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6 BAY AREA CLEAN WATER AGENCIES

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10 BEFORE THE  
11 CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

12 In the Matter of the Bay Area Clean Water  
13 Agencies' Petition for Review of Action and  
14 Failure to Act by the California Regional Water  
15 Quality Control Board, San Francisco Bay  
16 Region, in Adopting Order No. R2-2009-0061,  
17 NPDES Permit No. CA0037621 and Waste  
18 Discharge Requirements for the Sunnyvale  
19 Water Pollution Control Plant and sewage  
20 collection system.

PETITION FOR REVIEW;  
PRELIMINARY POINTS AND  
AUTHORITIES IN SUPPORT OF  
PETITION (WATER CODE  
SECTIONS 13320 AND 13321)

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Petitioner Bay Area Clean Water Agencies ("BACWA"), in accordance with section 13320 of the Water Code, hereby petitions the State Water Resources Control Board ("SWRCB" or "State Board") to review Order No. R2-2009-0061 of the California Regional Water Quality Control Board, San Francisco Bay Region, ("RWQCB" or "Regional Board") reissuing National Pollution Discharge Elimination System ("NPDES") Permit No. CA0037621 ("Permit") and Waste Discharge Requirements for the Sunnyvale Water Pollution Control Plant and its sewage collection system. ("Sunnyvale"). A copy of Order No. R2-2009-0061, adopted on August 12, 2009, is attached to this Petition as **Exhibit A**. The issues and a summary of the bases for the Petition follow. At such time as the full administrative record is available and any other material has been submitted, BACWA

1 reserves the right to file a more detailed memorandum in support of the Petition and/or in reply to  
2 the Regional Board's response.<sup>1</sup>

3 BACWA is a joint powers authority whose members own and operate publicly-owned  
4 treatment works ("POTWs") that discharge treated effluent to San Francisco Bay and its  
5 tributaries. Collectively, BACWA's members serve nearly 7 million people in the nine-county  
6 Bay Area, treating all domestic, commercial and a significant amount of industrial wastewater.  
7 BACWA was formed to develop a region-wide understanding of the watershed protection and  
8 enhancement needs through reliance on sound technical, scientific, environmental and economic  
9 information and to ensure that this understanding leads to long-term stewardship of the San  
10 Francisco Bay Estuary. BACWA member agencies are public agencies, governed by elected  
11 officials and managed by professionals, who are dedicated to protecting our water environment  
12 and the public health.

13 On February 13, 2009, BACWA submitted written comments on the tentative versions of  
14 the Permit. For the reasons contained herein, BACWA asserts that provisions contained in the  
15 recently issued Permit for Sunnyvale are improper and inappropriate. BACWA believes the issues  
16 being raised are vitally important to Bay Area POTWs.

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18 **1. NAME, ADDRESS, TELEPHONE, AND EMAIL FOR PETITIONER:**

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25 In addition, all materials in connection with this Petition for Review should also be provided  
26 to BACWA's special counsel at the following address:

27 \_\_\_\_\_  
28 <sup>1</sup> The State Board's regulations require submission of a statement of points and authorities in support of a petition (23 C.C.R. §2050(a)(7)), and this document is intended to serve as a preliminary memorandum. However, it is impossible to prepare a thorough statement or a memorandum that is entirely useful to the reviewer in the absence of the complete administrative record, which is not yet available.

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6 **2. THE SPECIFIC ACTION OF THE REGIONAL BOARD WHICH THE STATE**  
7 **BOARD IS REQUESTED TO REVIEW:**

8 BACWA seeks review of Order No. R2-2009-0061, reissuing NPDES Permit No.  
9 CA0037621 for Sunnyvale. The specific requirements of the Permit that BACWA requests the  
10 State Board to review relate to the following:

- 11 A. Numeric-based effluent limits for dioxin-TEQ;  
12 B. Daily maximum effluent limitations; and  
13 C. Compliance schedule action plans for dioxin-TEQ.

14 The State Board is also requested to review the Regional Board's actions in adopting the  
15 Permit for compliance with due process and the California Administrative Procedures Act (Cal.  
16 Gov't Code §§11340, *et seq.*); the California Environmental Quality Act ("CEQA," Cal. Pub. Res.  
17 Code §21000, *et seq.*);<sup>2</sup> the Porter-Cologne Water Quality Control Act (Cal. Water Code §§13000,  
18 *et seq.*); the Clean Water Act ("CWA") (33 U.S.C. §§1251, *et seq.*) and its implementing  
19 regulations (40 C.F.R. Parts 122, 123, 130 and 131); the Water Quality Control Plan, San Francisco  
20 Bay Region (the "Basin Plan"); and the Policy for Implementation of Toxics Standards for Inland  
21 Surface Waters, Enclosed Bays, and Estuaries of California ("SIP").

22 **3. THE DATE ON WHICH THE REGIONAL BOARD ACTED:**

23 The Regional Board adopted the Permit on August 12, 2009.  
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27 <sup>2</sup> Although the Permit at II.E. discusses an exemption from CEQA under Water Code §13389, that exemption is narrow,  
28 and only exempts Chapter 3. The remaining non-exempted parts of CEQA require all Regional Boards to consider the  
environmental consequences of their permitting actions, and to explore feasible alternatives and mitigation measures  
prior to the adoption of waste discharge requirements. *See, e.g.*, Cal. Pub. Res. Code §21002; 23 C.C.R. §3733 (stating  
that the exemption in §13389 "does not apply to the policy provisions of Chapter 1 of CEQA").

1 **4. A STATEMENT OF THE REASONS THE ACTION WAS INAPPROPRIATE OR**  
2 **IMPROPER:**

3 **A. The Regional Board Improperly Imposed Numeric Effluent Limitations for**  
4 **Dioxin-TEQ.**

5 BACWA has been concerned about the imposition of numeric effluent limitations for dioxin  
6 since the California Toxics Rule ("CTR") was promulgated, notwithstanding that regulations'  
7 promise that the "rule would not impose undue or inappropriate burden on the State of California or  
8 its dischargers." 65 Fed. Reg. 31,687 (May 18, 2000). BACWA was initially hopeful that the  
9 United States Environmental Protection Agency's ("USEPA") prediction that costs to meet the CTR  
10 criteria would be "unlikely to reach the high-end of the [cost] range because State authorities are  
11 likely to choose implementation options that provide some degree of flexibility or relief to the point  
12 source dischargers" was accurate; unfortunately, in practice, this has not been the case. *Id.* at  
13 31,706. The purpose of this petition is to request that the State use its presumed flexibility when  
14 issuing discharge permits where compliance with water quality criteria (whether these criteria are  
15 CTR criteria or narrative objectives) has been demonstrated to be infeasible.

16 The Permit BACWA is appealing contains final and interim concentration limits for dioxin-  
17 TEQ. *See* Permit at pgs. 11-13. Similar limits were challenged by BACWA in previous  
18 administrative and court appeals. BACWA tried for several years to settle the outstanding petitions  
19 on Bay Area POTW permits filed since 2000 by BACWA and others, but disagreement as to legal  
20 requirements prevented the consummation of a global settlement. Because these issues remain as  
21 important today as they did nine years ago, or perhaps more important since the time for final  
22 compliance with CTR criteria becomes shorter every day, BACWA continues to press for a final  
23 ruling to re-incorporate the "flexibility or relief" promised over the years.

24 BACWA believes that the Regional Board included final numeric water quality-based  
25 effluent limitations ("WQBELs") for dioxin-TEQ in the Permit that are contrary to the requirements  
26 of the CWA and state law.<sup>3</sup> In most cases, these numeric limitations have been demonstrated to be  
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28 <sup>3</sup> The Regional Board must ensure its actions to implement the CWA are consistent with any applicable provisions of  
the CWA and its implementing regulations. Cal. Water Code §13372.

1 infeasible to meet,<sup>4</sup> and could result in the permitted entities having to construct expensive new  
2 treatment facilities before October 1, 2019 in order to meet the final effluent limits, if the  
3 technology even exists to provide such treatment. These treatment technologies far exceed the  
4 mandated treatment requirements of the CWA and will likely become unnecessary once new water  
5 quality objectives, site specific objectives, or TMDLs for this substance is in place and finally  
6 approved.<sup>5</sup> Such a waste of resources is neither reasonable nor required (*see* Water Code §13000),  
7 and ignores the fact that control of dioxin-TEQ may instead require a “carefully conceived, agency-  
8 approved, long-term pollution control procedure for a complex environmental setting.”  
9 *Communities for a Better Environment v. SWRCB*, 109 Cal.App.4th 1089, 1107 (2003) (“*Tesoro*  
10 case”). For these reasons, BACWA challenges these limits as being contrary to federal and state  
11 law requirements.

12 1) Numeric Effluent Limitations are Not Required.

13 The Regional Board has imposed numeric WQBELs for various constituents in the Permit  
14 based on 40 C.F.R. §122.44(d). *See* Permit at pgs. 10-11. However, as explained below, section  
15 122.44(d) does not require the imposition of *numeric* WQBELs.

16 EPA regulations require that “each NPDES permit shall include the following requirements  
17 when applicable.” *See* 40 C.F.R. § 122.44 (emphasis added). Subsection (d) of this section

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20 <sup>4</sup> As defined by SWRCB Policy, “infeasible” means “not capable of being accomplished in a successful manner within  
a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” *See*  
SIP at Appendix 1-3.

21 <sup>5</sup> Courts have recognized a step-wise process in pollutant control. In *San Francisco BayKeeper v. Whitman*, 287 F.3d  
22 764,766-767 (April 15, 2002), the Ninth Circuit Court of Appeals determined that:

23 “[w]hen the NPDES system fails to adequately clean up certain rivers, streams or smaller water segments, the Act  
24 requires the use of a water-quality based approach. States are required to identify such waters, which are to be  
25 designated as ‘water quality limited segments’ (‘WQLSs’). The states must then rank these waters in order of  
26 priority, and based on that ranking, institute more stringent pollution limits called ‘total maximum daily loads’ or  
27 ‘TMDLs.’ 33 U.S.C. §§1313(d)(1)(A), (C). TMDLs are the maximum quantity of a pollutant the water body can  
receive on a daily basis without violating the water quality standard. The TMDL calculations are to ensure that the  
cumulative impacts of multiple point source discharges are accounted for, and are evaluated in conjunction with  
pollution from non-point sources. States must then institute whatever additional cleanup actions are necessary,  
which can include further controls on both point and nonpoint pollution sources.” (emphasis added).

28 Thus, the Court reasoned that the TMDL program is the tool for correcting water quality impairments when they are  
deemed to exist, not continued ratcheting down under the NPDES permitting program. Any other determination would  
render the TMDL program superfluous. Unfortunately, no TMDL for dioxin is currently being adopted.

1 imposes “any requirements in addition to or more stringent than promulgated effluent limitations  
2 guidelines or standards under sections 301, 304, 306, 307, 318 and 405 of the CWA necessary to  
3 achieve water quality standards established under Section 303 of the CWA, including State  
4 narrative criteria for water quality . . .” 40 C.F.R. § 122.44(d) (emphasis added). The regulations  
5 require the imposition of “requirements,” not numeric effluent limitations. Furthermore, when  
6 numeric effluent limitations are infeasible, EPA regulations specifically authorize the use of Best  
7 Management Practices (“BMPs”) and other non-numeric or narrative requirements in lieu of  
8 numeric limits. 40 C.F.R. §122.44(k)(3); *see also* SWRCB Order No. WQ 2003-12 at pg. 9.  
9 Alternatively, the Regional Board could have styled this Permit after recent permits in the Central  
10 Valley Region, which have imposed final numeric limits, but stated that these limits do not apply if  
11 the discharger undertakes certain actions. *See* Order Nos. R5-2007-0036 and R5-2007-0039. This  
12 approach, which USEPA did not veto, takes a creative approach to dealing with infeasible final  
13 limits without the necessity of compliance schedules.

14       The California Court of Appeal in the *Tesoro* case specifically ruled on this issue and stated  
15 that numeric limits are not required, and that, where infeasibility is demonstrated, numeric limits  
16 can be replaced with non-numeric requirements. *See Communities for a Better Environment v.*  
17 *SWRCB*, 109 Cal.App.4th at 1103-1105; *see accord In the Matter of the Petition of Citizens for a*  
18 *Better Environment, Save San Francisco Bay Association, and Santa Clara Audubon Society,*  
19 *SWRCB Order No. WQ 91-03 (May 16, 1991).* This appellate decision is binding on the State  
20 Board as a party to that case and must be followed in the case of this Permit.

21       By including final numeric effluent limitations in lieu of non-numeric or narrative  
22 requirements where numeric limits have been demonstrated to be infeasible, the Regional Board  
23 exceeded federal law requirements. If the Regional Board chooses to exceed federal law  
24 requirements, then it must comply with state law requirements. *City of Burbank, et al v. SWRCB, et*  
25 *al.*, 35 Cal. 4th 613, 627-628 (2005). However, the Regional Board failed to comply with the  
26 requirements of Water Code §13263(a), which requires consideration of several factors, including  
27 those contained in Water Code §13241, when adopting numeric effluent limitations more stringent  
28 than required by federal law into this Permit.

1 Thus, the State Board should remand the Permit to the Regional Board and direct the  
2 Regional Board to comply with the provisions of 40 C.F.R. §122.44(k)(3), by removing the numeric  
3 concentration-based effluent limits for dioxin-TEQ where compliance with such limits has been  
4 demonstrated to be infeasible, and replace these numeric limits with narrative requirements (source  
5 control, best management practices, etc.) in lieu of the numeric limits.<sup>6</sup>

6 2) Dioxin-TEQ Limits

7 The Permit contains the following final effluent limitations for dioxin-TEQ:

8 <u>AMEL (µg/L)</u>	<u>MDEL (µg/L)</u>	<u>Effective Date</u>
9 1.4 x 10 <sup>-8</sup>	2.8 x 10 <sup>-8</sup>	10/01/2019

10 The CTR did not promulgate numeric water quality criteria for dioxin-TEQ, only for  
11 2,3,7,8-tetrachlorodibenzo-p-dioxin (“2,3,7,8-TCDD”). In addition, no aquatic life criteria were  
12 promulgated in the CTR or the Basin Plan for dioxin-TEQ. Only a human-health criteria for  
13 municipal (“Water & Organisms”), and non-municipal drinking water supply waters (e.g.,  
14 “Organisms Only”) were set at 0.000000013 and 0.000000014 µg/L, respectively, based on a  
15 carcinogenicity risk of 1x10<sup>-6</sup>. See 40 C.F.R. §131.38(b)(1)(#16). These figures are based on an  
16 assumed exposure pathway of consumption of 6.5 grams per day of organisms from the Bay that  
17 are contaminated at a level equal to the criteria concentration, but multiplied by a  
18 “bioconcentration factor.” 65 Fed. Reg. 31,693 (May 18, 2000). This amount can be consumed  
19 over a lifetime (70 years) without expecting an adverse effect. *Id.* However, current detection  
20 technologies cannot measure to these levels.

21 Neither the Permit nor the accompanying Fact Sheet demonstrated reasonable potential for  
22 2,3,7,8-TCDD. See Permit at pg. F-30. However, the same table containing the reasonable  
23 potential analysis (“RPA”) shows reasonable potential (“RP”) for dioxin-TEQ, even though no  
24 formally adopted water quality criteria or objective exists for dioxin-TEQ upon which a RPA  
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28 <sup>6</sup> Such an action would negate the need for compliance schedules as well since Sunnyvale would presumably be able to immediately comply with narrative requirements for the constituents at issue.

1 could be performed.<sup>7</sup> The Regional Board's action in finding reasonable potential in the absence  
2 of applicable numeric water quality criteria was unreasonable, in violation of Water Code §13000,  
3 and 40 C.F.R. §122.44(d).

4 The number used in the RPA for dioxin-TEQ was exactly the same as the promulgated  
5 criterion for 2,3,7,8-TCDD. The Permit provides:

6 To determine if the discharge of dioxin or dioxin-like compounds from the discharge has  
7 reasonable potential to cause or contribute to a violation of the Basin Plan's narrative  
8 bioaccumulation WQO, Regional Water Board staff used TEFs [Toxic Equivalent  
9 Factors] to express the measured concentrations of 16 dioxin congeners in effluent and  
10 background samples as 2,3,7,8-TCDD. These "equivalent" concentrations were then  
11 compared to the CTR numeric criterion for 2,3,7,8-TCDD ( $1.4 \times 10^{-8}$  µg/L). Although the  
12 1998 WHO scheme includes TEFs for dioxin-like PCBs, they are not included in this  
13 Order's version of the TEF procedure. The CTR has established a specific WQS for  
14 dioxin-like PCBs, and they are included in the analysis of total PCBs.

15 *See* Permit at pg. F-30. Given that 11 years have passed since the TEFs were first adopted by the  
16 World Health Organization, it is unreasonable for the Regional Board to continue to use a broad  
17 narrative objective and not adopt numeric objectives and an implementation plan through a formal  
18 rulemaking process as required by Water Code §13241 and §13242, and the triennial review  
19 process required by CWA section 303, 33 U.S.C. §1313(c) and (e). The use of a narrative  
20 objective to indefinitely skirt state law requirements also ignores the congressional mandate that  
21 water quality standards criteria "shall be specific numeric criteria for such toxic pollutants." 33  
22 U.S.C. §1313(c)(2)(B) (emphasis added).

23 Moreover, the Permit mixes criteria in order to create a finding of RP. The Permit states  
24 that "because the average ambient background concentration ( $1.1 \times 10^{-7}$  µg/L), as measured at  
25 Dumbarton Bridge (RMP Station BA30), exceeds the applicable WQC ( $1.4 \times 10^{-8}$  µg/L),  
26 demonstrating Reasonable Potential by Trigger 2," this somehow demonstrates RP. *See* Permit at  
27 pg. F-36 para. (4)(ii). However, since the 2005 amendments to the SIP, ambient background  
28 exceedances alone are not enough to trigger RP, the Regional Board must also determine that the  
pollutant was detected. In the explanation of the dioxin-TEQ effluent limitations, there are no

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<sup>7</sup> It should be noted that this is contrary to the RPA for other constituents where the Permit states "No Criteria" in the

1 express findings about detections of dioxin-TEQ in the effluent although there is a statement that  
2 the maximum effluent concentration (MEC) is below the water quality objective (for 2,3,7,8-  
3 TCDD). Therefore, the Regional Board improperly relied on Trigger 2 without appropriate  
4 findings and evidence to do so. In fact, the findings explicitly concede that “there is a very high  
5 degree of uncertainty in the dioxin data given the small dataset and the high degree of variability  
6 and uncertainty inherent with dioxin sampling and analysis when trying to measure  
7 concentrations in the pg/L range.” See Permit at pg. F-36. Thus, this justification should not be  
8 used to establish RP.

9 Moreover, the Regional Board should not be allowed to mix and match 2,3,7,8-TCDD and  
10 dioxin-TEQ in order to find RP; they must use each congener independently, taking into account  
11 the different TEF values for each congener, in order to properly determine RP. Moreover,  
12 Bioaccumulation Equivalency Factors (BEFs) as set forth in the Great Lakes Water Quality  
13 Guidance (40 C.F.R. Part 132), in conjunction with TEFs when calculating dioxin-TEQ limits.  
14 The Regional Board did not do this, and these limits should be overturned.

15 a) The Regional Board Improperly Utilized the Basin  
16 Plan’s Narrative Objective for Bioaccumulation to  
17 Justify the Imposition of a Dioxin-TEQ Limit.

18 In adopting a numeric effluent limitation for dioxin-TEQ, the Regional Board attempted to  
19 justify its actions by claiming that the applicable water quality objectives specified in the Basin Plan  
20 require limits to protect against unsafe levels of dioxin in the fatty tissue of fish and other  
21 organisms. See Permit at pg. F-35. The Basin Plan contains no numeric objectives specifically set  
22 to define acceptable levels of these constituents in fish tissue or sediment, and the CTR only set  
23 numeric criteria for 2,3,7,8-TCDD, not for all the congeners of dioxins. Thus, the Regional Board  
24 improperly relied upon the Basin Plan’s narrative objective for Bioaccumulation to justify limits for  
25 dioxin-TEQ.

26 In addition, the Regional Board improperly lumped together all of the congeners of dioxin  
27 and furans. Had the RPA been done on each individual congener, most if not all would not show  
28 reasonable potential because of the varying TEF for each. See Permit at pg. F-30. However,

table instead of inserting a non-promulgated criteria. See Permit at pg. F-30-32.

1 pooling all of the congeners together creates an unnecessary finding of reasonable potential for all  
2 congeners. The Regional Board's inclusion of an effluent limit for dioxin-TEQ based on all of the  
3 congeners of dioxins and furans improperly ignores that the congeners do not create reasonable  
4 potential. Imposition of limits on congeners without reasonable potential violates the specific  
5 mandates of the Basin Plan and federal regulations.<sup>8</sup>

6 A review of the Bioaccumulation objective demonstrates that this objective does not provide  
7 authorization for the numeric limits imposed in this instance. The Bioaccumulation objective found  
8 on page 3-2 of the Basin Plan provides:

9 Many pollutants can accumulate on particles, in sediment, or  
10 bioaccumulate in fish or other aquatic organisms. Controllable water  
11 quality factors shall not cause a detrimental increase in concentrations  
12 of toxic substances found in bottom sediments or aquatic life. Effects  
13 on aquatic organisms, wildlife, and human health will be considered.

14 (emphasis added). Courts have acknowledged that the presence of dioxin may be beyond the  
15 Discharger's control. *See, e.g., Communities for a Better Environment*, 109 Cal.App.4th at 1096

16 (“Dioxins are not produced intentionally. They are formed as undesired  
17 byproducts of combustion and the manufacture and use of certain chlorinated  
18 chemical compounds. They exist in the environment worldwide, particularly in  
19 air, water, soils, and sediments. They enter the atmosphere through aerial  
20 emissions and widely disperse through a number of processes, including erosion,  
21 runoff, and volatilization from land or water. For example, automobile exhaust is  
22 a common source of dioxins.”).

23 Therefore, control of all of these sources is not within the jurisdiction of Sunnyvale. Because the  
24 minimal contribution of dioxin-TEQ by Sunnyvale's POTW is not a “controllable water quality  
25 factor” that is causing a “detrimental increase in concentrations of toxic substances found in bottom  
26 sediments or aquatic life,” imposing a limit for dioxin-TEQ is neither necessary nor based upon the  
27 findings and evidence.

28 Additionally, a numeric effluent limitation can only be imposed through a narrative water  
quality objective if the narrative objective contains an appropriate mechanism to “translate” the

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<sup>8</sup> The insertion of limits without reasonable potential is contrary to permit findings that state “WQBELs are not included in this Order for constituents that do not demonstrate Reasonable Potential.” *See* Permit at pg. F-32, para. D.3.g.

1 narrative requirement (*i.e.*, to translate a narrative objective into a concentration or mass effluent  
2 limitation).<sup>9</sup> In order for a numeric limit derived from a narrative objective to be appropriate, the  
3 derivation of the numeric limit must be transparent. A clear explanation of the translation from the  
4 narrative water quality objective must be set forth in the NPDES permit.<sup>10</sup> *See* 40 C.F.R.

5 §124.8(b)(4); *Topanga Ass'n for a Scenic Community v. County of Los Angeles*, 11 Cal. 3d 506, 515  
6 (1974); *California Edison v. SWRCB*, 116 Cal. App. 3d 751, 761 (1981); *see also In re Petition of*  
7 *the Pinole-Hercules Water Pollution Control Plant and County of San Francisco*, State Board  
8 Order No. WQ-95-4 at 10 (Sept. 21, 1995). The failure by the Regional Board to clearly enunciate  
9 the translation from a narrative objective to a numeric limit in the Findings or Fact Sheet of the  
10 Permit was an abuse of discretion.

11       Moreover, the Permit fails to show that dioxin-TEQ levels in the discharge have caused a  
12 detrimental impact in concentrations of toxic substances found in bottom sediments or aquatic life.  
13 Without such a showing, no limits may be imposed under the narrative bioaccumulation objective.  
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16 <sup>9</sup> Federal regulations mandate that “[w]here a State adopts narrative criteria for toxic pollutants to protect designated  
17 uses, the State must provide information identifying the method by which the State intends to regulate point source  
18 dischargers of toxic pollutants on water quality limited segments based on such narrative criteria. Such information  
19 may be included as part of the standards . . . .” 40 C.F.R. §131.11(a)(2). Since the Basin Plan’s narrative objective for  
20 Bioaccumulation does not contain an appropriate translation mechanism, the only conclusion can be that subjective,  
arbitrary, or wholly inapplicable WQBELs for dioxin-TEQ have been imposed in the Permit. The rationale in the  
*EBMUD* Order, SWRCB Order No. WQ 2002-0012 at pgs. 6-7 does not apply in this case, since the dioxin-TEQ limits  
are final WQBELs and were not adopted in conformance with federal regulations as there are no 304(a) guidance  
criteria for dioxin-TEQ. *See* <http://www.epa.gov/waterscience/criteria/wqcriteria.html>.

21 <sup>10</sup> In EPA’s official guidance documents, EPA explains at length the process the State must go through to implement an  
22 adequate translator mechanism. *See* EPA Water Quality Standards Handbook at 3-13 to 3-26 (1994). Among other  
things, EPA provides that a State’s translator procedure for narrative criteria should specifically describe:

- 23       ▪ specific, scientifically defensible methods by which the state will implement its narrative toxicity standard for  
all priority pollutants;
- 24       ▪ how these methods will be integrated into the State’s priority pollutant control program;
- 25       ▪ methods the State will use to identify those pollutants to be regulated in a specific discharge;
- 26       ▪ an incremental cancer risk for carcinogens;
- 27       ▪ methods for identifying compliance thresholds in permits where calculated limits are below detection;
- 28       ▪ methods for selecting appropriate hardness, pH, and temperature variables for criteria expressed as functions;
- methods or policies controlling the size and in-zone quality of mixing zones;
- design flows to be used in translating chemical-specific numeric criteria for aquatic life and human health into  
permit limits; and
- other methods and information needed to apply standards on a case-by-case basis.

*Id.* at 3-25; *see also* EPA, TSD for Water Quality-Based Toxics Control at 30-31(1991).

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b) Meeting the Dioxin Concentration Limit is Not Feasible

As stated above, dioxins enter the environment from a variety of sources, primarily combustion sources. *See Communities for a Better Environment*, 109 Cal. App. 4<sup>th</sup> at 1096 (“automobile exhaust is a common source of dioxins.”). Further, the Regional Board has concurred with Sunnyvale that compliance with the dioxin-TEQ limits is infeasible. *See Permit* at pg. F-36 and F-42. For these reasons, numeric effluent limitations were not required and represent an abuse of discretion.<sup>11</sup>

**B. The Regional Board Improperly Included Daily Maximum Effluent Limitations.**

Where effluent limitations are authorized, federal regulations provide that for discharges from POTWs, all permit effluent limits shall, unless impracticable, be stated as average weekly and average monthly discharge limitations.<sup>12</sup> 40 C.F.R. § 122.45(d)(2). The Permit contains several unsupported daily maximum limits, including, among others, the limit for dioxin-TEQ. *See Permit* at pg. 10-11.

In order to justify the inclusion of these daily limits, the Regional Board first cited to the language of 40 C.F.R. §122.45(d)(1), which states that: “For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards shall unless impracticable be stated as maximum daily and average monthly discharge limitations for all discharges other than publicly owned treatment works.” *See Permit* at pg. F-22, para. D.1.b.(1). This citation ignores that these discharges are from a publicly owned treatment works, and the rule for such a facility is that “average weekly and average monthly discharge

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<sup>11</sup> The Regional Board should have done what it did in the Vallejo permit, Order No. R2-2006-0056, which was to state: “Due to the limited monitoring data, no dioxin limits (final or interim) are established. The final limits for dioxin TEQ will be based on the WLA assigned to the Discharger in the TMDL. This Order requires additional dioxin monitoring to complement the Clean Estuary Partnership’s special dioxin project, consisting of impairment, assessment, and a conceptual model for dioxin loading into the Bay. The permit will be reopened, as appropriate, to include interim dioxin limitations when additional data become available.” Order No. R2-2006-0056 at pg. F-24.

<sup>12</sup> Federal regulations also provide that discharges from all dischargers other than POTWs, effluent limitations shall be stated as maximum daily and average monthly discharge limitations. 40 C.F.R. §122.45(d)(1).

1 limitations [apply] for POTWs.” 40 C.F.R. §122.45(d)(2). Therefore, this first justification for  
2 daily limits fails.

3 The second justification also fails. See Permit at pg. F-22, para. D.1.B.(2). The State  
4 Implementation Policy (SIP) did not change the federal requirements. In enacting the SIP, the State  
5 Board may have attempted to modify the federal regulatory prohibition on the use of daily  
6 maximum limits for POTWs by stating: “For this method only [*referring to limits for aquatic life*  
7 *protection*] maximum daily effluent limitations shall be used for publicly-owned treatment works  
8 (POTWs) in place of average weekly limitations.” SIP at 10, §1.4. However, prior to authorizing  
9 the use of daily maximum limitations in POTW permits for compliance with aquatic life criteria in  
10 the SIP, the State Board did not make the required demonstration that the imposition of average  
11 weekly and average monthly effluent limitations for the protection of aquatic life was  
12 “impracticable” per the requirements of 40 C.F.R. §122.45(d). Therefore, the State Board’s  
13 authorization of daily maximum limitations for compliance with aquatic life criteria does not meet  
14 federal requirements or California Water Code Chapter 5.5 requirements for consistency with  
15 federal requirements. As such, the Regional Board should remove all daily maximum effluent  
16 limitations based on aquatic life criteria.

17 Further, the State Board did not include in the SIP the same language purportedly allowing  
18 for the inclusion of daily maximum limitations in POTW permits for effluent limitations based upon  
19 technological requirements (for conventional pollutants) or upon human health criteria, such as  
20 dioxin-TEQ. Therefore, even if the SIP provisions pertaining to maximum daily limits for aquatic  
21 life criteria were valid, 40 C.F.R. §122.45(d) requires the Regional Board to remove all daily  
22 maximum interim and final effluent limitations based on human health criteria or technological  
23 requirements. The criteria for 2,3,7,8-TCDD is human health-based. See 40 CFR §131.38  
24 (b)(1)(16). Thus, daily maximum limits are not necessary.

25 The Permit never specifies why monthly and weekly average limits are impracticable. The  
26 Permit merely states that “MDELs are used in this Order to protect against acute water quality  
27 effects. The MDELs are necessary for preventing fish kills or mortality to aquatic organisms.”  
28

1 Permit at pg. F-22, para. D.1.c. These statements do not constitute an impracticability analysis, and  
2 are inadequate to justify daily limits as there is no evidence to support such generic findings.

3 Furthermore, at most, these justifications would address only limits based on acute aquatic  
4 life criteria. However, the Regional Board did not include limits based on acute aquatic life  
5 protection, rather, the limits for dioxin-TEQ are based on long-term chronic human exposure. *See*  
6 *In the Matter of the Own Motion Review of the City of Woodland*, SWRCB Order No. WQ 2004-  
7 0010 (holding that “implementing the limits as instantaneous maximums appears to be incorrect  
8 because the criteria guidance value . . . is intended to protect against chronic effects”).

9 Therefore, the Regional Board’s inclusion of daily maximum effluent limitations in the  
10 Permit, without a specific, pollutant-by-pollutant impracticability analysis, violated 40 C.F.R.  
11 §122.45(d)(2) and Water Code Chapter 5.5. By violating federal and state law, the Regional Board  
12 proceeded without, or in excess of, its jurisdiction and has committed a prejudicial abuse of  
13 discretion by not proceeding in a manner required by law. For these reasons, the State Board should  
14 direct the Regional Board to remove the daily maximum effluent limitations not properly analyzed  
15 for impracticability. *See accord* SWRCB Order No. 2002-0012 at pg. 20-21 (July 18, 2002) (“the  
16 Regional Board must include a finding in the permit on remand explaining the impracticability of  
17 weekly average limits.”); SWRCB Order No. 2002-0015 at pg. 56; *City of Woodland v. Regional*  
18 *Water Quality Control Board for the Central Valley Region, and SWRCB*, Case No. RG04-188200,  
19 Statement of Decision at pg. 20.

20 **C. The Regional Board Improperly Imposed A Compliance Schedule**  
21 **Action Plan for Dioxin-TEQ in the Permit which is Overly Stringent.**

22 BACWA is concerned that having stringent schedules contained in the Permit will  
23 eventually require the construction of capital facilities when BACWA has repeatedly been told that  
24 building additional treatment is not the expected direction of the Bay Area water quality program.  
25 BACWA was under the impression that the direction was to pursue regulatory alternatives, such as  
26 TMDLs, site specific objectives, and pollution prevention (as described in the implementation plan  
27 for the mercury TMDL). The Permit veers way off this intended direction.

28

1 Also, this Permit contains a compliance schedule for dioxin-TEQ, which cannot be source  
2 controlled, or for which wastewater treatment plant effluents have been identified as non-  
3 significant sources. See Permit at pg. 31-32. Additionally, dioxin-TEQ is already being addressed  
4 through an alternative regulatory strategy that will appropriately resolve beneficial use concerns  
5 for the San Francisco Bay. The compliance schedule in the Permit is overly burdensome for  
6 dioxin-TEQ, as specified below.

7 The dioxin congeners found in fish tissue samples, which formed the initial basis for the  
8 dioxin 303(d) listing, are different than the congeners detected in publicly-owner treatment works.  
9 Given that the sources of dioxin are uncontrollable by municipal wastewater treatment plants and  
10 are primarily introduced through air deposition, the compliance requirements for dioxin reduction  
11 in the effluent will have little, if any, environmental benefit to reduce the concentrations of dioxin  
12 congeners found in fish tissue. Thus, a *de minimis* exception should be granted in this case at least  
13 until the TMDL is finalized. See *Ober v. USEPA*, 243 F.3d 1190, 1195 (9th Cir. 2001) (“*de*  
14 *minimis* exception is allowed for regulation yielding trivial gain.”).

15 For these reasons, the action plans in the Permit should be revised to remove all activities  
16 related to installation of capital improvements. In addition, any pollution prevention activities  
17 should be identical to resolutions or orders already adopted by the Regional Board for specific  
18 constituents. No new or different activities should be required for dioxin-TEQ.

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

20 The Permit includes requirements, challenged herein, which are unreasonable, contrary to  
21 legal requirements, and not supported by the findings and evidence in the administrative record.  
22 The limits for dioxin-TEQ are unreasonable because Sunnyvale has extremely limited control over  
23 influent sources. Further, these requirements could ultimately impose considerable costs on the  
24 agency’s ratepayers for potential mandatory and discretionary penalties imposed for non-  
25 compliance with the challenged requirements, or for construction of additional treatment units to  
26 meet limits imposed without a demonstration that such requirements would result in material  
27 improvements in the water quality of the Bay. In fact, such expenditures could have a negative  
28

1 impact on water quality, by diverting limited public funds away from other projects that might have  
2 a higher potential for improvements in water quality.

3 BACWA is aggrieved by unreasonable permit prohibitions that may put Sunnyvale in non-  
4 compliance with the Permit. BACWA's membership will be aggrieved by any permit provisions  
5 that cannot now or in the future be met as federal and state law provide harsh sanctions for non-  
6 compliance with effluent limitations in a wastewater discharge permit. For example, California  
7 Water Code §13385 prescribes mandatory minimum penalties of \$3,000 per day per violation, with  
8 narrow exceptions. With this statute, the State has very little latitude to excuse noncompliance with  
9 the Permit.

10 Other statutory provisions, while not setting mandatory minimum penalties, create even  
11 greater exposure for BACWA's members. The CWA authorizes civil penalties of up to \$37,500 per  
12 day per violation, 33 U.S.C. § 1319(d), and also authorizes criminal penalties, including the  
13 incarceration of public officials, for knowing or negligent permit violations. 33 U.S.C §1319(c); *see*  
14 *U.S. v. Weitzenhoff*, 35 F.3d 1275 (9<sup>th</sup> Cir. 1994) (managers of treatment plant convicted of permit  
15 violations). In addition to enforcement by administrative agencies, private parties can seek civil  
16 penalties pursuant to the "citizen suit" provisions of the CWA. *See* 33 U.S.C. §1365.

17 Likewise, California's Porter-Cologne Water Quality Act contains stiff penalties for  
18 violation of effluent limitations in a wastewater discharge permit. *See* Cal. Water Code §§ 13385  
19 and 13387. This act authorizes a penalty of up to \$25,000 per day per violation, with additional  
20 liability not to exceed \$25 per gallon if the discharge is to navigable waters of the United States and  
21 either is "not susceptible to cleanup or is not cleaned up." Cal. Water Code §13385(b)(1)-(2), (d).  
22 The act also establishes criminal liability for intentional or negligent violation of effluent limitations  
23 contained within a permit. Cal. Water Code §13387(a)-(d).

24 Furthermore, the application of illegal or unreasonable effluent limitations in violation of  
25 federal and state law causes substantial harm to BACWA and its members that have a vested  
26 interest in complying with the law. This appeal furthers one of BACWA's express purposes, which  
27 is "to represent the interests of the Agency or one or more Member Agencies, including, without  
28 limiting the generality of the foregoing, by participating in the appeal of or court challenge of the

1 issuance or denial of issuance of NPDES permits or the adoption or amendment of water quality  
2 orders, regulations or decisions.”  
3  
4

5 **6. THE SPECIFIC ACTION BY THE STATE OR REGIONAL BOARD WHICH**  
6 **PETITIONER REQUESTS:**

7 Petitioner seeks an Order by the State Board that will remand Order No. R2-2009-0061 to  
8 the Regional Board for revisions and will direct the Regional Board to:

- 9 A. Remove the numeric effluent limits for dioxin-TEQ;  
10 B. Remove daily maximum effluent limitations where the Regional Board failed to  
11 conduct an impracticability analysis; and  
12 C. Revise the compliance schedule action plan for dioxin-TEQ to (1) remove all  
13 activities related to installation of capital improvements and (2) ensure that any  
14 pollution prevention activities are identical to resolutions or orders already adopted  
15 by the Regional Board.<sup>13</sup>

16 **7. A STATEMENT OF POINTS AND AUTHORITIES IN SUPPORT OF LEGAL**  
17 **ISSUES RAISED IN THE PETITION:**

18 BACWA’s preliminary statement of points and authorities is set forth in Section 4 above.  
19 Nevertheless, BACWA reserves the right to supplement this statement upon receipt and review of  
20 the administrative record.

21 In Section 4, BACWA asserts that provisions of the Permit are inconsistent with the law and  
22 otherwise inappropriate for various reasons, including: failure to comply with the Porter-Cologne  
23 Water Quality Control Act (Cal. Water Code, §§ 13000 *et seq.*); failure to comply with the CEQA  
24 (Cal. Public Resources Code, §§ 21000 *et seq.*, and 23 C.C.R. § 3733); failure to comply with the  
25 APA (Cal. Gov’t Code, §§ 11340 *et seq.*); inconsistency with the Water Quality Control Plan, San  
26

27  
28 <sup>13</sup> An additional clean up change needs to be made to the last cell in the left hand column of the table setting forth the  
dioxin-TEQ compliance tasks. The following sentence is included twice: “Alternatively, the Discharger may comply  
with the limits through implementation of a mass offset strategy for dioxin-TEQ in accordance with policies in effect at  
that time.”

1 Francisco Bay Region (Basin Plan); inconsistency with the Clean Water Act (33 U.S.C. §§ 1251 *et*  
2 *seq.*) and its implementing regulations (40 C.F.R. Parts 122, 123, 130, and 131); inconsistency with  
3 EPA guidance (EPA's Water Quality Standards Handbook (1994, 3<sup>d</sup> edition)); absence of findings  
4 supporting the provisions of the Order; Regional Board findings that are not supported by the  
5 evidence; and other grounds that may be or have been asserted by Petitioner.

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

9 A true and correct copy of this Petition was mailed by First Class mail on September 4,  
10 2009, to the Discharger, and to the Regional Board at the following addresses:<sup>14</sup>

11 Lorrie Gervin  
12 City of Sunnyvale  
13 Environmental Division Manager  
14 P.O. Box 3707  
Sunnyvale CA 94088

15 Bruce Wolfe, Executive Officer  
16 California Regional Water Quality Control Board, San Francisco Region  
17 1515 Clay Street, Suite 1400  
Oakland, California 94612

18 **9. A STATEMENT THAT THE SUBSTANTIVE ISSUES AND OBJECTIONS RAISED**  
19 **IN THE PETITION WERE RAISED BEFORE THE REGIONAL BOARD, OR AN**  
20 **EXPLANATION WHY NOT:**

21 The substantive issues and objections were raised before the Regional Board in this  
22 permitting action through written comments.

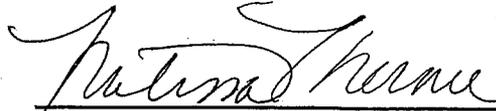
23 **10. PETITIONER'S REQUEST FOR ABEYANCE:**

24 Notwithstanding the vital importance of the issues contained herein, BACWA requests that  
25 the State Board place BACWA's Petition for Review in abeyance pursuant to 23 C.C.R. §2050.5(d)  
26 to allow time for BACWA to attempt to resolve its concerns with the Regional Board informally.

27  
28 <sup>14</sup> Copies of this Petition were also provided to the City of Sunnyvale's technical consultant (EOA, Inc. Attn. Tom Hall, 1410 Jackson Street, Oakland, California 94612) and outside legal counsel (Morrison & Foerster LLP, Attn. Robert Falk, 425 Market Street, 32<sup>nd</sup> Floor, San Francisco, CA 94105) respectively. On behalf of the City, BACWA hereby requests that they be copied on all correspondence to the Discharger related to this Petition.

1 DATED: September 4, 2009

Respectfully submitted,

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Melissa A. Thorne  
DOWNEY BRAND LLP  
5 BACWA Special Counsel  
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Linda S. Adams  
Secretary for  
Environmental Protection

## California Regional Water Quality Control Board

San Francisco Bay Region  
1515 Clay Street, Suite 1400, Oakland CA 94612  
(510) 622-2300 • Fax (510) 622-2460  
<http://www.waterboards.ca.gov/sanfranciscobay>



Arnold Schwarzenegger  
Governor

### ORDER R2-2009-0061 NPDES PERMIT NO. CA0037621

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

**Table 1. Discharger Information**

<b>Discharger</b>	City of Sunnyvale
<b>Name of Facility</b>	Sunnyvale Water Pollution Control Plant and its sewage collection system
<b>Facility Address</b>	1444 Borregas Avenue
	Sunnyvale, CA 94088
	Santa Clara County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

The discharge by the facility, consisting of the Sunnyvale Water Pollution Control Plant and its sewage collection system, 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	Advanced secondary-treated Municipal Wastewater	37° 25' 13" N	122° 01' 00" W	Moffett Channel (Tributary to South San Francisco Bay via Guadalupe Slough)

**Table 3. Administrative Information**

<b>This Order was adopted by the Regional Water Board on:</b>	August 12, 2009
<b>This Order shall become effective on:</b>	October 1, 2009
<b>This Order shall expire on:</b>	September 30, 2014
<b>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:</b>	180 days prior to the Order expiration date

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 August 12, 2009.

Digitally signed  
by Bruce Wolfe  
Date: 2009.08.13  
11:59:44 -07'00'

\_\_\_\_\_  
Bruce H. Wolfe, Executive Officer

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## 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 Sunnyvale
<b>Name of Facility</b>	Sunnyvale Water Pollution Control Plant and its sewage collection system
<b>Facility Address</b>	1444 Borregas Avenue
	Sunnyvale, CA 94088
	Santa Clara County
<b>Facility Contact, Title, and Phone</b>	Lorrie Gervin, Environmental Division Manager, (408) 730-7268
<b>Mailing Address</b>	P.O. Box 3703, Sunnyvale, CA 94088
<b>Type of Facility</b>	Publicly Owned Treatment Works (POTW)
<b>Facility Design Flow</b>	29.5 million gallons per day (MGD) (average dry weather flow design capacity) 40 MGD (peak wet weather flow design capacity)
<b>Service Areas</b>	City of Sunnyvale, Rancho Rinconada, and Moffett Field
<b>Service Area Population</b>	136,000

## II. FINDINGS

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

- A. Background.** The City of Sunnyvale (hereinafter the Discharger) has been discharging under Order No. R2-2003-0079 (previous Order) and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037621. The Discharger submitted a Report of Waste Discharge (ROWD) on April 2, 2008, and applied for reissuance of its NPDES permit to discharge advanced-secondary level treated wastewater from the Sunnyvale Water Pollution Control Plant (Plant) to waters of the State and the United States.

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 and Discharge Description

- 1. Facility Description.** The Discharger owns and operates the Plant and its associated collection system (collectively the facility). The Plant provides advanced-secondary treatment of wastewater from domestic, commercial and industrial sources from its service areas as indicated in Table 4 above. The current total service area population is approximately 136,000.

Wastewater treatment processes at the Plant include grinding and grit removal, primary sedimentation, secondary treatment through the use of oxidation ponds, fixed-film reactor nitrification, dissolved air flotation, dual media filtration, chlorine disinfection, and dechlorination.

The Plant's collection system is 100% separate sanitary sewer and is owned by the Discharger. It contains approximately 327 miles of pipes ranging from 6 inches to 48 inches in diameter, and one lift station.

2. **Discharge Description.** Treated wastewater from the Plant flows into Moffett Channel (37° 25' 13" Latitude and -122° 01' 00" Longitude), tributary to Guadalupe Slough and South San Francisco Bay. The Plant has an average dry weather flow design capacity of 29.5 million gallons per day (MGD) and a 40 MGD peak wet weather flow capacity. The average dry weather flow discharged to Moffett Channel during the months of June, July, August, and September in 2006-2008 was 9.4 MGD. The average flow discharged to Moffett Channel was 11.8 MGD during 2006 - 2008, the average wet weather flow (October-May) discharged to Moffett Channel was 13.1 MGD during 2006 - 2008, and the maximum daily effluent flow rate was 35 MGD during 2006 -2008.
3. **Biosolids Management.** Biosolids from primary treatment and a portion of the solids from secondary treatment are pumped to the anaerobic digesters. Secondary treatment solids consist of algae "float" removed from the oxidation pond effluent in the dissolved air floatation tanks (DAFTs). Digested sludge is conditioned with polymer and dewatered on gravity drainage tiles to approximately 15-20 percent (%) solids and then solar dried to approximately 50-70% solids prior to land application or disposal at the City of Sunnyvale's Biosolids Monofill.
4. **Reclamation Activities.** The Discharger provides recycled water for distribution throughout the northern portion of Sunnyvale, mainly for irrigation purposes; however, recycled water is also available for construction use at remote locations through a truck fill facility located at the Plant. The production and distribution of recycled water are regulated under Regional Water Board Order No. 94-069.
5. **Storm Water Discharge.** The Discharger is not required to be covered under the State Water Board's statewide NPDES permit for storm water discharges associated with industrial activities (NPDES General Permit CAS000001) because all of the storm water captured within the Plant storm drain system is directed to the headworks of the Plant and treated to the standards contained in this Order.

Attachment B provides a map of the area around the Plant. Attachment C provides a flow schematic of the Plant.

- C. **Legal Authorities.** This Order is issued pursuant to the Clean Water Act (CWA) section 402 and implementing regulations adopted by the USEPA and chapters 5.5, division 7 of the California Water Code (CWC or 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 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 and constitutes part of the findings for this Order. Attachments A through E and G through I 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 CEQA.

**F. Technology-Based Effluent Limitations.** CWA Section 301(b) and NPDES regulations at Title 40 of the Code of Federal Regulations (40 CFR) section 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 and/or Best Professional Judgment (BPJ) pursuant to 40 CFR 125.3. A detailed discussion of development of the technology-based effluent limitations is included in the Fact Sheet (Attachment F).

**G. Water Quality-Based Effluent Limitations (WQBELs).** 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 objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion (WQC), 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 water quality objectives (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 (State Water Board), USEPA, and the Office of Administrative Law (OAL), as required. Requirements of this Order implement the Basin Plan.

The Basin Plan does not specifically identify present and potential beneficial uses for Moffett Channel, or Guadalupe Slough, but does identify beneficial uses for South San Francisco Bay, to which Moffett Channel and Guadalupe Slough are tributary. The Basin Plan states that the beneficial uses of any specifically identified water body generally apply to all its tributaries (Basin Plan tributary rule). State Water Board Resolution No. 88-63 establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). Regional Monitoring Program total dissolved solids (TDS) data at Guadalupe Slough station (C-1-3, about 7,000 feet downstream of the discharge outfall) ranged from 220 mg/L to 26,800 mg/L (with an average above 11,000 mg/L) thereby meeting an exception to Resolution No. 88-63. The MUN designation is therefore not applicable to Moffett Channel. Table 5 identifies the existing and potential beneficial uses that are applicable to South San Francisco Bay. These beneficial uses also apply to Moffett Channel in accordance with the Basin Plan tributary rule.

Although South San Francisco Bay is listed to support shellfish harvesting, according to a City of San Jose report, *Alternative Effluent Bacteriological Standards Pilot Study*, 2003, representatives from the California Department of Fish and Game have stated that no shellfish harvesting occurs in San Francisco Bay south of Foster City. In addition, the Shellfish Harvesting (SHELL) beneficial use likely does not exist in Moffett Channel or Guadalupe Slough. Both water bodies are characterized with soft mudflats and subtidal marsh, which are not suitable shellfish habitats. The Discharger's 2004 beneficial use survey of Moffett Channel and Guadalupe Slough found no attempts by the public at shellfish harvesting over a period of 18 months (*City of Sunnyvale Water Pollution Control Plant Receiving Water User Survey Confirmation Study, December 23, 2004*).

**Table 5. Beneficial Uses of South San Francisco Bay**

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

- I. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA 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, USEPA 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 USEPA 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 USEPA 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 may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective

date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. The Basin Plan allows compliance schedules and interim effluent limitations or discharge specifications to allow time to implement a new or revised WQO.

The State Water Board adopted Resolution No. 2008-0025 on April 15, 2008, titled "Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits", which includes compliance schedule policies for pollutants that are not addressed by the SIP. This policy has been approved by USEPA and OAL, and became effective on August 27, 2008, superseding the Basin Plan's compliance schedule policy.

This Order includes a compliance schedule for dioxin-TEQ as allowed by the Basin Plan, and consistent with the State Water Board's new policy. A detailed discussion of the basis for the compliance schedule and interim effluent limitation and/or discharge specifications is included in the Fact Sheet (Attachment F).

- L. Alaska Rule.** On March 30, 2000, USEPA 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 USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.
- M. Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on oil and grease, pH, total suspended solids (TSS), carbonaceous biochemical oxygen demand (CBOD), and residual chlorine. Derivation of these technology-based limitations is discussed in the Fact Sheet (Attachment F). This Order's technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum federal technology-based requirements that are necessary to meet water quality standards.

WQBELs have been 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 WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The procedures for calculating the individual WQBELs for priority pollutants are based on the SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and WQOs contained in the Basin Plan were approved under State law and submitted to USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for the 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 requirements of the CWA.

- N. Antidegradation Policy.** NPDES regulations at 40 CFR 131.12 require that 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 No. 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law and 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 No. 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 the previous permit, with some exceptions where limitations may be relaxed. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with anti-backsliding requirements.
- P. Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Discharger is responsible for meeting all requirements of applicable State and federal law pertaining to threatened and endangered species.
- Q. Monitoring and Reporting Program (MRP, Attachment E).** NPDES regulations at 40 CFR 122.48 require 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 MRP establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.
- R. 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).
- S. Provisions and Requirements Implementing State Law.** No provisions or requirements in this Order are included to implement State law only. All provisions and requirements are required or authorized under the federal CWA; consequently, violations of these provisions and requirements are subject to the enforcement remedies that are available for NPDES violations.
- T. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies 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 this notification are provided in the Fact Sheet (Attachment F).

**U. 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 (Attachment F).

IT IS HEREBY ORDERED that this Order supersedes Order No. R2-2003-0079, 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.

**III. DISCHARGE PROHIBITIONS**

- A. Discharge of treated wastewater at a location or in a manner different from that described in this Order is prohibited.
- B. 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 Subsections I.G.2 and I.G.4 of Attachment D of this Order.
- C. The average dry weather effluent flow as measured at monitoring station EFF-002, described in the attached MRP (Attachment E), shall not exceed 29.5 MGD. Actual average dry weather flow shall be determined for compliance with this prohibition over three consecutive dry weather months each year.
- D. 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 for Conventional and Non-Conventional Pollutants – Discharge Point 001**

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 MRP (Attachment E).

**1. CBOD, TSS, Oil and Grease, pH, Total Chlorine Residual, and Turbidity**

**Table 6. Effluent Limitations for CBOD, TSS, Oil and Grease, pH, Total Chlorine Residual, Turbidity and Total Ammonia – Discharge Point 001**

Parameter	Units <sup>(1)</sup>	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
CBOD <sub>5</sub>	mg/L	10	---	20	---	---
TSS	mg/L	20	---	30	---	---
Oil and Grease	mg/L	5	---	10	---	---
pH <sup>(2)</sup>	standard units	---	---	---	6.5	8.5
Total Chlorine	mg/L	---	---	---	---	0.0

Residual <sup>(3)</sup>						
Turbidity	NTU	---	---	---	---	10
Total Ammonia (October-May)	mg/L as nitrogen	18	---	26	---	---
Total Ammonia (June-September)	mg/L as nitrogen	2.0	---	5.0	---	---

**Footnotes for Table 6:**

(1) Unit abbreviation:

mg/L = milligrams per liter  
NTU = Nephelometric turbidity units

(2) 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.

(3) The Discharger may elect to use a continuous on-line monitoring system(s) for measuring flows, chlorine, and sulfur dioxide 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 the effluent limitation.

2. **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.

3. **Enterococcus Bacteria.** The treated wastewater shall meet the following limit of bacteriological quality:

The 30-day geometric mean value for all samples analyzed for enterococcus bacteria shall not exceed 35 colonies per 100 mL.

**B. Effluent Limitations for Toxic Pollutants – Discharge Point 001**

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 MRP (Attachment E).

**Table 7. Effluent Limitations for Toxic Pollutants**

Pollutant	Units <sup>(4)</sup>	Effluent Limitations <sup>(1,2)</sup>	
		Average Monthly Effluent Limitation (AMEL)	Maximum Daily Effluent Limitation (MDEL)
Copper	µg/L	10	20
Nickel	µg/L	24	37
Cyanide	µg/L	8.0	18
Dioxin-TEQ <sup>(3)</sup>	µg/L	1.4 × 10 <sup>-8</sup>	2.8 × 10 <sup>-8</sup>
Chlorodibromomethane	µg/L	34	93
Endrin	µg/L	0.0019	0.0038
Tributyltin	µg/L	0.0061	0.012

**Footnotes for Table 7:**

- (1) a. Limitations apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month).
- b. All limitations for metals are expressed as total recoverable metal.
- (2) 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 associated with the minimum level (ML). The required MLs for pollutants with effluent limitations are listed below.

**Table 8. MLs for Pollutants with Effluent Limitations**

Pollutant	ML	Units <sup>(4)</sup>
Copper	2	µg/L
Nickel	1	µg/L
Cyanide	5	µg/L
Chlorodibromomethane	0.5	µg/L
Endrin	0.01	µg/L
Total Ammonia	0.2	mg/L
Dioxin-TEQ	As specified below	
2,3,7,8-TetraCDD	5	pg/L
1,2,3,7,8-PentaCDD	25	pg/L
1,2,3,4,7,8-HexaCDD	25	pg/L
1,2,3,6,7,8-HexaCDD	25	pg/L
1,2,3,7,8,9-HexaCDD	25	pg/L
1,2,3,4,6,7,8-HeptaCDD	25	pg/L
OctaCDD	50	pg/L
2,3,7,8-TetraCDF	5	pg/L
1,2,3,7,8-PentaCDF	25	pg/L
2,3,4,7,8-PentaCDF	25	pg/L
1,2,3,4,7,8-HexaCDF	25	pg/L
1,2,3,6,7,8-HexaCDF	25	pg/L
1,2,3,7,8,9-HexaCDF	25	pg/L
2,3,4,6,7,8-HexaCDF	25	pg/L
1,2,3,4,6,7,8-HeptaCDF	25	pg/L
1,2,3,4,7,8,9-HeptaCDF	25	pg/L
OctaCDF	50	pg/L
Tributyltin	0.005	µg/L

- (3) Final effluent limitations for dioxin-TEQ shall become effective starting October 1, 2019.
- (4) Unit Abbreviation  
 mg/L= milligrams per liter  
 µg/L = micrograms per liter  
 pg/L = picograms per liter

### C. Interim Effluent Limitation for Dioxin-TEQ

The Discharger shall comply with the following interim effluent limit for dioxin-TEQ at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the MRP (Attachment E). The interim limit for dioxin-TEQ shall remain in effect until September 30, 2019. Starting October 1, 2019, the final effluent limit in Table 7 for dioxin-TEQ shall become effective.

**Table 9. Interim Effluent Limitation for Dioxin-TEQ**

Pollutant	Units	Average Monthly Effluent Limitation (AMEL)
Dioxin-TEQ	µg/L	$6.3 \times 10^{-5}$

### D. Whole Effluent Toxicity

#### 1. Whole Effluent Acute Toxicity

- a. Representative samples of the effluent at Discharge Point 001, with compliance measured at EFF-001 as described in the MRP (Attachment E), shall meet the following limits for acute toxicity. Bioassays shall be conducted in compliance with Section V.A of the MRP (Attachment E).
  - (1) an eleven (11)-sample median value of not less than 90 percent survival, and
  - (2) an eleven (11)-sample 90th percentile value of not less than 70 percent survival.
- b. These acute toxicity limitations are further defined as follows:
  - (1) **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.
  - (2) **11-sample 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 USEPA 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.

#### 2. Whole Effluent Chronic Toxicity

- a. There shall be no chronic toxicity in the discharge. Chronic toxicity is a detrimental biological effect of growth rate, reproduction, fertilization success, larval development, or any other relevant measure of the health of an organism population or community.

Compliance with this limit shall be determined by analyses of indicator organisms and toxicity tests. Compliance shall be measured at EFF-001 as described in the MRP (Attachment E).

- b. The chronic toxicity of the effluent shall be expressed and reported in toxic units (TU<sub>c</sub>), where

$$TU_c = \frac{100}{NOEC}$$

The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

- c. The Discharger shall comply with the following tiered requirements based on results from representative samples of the effluent at Discharge Point 001, with compliance measured at EFF-001 as described in the MRP (Attachment E), meeting test acceptability criteria and Section V.B of the MRP (Attachment E):
- (1) Conduct routine monitoring.
  - (2) Conduct accelerated monitoring after exceeding a three sample median of 1 chronic toxicity unit (TU<sub>c</sub><sup>1</sup>) or a single-sample maximum of 2 TU<sub>c</sub> or greater.
  - (3) Return to routine monitoring if accelerated monitoring does not exceed the “trigger” in (2), above.
  - (4) If accelerated monitoring confirms consistent toxicity in excess of either “trigger” in (2), above, initiate toxicity identification evaluation/toxicity reduction evaluation (TIE/TRE) procedures in accordance with Provision VI.C.2.d.ii.
  - (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.
- d. The Discharger shall comply with Provision VI.C.2.d, which requires a “Chronic Toxicity Identification and Toxicity Reduction Study” in accordance with a schedule set forth in Provision VI.C.2.d.i.
- e. The Discharger shall monitor chronic toxicity using 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 screening phase requirements, critical life stage

<sup>1</sup> A TU<sub>c</sub> equals 100 divided by the no observable effect level (NOEL). The NOEL is determined from IC, EC, or NOEC values. These terms, their usage, and other chronic toxicity monitoring program requirements are defined in more detail in the MRP (Attachment E). Monitoring and TRE requirements may be modified by the Executive Officer in response to the degree of toxicity detected in the effluent or in ambient waters related to the discharge.

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). In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, currently third edition (EPA-821-R-02-014), and "*Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*," currently second Edition (EPA/600/4-91/003), with exceptions granted by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

#### **E. Land Discharge Specifications**

Not Applicable.

#### **F. Reclamation Specifications**

Regional Water Board Order No. 94-069 established water reclamation requirements for the Discharger.

### **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 discharge shall not cause the following in Moffett Channel, Guadalupe Slough, or South 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  
Furthermore, 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                              The pH shall not be depressed below 6.5 or raised above 8.5. The discharge shall not cause changes greater than 0.5 pH units in normal ambient pH levels.
  - d. Nutrients                      Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
3. The discharge shall not cause a violation of any water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board as required by the CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved, the Regional Water Board may revise and modify this Order in accordance with such more stringent standards.

#### **B. Groundwater Limitations**

Not Applicable.

### **VI. PROVISIONS**

#### **A. Standard Provisions**

1. **Federal Standard Provisions.** The Discharger shall comply with Federal Standard Provisions included in Attachment D of this Order.
2. **Regional Water Board Standard Provisions.** The Discharger shall comply with all applicable items of the Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits (Attachment G).

#### **B. 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 applicable sampling and reporting requirements in the two Standard Provisions listed in VI.A above.

#### **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: