 2005 to 2013* *b. 2005 to 2010* *c. 2007 to 2013* *d. 2008 to 2010* *e. 2005 to 2010*
3. Hydraulic Improvements/Outfall. Complete hydraulic improvements recommended in capacity evaluation.	*December 31, 2013.*
4. Treatment Plant Capacity Improvements. Complete treatment plant hydraulic capacity improvements pending results of capacity evaluation.	*December 31, 2013.*

Similarly, the City requests the following edits to Fact Sheet Section VII.C.6:

> *Both projects are to be completed in 2007. No other significant physical or operational changes are planned for the facility at this time; however, the Discharger is required to implement corrective measures to minimize blending events. The schedule of tasks is provided in Section VI.C.6 of this Order. The first task, to be completed by 18 months after the effective date of this Order~~July 1, 2009~~, is to develop alternatives to handle increased flows likely to occur after planned collection system improvements are completed.*

Response 7.
The effective date of this Order is February 1, 2008. We have therefore specified the date 18 months after the effective date as August 1, 2009. We have revised the TO as appropriate.

City of San Mateo Comment 8:
Section VI.C.7, Dioxin-TEQ Compliance Schedule: The compliance schedule action plan for dioxin-TEQ is neither realistic nor commensurate with actual water quality impacts.

The congeners detected in fish tissue samples which form the basis for the dioxin 303(d) listing are different than the congeners detected in publicly-owned treatment works. As a result, there is nothing a municipal wastewater treatment plant could do to its effluent to reduce the concentrations of dioxin congeners found in fish tissue, which is the basis for these requirements.

The compliance schedule requirements are more intensive than warranted, considering that, in this case, reasonable potential was triggered by background, rather than effluent, concentrations of dioxins.

Although an optional offset provision (as described in Task 7) may provide an alternative to compliance with a final effluent limit for dioxin-TEQ, such a program does not currently exist. Until such a program that includes a feasible implementation strategy is developed, the City believes this is not a realistic alternative and it is misleading to expect that such a program would lead to compliance.

For these reasons, the City requests that the compliance schedule for dioxin-TEQ be removed, along with the final limit.

If the Regional Water Board decides to keep the dioxin-TEQ compliance schedule, however, the City requests that language in the TO be revised as follows to be more reasonable, and to be consistent with recent permits:

The Discharger shall comply with the following tasks and deadlines:

Task	*Deadline*
1. Continue semi-annual monitoring for dioxin-TEQ at monitoring point E-001.	*Upon the effective date of this Order.*
2. Report on the status of dioxin-TEQ monitoring and analytical results in each semi-annual monitoring report.	*Upon the effective date of this order.*
3. If dioxin-TEQ monitoring data show that the Discharger is deemed out of compliance, as described in Section 2.4.5, Compliance Determination, of the State Implementation Policy, with~~results exceed~~ the final water quality based effluent limits specified in Effluent Limitations and Discharge Specifications A.2, the Discharger shall identify and implement source control measures to reduce concentrations of dioxin-TEQ to the treatment plant, and therefore to receiving waters.	*No later than 12 months after a detection of dioxin-TEQ that is out of compliance with~~exceeds~~ the final effluent limits.*
4. The Discharger shall evaluate and report on the effectiveness of its source control measures in reducing concentrations of dioxin-TEQ to its treatment plant. If, following previous measures, monitoring data show that ~~have not been successful in enabling~~ the Discharger remains out of~~to~~ compliance~~y~~ with final limits for dioxin-TEQ, the Discharger shall also identify and implement additional source control measures to reduce concentrations of this pollutant.	*Annually in the Annual Best Management Practices and Pollutant Minimization Report required by Provision VI.C.3*

Task	*Deadline*
5. In the event that, following previously implemented source control measures, monitoring data show that the Discharger is out of compliance with~~are insufficient for meeting~~ final water quality based effluent limits specified in Effluent Limitations and Discharge Specifications A.2 for dioxin-TEQ, the Discharger shall submit a schedule for implementation of additional actions to reduce the concentrations of this pollutants.	*July 1, 2013*
6. The Discharger shall commence implementation of the identified additional actions in accordance with the schedule submitted in task 5, above.	*August 15, 2013*
7. Full Compliance with IV. Effluent Limitations and Discharger Specifications A.2 for dioxin-TEQ. Alternatively, the Discharger may comply with the limit through implementation of a mass offset strategy for dioxin-TEQ in accordance with policies in effect at that time.	*January 31, 2018*

Response 8.
Please see the response to Comment 3 for discussion of the reasons why we must retain the dioxin-TEQ final effluent limitations in this permit, and why the limit applies to the dioxin congeners typically found in POTW effluent in addition to the congeners detected in the fish tissue samples that formed the basis of the 303(d) listing of San Francisco Bay for dioxins. Reasonable potential was triggered for dioxin-TEQ by the combination of detections in City of San Mateo effluent, specifically of the OCDD and OCDF congeners, and background concentrations in San Francisco Bay. We acknowledge that a formal mass offset program does not currently exist. The TO refers to such a program simply as one possible means to overcome any technical infeasibility in meeting the dioxin-TEQ limits.

Since we cannot remove the final limit for dioxin-TEQ from the TO, we cannot remove the dioxin-TEQ compliance schedule. None of the data provided by the City of San Mateo WWTP shows that the WWTP would have violated the dioxin-TEQ effluent limit, but the data set is small and does not provide statistical confidence that the effluent dioxin-TEQ concentrations are consistently below the effluent limit. However, because it is possible that the City of San Mateo WWTP will comply with the dioxin-TEQ effluent limit without further action, we think the request to revise the tasks and deadlines, as consistent with other recent compliance schedules, is reasonable, and we have revised the TO accordingly.

City of San Mateo Comment 9.
MRP, Section I.D, Table E-1, Test Methods and Minimum Levels for Pollutants with Reasonable Potential: The City requests the removal of the requirement for an ammonia Minimum Level (ML).

The City requests the removal of the ammonia ML (0.1 mg/L). The City's ammonia levels and limits are significantly higher than this figure. Ammonia is not a priority pollutant and therefore

does not fall into the same category as metals and organics for the purposes of ML determinations. Also, the City's lab is ELAP certified. This certification does not require the lab to calculate an ML for ammonia.

The City requests the following edits:

Table E-1. Test Methods and Minimum Levels for Pollutants with Reasonable Potential

CTR #	Constituent	Types of Analytical Methods [a] Minimum Levels (µg/L)											
		GC	GCMS	LC	Color	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAF	DCP
6	Copper					25	5	10	0.5	2			
8	Mercury [b]											0.0005	
9	Nickel					50	5	20	1	5			
14	Cyanide				5								
16-TEQ	Dioxin-TEQ [c]												
	~~Total Ammonia (as N)~~ [d]												

[a] *Analytical Methods / Laboratory techniques are defined as follows:*

Color	=	Colorimetric
CVAF	=	Cold Vapor Atomic Fluorescence
DCP	=	Direct Current Plasma
FAA	=	Furnace Atomic Absorption
GC	=	Gas Chromatography
GCMS	=	Gas Chromatography Mass Spectroscopy
GFAA	=	Graphite Furnace Atomic Absorption
ICP	=	Inductively Coupled Plasma
ICPMS	=	Inductively Coupled Plasma/Mass Spectrometry
LC	=	Liquid Chromatography
SPGFAA	=	Stabilized Platform Graphite Furnace Atomic Absorption (i.e. EPA 200.9)

[b] *Mercury: The Discharger may, at its option, sample effluent mercury either as grab or as 24-hour composite samples. Use ultra-clean sampling (U. S. EPA 1669) to the maximum extent practicable and ultra-clean analytical methods (U. S. EPA 1631) for mercury monitoring. The Discharger may only use alternative methods if the method has an ML of 0.5 nanograms per liter (ng/L) or less, and approval is obtained from the Executive Officer prior to conducting the monitoring.*

[c] *Minimum Levels for dioxin congeners are shown in the permit, Table 7.*

~~[d] *Ammonia-N measured by Ammonia Selective Electrode Method, Reference SM 4500-NH3 F (18th Edition) Minimum Detection Level 0.1 mg/l.*~~

Response 9.

We agree that an ML for ammonia is unnecessary, and have revised the TO as requested.

City of San Mateo Comment 10.

MRP Section IV.A, Table E-4, Effluent Monitoring: The City requests a change in the ammonia sampling requirement from grab to composite. Table E-4, Effluent Monitoring, requires the city to collect grab samples for ammonia. The City has historically collected composite samples for ammonia, for toxicity testing purposes, and requests that the table and requirement be changed to allow the City to continue collecting only composite samples for ammonia.

Response 10.

Table E-4 still calls for grab samples for ammonia because ammonia is a non-persistent pollutant; however, grab samples may be composited if the sample collection and preservation procedures called for in 40 CFR 136 are followed. The same is true of cyanide, since cyanide is

non-persistent similar to ammonia. We have added the following footnote to the Ammonia and Cyanide rows of Table E-4:

Table E-4. Effluent Monitoring

Parameter	Units	Minimum Sampling Frequency			Required Analytical Test Method
		Continuous	C-24	G	
…					
Ammonia (14)	mg/L			M	(1)
…					
Cyanide (14)	µg/L			M	(1)
…					

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(14) Ammonia and cyanide grab samples collected over a 24-hour period may be composited and analyzed to comply with this requirement if the appropriate sample collection and preservation practices called for in 40 CFR 136 are followed.

This should allow the Discharger to continue to collect composite ammonia samples and will ensure that those samples are representative of actual discharge conditions.

City of San Mateo Comment 11.
MRP Section IV.A, Table E-4, Effluent Monitoring: The City requests a monitoring frequency requirement for enterococcus of once per month.

The TO contains new monitoring requirements for enterococcus. The TO also retains the bacteria effluent limits for fecal coliform. The City has a 100% compliance record for fecal coliform levels, as demonstrated by Table F-3a of the TO. In addition, the data recorded from other Bay Area POTWs typically show very low enterococcus levels. The City therefore believes that monthly enterococcus sampling is sufficient to verify compliance with the new limits. The City requests a reduction in sampling frequency requirements that is consistent with other recently adopted NPDES permits in Region 2. Additionally, a monthly monitoring requirement would leave room for the City to accelerate monitoring as needed in the unlikely event that compliance issues arose.

If the Regional Water Board staff objects to monthly monitoring, the City would like to suggest consistent enterococcus and fecal coliform monitoring requirements of once per week for both constituents.

The City also requests approval of the IDEXX Enterolert method for monitoring enterococcus.

Response 11.
We have not reduced the enterococcus monitoring frequency. Both the fecal coliform limit and the enterococcus limit protect REC-1 (i.e., full body contact) beneficial uses, but enterococcus is considered the superior indicator of pathogens that cause gastrointestinal illness in humans. While the City of San Mateo has a commendable record of compliance with the fecal coliform limit, there is as yet no record of compliance with the enterococcus limit. However, we also think it is reasonable to reduce the fecal coliform monitoring frequency. The TO has been

revised to require weekly monitoring of both fecal coliform and enterococcus bacteria as suggested.

We agree that the IDEXX Enterolert method is allowable and have added the following footnote to Table E-4:

(13) The Discharger shall monitor for Enterococci using EPA-approved methods, including the IDEXX Enterolert method.

City of San Mateo Comment 12.
MRP, Tables E-3 Influent Monitoring and E-4 Effluent Monitoring: The City requests approval to report influent daily maximum and minimum flow rates rather than effluent values, for practical reasons.

The City would prefer to report only influent daily maximum and minimum flow rates, as they have done previously. Similar influent monitoring requirements are included in Table E-3. Therefore, the City requests the removal of footnote 2.e to table E-4, as follows:

(2) Flows shall be monitored continuously and the following shall be reported in monthly self-monitoring reports:
a. Daily Average Flow (MGD)
b. Total Daily Flow Volume (MG)
c. Monthly Average Flow (MGD)
d. Monthly Total Flow Volume (MG)
~~*e. Average daily maximum and average daily minimum flow rates (MGD) in each month.*~~

Response 12
It is not the intent of the Regional Water Board to require reporting of daily maximum and minimum effluent flow rates. To clarify the flow monitoring requirements, footnote 1 to Table E-3, which contains the influent monitoring requirements, has been replaced with the following:

(1) Flows shall be monitored continuously and the following shall be reported in monthly self-monitoring reports:
a. Daily instantaneous minimum flow rate (MGD).
b. Daily instantaneous maximum flow rate (MGD).
c. Average daily flow rate (MGD) based on the total flow for each day.
d. Average flow rate for the month (MGD) based on an average of daily flows.

Footnote 2 to Table E-4, which contains the effluent monitoring requirements, has been replaced with the following:

(2) Flows shall be monitored continuously and the following shall be reported in monthly self-monitoring reports:
a. Average daily flow rate (MGD) based on the total flow for each day.
b. Average flow rate for the month (MGD) based on an average of daily flows.

City of San Mateo Comment 13.
MPR, Table E-4 Effluent Monitoring Requirements and Fact Sheet Section VI.B, Effluent Monitoring. The City requests clarification and consistency of the required monitoring frequency for priority pollutants without effluent limits.

Table E-4 specifies a monitoring frequency for priority pollutant without effluent limits of once per year, a change that was made in response to the City's comments on the administrative draft

of this permit last spring. However, footnote 11 to table E-4 and the last bullet under VI.B on page F-41 might imply that these same pollutants required semi-annual monitoring. The City requests the following clarification to Table E-4:

> *(11) Sampling methods for all priority pollutants in the SIP is addressed in a letter dated August 6, 2001, from the Regional Water Board Staff: "Requirements for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy" (not attached but available for review or download on the Regional Water Board's website at http://www.waterboards.ca.gov/sanfranciscobay/).*

And to Fact Sheet Section VI.B:

- *Routine effluent monitoring is required for those priority toxic pollutants for which effluent limitations are established by this Order - copper, nickel, mercury, cyanide, dioxin-TEQ, and ammonia. Monitoring for all other priority toxic pollutants must be conducted once a year in accordance with ~~frequency and~~ methods described in the Regional Water Board's August 6, 2001 Letter.*

Response 13.
The TO has been revised as requested.

City of San Mateo Comment 14.
MRP Section XI.B.6. The City requests that the Regional Water Board remove the new required procedure for the invalidation of data points.

The City requests the removal of the modification to Section F.4.g of Part A of the Self-Monitoring Program as described in Reporting Requirement XI.B.6 of the MRP for the following two reasons.

Data entry errors occur occasionally in data reporting, and are not necessarily discovered immediately. Setting a time limit on the discovery and correction of these errors is not in the best interest of good science. Although the City makes every effort to identify and correct data issues, inaccurately reported data points should be allowed to be corrected whenever they are discovered and justified. The City's lab staff are ELAP-certified professionals who are qualified to determine the validity of data points.

Response 14.
BACWA provided essentially the same comment. Please see the response to BACWA comment 7.

City of San Mateo Comment 15.
Fact Sheet Section IV.C.4.d(6), Ammonia. The Technical Support Document should be used for the ammonia reasonable potential analysis.

The TO indicates that the driver for conducting a reasonable potential analysis for ammonia was the adoption of State Water Resources Control Board (SWRCB) Order WQ 2007-0004 on May 1, 2007. In that order, the language regarding establishment of reasonable potential for ammonia which forms the basis for the ammonia effluent limits analysis in this TO is as follows:

"…the effluent can appropriately be characterized as having reasonable potential to exceed the ammonia objective.[90] *[Footnote 90: See U.S. EPA's Technical Support Document for Water Quality-based Toxics Control (March 1991), EPA 505 2-90-001, 3.2 at page 50.]"*

This language indicates that the SWRCB used the Technical Support Document (TSD) method for establishing reasonable potential for ammonia. However, the Regional Water Board has opted to use the State Implementation Policy (SIP), which is more stringent. Given that ammonia is not a water quality concern in San Francisco Bay, the TSD, a U. S. EPA-supported and SWRCB-supported approach, should be used.

Response 15.
Following the SIP methodology to evaluate reasonable potential for ammonia makes more sense than using U.S. EPA's TSD. The Basin Plan directs us to use the SIP to calculate effluent limits for selected toxic pollutants (e.g., the criteria pollutants). It makes sense that we would take a similar approach for ammonia. Regardless of how we conduct our reasonable potential analyses, the limits are calculated in the same way, taking dilution into account as appropriate. The purpose of the reasonable potential analyses is to determine which (i.e., how many) dischargers need limits.

A reasonable potential analysis can be performed using either the SIP or TSD methodology. The SIP is more conservative than the TSD because the SIP does not account for dilution in its reasonable potential analysis methodology. Therefore, with the SIP, more dischargers get limits. These additional dischargers are relatively less likely to encounter problems complying with their limits. In our view, this approach allows us to better oversee the dischargers and more effectively monitor for any water quality concerns. Moreover, we already use the SIP methodology to complete the reasonable potential analyses for every other pollutant, and we see no reason to use a different method just for ammonia.

City of San Mateo Comment 16.
The City of San Mateo suggested corrections to several typographical and/or basic language errors.

Response 16.
We appreciate the City of San Mateo's close reading of the TO, and have made the suggested corrections.

City of San Mateo Comment 17.
The detailed action plan for mercury called for by the Cease and Desist Order (CDO) is not consistent with other activities in the region designed to address these constituents.

The Regional Water Board has been in the process of developing a mercury total maximum daily load (TMDL) for approximately 10 years. The TMDL contains requirements for mercury that have been developed in a deliberate, thoughtful, and meaningful way. The City is concerned that the requirements in the CDO, which have the potential for significant expenditures of public funds if a mercury TMDL permit does not become effective within the next twelve months, are

not consistent with the requirements related to the TMDL. The tentative mercury watershed permit, which would implement the TMDL, is scheduled for adoption by the Regional Water Board on the same day as this permit.

Also, the City would prefer that the Regional Water Board require initiation of source control activities only when there is a quantifiable non-compliance issue.

For these reasons, the City requests revisions to CDO Table 2.

Response to Comment 17.
The CDO does not require significant expenditures of public funds related to mercury until 2011. Until then, the CDO requires a pollution prevention strategy that entails source identification and reduction. These actions are similar to what will be necessary to implement the Mercury TMDL. U.S. EPA has indicated that it may approve the Mercury TMDL as soon as April 2008. When it does, we expect that a mercury watershed permit will supersede all the mercury provisions in this permit. The CDO contains explicit exceptions to all mercury-related requirements in the event that a mercury watershed permit becomes effective. The CDO time schedule reflects the TMDL timeline, so the Discharger may not need to complete any of the mercury-related actions in the CDO prior to approval of the Mercury TMDL.

We concur that source control activities should only be initiated if there is quantifiable non-compliance, and we have revised the CDO accordingly (see response to Comment 18).

City of San Mateo Comment 18.
The City requests several typographical and/or basic language corrections to CDO Table 2

Response 18.
Again, we appreciate the City of San Mateo's close reading of the TO and CDO. We have revised CDO Table 2 as follows:

Table 2: Time Schedules and Prescribed Actions

Action	Deadline
	Mercury
a. Comply with the following interim effluent limit at Monitoring Station E~~M~~-001: *Mercury*: Maximum daily effluent limit = 0.065 µg/L	Upon the effective date of this Order
b. If, by February 28, 2008, discharge data continue to show that the discharge is out of compliance (as defined in Section 2.4.5 of the State Implementation Plan) with the permit effluent limits, s~~S~~ubmit a plan for identifying all mercury sources to the discharge. Examples of potential mercury sources include dental offices, laboratories, medical facilities, fluorescent light tubes, thermometers, and electrical switches. The plan shall, at a minimum, include sampling influent waste streams to identify and quantify pollutant sources.	~~August 1~~September 1, 2008

Action	Deadline
	Mercury
c. Implement the plan developed in action "b" within 30 days of the deadline for action "b," and submit by the deadline for this action (action "c") a report that contains an inventory of the pollutant sources.	~~December~~January 1, 2009~~8~~
d. Submit a report documenting development and initial implementation of a program to reduce and prevent the pollutants of concern in the discharge. The program shall consist, at a minimum, of the following elements: i. Maintain a list of sources of pollutants of concern. ii. Investigate each source to assess the need to include it in the program. iii. Identify and implement targeted actions to reduce or eliminate discharges from each source in the program. iv. Develop and distribute, as appropriate, educational materials regarding the need to prevent sources to the sewer system.	~~February~~March 1, 200~~8~~9
e. Continue to implement the program described in action "d" and submit annual status reports that evaluate its effectiveness and summarize planned changes. Report whether the program has successfully brought the discharge into compliance with the effluent limits in the Permit. If not, identify and implement additional measures to further reduce discharges.	Annually each February 28 in Best Management Practices and Pollutant Minimization Report required by Permit Provision VI.C.3
f. If by **April 28, 2011**, discharge data continue to show that the discharge is out of compliance (as defined in Section 2.4.5 of the State Implementation Plan) with the Permit effluent limits, submit a report, by the deadline for this action, identifying more aggressive actions to ensure compliance. These actions shall include, but not be limited to, reviewing options for pretreatment and upgrades to the treatment plant. The report shall identify an implementation schedule for investigating these options, selecting a preferred option, and implementing the chosen option. At a minimum, the report shall plan for the following activities: i. Bench scale testing or pilot scale testing or both ii. Development of preliminary design specifications iii. Development of final design specifications iv. Procurement of funding v. Acquisition of necessary permits and approvals vi. Construction	August 1, 2011

Action	Deadline
	Mercury
g. Implement the plan required in action "f" within 45 days of the deadline for action "f," and submit annual status reports.	Annually each February 1st in Annual Self-Monitoring Report required by Permit Attachment E, Monitoring and Reporting Program
h. Submit documentation confirming complete plan implementation and comply with effluent limits in the Permit.	August 1, 2015

II. Bay Area Clean Water Agencies (BACWA)

BACWA submitted nine comments on the City of San Mateo TO

BACWA Comment 1.
An enforceable schedule for blending should not be included in the permit. *A no feasible alternative analysis is not legally required. U.S. EPA's national blending policy is only a draft, and even the draft policy does not require an enforceable schedule to reduce the need for blending. These blending requirements should not be imposed in advance of national policy decisions.*

Response to Comment 1.
We disagree. In our view, requiring enforceable actions to reduce the need for blending is reasonable and consistent with existing federal laws and regulations (see 40 CFR 122.41(m)(4)), which require that dischargers document that there are no feasible alternatives to such bypasses as blending events. U.S. EPA developed draft guidance on this topic, and although the draft guidance is not legally enforceable, we consider it to be a useful tool as we interpret these federal laws and regulations. The provisions in the TO are necessary because the Discharger needs to show us the measures they are undertaking to minimize blending events so we can consider whether to allow blending the next time we reissue the permit. The schedule in the TO was crafted to provide the Discharger with maximum flexibility in determining its preferred alternatives for minimizing blending events.

BACWA Comment 2.
BACWA objects to including numeric final effluent limits for dioxin-TEQ. *There is no approved numeric water quality objective for dioxin-TEQ, and dischargers are unable to meet the dioxin TEQ limit. Moreover, no analytical methods can accurately detect dioxins at these levels. The dioxin sources are air emissions and combustion, neither of which these dischargers can control. Although an optional offset provision may provide an alternative to compliance with these limits, such a program does not currently exist.*

Response 2.
The City of San Mateo provided essentially the same comment. Please see our response to City of San Mateo Comment 3.

BACWA Comment 3.
The compliance schedule action plan for dioxin-TEQ is neither realistic nor commensurate with actual water quality impacts, and overly burdensome. *The dioxin congeners found in fish tissue samples, which form the basis for the dioxin 303(d) listing, are different than the congeners detected in publicly-owned treatment works. Therefore there is nothing a municipal treatment plant could do to reduce the concentrations of dioxin congeners in fish tissue. It is highly unlikely that compliance schedule action plan activities will result in compliance with proposed final limits. Although an optional offset provision may provide an alternative to compliance with these limits, such a program does not currently exist.*

Response 3.
BACWA cites no evidence to support its assertion that the dioxins in San Francisco Bay fish are different (i.e., come from a different source) than the dioxins discharged by wastewater treatment plants. As explained in our response to City of San Mateo Comments 3 and 8, dioxins are controllable. This TO is consistent with the approach we have taken with recent permits.

We acknowledge that a formal mass offset program does not currently exist. The TO refers to such a program simply as one possible means to overcome any technical infeasibility in meeting the dioxin-TEQ limits.

BACWA Comment 4.
The City requests that the permit include alternative cyanide limits that would come into effect with the cyanide site-specific objective.

Response 4.
We concur. Please see the response to the City of San Mateo's Comment 6.

BACWA Comment 5.
BACWA has concerns about including final effluent limits in the permit with which the City cannot comply. *The permit includes final effluent limits for mercury. U.S EPA opines that TMDLs cannot be used to delay implementation of final limits through compliance schedules, but BACWA urges the Water Board to challenge U.S. EPA's assertion. BACWA objects to having final limits and CDOs for pollutants for which it has worked with the Water Boards to have TMDLs adopted.*

Response 5.
We see no basis for removing the final effluent limits for mercury from the permit. The SIP's prescriptive measures require that we include this limit because there is reasonable potential for the discharge to contain mercury at levels that could adversely affect water quality. The Discharger's inability to immediately comply with the water quality-based limits for mercury does not obviate the requirement for the effluent limitations for this pollutant, as it has a reasonable potential to cause or contribute to exceedances of water quality standards. We recognize that the Discharger will be unable to immediately comply with the mercury limits. The accompanying CDO addresses this foreseeable noncompliance. While the eventual adoption of a TMDL for mercury will likely require the recalculation of limits, we cannot legally delay implementation of existing water quality standards.

In a December 2006 letter to the Regional Water Board, U.S. EPA stated that the purpose of a compliance schedule could not be to allow time for such regulatory actions as TMDLs. Compliance schedules must be crafted to give dischargers time to undertake actions to meet water-quality based effluent limits. State Water Board Order WQ 2007-0004 (May 2007) reinforced U.S. EPA's position, stating that compliance schedules must contain an enforceable sequence of actions leading to compliance with effluent limits. The State Water Board specifically noted that U.S. EPA had formally disapproved the SIP's provisions on TMDL-based compliance schedules in an October 2006 letter. Therefore, we address the Discharger's

difficulty complying with the mercury limits through a CDO and not a compliance schedule in the permit.

Although the CDO requires that the Discharger meet the effluent limits for mercury, the CDO is constructed such that, when the mercury TMDL and the new effluent limits based on it take effect, the CDO will cease to be in effect.

BACWA Comment 6.
BACWA has legal concerns with the mercury mass limit. *BACWA incorporated by reference earlier legal arguments it made in its petitions regarding other San Francisco Bay Region permits to preserve its rights to challenge the mercury mass limits if a mercury TMDL is not adopted as expected. BACWA intends to withdraw this comment once an acceptable mercury TMDL is adopted.*

Response 6.
BACWA's request that the Regional Water Board notice all of its comments on mercury mass limits in previous draft permits, and its attempt to incorporate all of those comments by reference, is inappropriate. Some of the old comments may have relevance to this TO, and some may not. This global "incorporation by reference" fails to articulate any specific current grievance with this TO. Thus, we cannot make a specific reply.

The State Water Board has upheld the Regional Water Board's imposition of mercury mass limits on all four occasions when it reviewed this issue. Specifically, the State Water Board upheld mercury mass limits in its decisions on the permits for Tosco (WQ 2001-06), Napa (WQ 2001-16), Chevron (WQ 2002-0011), and East Bay Municipal Utility District (WQ 2002-0012). Since the State Water Board adopted the Mercury TMDL on July 17, 2007, and we expect the California Office of Environmental Law and U.S. EPA to approve it (U.S. EPA has expressed its support for the TMDL), we consider this comment to be withdrawn.

BACWA Comment 7
BACWA objects to the required procedure and time limits for invalidating data points. *Human errors occur occasionally in data reporting and are not necessarily discovered immediately. Setting a time limit on the discovery and correction of these errors is not good science. The Regional Water Board should allow erroneously reported data points to be corrected whenever they are discovered.*

BACWA's member agency's lab staff are ELAP-certified professionals who are qualified to determine the validity of data points. Invalidation of data points should not require formal review and approval by the Regional Water Board. Also, because lab staff are already subject to a regulated certification process, the new requirements presented in the TO would be over-regulating

Response 7.
The procedure for invalidating data points is not intended to be burdensome. In several recent permits, reasonable potential has been found for pollutants based on detections that may have been questionable because the data had not been reviewed sufficiently. Evidence to invalidate the

data did not exist years after the fact. This has left the Regional Water Board with no choice but to include final limits in permits in several cases where more timely review of the data might have removed the need for them. Furthermore, data may be invalidated whenever sufficient evidence is submitted to the Regional Water Board. However, we strongly encourage dischargers to review data as soon as possible after analytical results are received, and to request invalidation of suspect data by submitting documentary evidence with the next monitoring report.

Although we respect and appreciate the work of laboratory staff, we see no reason why dischargers should not submit documentary evidence that data points should be invalidated. The Regional Water Board, in its oversight role, retains the authority to make the final determination of whether data are valid or not. That said, when convincing evidence is provided to show data invalid, those data will not be retained.

III. Editorial Changes

1. All references to "USEPA" have been changed to U. S. EPA.

2. Table 3 Administrative Information: the Order's adoption data has been changed to November 1, 2007; the Order's effective date has been changed to February 1, 2008; and the Order's expiration date has been changed to January 31, 2013.

3. Section VI.C.7, Dioxin-TEQ Compliance Schedule; we have specified the dates on which the semi-annual reports are due (Task 2) as April 15 and October 15 of each calendar year (i.e., in the March and September self-monitoring reports), consistent with the months in which the City of San Mateo has historically sampled for dioxins.

4. Section VI.C.6, Corrective Measures to Minimize Blending Events: the completion dates for collection system improvements were erroneously given as date ranges rather than dates. Section VI.C.6 has been revised as follows:

Tasks	*Completion Date*
1. Capacity Evaluation. Evaluate the capacity of the collection system and the flows anticipated at the treatment plant after collection system improvements. Develop alternatives for handling increased flows.	*August 1, 2009~~July 1, 2009~~*
2. Collection System Improvements. Complete sewer rehabilitation and relief sewer projects. Projects currently scheduled include: *f. Sewer Rehabilitation ($2 million/year)* *g. Las Prados Relief Sewers* *h. South Trunk System Upgrade* *i. El Cerrito Relief Line* *j. Force Main, Dale Avenue to WWTP*	*Budgeted in Capital Improvement Plan (CIP)*:* *f. ~~2005 to~~ December 31, 2013* *g. ~~2005 to~~ December 31, 2010* *h. ~~2007 to~~ December 31, 2013* *i. ~~2008 to~~ December 31, 2010* *j. ~~2005 to~~ December 31, 2010*
3. Hydraulic Improvements/Outfall. Complete hydraulic improvements recommended in capacity evaluation.	*December 31, 2013.*
4. Treatment Plant Capacity Improvements. Complete treatment plant hydraulic capacity improvements pending results of capacity evaluation.	*December 31, 2013.*

5. Fact Sheet section IV.C.2.f: citation of *North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators* (2005) corrected to *North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators* (March 2005a)

6. Fact Sheet section IV.C.3.b(1): citation of *Contaminant Concentrations in Fish from San Francisco Bay*, May 1997, San Francisco Estuary Institute, corrected to (*Contaminant Concentrations in Fish from San Francisco Bay, 1997*, May 1999, San Francisco Estuary Institute).