

SOMACH, SIMMONS & DUNN

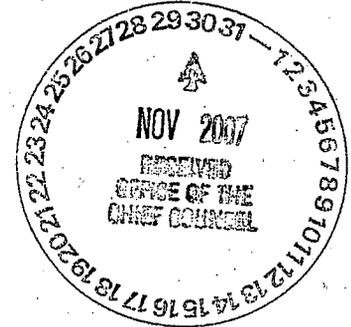
A PROFESSIONAL CORPORATION  
ATTORNEYS AT LAW

813 SIXTH STREET  
THIRD FLOOR  
SACRAMENTO, CA 95814-2403  
(916) 446-7979  
FACSIMILE (916) 446-8199  
WEBSITE: www.lawssd.com

November 30, 2007

Via Hand Delivery

Elizabeth Miller Jennings  
Staff Counsel IV  
Office of Chief Counsel  
State Water Resources Control Board  
1001 I Street, 22nd Floor  
Sacramento, CA 95812-0100



SUBJECT: Petition for Review of Action and Failure to Act by the California Regional Water Quality Control Board, San Francisco Bay Region, in Adopting Order No. R2-2007-0075 and Waste Discharge Requirements for the City of San Mateo and the Cease and Desist Order No. R2-2007-0076

Dear Ms. Jennings:

Enclosed please find a petition for review of the Waste Discharge Requirements (Order No. R2-2007-0075) and Cease and Desist Order (Order No. R2-2007-0076) for the City of San Mateo adopted by the San Francisco Bay Regional Board on November 1, 2007.

The City of San Mateo requests that the petition be placed in abeyance pursuant to the State Water Board's petition regulations. (Cal. Code Regs. §2050(d).)

Thank you for your attention to this matter.

Sincerely,

  
Roberta L. Larson

RLL/jlp

Enclosures

cc: Bruce Wolfe, Executive Officer, RWQCB

SOMACH SIMMONS & DUNN  
A Professional Corporation

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

SHAWN MASON (SBN 115966)  
CITY ATTORNEY  
330 W. 20<sup>th</sup> Avenue  
San Mateo, CA 94403  
Telephone: (650) 522-7020  
Facsimile: (650) 522-7021

SOMACH, SIMMONS & DUNN  
A Professional Corporation  
ROBERTA A. LARSON (SBN 191705)  
THERESA A. DUNHAM (SBN 187644)  
813 Sixth Street, Third Floor  
Sacramento, CA 95814-2403  
Telephone: (916) 446-7979  
Facsimile: (916) 446-8199

Attorneys for Petitioner  
CITY OF SAN MATEO



Original

BEFORE THE  
CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

In the Matter of the City of San Mateo's Petition  
for Review of Action and Failure to Act by the  
California Regional Water Quality Control  
Board, San Francisco Bay Region, in Adopting  
Order No. R2-2007-0075 and Waste Discharge  
Requirements for the City of San Mateo and  
Cease and Desist Order No. R2-2007-0076.

SWRCB/OCC File \_\_\_\_\_  
PETITION FOR REVIEW;  
PRELIMINARY POINTS AND  
AUTHORITIES IN SUPPORT OF  
PETITION (Wat. Code, § 13320)

The City of San Mateo ("City" or "Petitioner") hereby petitions the State Water Resources  
Control Board ("State Water Board") in accordance with Water Code section 13320 for review of  
Order Nos. R2-2007-0075 and R2-2007-0076 of the California Regional Water Quality Control  
Board, San Francisco Bay Region ("Regional Water Board"), reissuing the National Pollution  
Discharge Elimination System ("NPDES") Permit No. CA0037541 ("Permit") and Cease and  
Desist Order ("CDO"), which were adopted by the Regional Water Board on November 1, 2007.  
The issues and a summary of the bases for the Petition follow. Petitioner reserves the right to file

1 a more detailed Statement of Points and Authorities in support of its Petition when the full  
2 administrative record is available, and any other material has been submitted.<sup>1</sup>

3 The City owns and operates a wastewater treatment plant (also known as a Publicly-  
4 Owned Treatment Works, or "POTW") located at 2050 Detroit Street in the City of San Mateo,  
5 San Mateo County, California. The plant provides secondary level treatment of wastewater from  
6 the Cities of San Mateo, Foster City, Hillsborough, Belmont, and unincorporated areas of San  
7 Mateo County. The collection system includes approximately 257 miles of sanitary sewer lines  
8 (both gravity and force mains) and 23 pump stations.

9 The City's POTW has an average dry weather flow of about 11.7 million gallons per day  
10 ("mgd") and a maximum wet weather design flow of 40 mgd. The plant currently provides  
11 secondary treatment of flows up to 40 mgd, and advanced-secondary treatment as needed to meet  
12 effluent and receiving water limits in the Permit.

13 The City has a long history of working cooperatively with the Regional Water Board to  
14 achieve the common goal of protecting water quality in the San Francisco Bay. The City  
15 commends the Regional Water Board staff for addressing many complex technical and legal  
16 issues in a professional and conscientious way and attempting to address several of the City's  
17 concerns with the Permit as originally issued. Despite the Regional Water Board's efforts,  
18 however, the adopted Permit includes several provisions that are unlawful and inappropriate,  
19 which are the subject of this petition. The costs of complying with the contested Permit  
20 provisions are potentially staggering for a small city. Thus, despite the City's preference to  
21 attempt to address these issues regionally and cooperatively, the City decided to file this Petition  
22 to protect the interests of its residents and ratepayers.

23  
24  
25  
26  
27 <sup>1</sup> The State Water Board's regulations require submission of a statement of points and authorities in support of a  
28 petition (Cal. Code Regs., tit. 23, § 2050(a)(7)), and this document is intended to serve as a preliminary  
memorandum. However, it is not possible to prepare a complete statement and memorandum in the absence of the  
complete administrative record, which is not yet available.

1     **1.     NAME AND ADDRESS OF PETITIONER:**

2           City of San Mateo  
3           330 W. 20<sup>th</sup> Avenue  
4           San Mateo, CA 94403  
5           Attn: Darla G. Reams, Deputy Director / Chief Engineer  
6           Telephone: (650) 522-7304  
7           Email: [dreams@cityofsanmateo.org](mailto:dreams@cityofsanmateo.org)

8           In addition, all materials in connection with this Petition should be provided to the City's  
9           counsel at the following addresses:

10           Shawn Mason  
11           City Attorney  
12           330 W. 20<sup>th</sup> Avenue  
13           San Mateo, CA 94403  
14           Telephone: (650) 522-7020  
15           Email: [smason@cityofsanmateo.org](mailto:smason@cityofsanmateo.org)

16           Roberta Larson  
17           Theresa Dunham  
18           Somach, Simmons & Dunn  
19           813 Sixth Street, Third Floor  
20           Sacramento, CA 95814  
21           Telephone: (916) 446-7979  
22           Email: [blarson@somachlaw.com](mailto:blarson@somachlaw.com); [tdunham@somachlaw.com](mailto:tdunham@somachlaw.com)

23     **2.     THE SPECIFIC ACTION OR INACTION OF THE REGIONAL WATER BOARD  
24     WHICH THE STATE WATER BOARD IS REQUESTED TO REVIEW:**

25           The City seeks review of Order Nos. R2-2007-0075 and R2-2007-0076, reissuing the  
26           NPDES Permit for the City and issuing a CDO. A copy of the Permit (Order No. R2-2007-0075)  
27           is attached as Exhibit A. A copy of the CDO (Order No. R2-2007-0076) is attached as Exhibit B.  
28           The specific requirements of the Permit that the City requests the State Water Board review are:

- 29           A.     The imposition and derivation of effluent limitations for dioxin toxicity  
30                    equivalents ("dioxin-TEQ") and mercury.
- 31           B.     Inclusion of compliance schedule requirements for additional source control and  
32                    capital improvements.
- 33           C.     Inclusion of reference to use of mass offsets to meet the dioxin-TEQ limit where  
34                    no such program exists.

1     **3. THE DATE ON WHICH THE REGIONAL WATER BOARD ACTED OR**  
2     **REFUSED TO ACT:**

3             The Regional Water Board adopted the Permit and CDO on November 1, 2007.

4     **4. STATEMENT OF REASONS WHY THE REGIONAL WATER BOARD'S**  
5     **ACTION WAS INAPPROPRIATE OR IMPROPER:**

6             **A. The Regional Water Board Improperly Imposed Numeric Effluent**  
7             **Limitations for Dioxin-TEQ.**

8             The Permit contains concentration limits for dioxin-TEQ. Similar limits have been  
9     challenged by other dischargers and the Bay Area Clean Water Agencies ("BACWA") in  
10    previous administrative and court appeals. However, collectively, these appeals have not  
11    yielded an acceptable resolution of the appropriate manner of regulating dioxin in municipal  
12    effluents. As a consequence, the legal and technical issues remain, final effluent limits have  
13    been issued, and timelines for compliance under the Permit and the CDO have now been  
14    established. The final numeric water quality-based effluent limitations ("WQBELs") for dioxin  
15    included in the Permit are contrary to the requirements of the Clean Water Act ("CWA") and  
16    State law. Compliance with dioxin-TEQ numeric limitations is infeasible and could result in the  
17    City having to construct expensive new treatment facilities or otherwise spend scarce public  
18    funds on new technologies without reasonable promise that even these costly improvements will  
19    allow the City to meet these limits. This waste of resources is neither reasonable nor required  
20    by State or federal law.

21                   **(1) The Regional Water Board Improperly Utilized the Basin Plan's**  
22                   **Narrative Objective for Bioaccumulation to Justify the Imposition of a**  
23                   **Dioxin-TEQ Limit.**

24                   **a. The City's Discharge Contains Dioxin-TEQ that is**  
25                   **Uncontrollable and Therefore There is no Reasonable Potential**  
26                   **to Exceed the Bioaccumulation Narrative Objective.**

27             In adopting the numeric effluent limitations for dioxin-TEQ, the Regional Water Board  
28     claims that the narrative bioaccumulation water quality objective ("WQO") in the Water Quality  
Control Plan for the San Francisco Bay Region ("Basin Plan") requires limits to protect against  
unsafe levels of dioxin in fatty tissue of fish and other organisms. (See Order No. R2-2007-0075  
at pp. F-31 – F-32.) The Basin Plan contains no numeric objectives specifically set to define

1 acceptable levels of these constituents in fish tissue or sediment. The California Toxics Rule  
2 (“CTR”) only contains numeric criteria for a single dioxin congener, 2,3,7,8-TCDD. There are no  
3 adopted numeric water quality criteria or objectives for other congeners of dioxin or dioxin-TEQ.  
4 In this case, the Regional Water Board has imposed numeric water quality criteria for dioxin-TEQ  
5 translated from the narrative bioaccumulation WQO.

6 The bioaccumulation objective provides:

7 Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish  
8 or other aquatic organisms. *Controllable water quality factors shall not cause a*  
9 *detrimental increase in concentrations of toxic substances found in bottom*  
10 *sediments or aquatic life.* Effects on the aquatic organisms, wildlife, and human  
11 health will be considered. (Basin Plan at p. 3-2, emphasis added.)

12 Controllable water quality factors are defined as “those actions, conditions, or circumstances  
13 resulting from human activities that may influence the quality of the waters of the state and that  
14 may be reasonably controlled.” (Basin Plan at p. 3-1.) The State Water Board has determined  
15 that the “‘controllable’ requirement ... distinguish[es] between unidentifiable background sources  
16 and identifiable point and non-point sources associated with human activities that can be  
17 controlled ... .” (*In the Matter of the Petitions of East Bay Municipal Utility District and Bay*  
18 *Area Clean Water Agencies, State Water Board Order WQO 2002-0012 (July 18, 2002)*  
19 *(“WQO 2002-0012”).*<sup>2</sup> Because the water quality objective applies specifically to controllable  
20 water quality factors, and the controllable water quality factors are defined to include only human  
21 activities that may reasonably be identified and controlled, the Regional Water Board must  
22 consider only controllable factors in its determination of reasonable potential. Effluent  
23 limitations are then required if the discharge is at a level that “will cause, have the reasonable  
24 potential to cause, or contribute to an excursion above any State water quality standard, including  
25 State narrative criteria for water quality.” (40 C.F.R. § 122.44(d)(1)(i).)

26 In other words, to determine whether the City’s discharge has reasonable potential to  
27 cause an excursion above the bioaccumulation objective, the Regional Water Board needed to

28 <sup>2</sup> The Petitioner’s argument herein is not inconsistent with the State Water Board’s opinion in WQO 2002-0012. In that decision, the petitioners argued that the narrative bioaccumulation WQO did not apply because the discharges were uncontrollable. In this case, we argue that the Regional Water Board may only consider the controllable portion of dioxin-TEQ in its reasonable potential analysis, not that the narrative bioaccumulation WQO does not apply.

1 consider if the dioxin-TEQ in the City's discharge "that may reasonably be controlled" was  
2 contributing to bioaccumulation of toxic substances. In this case, the Regional Water Board  
3 conducted its reasonable potential analysis based solely on water quality data without regard to  
4 controllability of dioxin-TEQ in the City's discharge. (See Order No. R2-2007-0075 at pp. F-31  
5 – F-32.) Thus, the Regional Water Board staff inappropriately ignored the actual text of the  
6 WQO it purported to implement. Had the Regional Water Board considered "controllability" it is  
7 unlikely that it would have found reasonable potential. For example, the Regional Water Board  
8 has acknowledged that the presence of dioxin is most likely beyond the control of a POTW and is  
9 attributable to unidentified background sources. (See Order No. R5-2007-0008 at p. F-31.)  
10 Therefore, the level of dioxin-TEQ in the City's discharge is not "reasonably controlled" and does  
11 not have "reasonable potential" to cause or contribute to an exceedence of an applicable WQO.  
12 In the absence of reasonable potential, there is no federal regulatory requirement for the  
13 imposition of numeric effluent limitations in the City's NPDES Permit. Thus, the Regional  
14 Water Board has inappropriately applied the narrative bioaccumulation objective to the City's  
15 discharge, which has resulted in the improper adoption of effluent limitations for dioxin-TEQ.  
16 Because the numeric effluent limitations have been adopted improperly, they should be removed  
17 from the Permit.

18 **b. Even if the Regional Water Board Properly Found Reasonable**  
19 **Potential, the Bioaccumulation WQO Cannot be Used to**  
20 **Impose Effluent Limitations More Stringent than the Amount**  
21 **of Dioxin-TEQ that can be Reasonably Controlled.**

21 The Regional Water Board did not properly conduct its reasonable potential analysis  
22 because the Regional Water Board failed to consider only the amount of controllable dioxin-TEQ  
23 in the City's discharge. Even if the Regional Water Board could properly find reasonable  
24 potential, the language of the bioaccumulation narrative WQO prohibits the Regional Water  
25 Board from adopting numeric effluent limitations that cannot be attained through reasonable  
26 controls. As stated above, the narrative objective specifically states, "controllable water quality  
27 factors shall not cause a detrimental increase in concentrations of toxic substances found in  
28 bottom sediments or aquatic life." (Basin Plan at p. 3-2.) Thus, to the extent that reasonable

1 potential exists, the corresponding effluent limitations shall be limited to the amount of dioxin-  
2 TEQ that can be achieved by restricting “controllable water quality factors.”

3 The Permit includes effluent limits for 2,3,7,8-TCDD TEQ of 0.014 pg/L and 0.028 pg/L,  
4 as an average monthly and daily maximum respectively. These limits go far beyond the level of  
5 pollution control provided by current technology and pretreatment source control programs. The  
6 fact that POTWs may reduce dioxin discharges “in part” cannot bring effluent limitations of  
7 unlimited stringency within the ambit of a WQO that is explicitly limited to “controllable water  
8 quality factors.” Thus, the City cannot be required to do the impossible—to remove the  
9 uncontrollable 2,3,7,8-TCDD TEQ “part” from its effluent.

10 The Regional Water Board has acknowledged at several recent permit hearings that the  
11 main source of dioxin in influent is “beyond the [POTW’s] control” and that compliance with the  
12 2,3,7,8-TCDD TEQ effluent limitations could be overly burdensome and would not be cost  
13 effective for the benefits received.<sup>3</sup> Thus, the argument is not over the attainability of the  
14 limitations; rather, the issue is whether the narrative bioaccumulation objective may be read to  
15 allow overly-burdensome regulation without regard to its feasibility or cost. On its face, the  
16 objective does not support such a strained reading.

17 **(2) The Regional Water Board Has Failed to Conduct the Requisite**  
18 **“Case-By-Case Analysis” for Regulating Uncontrollable Water**  
19 **Quality Factors.**

20 The Basin Plan states that when “uncontrollable water quality factors result in the  
21 degradation of water quality beyond the levels or limits established herein as water quality  
22 objectives, the Regional Board will conduct a case-by-case analysis of the benefits and costs of  
23 preventing further degradation.” (Basin Plan at § 3.1.) Because the exceedance of the narrative  
24 bioaccumulation narrative WQO is caused by uncontrollable water quality factors, the Regional  
25 Water Board must conduct a case-by-case analysis of the benefits and costs of preventing further  
26 degradation. In the City’s case, no such analysis has been conducted to determine if the benefits  
27 of meeting the effluent limitations in the City’s Permit outweighs the costs that the City will be

28 <sup>3</sup> See Order No. R2-2007-0008, Central Contra Costa Sanitary District at p. F-31, (Exhibit C) and transcript of  
hearing on Order No. R2-2007-0008, held on January 23, 2007.

1 forced to endure if the effluent limitations remain. Until such a study is completed, the Regional  
2 Water Board cannot impose effluent limits for 2,3,7,8-TCDD TEQ in the City's Permit as it  
3 violates the provisions of the Basin Plan.

4 The Regional Water Board argues that the United States Environmental Protection  
5 Agency's ("EPA") action in placing San Francisco Bay on the 303(d) list as impaired by dioxin  
6 resolves the issue of whether the effluent limitations in a City's permit regulate "controllable  
7 water quality factors." (See Response to Comments of Regional Water Board for January 23,  
8 2007 hearing on permit of Central Contra Costa Sanitary District (Order No. R2-2007-0008) at  
9 pp. 5-6 (Exhibit D.) A listing of impairment, however, is a preliminary determination that a water  
10 body is not meeting standards and does not address the issue of controllability.<sup>4</sup>

11 A listing of impairment under CWA section 303(d) means only that implementation of  
12 technology-based effluent limitations are "not stringent enough to implement any water quality  
13 standard applicable to such waters." (33 U.S.C. § 1313(d)(1)(A).) Thus, the fact that the San  
14 Francisco Bay is listed as impaired for dioxins only indicates that the existing technology-based  
15 effluent limitations are not stringent enough to meet the narrative bioaccumulation WQO, as  
16 interpreted by the Regional Water Board and EPA. The 303(d) listing does not itself indicate if  
17 the impairment is caused by controllable or uncontrollable sources, nor does the listing reveal  
18 whether more stringent effluent limitations for dioxins in POTW permits are warranted.  
19 Similarly, the State Water Board has found that placement of a constituent on the 303(d) list alone  
20 is not sufficient evidence that a permit limit is warranted. (*In the Matter of the Review on its Own*  
21 *Motion of Waste Discharge Requirements for the Avon Refinery*, Order WQ 2001-06 (March 7,  
22 2001) ("Tosco Order") at p.17.) Contrary to the Regional Water Board's assertion, a  
23 303(d) listing clearly does not absolve the Regional Water Board from its obligation to conduct a  
24 case-by-case analysis in accordance with the Basin Plan.

25  
26  
27 <sup>4</sup> The State Water Board has acknowledged this in its Total Maximum Daily Load ("TMDL") policy, noting that  
28 impairments may be due to natural factors, which are by definition not controllable. (State Water Board  
Resolution 2005-0050, "Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and  
Options.")

1 In the case of dioxins in the San Francisco Bay, the Regional Water Board has identified  
2 the primary source of dioxins and furans in the Bay Areas to be air emissions from combustion  
3 sources. (See *Dioxins in San Francisco Bay: Conceptual Model/Impairment Assessment*,  
4 *January 20, 2005*, prepared by the San Francisco Estuary Institute for the Clean Estuary  
5 Partnership, or "CEP.")<sup>5</sup> In fact, EPA's web site indicates that the agency estimates that only 2%  
6 of the dioxin in San Francisco Bay comes from POTWs.<sup>6</sup> Considering the small amount of  
7 dioxin in POTW discharges, and the considerable questions regarding the ability of POTWs to  
8 control dioxins in effluent, it is imperative that the Regional Water Board conduct the case-by-  
9 case analysis to evaluate the benefits versus the costs of compliance with effluent limitations for  
10 dioxin-TEQ. Until such an analysis is conducted, as required by the Basin Plan, the Regional  
11 Water Board may not impose effluent limitations in the Permit for dioxins at a level that exceeds  
12 the City's ability to control the amount of dioxin in the discharge.

13 (3) **The Use of 2,3,7,8-TCDD Equivalents (or Dioxin-TEQs) for**  
14 **Determining Reasonable Potential and Adopting Water Quality Based**  
15 **Effluent Limitations is Inconsistent with State Policy.**

16 The CTR contains numeric water quality criteria for one type of dioxin, 2,3,7,8-TCDD.  
17 (40 C.F.R. § 131.38(b)(1).) In addition to this compound, there are other compounds referred to  
18 as congeners that exhibit toxic effects similar to those of 2,3,7,8-TCDD. As noted above, there  
19 are no adopted numeric water quality criteria for the other dioxin congeners in the CTR or in the  
20 Basin Plan. In the preamble to the CTR, EPA encourages the regulation of other dioxins and  
21 dioxin-like compounds through the use of TEQs when there is reasonable potential to cause or  
22 contribute to a violation of a narrative WQO. (51 Fed. Reg. 31682 (May 18, 2000).) The CTR  
23 does not mandate or require California to use dioxin-like compounds, or the TEQ-scheme, to  
24 determine reasonable potential and require effluent limitations for narrative objectives.

25 To implement the CTR, the State Water Board adopted the State's *Policy for*  
26 *Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of*

27 <sup>5</sup> The Regional Water Board was a member of the CEP when this document was completed.

28 <sup>6</sup> <http://www.epa.gov/docs/region09/water/dioxin/sfbay.html> [as of Feb. 20, 2007].

1 California ("SIP"). The SIP contains specific provisions regarding 2,3,7,8-TCDD equivalents  
2 (i.e., dioxin-TEQs). (SIP at pp. 28-29.) The SIP requires monitoring for the dioxin-like  
3 compounds. The SIP does not direct the Regional Water Boards to use the dioxin-like compounds  
4 to determine reasonable potential for narrative objectives. In fact, the State Water Board  
5 purposefully declined to implement the CTR criteria for 2,3,7,8-TCDD equivalents. "In the  
6 Implementation Policy, the Board considered implementing the CTR criteria for 2,3,7,8-TCDD as  
7 TCDD equivalents. Instead, the Board decided to implement the 2,3,7,8-TCDD criteria and to  
8 require only monitoring for the remaining 16 dioxin and furan congeners." (Tosco Order at  
9 p. 47.) The primary reason for only requiring monitoring was because the congeners were  
10 ubiquitous, and the sources and control measures uncertain. (*Ibid.*) In other words, the State  
11 Water Board in its implementation policy has specifically rejected the regulatory scheme  
12 encouraged—but not required—by EPA in the CTR.

13 Because the SIP establishes implementation procedures for priority toxic pollutants  
14 contained in the CTR, and because the SIP only requires monitoring for 2,3,7,8-TCDD  
15 equivalents, the Regional Water Board's action to regulate the City's discharge through dioxin-  
16 TEQs is inconsistent with State policy. To ensure consistency with State policy and the  
17 regulation of dioxins by other Regional Water Boards, the State Water Board should remove the  
18 effluent limitations for dioxin-TEQs from the Permit, or in the alternative, remand the Permit to  
19 the Regional Water Board with direction to remove the effluent limitations for dioxin-TEQs.

20 **(4) The Imposition of Effluent Limitations for 2,3,7,8-TCDD TEQ that are**  
21 **More Stringent than Required to Implement the Bioaccumulation**  
22 **Objective is Subject to Water Code Sections 13241 and 13242.**

23 The effluent limitations for 2,3,7,8-TCDD TEQ in the Permit go beyond what is required  
24 to implement the bioaccumulation narrative WQO, which requires limitations on controllable  
25 water quality factors. Thus, in imposing the effluent limitations, the Regional Water Board is  
26 establishing new permit-specific WQOs. When the Regional Water Board adopts WQOs, it must  
27 comply with State law. In particular, the Regional Water Board is required to consider a number  
28 of factors and prepare a program of implementation for the objectives. (Wat. Code, §§ 13241 and

1 3242.) The provisions of Water Code section 13241 apply without regard to whether the WQO is  
2 adopted as part of a Basin Plan amendment or as a basis for establishing water quality-based  
3 effluent limitations in a NPDES permit.

4 A RWQCB may choose, on a case-by-case basis, however, to establish water  
5 quality-based effluent limitations, which are more stringent than limitations based  
6 upon the applicable water quality objectives where necessary to protect beneficial  
7 uses or prevent nuisance. If a RWQCB takes this approach, the rationale for the  
8 more stringent limitations must be explained in the permit findings, which must be  
9 supported by evidence in the record. In addition, the RWQCB must consider the  
10 factors specified in Water Code Section 13241, which apply to the adoption of  
11 water quality objectives on a permit-specific basis. (*In the Matter of the Petition  
12 of City and County of San Francisco, et al.*, State Water Board, Order WQ 95-4  
13 (Sept. 21, 1995) at pp. 12-13, citations and footnotes omitted; see also *In the  
14 Matter of the Petition of the Cities of Palo Alto, et al.*, State Water Board, Order  
15 WQ 94-8 (Sept. 22, 1994) at p. 3; *Southern Cal. Edison Co. v. State Water  
16 Resources Control Bd.* (1981) 116 Cal.App.3d 751, 759-761.)

17 The Regional Water Board acted improperly, inappropriately and illegally when it failed  
18 to consider the factors listed in section 13241 and failed to prepare a program of implementation  
19 for 2,3,7,8-TCDD TEQ. Moreover, the Permit did not include findings explaining why it is  
20 necessary to impose effluent limitations more stringent than required by the bioaccumulation  
21 objective.

22 By imposing effluent limitations for 2,3,7,8-TCDD that are more stringent than required  
23 by the narrative bioaccumulation objective, the Regional Water Board imposed effluent limits  
24 that are more stringent than required by federal law. The Regional Water Board has identified the  
25 narrative bioaccumulation objective as the “applicable water quality standard” relevant to the  
26 effluent limitations for 2,3,7,8-TCDD in the City’s Permit. (Permit at p. F-30.) As explained  
27 above, because the effluent limitations require the City to remove 2,3,7,8-TCDD that does not  
28 come from controllable water quality factors, the effluent limitations are more stringent than the  
narrative bioaccumulation objective, and therefore more stringent than federal law. When  
imposing effluent limitations that are more stringent than federal law, the Regional Water Board  
must consider the factors listed in Water Code section 13241. (*City of Burbank v. State Water  
Resources Control Bd.* (2005) 35 Cal.4th 613, 625-627.) If the economic impact of the effluent  
limitations would be severe, the limitations must be made less stringent. (*Id.* at p. 626, fn. 7  
[“State law, as we have said, allows a regional board to consider a permit holder’s compliance

1 cost to relax pollutant concentrations, as measured by numeric standards, for pollutants in a  
2 wastewater discharge permit.” Emphasis added].)

3 For the reasons stated above, the final effluent limitations for 2,3,7,8-TCDD TEQ in the  
4 Permit are inappropriate and invalid. The Regional Water Board has not made sufficient findings  
5 regarding the need for the effluent limitations, which are not supported by evidence in the record.

6 In light of these infirmities, the State Water Board should delete the 2,3,7,8-TCDD TEQ  
7 concentration limits from the Permit. At a minimum, the Permit should be remanded to the  
8 Regional Water Board with direction to either eliminate the 2,3,7,8-TCDD TEQ concentration  
9 limits from the Permit, or to analyze whether there is reasonable potential for 2,3,7,8-TCDD TEQ  
10 in light of the actual language of the bioaccumulation objective. The Regional Water Board  
11 should further be directed to, if it finds reasonable potential for 2,3,7,8-TCDD TEQ, conduct the  
12 cost/benefit analysis required by the Basin Plan. Based on that analysis, the Regional Water  
13 Board should calculate effluent limitations based on the actual language of the bioaccumulation  
14 objective or conduct the analysis required under Water Code sections 13263 and 13241, if it  
15 decides to adopt effluent limitations that are more stringent than the Basin Plan and federal law.

16 **B. The Regional Water Board Improperly Included Final Effluent Limits for**  
17 **Mercury.**

18 The impairment of San Francisco Bay due to mercury is currently being comprehensively  
19 addressed through a TMDL, which has been approved by the Regional Water Board, the State  
20 Water Board, and the State of California Office of Administrative Law. A watershed-wide permit  
21 to address point source discharges of mercury, which includes effluent limitations consistent with  
22 the wasteload allocations (“WLAs”) in the TMDL, was adopted the same day as the City’s  
23 Permit. Including final limits in this Permit that are unachievable and inconsistent with the  
24 TMDL implementation program is inappropriate. The City requests removal of these final  
25 concentration limits.

26 In its 2006 disapproval of the pre-TMDL compliance schedule provisions of the SIP, EPA  
27 Region 9 raised questions about whether pending TMDLs can be the basis for delaying the  
28 implementation of a final effluent limitation in a permit. EPA’s disapproval, however, is not a

1 regulation and does not supercede precedential State Water Board orders and case law that affirm  
2 deferral of final numeric effluent limits until a TMDL can be implemented. The State Water  
3 Board's Tosco Order establishes that where a TMDL is not yet complete and a discharger cannot  
4 immediately comply with a final effluent limit calculated by the Regional Water Board, the  
5 WQBEL should be based on WLAs in the anticipated TMDL. (Tosco Order at p. 21.) In this  
6 situation, the State Water Board opined that "[t]he Permit findings should state that final water  
7 quality-based effluent limitations will be based on the wasteload allocations in the TMDL."  
8 (*Ibid.*) In 2003, the California Court of Appeal, First Appellate District, affirmed the State Water  
9 Board's decision. (*Communities for a Better Environment v. State Water Resources Control Bd.*  
10 (2003) 109 Cal.App.4th 1089.) The court specifically upheld the inclusion of a future WLA  
11 derived from a TMDL as the final WQBEL. (See *id.* at p. 1107.)

12 In any event, EPA's disapproval should not be read to require conflicting regulation of the  
13 City under the Permit and the watershed permit. The watershed permit will implement the  
14 adopted TMDL with very specific requirements for numeric mass and concentration limitations  
15 as well as required activities. The Regional Water Board's adoption of the watershed permit  
16 demonstrates that appropriate actions are being taken to address mercury, and a mere  
17 technicality—the fact that EPA has not yet approved the TMDL, which it supported—cannot be  
18 the basis for singling out the City for imposition of final effluent limitations that will not apply to  
19 other POTWs whose permits are adopted a few months later. The Regional Water Board has, in  
20 effect, penalized the City because of the timing of its Permit renewal. The effluent limitations for  
21 mercury should be removed from the Permit, and a finding added that mercury will be addressed  
22 in the separate watershed permit adopted concurrently.

23 **C. The Regional Water Board Improperly Relied on the Use of a Non-Existent**  
24 **Mass Offset Program for Meeting the 303(d)-Listed Pollutant Limits.**

25 The Permit provides that a discharger may seek approval of a mass offset plan to reduce  
26 303(d)-listed pollutants, if the discharger can demonstrate that the net reduction of total mass  
27 loadings of such pollutants cannot be achieved through economically feasible measures "such as  
28 aggressive source control, wastewater reuse, and treatment plant optimization." (Order

1 No. R2-2007-0075 at p. 18.) This reference to an optional offset program, as an alternative to  
2 compliance with final end-of-pipe limitations for dioxin-TEQ and mercury, is illusory, as no  
3 program for such offsets currently exists. This provision potentially obscures the  
4 inappropriateness of including final effluent limits which all parties recognize cannot be met, and  
5 for which Mandatory Minimum Penalties may be imposed in the not too distant future. As the  
6 State Water Board has discovered through its as-yet unfruitful efforts to develop an offset  
7 program for mercury in the San Francisco Bay and Delta, there are tremendous challenges to  
8 develop such an offset program that would survive both regulatory and legal reviews. Reference  
9 to such a non-existent program as though it were a viable alternative that can be readily  
10 implemented by the City is misleading and should not be considered by the State Water Board as  
11 adequately mitigating the harsh effect of inclusion in permits of the final limits for dioxin-TEQ  
12 and mercury.

13 **D. The Regional Water Board Improperly Imposed Compliance Schedule Action**  
14 **Plans in the Permit and CDO.**

15 The improperly imposed effluent limitations for dioxin-TEQ and mercury are  
16 accompanied by compliance schedules in the Permit and CDO, respectively. These limitations,  
17 and the associated compliance schedules, ignore the fact that wastewater treatment plant effluents  
18 have been identified as non-significant sources of these pollutants. (See Order No. R2-2007-0075  
19 at pp. 25-27, *Dioxins in San Francisco Bay: Conceptual Model/Impairment Assessment*,  
20 *January 20, 2005*; and *Proposed Mercury Water Quality Objectives, August 1, 2006 Revised*  
21 *Maximum Daily Load (TMDL) and Proposed Mercury Water Quality Objectives, August 1,*  
22 *2006*.) Dioxin-TEQ and mercury are being addressed on a watershed basis through the  
23 development of TMDLs that will appropriately resolve beneficial use concerns for the San  
24 Francisco Bay. Despite the fact that the City's options to comply with the final effluent  
25 limitations are extremely limited, and that any actions taken by the City in the interim before the  
26 TMDLs are completed will make no discernable difference in the Bay water quality, the Permit  
27 and the CDO require specific and overly-burdensome compliance actions for each constituent, as  
28 specified below:

1           (1)     Dioxin. The Permit requires the City to identify and implement source control  
2 measures to reduce concentrations of dioxin-TEQ to the treatment plant, and implement  
3 additional actions to reduce the dioxin-TEQ concentration if source control is not effective in  
4 reducing the concentration. The dioxin congeners found in fish tissue samples, which form the  
5 basis for the dioxin 303(d) listing, are different than the congeners detected in POTWs. Given  
6 that the sources of dioxin are uncontrollable by municipal wastewater treatment plants and are  
7 primarily introduced through air deposition, the compliance requirements for dioxin reduction in  
8 the effluent will have little, if any, environmental benefit to reduce the concentrations of dioxin  
9 congeners found in fish tissue. In an analogous situation, EPA's action to permit a new discharge  
10 into an already impaired water body was upheld by the U.S. Supreme Court because EPA  
11 determined that the discharge would not produce a detectable violation of State water quality  
12 standards. (See *Arkansas v. Oklahoma* (1992) 503 U.S. 91.) By comparison here, the City, an  
13 existing discharger, is being required to undertake costly actions set forth in the compliance  
14 schedule provisions and reduce a pollutant in wastewater that is uncontrollable and insignificant  
15 (i.e., de minimis). The two positions are not reconcilable. In the first instance, the Supreme  
16 Court held that a new discharge to a water body was permissible because the impact on water  
17 quality would be de minimis. Yet, in this case, the permit requires lowering of an admittedly  
18 de minimis discharge to levels beyond de minimis. Given the *insignificance of the City's*  
19 *contribution of dioxins*, a de minimis exception from further reductions is appropriate in this case.  
20 (See *Ober v. U.S. EPA* (9th Cir. 2001) 243 F.3d 1190, 1195 (9th Cir. 2001) ["de minimis  
21 exemption is allowed for regulation yielding trivial gain."].)

22           (2)     Mercury. The CDO requires the City to identify all mercury sources to the  
23 discharge, including sampling of influent waste streams to identify and quantify pollutant sources,  
24 as well as developing and implementing a program to reduce and prevent mercury in the  
25 discharge, including at a minimum: maintaining a list of sources of mercury, investigating each  
26 source to assess the need to include it in the program, identifying and implementing targeted  
27 actions to reduce or eliminate discharges from each source in the program. In addition to source  
28 control activities, the permit requires implementation of bench scale testing or pilot scale testing

1 or both, development of preliminary and final design specifications, procurement of funding,  
2 acquisition of necessary permits and approvals, and construction of new facilities to reduce  
3 mercury in the discharge. The CDO and Permit ignore the fact that the Regional Water Board  
4 and Bay Area stakeholders have worked diligently to develop a comprehensive mercury reduction  
5 strategy in the form of a mercury TMDL for at least ten years. The mercury TMDL, recently  
6 approved by the Regional and State Water Boards and the Office of Administrative Law, contains  
7 requirements that have been developed in a meaningful and deliberate way to address the mercury  
8 issue holistically. Bay Area POTWs are ready to implement the mercury TMDL through  
9 activities that will address impairment in San Francisco Bay. This is in contrast to the  
10 requirements in the CDO that mandate extensive actions, including significant expenditures of  
11 public funds, within the next few months solely because EPA has not yet approved the mercury  
12 TMDL. The timeline set forth in the CDO is clearly unreasonable in light of the history of the  
13 TMDL process and the insignificant contribution of mercury by municipal wastewater treatment  
14 plants to San Francisco Bay.

15 For these reasons, at a minimum, the action plans in the Permit and CDO should be  
16 revised to remove all activities related to installation of capital improvements. In addition, any  
17 pollution prevention activities should be identical to resolutions or orders already adopted by the  
18 Regional Water Board for specific constituents, such as mercury and cyanide. No new or  
19 different activities should be required for these constituents in the absence of any articulated  
20 reason for treating the City differently from the vast majority of the POTWs in the watershed.

21 **5. THE MANNER IN WHICH THE PETITIONER IS AGGRIEVED:**

22 The City is aggrieved as the Permit holder subject to conditions and limitations which are  
23 more stringent or onerous than required by or provided for under current law. Accordingly, the  
24 City will be required to expend portions of its limited public assets to comply with inappropriate  
25 or unlawful Permit conditions for 2,3,7,8-TCDD TEQ and mercury, as well as spending funds for  
26 inappropriate compliance schedule action plan requirements related to source control and its  
27 capital improvement program, and investigating use of a non-existent mass offset program.  
28 Given that the City's resources are limited, it is aggrieved when it is forced to use resources to

1 comply with requirements that are arbitrary, unnecessary and not required by law. This harm is  
2 exacerbated by the fact that these additional efforts are not likely to provide for measurable  
3 betterment to the water quality of the Bay. The challenged limits may also require the City to  
4 investigate or undertake the use of mass offset programs which will siphon off resources that  
5 could be more appropriately used for improving water quality in other ways. Ultimately,  
6 investigation and potential inclusion in mass offset programs may result in no useful solution, as  
7 such programs may not be implemented, or if implemented, thereafter be found to be inconsistent  
8 with applicable law and regulation. The City is further aggrieved by the inclusion of each of the  
9 unlawful and excessive Permit conditions with which it cannot now, or in the immediate future,  
10 comply, because it will be subject to penalties and citizen suits in accordance with the CWA and  
11 the California Water Code.

12 **6. THE SPECIFIC ACTION BY THE STATE OR REGIONAL WATER BOARDS**  
13 **REQUESTED:**

14 The City seeks an Order by the State Water Board that will revise the Permit, or remand  
15 the Permit to the Regional Water Board with direction for revisions, as follows:

- 16 A. Delete the effluent limitations for 2,3,7,8-TCDD TEQ or reconsider them in light  
17 of the limitations of the bioaccumulation objective to controllable water quality  
18 factors, and in light of the requirements of the Basin Plan and Water Code  
19 sections 13263 and 13241;
- 20 B. Delete the final effluent limitations for mercury and rescind the CDO;
- 21 C. Delete the compliance schedules for dioxin-TEQ and mercury; and
- 22 D. Delete reference to a mass offset program until and unless a technically realistic  
23 and legally sound program that has been developed and approved by the State Water Board or  
24 Regional Water Board.
- 25  
26  
27  
28

1     **7.     A STATEMENT OF POINTS AND AUTHORITIES IN SUPPORT OF LEGAL**  
2     **ISSUES RAISED IN THIS PETITION:**

3             The City's preliminary statement of points and authorities is set forth in Section 4 above.  
4     The City reserves the right to supplement this statement upon receipt and review of the  
5     administrative record.

6     **8.     A STATEMENT THAT THE PETITION HAS BEEN SENT TO THE**  
7     **APPROPRIATE REGIONAL WATER BOARD:**

8             A true and correct copy of the Petition was mailed by First Class mail on November 30,  
9     2007, to the Regional Water Board at the following address:

10            Bruce Wolfe, Executive Officer  
11            California Regional Water Quality Control Board,  
12            San Francisco Region  
13            1515 Clay Street, Suite 1400  
14            Oakland, California 94612

13     **9.     A STATEMENT THAT THE SUBSTANTIVE ISSUES OR OBJECTIONS RAISED**  
14     **IN THE PETITION WERE RAISED BEFORE THE REGIONAL WATER**  
15     **BOARD:**

15            The substantive issues and objections in this Petition were raised before the Regional  
16     Water Board in written comments, dated September 11, 2007, and in testimony before the  
17     Regional Water Board at a hearing held on November 1, 2007.

19     Dated: November 30, 2007

Respectfully submitted,

SOMACH, SIMMONS & DUNN

22     By *Roberta Larson*

23             Roberta Larson  
24             Special Counsel for Petitioner  
25             CITY OF SAN MATEO

Exhibit A



Linda S. Adams  
Secretary for  
Environmental Protection

# California Regional Water Quality Control Board

## San Francisco Bay Region

1515 Clay Street, Suite 1400  
(510) 622-2300 • Fax (510) 622-2460  
<http://www.waterboards.ca.gov/sanfranciscobay>



Arnold Schwarzenegger  
Governor

**ORDER NO. R2-2007-0075**  
**NPDES NO. CA0037541**

The following Discharger is subject to waste discharge requirements as set forth in this Order.

**Table 1. Discharger Information**

Discharger	City of San Mateo
Name of Facility	City of San Mateo Wastewater Treatment Plant
Facility Address	2050 Detroit Drive
	San Mateo, CA 94404
	San Mateo County
The U.S. Environmental Protection Agency (U.S. EPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

The discharge by the City of San Mateo Wastewater Treatment Plant from the discharge point identified below is subject to waste discharge requirements as set forth in this Order.

**Table 2. Discharge Location**

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	POTW Effluent	37°, 34', 50" N	122°, 14', 45" W	Lower San Francisco Bay

**Table 3. Administrative Information**

This Order was adopted by the Regional Water Board on:	November 1, 2007
This Order shall become effective on:	February 1, 2008
This Order shall expire on:	January 31, 2013
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days prior to the Order expiration date

IT IS HEREBY ORDERED, that this Order supersedes Order No. 01-071 except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on November 1, 2007.

Digitally signed by Bruce Wolfe  
Date: 2007.11.02 14:40:38 -07'00'

Bruce H. Wolfe, Executive Officer

## Table of Contents

I.	Facility Information .....	4
II.	Findings.....	4
III.	Discharge Prohibitions.....	9
IV.	Effluent Limitations and Discharge Specifications .....	10
	A. Effluent Limitations – Discharge Point 001 .....	10
	B. Mercury Mass Emission Limitation .....	14
	C. Reclamation Specifications .....	15
V.	Receiving Water Limitations .....	15
	A. Surface Water Limitations.....	15
	B. Groundwater Limitations .....	16
VI.	Provisions.....	16
	A. Standard Provisions .....	16
	B. Monitoring and Reporting Program (MRP) Requirements .....	16
	C. Special Provisions .....	16
	1. Reopener Provisions.....	16
	2. Special Studies and Additional Monitoring Requirements .....	17
	3. Best Management Practices and Pollution Minimization .....	18
	4. Construction, Operation and Maintenance Specifications .....	21
	5. Special Provisions for Publicly Owned Treatment Works (POTWs).....	22
	6. Corrective Measures to Minimize Blending Events.....	25
	7. Dioxin-TEQ Compliance Schedule.....	25
	8. Action Plan for Cyanide.....	27
	9. Action Plan for Copper.....	27
VII.	Compliance Determination .....	27

## Tables

Table 1.	Discharger Information.....	1
Table 2.	Discharge Location.....	1
Table 3.	Administrative Information .....	1
Table 4.	Facility Information .....	4
Table 5.	Basin Plan Beneficial Uses of Lower San Francisco Bay .....	6
Table 6a.	Effluent Limitations from May 1 <sup>st</sup> to September 30 <sup>th</sup> .....	10
Table 6b.	Effluent Limitations from October 1 <sup>st</sup> to April 30 <sup>th</sup> .....	10
Table 6c.	Toxic Substances Effluent Limitations .....	11
Table 7.	Minimum Levels for Pollutants with Effluent Limitations .....	12

## Attachments

Attachment A – Definitions.....	A-1
Attachment B – Facility Map.....	B-1
Attachment C – Process Flow Diagram.....	C-1
Attachment D – Federal Standard Provisions.....	D-1
Attachment E – Monitoring and Reporting Program (MRP).....	E-1

Attachment F – Fact Sheet ..... F-1

Attachment G – The following documents are part of this Permit, but are not physically attached due to volume. They are available on the internet at

[www.waterboards.ca.gov/sanfranciscobay/](http://www.waterboards.ca.gov/sanfranciscobay/)

- Self-Monitoring Program, Part A, adopted August 1993
- Standard Provisions and Reporting Requirements, August 1993
- August 6, 2001, Staff Letter: *Requirement for Priority Pollutant Monitoring in Receiving Water and Wastewater Discharges*

Attachment H – Pretreatment Requirements ..... H-1

**I. FACILITY INFORMATION**

The following Discharger is subject to the waste discharge requirements as set forth in this Order:

**Table 4. Facility Information**

<b>Discharger</b>	City of San Mateo
<b>Name of Facility</b>	City of San Mateo Wastewater Treatment Plant
<b>Facility Address</b>	2050 Detroit Drive
	San Mateo, CA 94404
	San Mateo County
<b>Facility Contact, Title, and Phone</b>	Wastewater Treatment Plant – Mark Von Aspern, Plant Manager, (650) 522-7385
	Collection System – Darla Reams, Deputy Directory/Chief Engineer (650) 522-7304
	Pretreatment and Stormwater – Vern Bessey, Environmental Compliance Program Manager, (650) 522-7342
<b>Mailing Address</b>	330 West 20 <sup>th</sup> Avenue San Mateo, CA 94403
<b>Type of Facility</b>	Publicly Owned Treatment Works (POTW)
<b>Facility Design Flow</b>	15.7 mgd (dry weather) and 40 mgd (wet weather)

**II. FINDINGS**

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter the Regional Water Board), finds:

**A. Background.** The City of San Mateo Wastewater Treatment Plant (San Mateo WWTP) is currently discharging under Order No. 01-071 and National Pollutant Discharge Elimination System (NPDES) Permit CA0037541. The Discharger submitted a Report of Waste Discharge, dated November 22, 2005, and applied to renew its NPDES permit to discharge up to 15.7 million gallons per day (mgd) of treated wastewater from the San Mateo WWTP. The application was deemed complete on January 10, 2006.

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

**B. Facility Description.** The Discharger owns and operates the San Mateo WWTP, a secondary and advanced secondary wastewater treatment plant, and its conveyance system. The San Mateo WWTP transports and treats domestic, commercial, and industrial wastewater from a service area with a population of approximately 137,000. The following municipalities and counties contribute to influent flows to the San Mateo WWTP: City of San Mateo (population 94,000), City of Foster City (30,000), City of Hillsborough (6,500), City of Belmont (400); and San Mateo County (5,600).

Treated wastewater is discharged from Discharge Point 001 into Lower San Francisco Bay, a water of the State and United States through a submerged diffuser approximately 3,700 feet offshore and 500 feet north of the San Mateo-Hayward Bridge. The diffuser is about 41 feet below the water surface.

The Discharger presently discharges an average year-round flow of approximately 13.0 mgd, an average dry weather flow of 11.7 mgd, and an average wet weather flow of 13.9 mgd from its treatment plant. The treatment plant has a dry weather design capacity of 15.7 mgd and a peak wet weather flow capacity of approximately 40 mgd. The Discharger currently provides secondary treatment of flows up to 40 mgd, and advanced-secondary treatment as needed to meet effluent and receiving water limits in this Order. During high wet weather flows, a portion of primary effluent is routed around biological treatment to the disinfection facility, providing for blending of primary and secondary effluent during wet weather periods when the secondary capacity is exceeded. Treatment facilities consist of primary clarifiers, aeration basins, secondary clarifiers, pressure filters, chlorination, and dechlorination.

In May 2005, construction began for modifications to the solids handling facilities, including a second anaerobic digester and centrifuges. Modifications also include elimination of the Zimpro low-pressure oxidation system and vacuum filters. The planned completion date for these modifications is April 2008.

The Discharger's wastewater collection system includes approximately 257 miles of sanitary sewer lines (gravity lines and force mains) and 23 pump stations.

Attachment B provides a map of the area around the San Mateo WWTP. Attachment C provides a process flow schematic of the San Mateo WWTP.

- C. Legal Authorities.** This Order is issued pursuant to CWA section 402 and implementing regulations adopted by the U.S. EPA and Chapters 5.5, Division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4, Division 7 of the Water Code (commencing with section 13260).
- D. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order. The Fact Sheet constitutes part of the Findings for this Order. Attachments A through E and G are also incorporated into this Order.
- E. California Environmental Quality Act (CEQA).** Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA.
- F. Technology-Based Effluent Limitations.** CWA Section 301(b) and NPDES regulations at 40 CFR 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR 133. A detailed discussion of development of the technology-based effluent limitations development is included in the Fact Sheet.

**G. Water Quality-Based Effluent Limitations.** CWA section 301(b) and NPDES regulations at 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

NPDES regulations at 40 CFR 122.44(d)(1)(i) mandate that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative water quality objectives (WQOs) within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using:

- (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information
- (2) An indicator parameter for the pollutant of concern
- (3) A calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

**H. Water Quality Control Plans.** *The Water Quality Control Plan for the San Francisco Bay Basin* (the Basin Plan) is the Regional Water Board's master water quality control planning document. It designates beneficial uses and WQOs for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve WQOs. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Resources Control Board, the Office of Administrative Law, and the U.S. EPA, where required. The Basin Plan implements State Water Resources Control Board (State Water Board) Resolution 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). Because of the marine influence on receiving waters of San Francisco Bay, total dissolved solids levels in the Bay commonly (and often significantly) exceed 3,000 milligrams per liter (mg/L) and thereby meet an exception to State Water Board Resolution 88-63. Therefore, the MUN designation is not applicable to Lower San Francisco Bay. Beneficial uses applicable to Lower San Francisco Bay are as follows.

**Table 5. Basin Plan Beneficial Uses of Lower San Francisco Bay**

Discharge Point	Receiving Water Name	Beneficial Uses
001	Lower San Francisco Bay	Industrial Service Supply (IND) Navigation (NAV) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2) Ocean, Commercial and Sport Fishing (COMM) Wildlife Habitat (WILD) Preservation of Rare and Endangered Species (RARE) Fish Migration (MIGR) Shellfish Harvesting (SHELL) Estuarine Habitat (EST)

Requirements of this Order implement the Basin Plan.

- I. National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules contain WQC for priority pollutants.
- J. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- K. Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule for CTR criterion-based effluent limits may not exceed 5 years from the date the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010). Where a compliance schedule for a final effluent limitation exceeds 1 year, the SIP requires the Order to include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised WQO. This Order includes compliance schedules and interim effluent limitations and/or discharge specifications. A detailed discussion of the basis for the compliance schedule(s) and interim effluent limitation(s) and/or discharge specifications is included in the Fact Sheet.
- L. Alaska Rule.** On March 30, 2000, U.S. EPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes. [65 Fed. Reg. 24641 (April 27, 2000) (codified at 40 CFR 131.21)]. Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to U.S. EPA after May 30, 2000, must be approved by U.S. EPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to U.S. EPA by May 30, 2000, may be used for CWA purposes, whether or not approved by U.S. EPA.
- M. Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and WQBELs. The technology-based effluent limitations consist of restrictions on oil and grease, pH, total suspended solids (TSS), and five-day carbonaceous biochemical oxygen demand (CBOD<sub>5</sub>). Restrictions on these pollutants are specified in federal regulations as discussed in Section IV.B of the Fact Sheet (Attachment F). WQBELs have been scientifically derived to implement WQOs that protect beneficial uses. Both

the beneficial uses and the WQOs have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by U.S. EPA on May 18, 2000. All beneficial uses and WQOs contained in the Basin Plan were approved under state law, and submitted to and approved by U.S. EPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

- N. Antidegradation Policy.** 40 CFR 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16. Resolution 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16.
- O. Anti-Backsliding Requirements.** CWA Sections 402(o)(2) and 303(d)(4) and NPDES regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in Order No. 01-071, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in Order No. 01-071.
- P. Monitoring and Reporting.** 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.
- Q. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).
- R. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections VI.C(1)-(5) and (7) of this Order are included to implement State law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

- S. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested organizations and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet of this Order.
- T. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

### III. DISCHARGE PROHIBITIONS

- A.** Discharge of wastewater at a location or in a manner different from that described in this Order is prohibited.
- B.** Discharge of treated wastewater into Lower San Francisco Bay at any point where it does not receive an initial dilution of at least 10:1 is prohibited.
- C.** The bypass of untreated or partially treated wastewater to waters of the United States is prohibited, except as provided for in the conditions stated in 40 CFR 122.41(m)(4) and in A.12 of the *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993* (Attachment G).

Blended wastewater is biologically treated wastewater blended with primary-treated wastewater diverted around biological treatment units or advanced treatment units. Such discharges are approved under the bypass conditions stated in 40 CFR 122.41(m)(4) when (1) the Discharger's peak wet weather influent flow volumes exceed the capacity of the secondary treatment units of 40 mgd; (2) the discharge complies with the effluent and receiving water limitations contained in this Order, provided the Discharger satisfies Provision VI.C.5.c. Furthermore, the Discharger shall operate its facility as designed and in accordance with the Operation & Maintenance Manual developed for the facility. This means that it shall optimize storage and use of equalization units, and shall fully utilize the biological treatment units and advanced treatment units, if applicable. The Discharger shall report incidents of blended effluent discharges in routine monitoring reports and shall conduct monitoring of this discharge as specified in the attached MRP (Attachment E).

- D.** The average dry weather flow, as measured at station EFF-001 described in the attached MRP (Attachment E), shall not exceed 15.7 million gallons per day. Actual average dry weather flow shall be determined for compliance with this prohibition over three consecutive dry weather months each year.
- E.** Any sanitary sewer overflow that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.

## IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

## A. Effluent Limitations – Discharge Point 001

## 1. Effluent Limitations for Conventional Pollutants

- a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001 with compliance measured at Monitoring Location EFF-001 as described in the attached MRP (Attachment E).

Table 6a. Effluent Limitations from May 1<sup>st</sup> to September 30<sup>th</sup>

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Oil and Grease	mg/L	10	---	20	---	---
pH <sup>(1)</sup>	standard units	---	---	---	6.0	9.0
Total Suspended Solids (TSS)	mg/L	20	30	---	---	---
Carbonaceous Biochemical Oxygen Demand (CBOD <sub>5</sub> ) (5-day @ 20 Deg. C)	mg/L	15	25	---	---	---
Chlorine, Total Residual <sup>(2)</sup>	mg/L	---	---	---	---	0.0 <sup>(2)</sup>

Table 6b. Effluent Limitations from October 1<sup>st</sup> to April 30<sup>th</sup>

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Oil and Grease	mg/L	10	---	20	---	---
pH <sup>(1)</sup>	standard units	---	---	---	6.0	9.0
TSS	mg/L	30	45	---	---	---
CBOD <sub>5</sub>	mg/L	25	40	---	---	---
Chlorine, Total Residual <sup>(2)</sup>	mg/L	---	---	---	---	0.0 <sup>(2)</sup>

<sup>(1)</sup> If the Discharger monitors pH continuously, pursuant to 40 CFR 401.17, the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied: (i) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (ii) no individual excursion from the range of pH values shall exceed 60 minutes.

<sup>(2)</sup> This requirement is defined as below the limit of detection in standard test methods, as defined in 40 CFR 136. The discharger may elect to use a continuous on-line monitoring system(s) for measuring flows, sodium hypochlorite, and sodium bisulfite dosage (including a safety factor) and concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Regional Water Board staff will conclude that these false positive chlorine residual exceedances are not violations of this Order limit. Samples for this parameter may be collected at Monitoring Location EFF-001-D.

- b. **CBOD<sub>5</sub> and TSS 85% Percent Removal:** The average monthly percent removal of CBOD<sub>5</sub> and TSS values, by concentration, shall not be less than 85 percent.

- c. **Fecal Coliform Bacteria:** The treated wastewater shall meet the following limits of bacteriological quality:

- (1) The five day log mean fecal coliform density shall not exceed 200 MPN/100ml; and
- (2) The 90<sup>th</sup> percentile fecal coliform value shall not exceed 400 MPN/100 ml.

d. **Enterococci Bacteria:** The monthly geometric mean enterococci bacteria concentration shall not exceed 35 MPN/100 mL.

## 2. Effluent Limitations for Toxics Substances – Discharge Point 001

- a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001 with compliance measured at Monitoring Location EFF-001 as described in the attached MRP (Attachment E):

**Table 6c. Toxic Substances Effluent Limitations**

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

<sup>(1)</sup> (a) Limitations apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month).

(b) All metals limitations are expressed as total recoverable metal.

<sup>(2)</sup> Alternate Effluent Limits for Copper:

- a. If a copper Site Specific Objective (SSO) for the receiving water becomes legally effective, resulting in adjusted saltwater Criterion Continuous Concentration (CCC) of 2.5 micrograms per liter (µg/l) and Criterion Maximum Concentration (CMC) of 3.9 µg/l as documented in the *North of Dumbarton Bridge Copper and Nickel Site-Specific Objective (SSO) Derivation (Clean Estuary Partnership March 2005)*, upon its effective date, the following limitations shall supersede those copper limitations listed in Table 6c (the rationale for these effluent limitations can be found in the Fact Sheet [Attachment F]).

Maximum Daily Effluent Limit (MDEL) of 72 µg/L, and Average Monthly Effluent Limit (AMEL) of 54 µg/L.

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

<sup>(3)</sup> The Discharger shall comply with the compliance schedule tasks and deadlines described in Section VI.C.7. Final limits for dioxin-TEQ will take effect on January 31, 2018.

<sup>(4)</sup> A daily maximum or average monthly value for a given constituent shall be considered noncompliant with the effluent limitations only if it exceeds the effluent limitation and the Reporting Level for that constituent. As outlined in Section 2.4.5 of the SIP, the table below indicates the Minimum Level (ML) for compliance determination purposes. An ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

## (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.

**Table 7. Minimum Levels for Pollutants with Effluent Limitations**

Parameter	Minimum Level	Units
Copper	2	µg/L
Mercury	0.0005	µg/L
Nickel	5	µg/L
Cyanide	5	µg/L
2,3,7,8-TCDD	5	pg/L
1,2,3,7,8-PeCDD	25	pg/L
1,2,3,4,7,8-HxCDD	25	pg/L
1,2,3,6,7,8-HxCDD	25	pg/L
1,2,3,7,8,9-HxCDD	25	pg/L
1,2,3,4,6,7,8-HpCDD	25	pg/L
OCDD	50	pg/L
2,3,7,8-TCDF	5	pg/L
1,2,3,7,8-PeCDF	25	pg/L
2,3,4,7,8-PeCDF	25	pg/L
1,2,3,4,7,8-HxCDF	25	pg/L
1,2,3,6,7,8-HxCDF	25	pg/L
1,2,3,7,8,9-HxCDF	25	pg/L
2,3,4,6,7,8-HxCDF	25	pg/L
1,2,3,7,8-PeCDF	25	pg/L
2,3,4,7,8-PeCDF	25	pg/L
1,2,3,4,7,8-HxCDF	25	pg/L
1,2,3,6,7,8-HxCDF	25	pg/L
1,2,3,7,8,9-HxCDF	25	pg/L
2,3,4,6,7,8-HxCDF	25	pg/L
1,2,3,4,6,7,8-HpCDF	25	pg/L
1,2,3,4,7,8,9-HpCDF	25	pg/L
OCDF	50	pg/L

### 3. Acute Toxicity:

- a. Representative samples of the effluent at Discharge Point 001 shall meet the following limits for acute toxicity: Bioassays shall be conducted in compliance with Section V.A of the Monitoring and Reporting Program [MRP] (Attachment E).

The survival of organisms in undiluted combined effluent shall be an eleven (11) sample median value of not less than 90 percent survival, and an eleven (11) sample 90 percentile value of not less than 70 percent survival.

- b. These acute toxicity limitations are further defined as follows:

**11 sample median:** A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or less bioassay tests show less than 90 percent survival.

**90th percentile:** A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit if one or more of the past ten or less bioassay tests show less than 70 percent survival.

- c. Bioassays shall be performed using the most up-to-date U.S. EPA protocol and the most sensitive species as specified in writing by the Executive Officer based on the most recent screening test results. Bioassays shall be conducted in compliance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms," currently 5th Edition (EPA-821-R-02-012), with exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP) upon the Discharger's request with justification.
- d. If the Discharger can demonstrate to the satisfaction of the Executive Officer that toxicity exceeding the levels cited above is caused by ammonia and that the ammonia in the discharge is not adversely impacting receiving water quality or beneficial uses, then such toxicity does not constitute a violation of this effluent limitation.

### 4. Chronic Toxicity

- a. Compliance with the Basin Plan narrative chronic toxicity objective shall be demonstrated according to the following tiered requirements based on results from representative samples of the treated final effluent at Discharge Point 001 meeting test acceptability criteria and Section V.B of the MRP (Attachment E).

(1) Conduct routine monitoring.

(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 semi-annually. Accelerated monitoring shall consist of monthly monitoring.

(3) Return to routine monitoring if accelerated monitoring does not exceed the "trigger" in (2), above.

- (4) If accelerated monitoring confirms consistent toxicity above either "trigger" in (2), above, initiate toxicity identification evaluation/toxicity reduction evaluation (TIE/TRE) in accordance with a workplan submitted in accordance with Section V.B.3 of the MRP (Attachment E) and that incorporates any and all comments from the Executive Officer.
- (5) Return to routine monitoring after appropriate elements of TRE workplan are implemented and either the toxicity drops below "trigger" levels in (2), above, or, based on the results of the TRE, the Executive Officer authorizes a return to routine monitoring.

Failure to conduct the required toxicity tests or a toxicity reduction evaluation (TRE) within a designated period shall result in the establishment of effluent limitations for chronic toxicity.

b. Test Species and Methods

The Discharger shall conduct routine monitoring with the test species and protocols specified in Section V.B of the MRP (Attachment E). The Discharger shall also perform Chronic Toxicity Screening Phase monitoring as described in the Appendix E-1 of the MRP (Attachment E). Chronic Toxicity Monitoring Screening Phase Requirements, Critical Life Stage Toxicity Tests and definitions of terms used in the chronic toxicity monitoring are identified in Appendices E-1 and E-2 of the MRP (Attachment E).

**B. Mercury Mass Emission Limitation**

Until total maximum daily load (TMDL) and Waste Load Allocation (WLA) efforts for mercury provide enough information to establish a different WQBEL, the Discharger shall demonstrate that the total mercury mass loading from the discharge to Lower San Francisco Bay has not increased by complying with the following:

1. Mass Emission Limit: The mass emission limit for mercury is 0.15 kilograms per month (kg/month). The total mercury mass load shall not exceed this limit.
2. Compliance with this limit shall be evaluated using running annual average mass load. Running annual averages shall be calculated by taking the arithmetic average of the current monthly mass loading value (see sample calculation below) and the previous 11-months values. Sample calculation:

Flow (mgd) = Average of monthly plant effluent flows in mgd.

Constituent Concentration ( $\mu\text{g/L}$ ) = Average of monthly effluent concentration measurements in  $\mu\text{g/L}$ . If more than one measurement is obtained in a calendar month, the average of these measurements is used as the monthly value for that month. If test results are less than the method detection limit used, the measurement value is assumed to be equal to the method detection limit.

Mass Loading (kg/month) = (Flow) x (Constituent Concentration) x (0.1151).

This mass emission limit is consistent with the current *Mercury in San Francisco Bay Proposed Basin Plan Amendment and Staff Report for Revised Total Maximum Daily Load (TMDL) and Proposed Mercury Water Quality Objectives* (August 1, 2006) and will be superseded upon completion of a TMDL and adoption of new mercury limits based on the TMDL. According to the antibacksliding rule in the Clean Water Act, Section 402(o), the permit may be modified to include a less stringent requirement following completion of a TMDL.

### C. Reclamation Specifications

Not Applicable.

## V. RECEIVING WATER LIMITATIONS

### A. Surface Water Limitations

1. Receiving water limitations are based on WQOs contained in the Basin Plan and are a required part of this Order. The discharges shall not cause the following in Lower San Francisco Bay:
  - a. Floating, suspended, or deposited macroscopic particulate matter or foams;
  - b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;
  - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
  - d. Visible, floating, suspended, or deposited oil and other products of petroleum origin; and
  - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State within one foot of the water surface:
  - a. Dissolved Oxygen                      5.0 mg/L, minimum  
  
The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.
  - b. Dissolved Sulfide                      Natural background levels
  - c. pH    Within 6.5 and 8.5

**B. Groundwater Limitations**

Not Applicable.

**VI. PROVISIONS****A. Standard Provisions**

1. The Discharger shall comply with Federal Standard Provisions included in Attachments D and H of this Order.
2. The Discharger shall comply with all applicable provisions of the *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993* (Attachment G), including any amendments thereto. Where provisions or reporting requirements specified in this Order are different from equivalent or related provisions or reporting requirements given in the Standard Provisions, the specifications of this Order shall apply. Duplicative requirements in the federal Standard Provisions in VI.A.1.2, above (Attachment D) and the regional Standard Provisions (Attachment G) are not separate requirements. A violation of a duplicative requirement does not constitute two separate violations.

**B. Monitoring and Reporting Program (MRP) Requirements**

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order. The Discharger shall also comply with the requirements contained in *Self Monitoring Programs, Part A, August 1993* (Attachment G).

**C. Special Provisions****1. Reopener Provisions**

The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances as allowed by law:

- a. If present or future investigations demonstrate that the discharge governed by this Order will have, or will cease to have, a reasonable potential to cause or contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters;
- b. If new or revised WQOs or TMDLs come into effect for the San Francisco Bay estuary and contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order will be modified as necessary to reflect updated WQOs and waste load allocations in TMDLs. Adoption of effluent limitations contained in this Order is not intended to restrict in any way future modifications based on legally adopted WQOs, TMDLs, or as otherwise permitted under Federal regulations governing NPDES permit modifications;
- c. If translator or other water quality studies provide a basis for determining that a permit condition(s) should be modified;

- d. If administrative or judicial decision on a separate NPDES permit or WDR that addresses requirements similar to this discharge;
- e. Or as otherwise authorized by law.

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

## 2. Special Studies and Additional Monitoring Requirements

- a. **Blending Monitoring Study.** The Discharger shall comply with the following tasks and deadlines:

Tasks	Compliance Date
(1.) <i>Blending Study Plan.</i> The study plan shall outline data collection for demonstrating that TSS is an appropriate indicator of compliance with other effluent limitations during blending events.	July 1, 2008.
(2.) <i>Implementation of the Study Plan.</i> Upon approval by the Executive Officer, or after 45 days of the study plan submittal if the Executive Officer has not commented, the Discharger shall conduct the study plan.	No later than August 14, 2008
(3.) <i>Final Report.</i> The Discharger shall submit a report, acceptable to the Executive Officer. The report shall include an analysis of TSS as an indicator of compliance with effluent limitations, and a recommendation for a TSS trigger value, if appropriate. The purpose of the TSS trigger is for use in triggering additional monitoring during blending events.	As specified in the study plan, but no later than June 30, 2013

- b. **Effluent Characterization for Selected Constituents.** The Discharger shall continue to monitor and evaluate the discharge from Outfall 001 (measured at EFF-001) for the constituents listed in Enclosure A of the Regional Water Board's August 6, 2001 Letter according to the sampling frequency specified in the attached MRP (Attachment E). Compliance with this requirement shall be achieved in accordance with the specifications stated in the Regional Water Board's August 6, 2001 Letter under Effluent Monitoring for Major Dischargers.

The Discharger shall evaluate on an annual basis if concentrations of any constituent increase over past performance. The Discharger shall investigate the cause of the increase. The investigation may include, but need not be limited to, an increase in the effluent monitoring frequency, monitoring of internal process streams, and monitoring of influent sources. This may be satisfied through identification of these constituents as "Pollutants of Concern" in the Discharger's Pollutant Minimization Program described in Provision C.3.b, below. A summary of the annual evaluation of data and source investigation activities shall also be reported in the annual self-monitoring report.

A final report that presents all the data shall be submitted to the Regional Water Board no later than 180 days prior to the Order expiration date. This final report shall be submitted with the application for permit reissuance.

**c. Ambient Background Receiving Water Study**

The Discharger shall collect or participate in collecting background ambient receiving water monitoring for priority pollutants that is required to perform a reasonable potential analysis (RPA) and to calculate effluent limitations. The data on the conventional water quality parameters (pH, salinity, and hardness) shall also be sufficient to characterize these parameters in the receiving water at a point after the discharge has mixed with the receiving waters. This provision may be met through monitoring through the Collaborative Bay Area Clean Water Agencies (BACWA) Study, or a similar ambient monitoring program for San Francisco Bay. This Order may be reopened, as appropriate, to incorporate effluent limits or other requirements based on Regional Water Board review of these data.

The Discharger shall submit or cause to have submitted on its behalf a final report that presents all the data to the Regional Water Board 180 days prior to Order expiration. This final report shall be submitted with the application for permit reissuance.

**d. Optional Mass Offset**

If the Discharger demonstrates that further net reductions of the total mass loadings of 303(d)-listed pollutants to the receiving water can only be achieved through a mass offset program, the Discharger may submit a mass offset plan to reduce 303(d)-listed pollutants to the same watershed or drainage basin to the Regional Water Board for approval. The Discharger must demonstrate that economically feasible measures, such as aggressive source control, wastewater reuse, and treatment plant optimization, will not further reduce total mass loadings. The Regional Water Board may modify this Order to allow an approved mass offset program.

**3. Best Management Practices and Pollution Minimization**

**a. Pollution Minimization Program**

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

**b. Annual Pollution Prevention Report**

The Discharger shall submit an annual report, acceptable to the Executive Officer, no later than February 28 of each calendar year. The annual report shall cover January

through December of the preceding year. Each annual report shall include at least the following information:

- (1) *A brief description of its treatment plant, treatment plant processes, and service area.*
- (2) *A discussion of the current pollutants of concern.* Periodically, the Discharger shall determine which pollutants are currently a problem and/or which pollutants may be potential future problems. This discussion shall include the reasons why the pollutants were chosen.
- (3) *Identification of sources for the pollutants of concern.* This discussion shall include how the Discharger intends to estimate and identify pollutant sources. The Discharger should also identify sources or potential sources not directly within the ability or authority of the Discharger to control, such as pollutants in the potable water supply and air deposition.
- (4) *Identification of tasks to reduce the sources of the pollutants of concern.* This discussion shall identify and prioritize tasks to address the Discharger's pollutants of concern. The Discharger may implement the tasks themselves or participate in group, regional, or national tasks that will address its pollutants of concern whenever it is efficient and appropriate to do so. A time line shall be included for the implementation of each task.
- (5) *Outreach to employees.* The Discharger shall inform its employees about the pollutants of concern, and their potential sources. The Discharger shall also inform its employees about how they might be able to help reduce the discharge of these pollutants. The Discharger may provide a forum for employees to provide input to the program.
- (6) *Continuation of Public Outreach Program.* The Discharger shall prepare a public outreach program to communicate pollution minimization measures to its service area. Outreach may include participation in existing community events such as county fairs, initiating new community events such as displays and contests during Pollution Prevention Week, conducting school outreach programs, conducting plant tours, and providing public information in various media. Information shall be specific to target audiences. The Discharger shall coordinate with other agencies as appropriate.
- (7) *Discussion of criteria used to measure Program's and tasks' effectiveness.* The Discharger shall establish criteria to evaluate the effectiveness of its Pollution Minimization Program. This discussion shall include of the specific criteria used to measure the effectiveness of each of the tasks in item b.3., b.4., b.5., and b.6.
- (8) *Documentation of efforts and progress.* This discussion shall detail all of the Discharger's activities in the Pollution Minimization Program during the reporting year.
- (9) *Evaluation of Program's and tasks' effectiveness.* The Discharger shall use the criteria established in b. to evaluate the Program's and tasks' effectiveness.

- (10) *Identification of specific tasks and time schedules for future efforts.* Based on the evaluation, the Discharger shall detail how it intends to continue or change its tasks to reduce more effectively the amount of pollutants to the treatment plant and subsequently its effluent.

**c. Pollutant Minimization Program for Reportable Priority Pollutants**

The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as "Detected, But Not Quantified" (DNQ) when the effluent limitation is less than the minimum level (ML), sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

- (1) A sample result is reported as DNQ and the effluent limitation is less than the reporting level (RL); or
  - (2) A sample result is reported as "Non-Detect" (ND) and the effluent limitation is less than the MDL, using definitions described in the SIP.
- d.** If triggered by the reasons in c. above, the Discharger's PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:
- (1) An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling, or alternative measures approved by the Executive Officer when it is demonstrated that source monitoring is unlikely to produce useful analytical data;
  - (2) Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system, or alternative measures approved by the Executive Officer, when it is demonstrated that influent monitoring is unlikely to produce useful analytical data;
  - (3) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;
  - (4) Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and
  - (5) The annual report required by 3.b. above shall specifically address the following items:
    - i. All PMP monitoring results for the previous year;
    - ii. A list of potential sources of the reportable priority pollutant(s);
    - iii. A summary of all actions undertaken pursuant to the control strategy; and

iv. A description of actions to be taken in the following year.

#### **4. Construction, Operation and Maintenance Specifications**

##### **a. Wastewater Facilities, Review and Evaluation, and Status Reports**

- (1) The Discharger shall operate and maintain its wastewater collection, treatment, and disposal facilities in a manner ensuring that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities.
- (2) The Discharger shall regularly review and evaluate its wastewater facilities and operation practices in accordance with section a.1 above. Reviews and evaluations shall be conducted as an ongoing component of the Discharger's administration of its wastewater facilities.
- (3) The Discharger shall provide the Executive Officer, upon request, a report describing the status of its wastewater facilities and operation practices, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures, and applicable wastewater facility programs or capital improvement projects.

##### **b. Operations and Maintenance Manual (O&M), Review, and Status Reports**

- (1) The Discharger shall maintain an O&M Manual for the Discharger's wastewater facilities. The O&M Manual shall be maintained in usable condition and be available for reference and use by all applicable personnel.
- (2) The Discharger shall regularly review, revise, or update, as necessary, the O&M Manual(s) to ensure that the document(s) may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and revisions or updates shall be completed as necessary. For any significant changes in treatment facility equipment or operation practices, applicable revisions shall be completed within 90 days of completion of such changes.
- (3) The Discharger shall provide the Executive Officer, upon request, a report describing the status of its O&M manual, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures and applicable changes to its operations and maintenance manual.

##### **c. Contingency Plan, Review, and Status Reports**

- (1) The Discharger shall maintain a Contingency Plan as required by Regional Water Board Resolution 74-10 (Attachment G) and as prudent in accordance with current municipal facility emergency planning. The discharge of pollutants in violation of

this Order where the Discharger has failed to develop and/or adequately implement a Contingency Plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

- (2) The Discharger shall regularly review and update, as necessary, the Contingency Plan so that the plan may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and updates shall be completed as necessary.
- (3) The Discharger shall provide the Executive Officer, upon request, a report describing the status of its Contingency Plan review and update. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures and applicable changes to its Contingency Plan.

## 5. Special Provisions for Publicly Owned Treatment Works (POTWs)

### a. Pretreatment Program

- (1) Pretreatment Program: The Discharger shall implement and enforce its approved pretreatment program in accordance with federal Pretreatment Regulations (40 CFR § 403), pretreatment standards promulgated under Sections 307(b), 307(c), and 307(d) of the Clean Water Act, pretreatment requirements specified under 40 CFR § 122.44(j), and the requirements in Attachment H, "Pretreatment Requirements." The Discharger's responsibilities include, but are not limited to:
  - i. Enforcement of National Pretreatment Standards of 40 CFR §§ 403.5 and 403.6;
  - ii. Implementation of its pretreatment program in accordance with legal authorities, policies, procedures, and financial provisions described in the General Pretreatment regulations (40 CFR § 403) and its approved pretreatment program;
  - iii. Submission of reports to U.S. EPA, the State Water Board, and the Regional Water Board, as described in Attachment H "Pretreatment Requirements".
  - iv. Evaluate the need to revise local limits under 40 CFR § 403.5(c)(1); and within 180 days after the effective date of this Order, submit a report acceptable to the Executive Officer describing the changes with a plan and schedule for implementation. To ensure no significant increase in the discharge of copper, and thus compliance with antidegradation requirements, the Discharger shall not consider eliminating or relaxing local limits for copper in this evaluation.
- (2) The Discharger shall implement its approved pretreatment program and the program shall be an enforceable condition of this Order. If the Discharger fails to perform the pretreatment functions, the Regional Water Board, the State Water Board, or the U.S. EPA may take enforcement actions against the Discharger as authorized by the Clean Water Act.

**b. Sludge Management Practices Requirements**

- (1) All sludge generated by the Discharger must be disposed of in a municipal solid waste landfill, reused by land application, or disposed of in a sludge-only landfill in accordance with 40 CFR §503. If the Discharger desires to dispose of sludge by a different method, a request for permit modification must be submitted to U.S. EPA 180 days before start-up of the alternative disposal practice. All the requirements in 40 CFR §503 are enforceable by U.S. EPA whether or not they are stated in an NPDES permit or other permit issued to the Discharger. The Regional Water Board should be copied on relevant correspondence and reports forwarded to U.S. EPA regarding sludge management practices.
- (2) Sludge treatment, storage and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, or result in groundwater contamination.
- (3) The Discharger shall take all reasonable steps to prevent or minimize any sludge use or disposal that is likely to have an adverse effect on human health or the environment.
- (4) The discharge of sludge shall not cause waste material to be in a position where it is or can be carried from the sludge treatment and storage site and deposited in waters of the State.
- (5) The sludge treatment and storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the temporary storage site. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.
- (6) For sludge that is applied to the land, placed on a surface disposal site, or fired in a sludge incinerator as defined in 40 CFR §503, the Discharger shall submit an annual report to U.S. EPA and the Regional Water Board containing monitoring results and pathogen and vector attraction reduction requirements as specified by 40 CFR §503, postmarked February 15 of each year, for the period covering the previous calendar year.
- (7) Sludge that is disposed of in a municipal solid waste landfill must meet the requirements of 40 CFR §258. In the annual self-monitoring report, the Discharger shall include the amount of sludge disposed of and the landfill(s) to which it was sent.
- (8) Permanent on-site sludge storage or disposal activities are not authorized by this Order. A report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencement of any such activity by the Discharger.
- (9) Sludge Monitoring and Reporting Provisions of this Regional Water Board's Standard Provisions (Attachment G), apply to sludge handling, disposal and reporting practices.

(10) The Regional Water Board may amend this Order prior to expiration if changes occur in applicable state and federal sludge regulations.

**c. Utility Analysis and Implementation Schedule for Wet Weather Bypass of Secondary Treatment**

At least 180 days prior to the Order expiration date, the Discharger shall complete a utility analysis if it seeks to continue to bypass peak wet weather flows around its secondary treatment units. The utility analysis must satisfy 40 CFR 122.4 (m)(4)(i)(A)-(C) and any applicable policy or guidance such as the process set forth in Part 1 of U.S. EPA's Peak Wet Weather Policy's No Feasible Alternatives Analysis Process (available at <http://cfpub.epa.gov/npdes/wetweather.cfm>) once it is finalized. Specifically, the Discharger shall fully evaluate if it has maximized its ability to reduce inflow/infiltration (I/I) throughout the entire collection system (i.e., the portions operated by the Discharger and those operated by its member agencies). The Discharger's evaluation shall include (1) its use of existing legal authorities; (2) potential improvements in the timing or quality of such efforts; and (3) options for obtaining or expanding legal authorities to reduce I/I from satellite collection systems.

**d. Sanitary Sewer Overflows and Sewer System Management Plan**

The Discharger's collection system is part of the facility that is subject to this Order. As such, the Discharger must properly operate and maintain its collection system (Attachment D, Standard Provisions - Permit Compliance, subsection I.D). The Discharger must report any noncompliance (Attachment D, Standard Provision - Reporting, subsections V.E.1 and V.E.2), and mitigate any discharge from the Discharger's collection system in violation of this Order (Attachment D, Standard Provisions - Permit Compliance, subsection I.C). The General Waste Discharge Requirements for Collection System Agencies (Order 2006-0003 DWQ) has requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. While the Discharger must comply with both the General Waste Discharge Requirements for Collection System Agencies (General Collection System WDR) and this Order, the General Collection System WDR more clearly and specifically stipulates requirements for operation and maintenance and for reporting and mitigating sanitary sewer overflows.

Implementation of the General Collection System WDR requirements for proper operation and maintenance and mitigation of spills will satisfy the corresponding federal NPDES requirements specified in this Order. Following reporting requirements in the General Collection System WDR will satisfy NPDES reporting requirements for sewage spills. Furthermore, the Discharger shall comply with the schedule for development of sewer system management plans (SSMPs) as indicated in the letter issued by the Regional Water Board on July 7, 2005, pursuant to Water Code Section 13267. Until the statewide on-line reporting system becomes operational, the Discharger shall report sanitary sewer overflows electronically according to the Regional Water Board's sanitary sewer overflow reporting program.

**6. Corrective Measures to Minimize Blending Events**

The Discharger shall comply with the following tasks and deadlines to complete its Wet Weather Improvement Project, and to address Inflow and Infiltration into Satellite collection Systems:

Tasks	Completion Date
1. <i>Capacity Evaluation.</i> 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.
2. <i>Collection System Improvements.</i> Complete sewer rehabilitation and relief sewer projects. Projects currently scheduled include: <ul style="list-style-type: none"> <li>a. Sewer Rehabilitation (\$2 million/year)</li> <li>b. Las Prados Relief Sewers</li> <li>c. South Trunk System Upgrade</li> <li>d. El Cerrito Relief Line</li> <li>e. Force Main, Dale Avenue to WWTP</li> </ul>	Budgeted in Capital Improvement Plan (CIP)*: <ul style="list-style-type: none"> <li>a. December 31, 2013</li> <li>b. December 31, 2010</li> <li>c. December 31, 2013</li> <li>d. December 31, 2010</li> <li>e. December 31, 2010</li> </ul>
3. <i>Hydraulic Improvements/Outfall.</i> Complete hydraulic improvements recommended in capacity evaluation.	December 31, 2013.
4. <i>Treatment Plant Capacity Improvements.</i> Complete treatment plant hydraulic capacity improvements pending results of capacity evaluation.	December 31, 2013.

\* Completion of projects is conditional on passage of currently scheduled rate increases.

**7. Dioxin-TEQ Compliance Schedule**

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 semi-annually no later than April 15 and October 15 of each calendar year in the March and September self-monitoring reports.	Upon the effective date of this order.

Task	Deadline
3. If dioxin-TEQ monitoring data show that the Discharger is out of compliance, as described in Section 2.4.5, Compliance Determination, of the State Implementation Policy, with 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 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 the Discharger remains out of compliance 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.
5. In the event that, following previously implemented source control measures, monitoring data show that the Discharger is out of compliance with 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, 2011
6. The Discharger shall commence implementation of the identified additional actions in accordance with the schedule submitted in task 5, above.	August 15, 2011
7. Full Compliance with IV. Effluent Limitations and Discharger Specifications A.2 for dioxin-TEQ. Alternatively, the Discharger may comply with the limit through	January 31, 2018

Task	Deadline
implementation of a mass offset strategy for dioxin-TEQ in accordance with policies in effect at that time.	

#### 8. Action Plan for Cyanide

The Discharger shall initiate implementation of an action plan for cyanide as described in Appendix I of "Staff Report on Proposed Site-Specific Water Quality Objectives for Cyanide for San Francisco Bay," December 4, 2006.

#### 9. Action Plan for Copper

If and when the alternate limits for copper in Section IV become effective, the Discharger shall initiate implementation of an action plan for copper in accordance with the Basin Plan Copper SSO Amendment.

### VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below:

#### A. General.

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP, Attachment A and Section VI of the Fact Sheet of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the 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 RL.

#### B. Multiple Sample Data.

When determining compliance with an Average Monthly Effluent limit (AMEL) or Maximum Daily Effluent Limit (MDEL) for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ. In that case, the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

**ATTACHMENT A – DEFINITIONS**

**Arithmetic mean** =  $\mu = \Sigma x / n$  where:  $\Sigma x$  is the sum of the measured ambient water concentrations, and  $n$  is the number of samples.

**Average Monthly Effluent Limitation (AMEL)**: the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

**Average Weekly Effluent Limitation (AWEL)**: the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

**Bioaccumulative** pollutants are those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

**Carcinogenic** pollutants are substances that are known to cause cancer in living organisms.

**Coefficient of Variation (CV)** is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

**Daily Discharge**: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in this Order), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

**Detected, but Not Quantified (DNQ)** are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

**Dilution Credit** is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

**Effluent Concentration Allowance (ECA)** is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge

concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

**Enclosed Bays** means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

**Estimated Chemical Concentration** is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

**Estuaries** means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters include, but are not limited to, the Sacramento-San Joaquin Delta as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

**Inland Surface Waters** are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

**Instantaneous Maximum Effluent Limitation:** the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

**Instantaneous Minimum Effluent Limitation:** the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

**Maximum Daily Effluent Limitation (MDEL)** means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

**Median** is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements ( $n$ ) is odd, then the median =  $X_{(n+1)/2}$ . If  $n$  is even, then the median =  $(X_{n/2} + X_{(n/2)+1})/2$  (i.e., the midpoint between the  $n/2$  and  $n/2+1$ ).

**Method Detection Limit (MDL)** is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

**Minimum Level (ML)** is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

**Mixing Zone** is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where WQC can be exceeded without causing adverse effects to the overall water body.

**Not Detected (ND)** are those sample results less than the laboratory's MDL.

**Ocean Waters** are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

**Persistent** pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

**Pollutant Minimization Program (PMP)** means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

**Pollution Prevention** means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

**Reporting Level (RL)** is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

**Satellite Collection System** is the portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

**Source of Drinking Water** is any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

**Standard Deviation ( $\sigma$ )** is a measure of variability that is calculated as follows:

$$\sigma = \left( \frac{\sum[(x - \mu)^2]}{(n - 1)} \right)^{0.5}$$

where:

x is the observed value;

$\mu$  is the arithmetic mean of the observed values; and

n is the number of samples.

**Toxicity Reduction Evaluation (TRE)** is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

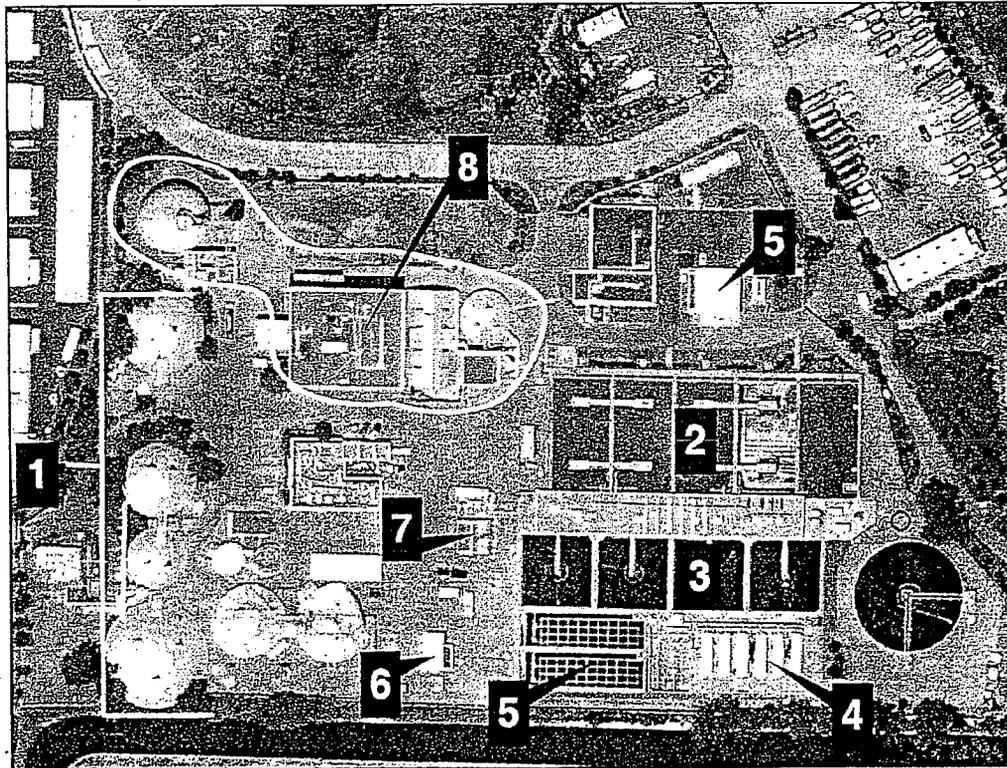
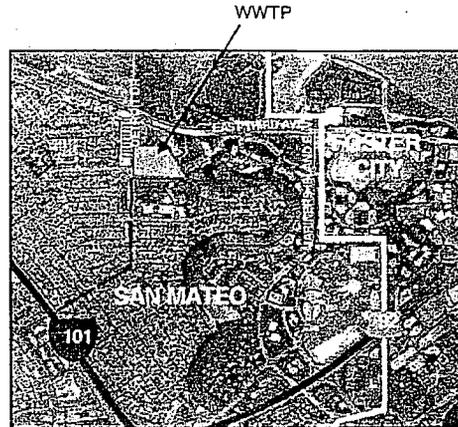
ATTACHMENT B – FACILITY MAP



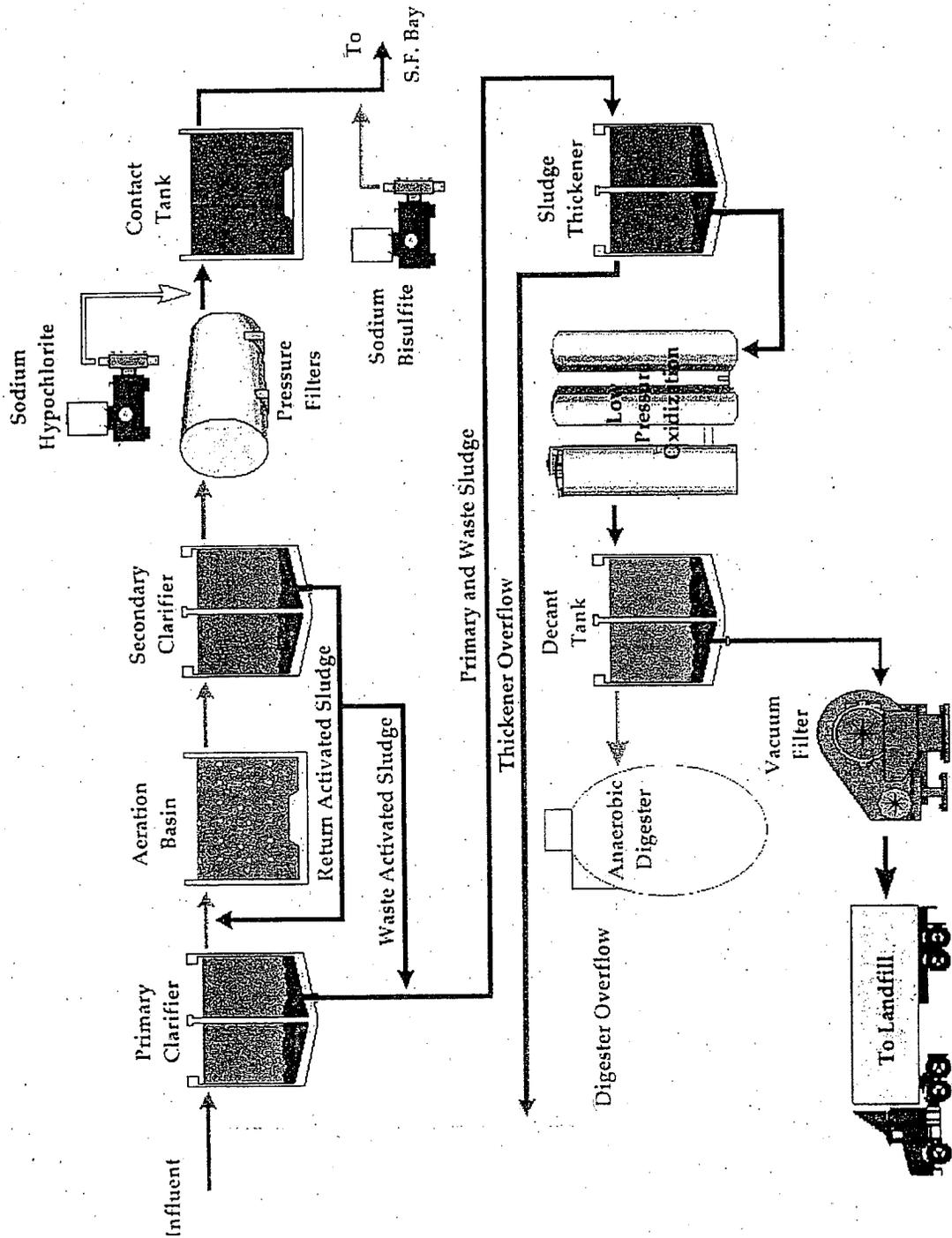
City of San Mateo  
**WASTEWATER TREATMENT PLANT**

THE TREATMENT PROCESS

1. Primary Clarifiers
2. Aeration Basins
3. Secondary Clarifiers
4. Effluent Filters
5. Chlorine Contact - Effluent Disinfection
6. Effluent Dechlorination
7. Clean discharge is pumped into Bay
8. Biosolids processing and disposal



ATTACHMENT C – PROCESS FLOW DIAGRAM



**ATTACHMENT D – STANDARD PROVISIONS****I. STANDARD PROVISIONS – PERMIT COMPLIANCE****A. Duty to Comply**

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR § 122.41(a).)
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR § 122.41(a)(1).)

**B. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 CFR § 122.41(c).)

**C. Duty to Mitigate**

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40CFR§ 122.41(d).)

**D. Proper Operation and Maintenance**

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order (40CFR§ 122.41(e)).

**E. Property Rights**

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR § 122.41(g).)
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR § 122.5(c).)

**F. Inspection and Entry**

The Discharger shall allow the Regional Water Board, State Water Board, United States Environmental Protection Agency (U.S. EPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 CFR § 122.41(i); Wat. Code, § 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 CFR § 122.41(i)(1));
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 CFR § 122.41(i)(2));
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 CFR § 122.41(i)(3)); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 CFR § 122.41(i)(4).)

**G. Bypass**

1. Definitions
  - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 122.41(m)(1)(i).)
  - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR § 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR § 122.41(m)(4)(i)):
  - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 122.41(m)(4)(i)(A));
  - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment

should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and

- c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR § 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 CFR § 122.41(m)(4)(ii).)
5. Notice
  - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 CFR § 122.41(m)(3)(i).)
  - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR § 122.41(m)(3)(ii).)

#### H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR § 122.41(n)(2).)
2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR § 122.41(n)(3)):
  - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));
  - b. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));
  - c. The Discharger submitted notice of the upset as required in Standard Provisions– Reporting V.E.2.b below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and

- d. The Discharger complied with any remedial measures required under Standard Provisions-Permit Compliance I.C above. (40 CFR § 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR § 122.41(n)(4).)

## II. STANDARD PROVISIONS – PERMIT ACTION

### A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR § 122.41(f).)

### B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 CFR § 122.41(b).)

### C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of this Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 CFR § 122.41(l)(3); § 122.61.)

## III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR § 122.41(j)(1).)
- B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 CFR § 122.41(j)(4); § 122.44(i)(1)(iv).)

## IV. STANDARD PROVISIONS – RECORDS

- A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 CFR § 122.41(j)(2).)
- B. Records of monitoring information shall include:
  1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));
  3. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));
  4. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));
  5. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and
  6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi).)
- C. Claims of confidentiality for the following information will be denied (40 CFR § 122.7(b)):
1. The name and address of any permit applicant or Discharger (40 CFR § 122.7(b)(1)); and
  2. Permit applications and attachments, permits and effluent data. (40 CFR § 122.7(b)(2).)

## V. STANDARD PROVISIONS – REPORTING

### A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Regional Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); Wat. Code, § 13267.)

### B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR § 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). (40 CFR § 122.22(a)(3).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR § 122.22(b)(1));
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent

responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR § 122.22(b)(2)); and

- c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 CFR § 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR § 122.22(c).)
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.” (40 CFR § 122.22(d).)

### **C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR § 122.22(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR § 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 CFR § 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR § 122.41(l)(4)(iii).)

**D. Compliance Schedules**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 CFR § 122.41(l)(5).)

**E. Twenty-Four Hour Reporting**

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR § 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR § 122.41(l)(6)(ii)):
  - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(A).)
  - b. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR § 122.41(l)(6)(iii).)

**F. Planned Changes**

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 CFR § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR § 122.41(l)(1)(ii).)
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application

process or not reported pursuant to an approved land application plan. (40 CFR § 122.41(l)(1)(iii).)

#### **G. Anticipated Noncompliance**

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 CFR § 122.41(l)(2).)

#### **H. Other Noncompliance**

The Discharger shall report all instances of noncompliance not reported under Standard Provisions—Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision—Reporting V.E above. (40 CFR § 122.41(l)(7).)

#### **I. Other Information**

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. (40 CFR § 122.41(l)(8).)

### **VI. STANDARD PROVISIONS – ENFORCEMENT**

- A. The Regional Water Board is authorized to enforce the terms of this Order under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

### **VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS**

#### **A. Publicly-Owned Treatment Works (POTWs)**

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 CFR § 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR § 122.42(b)(1)); and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of this Order. (40 CFR § 122.42(b)(2).)
3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR § 122.42(b)(3).)

**ATTACHMENT E – MONITORING AND REPORTING PROGRAM**

**Table of Contents**

I.	General Monitoring Provisions.....	E-2
II.	Monitoring Locations.....	E-3
III.	Influent Monitoring Requirements .....	E-3
	A. Monitoring Location INF-001 .....	E-3
IV.	Effluent Monitoring Requirements .....	E-4
	A. Monitoring Location – EFF-001 .....	E-4
V.	Whole Effluent Toxicity Testing Requirements .....	E-5
VI.	Land Discharge Monitoring Requirements.....	E-8
VII.	Reclamation Monitoring Requirements.....	E-8
VIII.	Receiving water Monitoring Requirements – Surface water and Groundwater.....	E-8
	A. Regional Monitoring Program.....	E-8
IX.	Legend for MRP Tables.....	E-9
X.	Other Monitoring Requirements.....	E-9
XI.	Reporting Requirements .....	E-10
	A. General Monitoring and Reporting Requirements .....	E-10
	B. Modifications to Part A of Self-Monitoring Program (Attachment G).....	E-10
	C. Self Monitoring Reports (SMRs) .....	E-14
	D. Discharge Monitoring Reports (DMRs).....	E-16
	E. Other Reports .....	E-16

**Tables**

Table E-1.	Test Methods and Minimum Levels for Pollutants with Reasonable Potential.....	E-2
Table E-2.	Monitoring Station Locations .....	E-3
Table E-3.	Influent Monitoring.....	E-3
Table E-4.	Effluent Monitoring .....	E-4
Table E-5.	Pretreatment Monitoring Requirements.....	E-10
Table E-6.	Monitoring Periods and Reporting Schedule.....	E-14

**ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)**

National Pollutant Discharge Elimination System (NPDES) regulations at 40 CFR 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

**I. GENERAL MONITORING PROVISIONS**

- A. The Discharger shall comply with the MRP for this Order as adopted by the Regional Water Board, and with all of the Self-Monitoring Program, Part A, adopted August 1993 (SMP). The MRP and SMP may be amended by the Executive Officer pursuant to US Environmental Protection Agency (U.S. EPA) regulations 40 CFR 122.62, 122.63, and 124.5. If any discrepancies exist between the MRP and SMP, the MRP prevails.
- B. Sampling is required during the entire year when discharging. All analyses shall be conducted using current U.S. EPA methods, or methods that have been approved by the U.S. EPA Regional Administrator pursuant to 40 CFR 136.4 and 40 CFR 136.5, or equivalent methods that are commercially and reasonably available, and that provide quantification of sampling parameters and constituents sufficient to evaluate compliance with applicable effluent limits and to perform reasonable potential analysis. Equivalent methods must be more sensitive than those specified in 40 CFR 136, must be specified in the permit, and must be approved for use by the Executive Officer, following consultation with the State Water Quality Control Board’s Quality Assurance Program.
- C. Sampling and analysis of additional constituents is required pursuant to Table 1 of the Regional Water Board’s August 6, 2001 Letter entitled, *Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy* (Attachment G).
- D. *Minimum Levels.* For compliance and reasonable potential monitoring, analyses shall be conducted using the commercially available and reasonably achievable detection levels that are lower than the effluent limitations. The objective is to provide quantification of constituents sufficient to allow evaluation of observed concentrations with respect to the Minimum Levels (MLs) given below.

MLs are the concentrations at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed. All MLs are expressed as micrograms per liter (µg/L).

Table E-1 lists the test methods the Discharger may use for compliance and reasonable potential monitoring for the pollutants with effluent limits.

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

CTR #	Constituent	Types of Analytical Methods <sup>[a]</sup>											
		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 <sup>[b]</sup>											0.0005	

CTR #	Constituent	Types of Analytical Methods <sup>[a]</sup>											
		Minimum Levels (µg/L)											
		GC	GCMS	LC	Color	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAF	DCP
9	Nickel					50	5	20	1	5			
14	Cyanide				5								
16-TEQ	Dioxin-TEQ <sup>[c]</sup>												

<sup>[a]</sup> 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)

<sup>[b]</sup> 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.

<sup>[c]</sup> Minimum Levels for dioxin congeners are shown in the permit, Table 7.

**II. MONITORING LOCATIONS**

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order.

**Table E-2. Monitoring Station Locations**

Type of Sampling Location	Monitoring Location Name	Monitoring Location Description
Influent Station	INF-001	At any point in the treatment facility's headworks preceding any phase of treatment and preceding introduction of recycle streams.
Plant Effluent Station	EFF-001	At any point after full treatment and before contact with receiving water of the lower San Francisco Bay.
Plant Effluent Station	EFF-001-D	At any point in the disinfection facilities where adequate contact with the disinfectant is assured.

**III. INFLUENT MONITORING REQUIREMENTS**

**A. Monitoring Location INF-001**

1. The Discharger shall monitor influent to the facility at INF-001 as follows.

**Table E-3. Influent Monitoring**

Parameter	Units	Minimum Sampling Frequency	Required Analytical Test Method
		C-24 <sup>(2)</sup>	
Flow rate <sup>(1)</sup>	mgd	Cont/D	Meter
CBOD <sub>5</sub>	mg/L	3/W	<sup>(3)</sup>

Parameter	Units	Minimum Sampling Frequency		Required Analytical Test Method
		C-24 <sup>(2)</sup>		
TSS	mg/L	3/W		(3)

- (1) Flows shall be monitored continuously and the following shall be reported in monthly self-monitoring reports:
- Daily instantaneous minimum flow rate (MGD)
  - Daily instantaneous maximum flow rate (MGD)
  - Average daily flow rate (MGD) based on the total flow for each day.
  - Average flow rate for the month (MGD) based on an average of daily flows.
- (2) 24-hour composite samples of influent shall be collected on varying days selected at random and shall not include any plant recirculation or other side stream waste. Deviation from this requirement must be approved by the Executive Officer.
- (3) Pollutants shall be analyzed using the analytical methods described in 40 CFR 136.

#### IV. EFFLUENT MONITORING REQUIREMENTS

##### A. Monitoring Location – EFF-001

1. The Discharger shall monitor treated effluent from the facility at EFF-001 as follows:

**Table E-4. Effluent Monitoring**

Parameter	Units	Minimum Sampling Frequency			Required Analytical Test Method
		Continuous	C-24	G	
Flow Rate <sup>(2)</sup>	Mgd	Cont/D			(1)
Oil and Grease <sup>(3)</sup>	mg/L			2/Y	(1)
pH <sup>(4)</sup>	s.u.			D	(1)
CBOD <sub>5</sub> <sup>(5)</sup>	mg/L		3/W		(1)
TSS <sup>(5)</sup>	mg/L		D		(1)
Acute Toxicity <sup>(6)</sup>	% survival		M		(1)
Chlorine, Total Residual <sup>(7)</sup>	mg/L	Cont or 1/2h			(1)
Chronic Toxicity <sup>(8)</sup>	TUc		2/Y		(1)
DO	mg/L			D	(1)
Enterococci Bacteria <sup>(13)</sup>	MPN/100ml			W	(1)
Fecal Coliform Bacteria <sup>(9)</sup>	MPN/100ml			W	(1)
Temperature	°C			D	(1)
Ammonia <sup>(14)</sup>	mg/L			M	(1)
Copper	µg/L		M		(1)
Cyanide <sup>(14)</sup>	µg/L			M	(1)
Dioxin-TEQ	µg/L			2/Y	(1)
Nickel	µg/L		M		(1)
Mercury	µg/L, kg/mo			M	(1)(10)
Remaining Priority Pollutants	µg/L		1/Y <sup>(11)(12)</sup>		(1)

- (1) Pollutants and pollutant parameters shall be analyzed using the analytical methods described in 40 CFR 136. For priority pollutants, the methods must meet the lowest MLs specified in Attachment 4 of the State Implementation Policy (SIP). Where no methods are specified for a given pollutant, the methods must be approved by this Regional Water Board or the State Water Resources Control Board (State Water Board).
- (2) Flows shall be monitored continuously and the following shall be reported in monthly self-monitoring reports:
- Average daily flow rate (MGD) based on the total flow for each day.
  - Average flow rate for the month (MGD) based on an average of daily flows.

- (3) Each oil and grease sampling event shall consist of a composite sample comprised of three grab samples taken at equal intervals during the sampling date, with each grab sample being collected in a glass container. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite sample for extraction and analysis.
- (4) If pH is monitored continuously, the minimum and maximum pH values for each day shall be reported in monthly self-monitoring reports.
- (5) The percent removal for CBOD<sub>5</sub> and TSS shall be reported for each calendar month. Samples for CBOD<sub>5</sub> and TSS shall be collected simultaneously with influent samples.
- (6) Acute bioassay tests shall be performed in accordance with Section V.A of this MRP.
- (7) Chlorine residual: During all times when chlorination is used for disinfection of the effluent, effluent chlorine residual concentrations shall be monitored continuously, or by grab samples taken once every 2 hours. Chlorine residual concentrations shall be monitored and reported for sampling points both prior to and following dechlorination. Total chlorine dosage (kilograms per day [kg/day]) shall be recorded on a daily basis.
- (8) Critical Life Stage Toxicity Test shall be performed and reported in accordance with the Chronic Toxicity Requirements specified in Sections V.B of the MRP.
- (9) Samples for this parameter may be collected at Monitoring Location EFF-001-D.
- (10) Mercury: The Discharger may, at its option, sample effluent mercury either as grab or 24-hour composite samples. Ultra clean sampling (U.S. EPA 1669) and ultra clean analytical methods (U.S. EPA 1631) shall be used to the maximum extent practicable. The Discharger may use an alternative method, if the method has an ML of 5.0 ng/L or less, and approval is obtained from the Executive Officer prior to the monitoring event.
- (11) Sampling methods for all priority pollutants in the SIP are 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/>).
- (12) For the same pollutants the sampling frequencies shall be the higher ones under this table or under the pretreatment program sampling required in section VII.A of the MRP (Table E-5). Pretreatment program monitoring can be used to satisfy part of these sampling requirements.
- (13) The Discharger shall monitor for Enterococci using EPA-approved methods, including the IDEXX Enterolert method.
- (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.

## V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The Discharger shall monitor acute and chronic toxicity at EFF-001 as follows.

### A. Whole Effluent Acute Toxicity

1. Compliance with the acute toxicity effluent limitations of this Order shall be evaluated by measuring survival of test organisms exposed to 96-hour continuous flow-through bioassays.
2. Test organisms shall be rainbow trout unless specified otherwise in writing by the Executive Officer.
3. All bioassays shall be performed according to the most up-to-date protocols in 40 CFR 136, currently in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms," 5<sup>th</sup> Edition.
4. If specific identifiable substances in the discharge can be demonstrated by the Discharger as being rapidly rendered harmless upon discharge to the receiving water, compliance with the acute toxicity limit may be determined after the test samples are adjusted to remove the influence of those substances. Written approval from the Executive Officer must be obtained to authorize such an adjustment. Written approval to adjust the pH of whole effluent acute toxicity samples prior to performing bioassays was requested by and granted to the Discharger during the term of Order No. 01-071.