STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Bill Johnson)
MEETING DATE: February 10, 2010

ITEM 5

SUBJECT: Updated Regional Standard Provision, and Monitoring and Reporting Requirements—Amendment of NPDES Permits

CHRONOLOGY: 1993—Regional Standard Provisions last revised
2009—Regional Standard Provisions updated for some permits

DISCUSSION: This amendment would modify nearly all this region's NPDES wastewater permits to replace existing standard provisions with one up-to-date document. It would also provide new direction concerning dioxin and furan reporting. Specifically, it would incorporate bioaccumulation equivalency factors into existing calculations, standardize dioxin and furan minimum levels (quantification levels) to match default values specified in USEPA Method 1613, and clarify how dischargers are to handle estimated dioxin and furan concentrations when reporting data for compliance purposes. This amendment would also impose consistent monitoring requirements for approved treatment system bypasses (e.g., approved blending during wet weather).

We received six comment letters (Appendix B), and as explained in our response to the comments (Appendix C), we revised the tentative order (Appendix A) to address several concerns. We resolved most concerns raised. However, the San Francisco Baykeeper remains concerned that the amendment could increase dioxin and furan discharges, thus further impairing San Francisco Bay. We contend that dioxin and furan discharges will not increase since no discharger has modified its treatment processes specifically to control dioxins and furans, and no discharger will forego any existing treatment because of this amendment. Furthermore, all existing pollution minimization requirements remain in place. We believe the basis for the amendment is technically and legally sound, and our overall approach to dioxins and furans is appropriate, particularly considering that their predominant sources are historic and current atmospheric emissions.

RECOMMEN-DATION: Adopt the Revised Tentative Order

APPENDICES: A. Revised Tentative Order
B. Comment Letters
C. Response to Comments

APPENDIX A

Linda S. Adams
Secretary for
Environmental Protection

California Regional Water Quality Control Board

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

Arnold Schwarzenegger
Governor

REVISED TENTATIVE ORDER R2-2010-XXXX

AMENDMENT OF WASTE DISCHARGE REQUIREMENTS FOR MUNICIPAL AND INDUSTRIAL DISCHARGERS

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

1. The Regional Water Board issued waste discharge requirements that serve as National Pollutant Discharge Elimination System (NPDES) permits for the dischargers listed in Table 1 (hereinafter "Dischargers"). These permits authorize the Dischargers to discharge treated effluent from their respective facilities to waters of the United States under specific conditions.

2. This Order amends the orders listed in Table 1 to replace the regional standard provisions, and monitoring and reporting requirements, contained in an attachment or attachments to those orders (often but not always labeled as Attachment G) with the revised version of Attachment G attached to this Order (hereinafter "new Attachment G").

3. The Regional Water Board developed this Order's requirements based on available information. The Fact Sheet attached to this Order as Attachment F contains background information and rationale for this Order's requirements. It is hereby incorporated into this Order and therefore constitutes part of the findings for this Order.

4. This Order is exempt from the provisions of the California Environmental Quality Act pursuant to California Water Code §13389.

5. The Regional Water Board notified the Dischargers and interested agencies and persons of its intent to consider adoption of this Order, and provided an opportunity to submit written comments.

6. In a public meeting, the Regional Water Board heard and considered all comments pertaining to this Order.

TABLE 1
DISCHARGERS SUBJECT TO THIS ORDER

Discharger	Permit Number	Order Number	Adoption Date
Allied Defense Recycling	CA0030171	R2-2008-0062	7/9/08
American Canyon, City of	CA0038768	R2-2006-0036	6/14/06
Benicia, City of	CA0038091	R2-2008-0014	3/12/08
Bottling Group, LLC	CA0030058	R2-2008-0056	7/9/08
Browning-Ferris Industries (BFI)	CA0029947	R2-2007-0062	8/8/07
Burlingame, City of, and North Bayside System Unit	CA0037788	R2-2008-0008	1/30/08
C&H Sugar Company Inc. and Crockett Community Services District	CA0005240	R2-2007-0032	4/11/07
California Department of Transportation	CA0038831	R2-2006-0049	7/12/06
Calistoga, City of	CA0037966	R2-2006-0066	10/11/06
Cedar Fair Entertainment Company	CA0030180	R2-2009-0052	7/8/09
Central Contra Costa Sanitary District	CA0037648	R2-2007-0008	1/23/07
Central Marin Sanitary Agency	CA0038628	R2-2007-0007	1/23/07
Chevron U.S.A., Inc., Richmond Refinery, Chevron Chemical Company LLC, Richmond Plant, and General Chemical Corporation, Richmond Works	CA0005134	R2-2006-0035	6/14/06
ConocoPhillips	CA0005053	R2-2005-0030	6/15/05
Crockett Community Services District	CA0037885	R2-2008-0005	1/23/07
Delta Diablo Sanitation District	CA0038547	R2-2009-0018	3/11/09
Dow Chemical Company	CA0004910	R2-2008-0030	5/14/08
Dublin San Ramon Services District (DSRSD), Livermore-Amador Valley Water Management Agency (LAVWMA), East Bay Dischargers Authority (EBDA)	CA0037613	R2-2006-0054	8/9/06
East Bay Dischargers Authority (EBDA), including its member agencies: City of Hayward, City of San Leandro, Oro Loma Sanitary District, Castro Valley Sanitary District, Union Sanitary District, and Livermore-Amador Valley Water Management Agency (LAVWMA)	CA0037869	R2-2006-0053	8/9/06
East Bay Municipal Utilities District (Orinda Water Treatment Plant)	CA0038342	R2-2009-0067	10/14/09
East Bay Municipal Utilities District, Special District No. 1 (Water Pollution Control Plant)	CA0037702	R2-2001-0072	6/20/01
East Bay Municipal Utilities District, Special District No. 1 (wet weather facilities)	CA0038440	R2-2009-0004	1/14/09

Discharger	Permit Number	Order Number	Adoption Date
East Bay Regional Park District (EBRPD), Union Sanitary District (USD), and East Bay Dischargers Authority (EBDA) (Hayward Shoreline Marsh)	CA0038636	R2-2006-0031	5/10/06
Fairfield-Suisun Sewer District	CA0038024	R2-2009-0039	4/8/09
GWF Power Systems, LP, Site I	CA0029106	R2-2005-0018	5/18/05
GWF Power Systems, LP, Site V	CA0029122	R2-2005-0019	5/18/05
Kobe Precision, Inc.	CA0030112	R2-2005-0040	9/21/05
Las Gallinas Valley Sanitary District	CA0037851	R2-2009-0070	10/14/09
Livermore, City of, Livermore-Amador Valley Water Management Agency (LAVWMA), and East Bay Dischargers Authority (EBDA)	CA0038008	R2-2006-0055	8/9/06
Livermore-Amador Valley Water Management Agency (LAVWMA), Dublin San Ramon Services District (DSRSD), and City of Livermore	CA0038679	R2-2006-0026	4/12/06
Marin County, Sanitary District No. 5 of (Paradise Cove)	CA0037427	R2-2006-0037	6/14/06
Marin County, Sanitary District No. 5 of (Tiburon)	CA0037753	R2-2008-0057	8/9/06
Mercury Dischargers (various wastewater treatment plants)	CA0038849	R2-2007-0077	11/1/2007
Millbrae, City of, and North Bayside System Unit	CA0037532	R2-2008-0071	8/13/08
Morton International, Inc.	CA0005185	R2-2005-0010	4/20/05
Mt. View Sanitary District	CA0037770	R2-2006-0063	9/13/06
Napa Sanitation District	CA0037575	R2-2005-0008	4/20/05
North San Mateo County Sanitation District	CA0037737	R2-2006-0068	10/11/06
Pacific Gas and Electric Company (PG&E)	CA0030082	R2-2006-0010	2/8/06
Pacifica, City of	CA0038776	R2-2006-0067	10/11/06
Palo Alto, City of	CA0037384	R2-2009-0032	4/8/09
Petaluma, City of	CA0037810	R2-2005-0058	10/19/05
Pinole, City of	CA0037796	R2-2007-0024	3/14/07
Potable Water Supply Dischargers (various surface water treatment facilities for potable supply)	CAG382001	R2-2009-0033	4/8/09
Rhodia, Inc.	CA0006165	R2-2004-0042	6/16/04
Rodeo Sanitary District	CA0037826	R2-2006-0062	9/13/06
Saint Helena, City of	CA0038016	R2-2005-0025	6/15/05
San Francisco Public Utilities Commission (Drinking Water Transmission System)	CA0038857	R2-2008-0102	12/10/08
San Francisco, City and County of (Oceanside Plant)	CA0037681	R2-2009-0062	8/12/09

Discharger	Permit Number	Order Number	Adoption Date
San Francisco, City and County of (Southeast Plant)	CA0037664	R2-2008-0007	1/30/08
San Francisco, City and County of, and North Bayside System Unit (SF International Airport, Industrial Plant)	CA0028070	R2-2007-0060	8/8/07
San Francisco, City and County of, and North Bayside System Unit (SF International Airport, Sanitary Plant)	CA0038318	R2-2007-0058	8/8/07
San Jose and Santa Clara, Cities of, San Jose/Santa Clara Water Pollution Control Plant	CA0037842	R2-2009-0038	4/8/09
San Mateo, City of	CA0037541	R2-2007-0075	11/1/07
Sausalito-Marin City Sanitary District	CA0038067	R2-2007-0054	8/8/07
Sewer Authority Mid-Coastside	CA0038598	R2-2007-0003	1/23/07
Sewerage Agency of Southern Marin	CA0037711	R2-2007-0056	8/8/07
Shell Oil Products US and Equilon Enterprises, LLC	CA0005789	R2-2006-0070	10/11/06
Sonoma Valley County Sanitation District	CA0037800	R2-2008-0090	10/8/08
South Bayside System Authority	CA0038369	R2-2007-0006	1/23/07
South San Francisco and San Bruno, Cities of	CA0038130	R2-2008-0094	11/12/08
Sunnyvale, City of	CA0037621	R2-2009-0061	8/12/09
Tesoro Refining & Marketing Co.	CA0004961	R2-2005-0041	9/21/05
US Naval Support Activity, Treasure Island	CA0110116	R2-2010-0001	1/13/10
USS-Posco Industries	CA0005002	R2-2006-0029	5/10/06
Valero Refining Company	CA0005550	R2-2009-0079	11/18/09
Vallejo Sanitation and Flood Control District	CA0037699	R2-2006-0056	8/9/06
West County Agency (West County Wastewater District, City of Richmond, and Richmond Municipal Sewer District No. 1)	CA0038539	R2-2008-0003	1/30/08

IT IS HEREBY ORDERED, pursuant to the provisions of California Water Code Division 7 and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder, that the Dischargers listed in Table 1 shall comply with their respective orders listed in Table 1, as amended by this Order.

1. **The provisions of the new Attachment G attached to this Order shall replace the attachments listed below for the orders listed in Table 1.**

   For the orders listed in Table 1 adopted through June 2009, the attachments include the following documents:

   - *Self Monitoring Program Part A* (August 1993);
   - *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharger Permits* (August 1993);
   - August 6, 2001, Regional Water Board letter from Loretta K. Barsamian, Executive Officer, to Bay Area Permitted Wastewater Dischargers titled, "Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy"; and
   - Regional Water Board Resolution Number 74-10.

   For the orders listed in Table 1 adopted after June 2009, there is a single attachment:

   - *Attachment G, Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits* (July 2009).

2. **In the orders listed in Table 1, references to the new Attachment G shall replace all references to the attachments listed in Provision 1, above.**

   References to existing attachments containing regional standard provisions appear in various places within each permit subject to this Order. The specific wording varies with each reference. The Fact Sheet (page F-7) identifies where these references typically appear and provides examples. All these references shall henceforth be considered references to the new Attachment G.

3. **In the orders listed in Table 1, modifications to the attachments listed in Provision 1, including *Self Monitoring Program Part A* (August 1993), shall be rescinded.**

4. **The following provisions currently in effect for specific facilities remain in effect and shall modify the new Attachment G for the orders specifically identified below.**

   a. *Crockett Community Services District (Order Number R2-2008-0005):*

      The Discharger shall monitor the perimeter of the fence line surrounding the treatment facilities at the corners and midpoints for odors weekly.

b. *Delta Diablo Sanitation District (Order Number R2-2009-0018):*

The Discharger shall collect composite influent samples on varying days selected at random and shall not include any plant recirculation or other side stream wastes unless the flows originate from the Recycled Water Facility. The Executive Officer must approve any deviation.

c. *East Bay Regional Park District, Union Sanitary District, and East Bay Dischargers Authority (Hayward Shoreline Marsh) (Order Number R2-2006-0031):*

i. With respect to standard observations at the periphery of waste treatment and/or disposal facilities, the Dischargers shall pay special attention to observations for vector nuisance and signs of waterfowl botulism per the Marsh Management Plan.

ii. The Dischargers may file separate self monitoring reports detailing permit compliance.

iii. The Dischargers shall collect receiving water samples during the higher slack water period. The Dischargers shall collect samples within the discharge plume and down current of the discharge point so as to be representative, unless otherwise stipulated.

5. If conflicts exist between this Order's provisions and those of the orders listed in Table 1, except as provided in Provision 4, this Order's provisions shall prevail.

Apparent conflicts may include, but may not necessarily be limited to, existing text that specifies the dioxin and furan minimum levels for analysis and the dioxin-TEQ calculation methodology. The minimum levels and calculation methodology in the new Attachment G shall supersede similar requirements in the permits amended by this Order.

6. This Order shall become effective on March 1, 2010.

I, Bruce Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on February 10, 2010.

_____

Bruce H. Wolfe
Executive Officer

ATTACHMENT F

FACT SHEET

This Fact Sheet describes the legal requirements and technical rationale that serve as the basis for this Order's requirements.

Purpose

The purpose of this amendment is to apply consistent standard requirements throughout NPDES wastewater permits and to provide new direction concerning calculation of dioxin and furan toxic equivalents (hereinafter "dioxin-TEQ"). This Order amends the NPDES permits listed in Table 1 of the Order as follows:

a. Replaces existing standard provisions with new revised standard provisions;
b. Replaces references to existing standard provisions with references to the new standard provisions;
c. Rescinds exceptions to the existing standard provisions; and
d. Modifies the new standard provisions to retain some existing exceptions for specific permits.

This amendment revises and updates existing standard provisions and other existing requirements by consolidating them into one document that reflects current requirements. It also revises the method for calculating dioxin-TEQ for those permits that require dioxin-TEQ monitoring and reporting as follows:

- Incorporates bioaccumulation equivalency factors (BEFs) into dioxin-TEQ calculations;
- Revises minimum levels (MLs) to match default values specified in U.S. Environmental Protection Agency Method 1613; and
- Instructs Dischargers to exclude estimated values below MLs when calculating dioxin-TEQ.

In addition, this amendment revises monitoring requirements for approved treatment system bypasses (e.g., blending primary and secondary-treated effluent during wet weather).

Background

Almost all individual NPDES wastewater permits contain standard provisions that define terms, specify general sampling and analytical protocols, and set out requirements for reporting spills, violations, and routine monitoring data. Federal regulations require some of these standard provisions. Others reflect region-specific requirements. The regional standard provisions ensure permit compliance through preventative planning; monitoring; recordkeeping; reporting; and review, characterization, and response to problems encountered. Most NPDES permits contain the federal standard provisions as Attachment D and the regional standard provisions as Attachment G. In some cases, these provisions may appear as attachments other than Attachments D and G. This Order replaces the existing regional standard provisions in the

permits listed in Table 1 of the Order. Table F-2 at the end of this Fact Sheet provides additional information regarding the facilities these permits cover.

For the permits listed in Table 1 of the Order adopted through June 2009, the regional standard provisions include the following documents, incorporated into those permits by reference and posted on the Regional Water Board's web site (www.waterboards.ca.gov/sanfranciscobay/npdes_wastewater_permit.shtml):

- *Self Monitoring Program Part A* (August 1993);
- *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharger Permits* (August 1993);
- August 6, 2001, Regional Water Board letter from Loretta K. Barsamian, Executive Officer, to Bay Area Permitted Wastewater Dischargers titled, "Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy" (hereinafter "August 2001 Letter"); and
- Regional Water Board Resolution Number 74-10.

For the orders listed in Table 1 of the Order adopted after June 2009, the regional standard provisions are provided as a single document included verbatim with the permit:

- *Attachment G, Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits* (July 2009).

This Order replaces the existing regional standard provisions (including all the attachments listed above, as applicable) with the new Attachment G attached to the Order. The new Attachment G differs little from the existing version attached to permits adopted after June 2009. As with those recently adopted permits, the new Attachment G updates the older regional standard provisions by consolidating them into one document with other existing requirements. The new Attachment G better delineates how its provisions relate to those required under federal law.

The new Attachment G also contains some substantive changes. It changes how dioxin-TEQ is to be calculated and reported (see Attachment G pages G-16 and G-17), and how approved bypasses are to be monitored (see Attachment G pages G-8 and G-9).

Rationale for Revised Dioxin-TEQ Requirements

Many NPDES wastewater permits, particularly those for facilities discharging to San Francisco Bay, contain dioxin-TEQ effluent limits. Dioxin-TEQ values reflect the combined effect of numerous dioxin and furan compounds (congeners). The effluent limits implement the *San Francisco Bay Basin (Region 2) Water Quality Control Plan*'s (Basin Plan's) bioaccumulation objective:

> Many pollutants can accumulate on particulates, in sediments, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom

sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered.

According to 40 CFR 122.44(d), where reasonable potential exists for a discharge to cause or contribute to violations of water quality objectives, water quality-based effluent limits must be established. If the potentially violated objective is narrative, the narrative objective must be translated into an effluent limit. The dioxin-TEQ effluent limits in the permits are numeric translations of the Basin Plan narrative bioaccumulation objective.

The translations are based on relevant scientific information used to weigh the congener concentrations with respect to their relative toxicities compared to the toxicity of a particular dioxin congener: 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD). The California Toxic Rule (40 CFR 131) contains a numeric water quality objective for 2,3,7,8-TCDD, but none of the other congeners. The World Health Organization developed toxicity equivalency factors (TEFs) to convert congener concentrations into equivalent concentrations of 2,3,7,8-TCDD, which when added together are expressed as dioxin-TEQ. The *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy) specifies that the World Health Organization's 1998 TEFs are to be used to calculate dioxin-TEQ. To complete the translation of the Basin Plan's narrative bioaccumulation objective into a numeric effluent limit, dioxin-TEQ limits are derived from the California Toxic Rule numeric water quality objective for 2,3,7,8-TCDD.

In February 2008, the San Francisco Estuary Institute convened an expert panel to provide an unbiased review and analysis of available information regarding San Francisco Bay dioxins and furans. Representatives of the Regional Water Board, the U.S. Environmental Protection Agency, the Bay Area Clean Water Agencies, and others with expertise in the field participated. The panel's recommendations included the following:

- Apply both TEFs and BEFs to dioxin and furan concentrations when calculating dioxin-TEQ; and
- Do not use dioxin and furan congener concentrations reported below MLs when computing dioxin-TEQ.

The new Attachment G reflects these recommendations as discussed further below.

Bioaccumulation Equivalency Factors

Just as the different dioxin and furan congeners exhibit different levels of toxicity, they also exhibit different levels of bioaccumulation potential. To account for the different levels of bioaccumulation potential, each congener may be assigned a bioaccumulation equivalency factor (BEF) relative to 2,3,7,8-TCDD. This is comparable to the TEFs that account for relative differences in toxicities. The BEFs shown in Table F-1 correspond to the differences in biological uptake from the water column through the food web for the various dioxin congeners. They come from the Great Lakes Water Quality Initiative.

TABLE F-1
TOXICITY EQUIVALENCY FACTORS AND
BIOACCUMULATION EQUIVALENCY FACTORS

Dioxin or Furan Congener	Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-TCDD	1.0	1.0
1,2,3,7,8-PeCDD	1.0	0.9
1,2,3,4,7,8-HxCDD	0.1	0.3
1,2,3,6,7,8-HxCDD	0.1	0.1
1,2,3,7,8,9-HxCDD	0.1	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.05
OCDD	0.0001	0.01
2,3,7,8-TCDF	0.1	0.8
1,2,3,7,8-PeCDF	0.05	0.2
2,3,4,7,8-PeCDF	0.5	1.6
1,2,3,4,7,8-HxCDF	0.1	0.08
1,2,3,6,7,8-HxCDF	0.1	0.2
1,2,3,7,8,9-HxCDF	0.1	0.6
2,3,4,6,7,8-HxCDF	0.1	0.7
1,2,3,4,6,7,8-HpCDF	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.4
OCDF	0.0001	0.02

In 1995, the U.S. Environmental Protection Agency adopted the approach of using both TEFs and BEFs to calculate dioxin-TEQ for the Great Lakes System (40 CFR 132, Appendix F). In the absence of site-specific BEFs, the U.S. Environmental Protection Agency supports the use of national BEFs, stating, "…EPA believes that national bioaccumulation factors are broadly applicable to sites throughout the United States and can be applied to achieve an acceptable degree of accuracy when estimating bioaccumulation potential at most sites." In its *Great Lakes Water Quality Initiative Technical Support Document for the Procedure to Determine Bioaccumulation Factors* (EPA-820-B-95-005), the U.S. Environmental Protection Agency states, "Limited comparison to BEFs calculated from data obtained for other ecosystems confirms these bioaccumulation potential differences for [dioxins and furans] for fish in ecosystems outside the Great Lakes." Recently, the U.S. Environmental Protection Agency and the Regional Water Board incorporated the national BEFs into the dioxin-TEQ calculations required for the NPDES permit for the City and County of San Francisco's Oceanside Water Pollution Control Plant (Order Number R2-2009-062).

The San Francisco Estuary Institute's expert panel concluded that, if suitable data are unavailable to derive site-specific BEFs for the San Francisco Bay Region, use of the BEFs derived for the Great Lakes System is preferable to omitting BEFs altogether. The panel concluded that, because

BEFs for the congeners most commonly detected in wastewater can be as low as 0.01, calculating dioxin-TEQ without BEFs (the current practice) may mischaracterize the significance of dioxin and furan discharges by as much as two orders of magnitude. Therefore, for purposes of determining compliance with effluent limits, this Order requires the Dischargers to calculate and report dioxin-TEQ using the following formula, where the TEFs and BEFs are as listed in Table F-1:

$$\text{Dioxin-TEQ} = \Sigma (C_x \times TEF_x \times BEF_x)$$

where:

C_x = concentration of dioxin or furan congener *x*
TEF_x = TEF for congener *x*
BEF_x = BEF for congener *x*

This Order supersedes existing requirements to use only TEFs in dioxin-TEQ calculations for purposes of determining compliance with dioxin-TEQ effluent limits.

Minimum Levels

For purposes of laboratory analysis, reporting, and compliance, the minimum level (ML) is the concentration at which the entire analytical system gives a recognizable signal and acceptable calibration point. Below the ML, detected concentrations can sometimes be estimated, but not with sufficient analytical confidence for regulatory compliance purposes. Currently, the Dischargers analyze dioxin and furan congeners in wastewater using the latest version of U.S. Environmental Protection Agency Method 1613 (*Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS*, USEPA 1994). Many permits set forth the dioxin and furan MLs for reporting and compliance purposes as equal to one half the default MLs specified in Method 1613. This Order revises the dioxin and furan MLs to be consistent among all permits and with Method 1613.

This Order also requires the Dischargers to exclude estimated congener concentrations below MLs when calculating dioxin-TEQ for purposes of determining compliance with effluent limits. When a dioxin or furan congener is detected below its ML, its concentration is very uncertain. According to the San Francisco Estuary Institute's expert panel, dioxin and furan concentrations measured in effluent using high-volume screening techniques have often been orders of magnitude lower than Method 1613's default MLs. Therefore, the expert panel concluded that assuming congeners detected below MLs are present at concentrations equal to the MLs (or one half the MLs) probably mischaracterizes the significance of dioxin and furan discharges by orders of magnitude. Moreover, when calculating dioxin-TEQ, the errors associated with adding multiple estimated values compound, resulting in values too uncertain for regulatory compliance purposes. Excluding values below MLs when adding multiple data points is consistent with how the U.S. Environmental Protection Agency directs dischargers to calculate averages when some data are below practical quantitation limits (comparable to MLs). When adding values to determine averages, data points below the practical quantitation limit are to be treated as zeros ("Instructions for Completing EPA Form 3320-1" [Rev. 01/06]).

Although this Order revises the dioxin and furan MLs, the Dischargers must continue to report all measured and estimated congener concentrations with appropriate data qualifiers.

Rationale for Revised Monitoring Requirements for Bypasses

Federal standard provisions (Attachment D of most permits) prohibit treatment system bypasses, except as specifically allowed in accordance with federal standard provisions sections I.G.2 and I.G.4. As authorized by California Water Code §13383, the new Attachment G sets forth monitoring requirements for bypasses. In the past, the regional standard provisions (e.g., *Self Monitoring Program Part A*, August 1993) required extensive accelerated monitoring during all bypasses, and many individual permits significantly modified these requirements for approved blending of primary and secondary treated effluent during wet weather. The new Attachment G replaces these permit-by-permit exceptions with one consistent provision that applies to all approved bypasses.

The new Attachment G requires the Dischargers to monitor approved bypasses at least once each year for all constituents that have effluent limits at affected outfalls. It excludes mercury, dioxin-TEQ, and chronic toxicity because these data provide little useful information about the short-term impacts of the discharge, because these tests are very expensive, and because they involve logistical sampling challenges. It also excludes oil and grease and acute toxicity because these tests involve logistical sampling challenges, and because review of a large set of representative discharge data collected during approved bypasses (e.g. blending) show consistent compliance with these limitations. During other approved bypasses, the new Attachment G requires the Dischargers to collect and retain samples; monitor flows, bacteria, and total suspended solids (TSS); and if TSS concentrations exceed 45 mg/L, analyze for other constituents that have effluent limits. TSS is a good indicator of pollutant removal, and effluent with TSS concentrations below 45 mg/L generally complies with effluent limits.

Rationale for Specific Provisions

1. **The provisions of the new Attachment G shall replace those of existing regional standard provisions.**

   This provision replaces all the existing attachments containing regional standard provisions with the new Attachment G attached to this Order. With the new Attachment G in place, the existing attachments are no longer necessary. The rationales for the substantive revisions regarding dioxin-TEQ calculations are presented above.

   Although the new Attachment G does not incorporate Regional Water Board Resolution Number 74-10 as some older permits did, that resolution remains in effect; this Order does not supersede it. The new Attachment G is consistent with Resolution Number 74-10 in that it implements Resolution Number 74-10 so inclusion of the resolution is no longer necessary.

2. References to the new Attachment G shall replace references to existing regional standard provisions.

This provision replaces references to existing attachments containing regional standard provisions with references to the new Attachment G. It clarifies that, where the permits refer to existing attachments containing regional standard provisions, such references should now be construed to refer to the new Attachment G.

References to regional standard provisions appear in the main body of the permits and in monitoring and reporting programs (sometimes called "Self Monitoring Program Part B," often in Attachment E of the permits). These references are located primarily in the sections indicated below. Section numbers are not provided since they vary among the permits. The specific language also varies. Therefore, the text below provides only illustrative examples of the modified references. These examples generally refer the regional standard provisions as Attachment G, as is typical for most permits listed in Table 1 of the Order.

References to Regional Standard Provisions in the Main Body of the Permits:

a. Discharge Prohibition (bypasses): The bypass of untreated or partially treated wastewater to waters of the United States is prohibited, except as provided for in 40 CFR 122.41(m)(4) and Attachment G (including *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharger Permits*, August 1993, if applicable).

b. Provisions (standard provisions): The Discharger shall comply with Regional Standard Provisions (Attachment G) and any amendments thereto. Duplicative requirements in the federal Standard Provisions (Attachment D) and the Regional Standards Provisions (Attachment G) are not separate requirements. A violation of a duplicative requirement does not constitute two separate violations.

c. Provisions (monitoring and reporting program requirements): The Discharger shall comply with the monitoring and reporting program, and any future revisions thereto. The Discharger shall also comply with the requirements contained in Attachment G (including *Self Monitoring Program Part A*, August 1993, if applicable).

d. Provisions (special studies – effluent characterization for selected constituents): The Discharger shall continue to monitor and evaluate the discharge from specified discharge points for the constituents listed in Attachment G (including Enclosure A of the August 2001 Letter, if applicable) according to the sampling frequency listed in the monitoring and reporting program. Compliance shall be achieved in accordance with the specifications stated in Attachment G (including the August 2001 Letter, if applicable).

e. Provisions (special provisions for POTWs – sludge/biosolids management practices requirements): Sludge/biosolids monitoring and reporting provisions of Attachment G apply to sludge/biosolids handling, disposal and reporting practices.

References to Regional Standard Provisions in Monitoring and Reporting Programs:

a. General Monitoring Provisions: The Discharger shall comply with the monitoring and reporting program (or self monitoring program) for this order as adopted by the Regional Water Board, and with all the requirements contained in Attachment G (including *Self Monitoring Program Part A*, August 1993, if applicable).

b. General Monitoring Provisions: Sampling and analysis of additional constituents is required pursuant to Attachment G (including Table 1 of the August 2001 Letter, if applicable).

c. Effluent Monitoring Requirements (table text and footnotes): The sample type and analytical method should be as described in Attachment G (including the August 2001 Letter, if applicable).

d. Reporting Requirements (general requirements): The Discharger shall comply with Attachment G (including *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits*, August 1993, and *Self Monitoring Program Part A*, August 1993, if applicable).

e. Reporting Requirements (self monitoring reports): By February 1 of each year, the Discharger shall submit an annual report to the Regional Water Board covering the previous calendar year. The report shall contain the items described in Attachment G (including *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits*, August 1993, and *Self Monitoring Program Part A*, August 1993, if applicable).

3. Modifications to existing regional standard provisions (including *Self Monitoring Program Part A*, August 1993) shall be rescinded.

This provision rescinds modifications to the existing regional standard provisions. Since the new Attachment G replaces those provisions, the modifications are no longer meaningful.

4. Certain provisions shall modify the new Attachment G for specific orders.

These provisions replace some of the modifications to the existing regional standard provisions rescinded through Provision 3 of the Order. They are not new requirements. They modify the new Attachment G requirements in the same way that the rescinded modifications had modified the regional standard provisions rescinded through Provision 1 of the Order. The Order includes these requirements to be clear that they still apply.

5. If conflicts exist between this Order's provisions and those of the orders listed in Table 1, except as provided in Provision 4, this Order's provisions shall prevail.

This provision clarifies which provisions prevail if apparent conflicts exist between the provisions of this Order and those of the orders amended by this Order. For example, it

clarifies that the new Attachment G provisions supersede any existing references the dioxin and furan MLs and to the dioxin-TEQ calculation method.

6. The Order shall become effective on March 1, 2010.

This provision specifies the effective date of the Order.

Anti-Backsliding Requirements

Clean Water Act §402(o)(2) and §303(d)(4), and 40 CFR 122.44(l), prohibit backsliding in NPDES permits. These anti-backsliding provisions require revised effluent limitations to be at least as stringent as those previously in place, with some exceptions. Final water quality-based effluent limits in the permits listed in Table 1 have not yet become effective; only interim limits are now in place. This Order does not change any interim or final limits. Because all limits will remain as stringent as existing requirements, this Order complies with anti-backsliding requirements.

Antidegradation Policies

Antidegradation policies require that the existing quality of waters be maintained unless degradation is justified based on specific findings. State Water Board Resolution Number 68-16 sets forth California's antidegradation policy. Consistent with 40 CFR 131.12, Resolution Number 68-16 incorporates the federal antidegradation policy. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. Permitted discharges must be consistent with these antidegradation policies.

This Order is consistent with antidegradation policies because it will not result in any additional pollutant discharges and will not reduce receiving water quality. Because this Order changes how dioxin-TEQ is to be calculated, most Dischargers will likely report lower dioxin-TEQ values. However, this Order does not change any dioxin-TEQ effluent limits. The final limits in most permits listed in Table 1 have not yet become effective, and no Discharger has upgraded its treatment operations specifically to control dioxin-TEQ. Therefore, no Discharger will forego any existing treatment because of this Order. Furthermore, all pollution minimization requirements in existing permits related to dioxins and furans remain in place. Since no change in dioxin and furan discharges is expected, antidegradation requirements are satisfied.

Authority to Reopen Permits

The Regional Water Board is authorized to reopen the permits listed in Table 1 of the Order for purposes of this amendment because (1) most of the changes to the standard provisions simply reorganize existing monitoring and reporting requirements, so they are minor modifications authorized under 40 CFR 122.63; and (2) the changes that incorporate BEFs into dioxin-TEQ calculations reflect new information not considered when the permits were issued, so 40 CFR 122.62(a)(2) authorizes them.

Notification of Interested Parties

The Regional Water Board encouraged public participation in this amendment process. It notified the Dischargers and other interested parties, and provided an opportunity to submit written comments between November 18 and December 21, 2009. On November 19, 2009, *The Recorder* published a notice that the Regional Water Board would consider this item during its February 10, 2010, meeting.

TABLE F-2
DISCHARGER FACILITY INFORMATION

Discharger	Facility Name	Facility Address	Facility Design Flow (mgd)	Receiving Water
Allied Defense Recycling	Mare Island Shipyard	Southeast Corner of 9th St and Nimitz Ave Vallejo, CA 94592 Solano County	N/A	Mare Island Strait
American Canyon, City of	Wastewater Treatment and Reclamation Facility	151 Mezzeta Court American Canyon, CA 94503 Napa County	2.5	North Slough
Benicia, City of	Benicia Wastewater Treatment Plant	614 East Fifth Street Benicia, CA 94510 Solano County	4.5	Carquinez Strait
Bottling Group, LLC	Bottling Group Hayward Plant	29000 Hesperian Blvd Hayward, CA 94545 Alameda County	0.180 (max. daily discharge rate)	Alameda County Flood Control and Water Conserv-ation District Flood Channel
Browning-Ferris Industries (BFI)	Corinda Los Trancos (Ox Mountain) Landfill	12310 San Mateo Road Half Moon Bay, CA 94019 San Mateo County	0.1152 (average daily flow)	Corinda Los Trancos Creek
Burlingame, City of, and North Bayside System Unit	Burlingame Wastewater Treatment Plant	1103 Airport Blvd Burlingame, CA 94010 San Mateo County	5.5	Lower San Francisco Bay
C&H Sugar Company Inc. and Crockett Community Services District	Phillip F. Meads Water Treatment Plant	830 Loring Avenue Crockett, CA 94525 Contra Costa County	35 (cooling water) 1.78 (second-ary)	Carquinez Strait
California Department of Transportation	Devil's Slide Tunnel Project	State Route 1 (Post Miles 38.0 – 40.4) San Mateo County	1.15 (maximum flow)	Pacific Ocean
Calistoga, City of	Dunaweal Wastewater Treatment Facility	1185 Dunaweal Lane Calistoga, CA 94515 Napa County	0.84	Napa River
Cedar Fair Entertainment Company	California's Great America	4701 Great America Parkway Santa Clara, CA 95054 Santa Clara County	Episodic	San Tomas Aquino Creek
Central Contra Costa Sanitary District	Central Contra Costa Sanitary District Wastewater Treatment Plant	5019 Imhoff Place Martinez, CA 94553 Contra Costa County	53.8	Suisun Bay

Discharger	Facility Name	Facility Address	Facility Design Flow (mgd)	Receiving Water
Central Marin Sanitary Agency	Central Marin Sanitation Agency Wastewater Treatment Plant	1301 Andersen Drive San Rafael, CA 94901 Marin County	10	Central San Francisco Bay
Chevron U.S.A., Inc., Richmond Refinery, Chevron Chemical Company LLC, Richmond Plant, and General Chemical Corporation, Richmond Works	Richmond Refinery	841 Chevron Way Richmond, CA 94801 Contra Costa County	7.6 (average flow in 2005)	San Pablo Bay
ConocoPhillips	San Francisco Refinery	1380 San Pablo Ave Rodeo, CA 94572-1354 Contra Costa County	varies	San Pablo Bay
Crockett Community Services District	Port Costa Wastewater Treatment Plant	End of Canyon Lake Drive Port Costa, CA 94569 Contra Costa County	0.033	Carquinez Strait
Delta Diablo Sanitation District	Wastewater Treatment Plant	2500 Pittsburg-Antioch Highway Antioch, CA 94509 Contra Costa County	16.5	New York Slough
Dow Chemical Company	Pittsburg Plant	901 Loveridge Road Pittsburg, CA 94565 Contra Costa County	0.54	New York Slough
Dublin San Ramon Services District (DSRSD), Livermore-Amador Valley Water Management Agency (LAVWMA), East Bay Dischargers Authority (EBDA)	Dublin San Ramon Services District Wastewater Treatment Plant	7399 Johnson Drive Pleasanton, CA 94588 Alameda County	20.2	Lower San Francisco Bay
East Bay Dischargers Authority (EBDA), including its member agencies: City of Hayward, City of San Leandro, Oro Loma Sanitary District, Castro Valley Sanitary District, Union Sanitary District, and Livermore-Amador Valley Water Management Agency (LAVWMA)	EBDA Common Outfall	EBDA Common Outfall 14150 Monarch Bay Drive San Leandro, CA 94577 Alameda County	105.8	Lower San Francisco Bay
	Hayward Water Pollution Control Facility			
	San Leandro Water Pollution Control Plant			
	Oro Loma/Castro Valley Sanitary Districts Water Pollution Control Plant			

Discharger	Facility Name	Facility Address	Facility Design Flow (mgd)	Receiving Water
	Raymond A. Boege Alvarado Wastewater Treatment Plant			
	Livermore-Amador Valley Water management Agency (LAVWMA) Export and Storage Facilities			
	Dublin San Ramon Services District Wastewater Treatment Plant			
	City of Livermore Water Reclamation Plant			
East Bay Municipal Utilities District	Orinda Water Treatment Plant	190 Camino Pablo Orinda, CA 94563 Contra Costa County	135 (average) 200 (max),	San Pablo Creek
East Bay Municipal Utilities District, Special District No. 1	Water Pollution Control Plant	2020 Wake Avenue, Oakland, CA 94607 Alameda County	120	Central San Francisco Bay
East Bay Municipal Utilities District, Special District No. 1 (wet weather facilities)	Point Isabel Wet Weather Facility	2755 Point Isabel Street Richmond, CA 94804 Contra Costa County	100	Richmond Inner Harbor, part of Central San Francisco Bay
	San Antonio Creek Wet Weather Facility	225 5th Avenue Oakland, CA 94606 Alameda County	51	Oakland Inner Harbor, part of Lower San Francisco Bay
	Oakport Wet Weather Facility	5597 Oakport Street Oakland, CA 94621 Alameda County	158	East Creek Slough, tributary to Lower San Francisco Bay

Discharger	Facility Name	Facility Address	Facility Design Flow (mgd)	Receiving Water
East Bay Regional Park District (EBRPD), Union Sanitary District (USD), and East Bay Dischargers Authority (EBDA) (Hayward Shoreline Marsh)	Hayward Shoreline Marsh	3010 West Winton Road Hayward, CA 94544 Alameda County	20	Lower San Francisco Bay
Fairfield-Suisun Sewer District	Fairfield-Suisun Wastewater Treatment Plant	1010 Chadbourne Road Fairfield, CA 94534 Solano County	17.5	Boynton Slough, Ledgewood Creek
GWF Power Systems, LP, Site I	GWF – Site I Power Plant	895 East 3rd Street Pittsburg, CA 94565 Contra Costa County	0.045 (average)	New York Slough
GWF Power Systems, LP, Site V	GWF – Site V Power Plant	555 Nichols Road Bay Point, CA 94565 Contra Costa County	0.047 (average)	Suisun Bay
Kobe Precision, Inc.	Kobe Precision	1510 Zephyr Ave Hayward, CA 94544 Alameda County	0.2 max.	Alameda County Flood Control and Water Conserv-ation District Flood Channel
Las Gallinas Valley Sanitary District	Las Gallinas Valley Sanitary District Sewage Treatment Plant	300 Smith Ranch Road San Rafael, CA 94903 Marin County	2.92	Miller Creek
Livermore, City of, Livermore-Amador Valley Water Management Agency (LAVWMA), and East Bay Dischargers Authority (EBDA)	City of Livermore Water Reclamation Plant	101 W. Jack London Blvd. Livermore, CA 94551 Alameda County	8.5	Lower San Francisco Bay
Livermore-Amador Valley Water Management Agency (LAVWMA), Dublin San Ramon Services District (DSRSD), and City of Livermore	LAVWMA Export and Storage Facilities	7176 Johnson Drive Pleasanton, CA 94588 Alameda County	21.5	San Lorenzo Creek and Alamo Canal

Discharger	Facility Name	Facility Address	Facility Design Flow (mgd)	Receiving Water
Marin County, Sanitary District No. 5 of (Paradise Cove)	Paradise Cove Treatment Plant	3700 Paradise Drive Tiburon, CA 94920 Marin County	0.08	Central San Francisco Bay
Marin County, Sanitary District No. 5 of (Tiburon)	Wastewater Treatment Plant	2001 Paradise Drive Tiburon, CA 94920 Marin County	0.98	Raccoon Strait to Central San Francisco Bay
Mercury Dischargers (various wastewater treatment plants)	Wastewater Treatment Plants	various	various	various
Millbrae, City of, and North Bayside System Unit	Water Pollution Control Plant	400 East Millbrae Avenue Millbrae, CA 94030 San Mateo County	3	Lower San Francisco Bay
Morton International, Inc, Morton Salt Division, Newark Facility	Morton Salt Division, Newark Facility	7380 Morton Ave Newark, CA 94560 Alameda County	0.0432 (average flow)	Alameda County Flood Control Ditch, tributary to Plummer Creek
Mt. View Sanitary District	Mt. View Sanitary District Wastewater Treatment Plant	3800 Arthur Road Martinez, CA 94553 Contra Costa County	3.2	Peyton Slough, a tributary to Carquinez Strait
Napa Sanitation District	Soscol Water Recycling Facility	151 Soscol Ferry Road Napa, CA 94558 Napa County	15.4	Napa River
North San Mateo County Sanitation District	North San Mateo County Sanitation District Wastewater Treatment Plant	153 Lake Merced Blvd Daly City, CA 94015 San Mateo County	8	Pacific Ocean
Pacific Gas and Electric Company (PG&E)	PG&E Shell Pond	½ Mile Northwest of North Broadway Street Bay Point, CA 94565 Contra Costa County	1 (max. average dry weather)	Suisun Bay
Pacifica, City of	Calera Creek Water Recycling Plant	700 Coast Highway Pacifica, CA 94044 San Mateo County	4	Calera Creek

Discharger	Facility Name	Facility Address	Facility Design Flow (mgd)	Receiving Water
Palo Alto, City of	Palo Alto Regional Water Quality Control Plant	2501 Embarcadero Way Palo Alto, CA 94303 Santa Clara County	39	Unnamed manmade channel, tributary to Lower San Francisco Bay
Petaluma, City of	Municipal Wastewater Treatment Plant	950 Hopper Street Petaluma, CA 94952 Sonoma County	5.2	Petaluma River
Pinole, City of	Pinole-Hercules Water Pollution Control Plant	11 Tennent Avenue Pinole, CA, 94564 Contra Costa County	4.06	San Pablo Bay
Potable Water Supply Dischargers (various)	Surface Water Treatment Facilities for Potable Supply	various	various	various
Rhodia, Inc.	Sulfuric Acid Regeneration Martinez Plant	100 Mococo Road Martinez, CA 94553 Contra Costa County	0.779 (potential maximum daily rate)	Suisun Bay
Rodeo Sanitary District	Rodeo Sanitary District Water Pollution Control Facility	800 San Pablo Ave. Rodeo, CA 94572 Contra Costa County	1.14	San Pablo Bay
Saint Helena, City of	City of St. Helena Wastewater Treatment and Reclamation Plant	1 Thomann Lane St. Helena, CA 94574 Napa County	0.05	Napa River
San Francisco Public Utilities Commission (Drinking Water Transmission System)	San Francisco Public Utilities Commission Drinking Water Transmission System	Multiple Cities Alameda, Santa Clara, and San Mateo Counties	2 to 5	Various
San Francisco, City and County of (Oceanside Plant)	Oceanside Water Pollution Control Plant and Collection System, Including the Westside Wet Weather Facilities	3500 Great Highway San Francisco, CA 94132 San Francisco County	43	Pacific Ocean
San Francisco, City and County of (Southeast Plant)	Southeast Water Pollution Control Plant	750 Phelps Street San Francisco, CA 94124 San Francisco County	110	Lower San Francisco Bay

Discharger	Facility Name	Facility Address	Facility Design Flow (mgd)	Receiving Water
San Francisco, City and County of, and North Bayside System Unit (SF International Airport, Industrial Plant)	Mel Leong Treatment Plant, Industrial Plant	676 McDonnell Road San Francisco, CA 94128 San Francisco County	1.2	Lower San Francisco Bay
San Francisco, City and County of, and North Bayside System Unit (SF International Airport, Sanitary Plant)	Mel Leong Treatment Plant	918 Clearwater Drive San Francisco International Airport San Francisco, CA 94128	2.2	Lower San Francisco Bay
San Jose and Santa Clara, Cities of, San Jose/Santa Clara Water Pollution Control Plant	San Jose/Santa Clara Water Pollution Control Plant	4245 Zanker Road San Jose, CA 95134 Santa Clara County	167	Artesian Slough, tributary to South San Francisco Bay via Coyote Creek
San Mateo, City of	City of San Mateo Wastewater Treatment Plant	2050 Detroit Drive San Mateo, CA 94404 San Mateo County	15.7	Lower San Francisco Bay
Sausalito-Marin City Sanitary District	Sausalito-Marin City Sanitary District Wastewater Treatment Plant	#1 Fort Baker Road Sausalito, CA 94965 Marin County	1.8	Central San Francisco Bay
Sewer Authority Mid-Coastside	Sewer Authority Mid-Coastside WWTP and the Intertie Pipeline System	1000 North Cabrillo Highway Half Moon Bay, CA 94019 San Mateo County	4	Pacific Ocean
Sewerage Agency of Southern Marin	Wastewater Treatment Plant	450 Sycamore Ave Mill Valley, CA 94941 Marin County	3.6	Raccoon Strait to Central San Francisco Bay
Shell Oil Products US and Equilon Enterprises, LLC	Shell Martinez Refinery	3485 Pacheco Blvd Martinez, CA 94553 Contra Costa County	5.8 (average flow in 2005)	Carquinez Strait
Sonoma Valley County Sanitation District	Municipal Wastewater Treatment Plant	22675 8th Street East Sonoma, CA 95476 Sonoma County	3	Schell Slough, tributary to San Pablo Bay

Discharger	Facility Name	Facility Address	Facility Design Flow (mgd)	Receiving Water
South Bayside System Authority	South Bayside System Authority Wastewater Treatment Plant	1400 Radio Road Redwood City, CA 94065 San Mateo County	29	Lower San Francisco Bay
South San Francisco and San Bruno, Cities of	South San Francisco and San Bruno Water Quality Control Plant	195 Belle Air Road South San Francisco, CA 94080 San Mateo County	13	Lower San Francisco Bay
Sunnyvale, City of	Sunnyvale Water Pollution Control Plant	1444 Borregas Avenue, Sunnyvale, CA 94089 Santa Clara County	29.5	Moffett Channel, tributary to Guadalupe Slough and South San Francisco Bay
Tesoro Refining & Marketing Co.	Golden Eagle Refinery	150 Solano Way Martinez, CA 94553 Contra Costa County	varies	Suisun Bay
US Naval Support Activity, Treasure Island	Wastewater Treatment Plant	681 Avenue M, Treasure Island San Francisco, CA 94130 San Francisco County	2	San Francisco Bay
USS-Posco Industries	Pittsburg Plant	900 Loveridge Road Pittsburg, CA 94565 Contra Costa County	28	Suisun Bay
Valero Refining Company	Valero Benicia Refinery	3400 East Second St Benicia, CA 94510-1005 Solano County	varies	Suisun Bay
Vallejo Sanitation and Flood Control District	Vallejo Sanitation and Flood Control District Wastewater Treatment Plant	450 Ryder Street Vallejo, CA 94590 Solano County	15.5	Carquinez Strait, Mare Island Strait (tributary to Carquinez Strait)
West County Agency (West County Wastewater District, City of Richmond, and Richmond Municipal Sewer District No. 1)	West County Agency Combined Outfall	601 Canal Blvd. Richmond, CA 94804 Contra Costa County	28.5	Central San Francisco Bay

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ATTACHMENT G

REGIONAL STANDARD PROVISIONS, AND MONITORING AND REPORTING REQUIREMENTS
(SUPPLEMENT TO ATTACHMENT D)

For

NPDES WASTEWATER DISCHARGE PERMITS

March 2010

Table of Contents

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

REGIONAL STANDARD PROVISIONS, AND MONITORING AND REPORTING REQUIREMENTS (SUPPLEMENT TO ATTACHMENT D)

FOR

NPDES WASTEWATER DISCHARGE PERMITS

APPLICABILITY

This document applies to dischargers covered by a National Pollutant Discharge Elimination System (NPDES) permit. This document does not apply to Municipal Separate Storm Sewer System (MS4) NPDES permits.

The purpose of this document is to supplement the requirements of Attachment D, Standard Provisions. The requirements in this supplemental document are designed to ensure permit compliance through preventative planning, monitoring, recordkeeping, and reporting. In addition, this document requires proper characterization of issues as they arise, and timely and full responses to problems encountered. To provide clarity on which sections of Attachment D this document supplements, this document is arranged in the same format as Attachment D.

I. STANDARD PROVISIONS - PERMIT COMPLIANCE

A. Duty to Comply – Not Supplemented

B. Need to Halt or Reduce Activity Not a Defense – Not Supplemented

C. Duty to Mitigate – This supplements I.C. of Standard Provisions (Attachment D)

1. **Contingency Plan** - The Discharger shall maintain a Contingency Plan as originally required by Regional Water Board Resolution 74-10 and as prudent in accordance with current municipal facility emergency planning. The Contingency Plan shall describe procedures to ensure that existing facilities remain in, or are rapidly returned to, operation in the event of a process failure or emergency incident, such as employee strike, strike by suppliers of chemicals or maintenance services, power outage, vandalism, earthquake, or fire. The Discharger may combine the Contingency Plan and Spill Prevention Plan into one document. Discharge in violation of the permit where the Discharger has failed to develop and implement a Contingency Plan as described below will be the basis for considering the discharge a willful and negligent violation of the permit pursuant to California Water Code Section 13387. The Contingency Plan shall, at a minimum, contain the provisions of a. through g. below.

    a. Provision of personnel for continued operation and maintenance of sewerage facilities during employee strikes or strikes against contractors providing services.

b. Maintenance of adequate chemicals or other supplies and spare parts necessary for continued operations of sewerage facilities.

c. Provisions of emergency standby power.

d. Protection against vandalism.

e. Expeditious action to repair failures of, or damage to, equipment and sewer lines.

f. Report of spills and discharges of untreated or inadequately treated wastes, including measures taken to clean up the effects of such discharges.

g. Programs for maintenance, replacement, and surveillance of physical condition of equipment, facilities, and sewer lines.

2. **Spill Prevention Plan -** The Discharger shall maintain a Spill Prevention Plan to prevent accidental discharges and minimize the effects of such events. The Spill Prevention Plan shall:

a. Identify the possible sources of accidental discharge, untreated or partially treated waste bypass, and polluted drainage;

b. Evaluate the effectiveness of present facilities and procedures, and state when they became operational; and

c. Predict the effectiveness of the proposed facilities and procedures, and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

This Regional Water Board, after review of the Contingency and Spill Prevention Plans or their updated revisions, may establish conditions it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions may be incorporated as part of the permit upon notice to the Discharger.

D. Proper Operation & Maintenance – This supplements I.D of Standard Provisions (Attachment D)

1. **Operation and Maintenance (O&M) Manual -** The Discharger shall maintain an O&M Manual to provide the plant and regulatory personnel with a source of information describing all equipment, recommended operational strategies, process control monitoring, and maintenance activities. To remain a useful and relevant document, the O&M Manual shall be kept updated to reflect significant changes in treatment facility equipment and operational practices. The O&M Manual shall be maintained in usable condition and be available for reference and use by all relevant personnel and Regional Water Board staff.

2. **Wastewater Facilities Status Report -** The Discharger shall regularly review, revise, or update, as necessary, its Wastewater Facilities Status Report. This report shall document how the Discharger operates and maintains its wastewater collection, treatment, and disposal facilities to ensure 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.

3. **Proper Supervision and Operation of Publicly Owned Treatment Works (POTWs) -** POTWs shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Division 4, Chapter 14, Title 23 of the California Code of Regulations.

E. Property Rights – Not Supplemented

F. Inspection and Entry – Not Supplemented

G. Bypass – Not Supplemented

H. Upset – Not Supplemented

I. Other – This section is an addition to Standard Provisions (Attachment D)

1. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or nuisance as defined by California Water Code Section 13050.

2. Collection, treatment, storage, and disposal systems shall be operated in a manner that precludes public contact with wastewater, except in cases where excluding the public is infeasible, such as private property. If public contact with wastewater could reasonably occur on public property, warning signs shall be posted.

3. If the Discharger submits a timely and complete Report of Waste Discharge for permit reissuance, this permit continues in force and effect until a new permit is issued or the Regional Water Board rescinds the permit.

J. Storm Water – This section is an addition to Standard Provisions (Attachment D)

These provisions apply to facilities that do not direct all storm water flows from the facility to the wastewater treatment plant headworks.

1. **Storm Water Pollution Prevention Plan (SWPP Plan)**

   The SWPP Plan shall be designed in accordance with good engineering practices and shall address the following objectives:

   a. To identify pollutant sources that may affect the quality of storm water discharges; and

   b. To identify, assign, and implement control measures and management practices to reduce pollutants in storm water discharges.

   The SWPP Plan may be combined with the existing Spill Prevention Plan as required in accordance with Section C.2. The SWPP Plan shall be retained on-site and made available upon request of a representative of the Regional Water Board.

2. Source Identification

The SWPP Plan shall provide a description of potential sources that may be expected to add significant quantities of pollutants to storm water discharges, or may result in non-storm water discharges from the facility. The SWPP Plan shall include, at a minimum, the following items:

a. A topographical map (or other acceptable map if a topographical map is unavailable), extending one-quarter mile beyond the property boundaries of the facility, showing the wastewater treatment facility process areas, surface water bodies (including springs and wells), and discharge point(s) where the facility's storm water discharges to a municipal storm drain system or other points of discharge to waters of the State. The requirements of this paragraph may be included in the site map required under the following paragraph if appropriate.

b. A site map showing the following:

1) Storm water conveyance, drainage, and discharge structures;

2) An outline of the storm water drainage areas for each storm water discharge point;

3) Paved areas and buildings;

4) Areas of actual or potential pollutant contact with storm water or release to storm water, including but not limited to outdoor storage and process areas; material loading, unloading, and access areas; and waste treatment, storage, and disposal areas;

5) Location of existing storm water structural control measures (i.e., berms, coverings, etc.);

6) Surface water locations, including springs and wetlands; and

7) Vehicle service areas.

c. A narrative description of the following:

1) Wastewater treatment process activity areas;

2) Materials, equipment, and vehicle management practices employed to minimize contact of significant materials of concern with storm water discharges;

3) Material storage, loading, unloading, and access areas;

4) Existing structural and non-structural control measures (if any) to reduce pollutants in storm water discharges; and

5) Methods of on-site storage and disposal of significant materials.

d. A list of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities.

3. Storm Water Management Controls

The SWPP Plan shall describe the storm water management controls appropriate for the facility and a time schedule for fully implementing such controls. The appropriateness and priorities of controls in the SWPP Plan shall reflect identified potential sources of pollutants. The description of storm water management controls to be implemented shall include, as appropriate:

a. Storm water pollution prevention personnel

Identify specific individuals (and job titles) that are responsible for developing, implementing, and reviewing the SWPP Plan.

b. Good housekeeping

Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the storm drain conveyance system.

c. Spill prevention and response

Identify areas where significant materials can spill into or otherwise enter storm water conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, and cleanup equipment and procedures shall be identified, as appropriate. The necessary equipment to implement a cleanup shall be available, and personnel shall be trained in proper response, containment, and cleanup of spills. Internal reporting procedures for spills of significant materials shall be established.

d. Source control

Source controls include, for example, elimination or reduction of the use of toxic pollutants, covering of pollutant source areas, sweeping of paved areas, containment of potential pollutants, labeling of all storm drain inlets with "No Dumping" signs, isolation or separation of industrial and non-industrial pollutant sources so that runoff from these areas does not mix, etc.

e. Storm water management practices

Storm water management practices are practices other than those that control the sources of pollutants. Such practices include treatment or conveyance structures, such as drop inlets, channels, retention and detention basins, treatment vaults, infiltration galleries, filters, oil/water separators, etc. Based on assessment of the potential of various sources to contribute pollutants to storm water discharges in significant quantities, additional storm water management practices to remove pollutants from storm water discharges shall be implemented and design criteria shall be described.

f. Sediment and erosion control

Measures to minimize erosion around the storm water drainage and discharge points, such as riprap, revegetation, slope stabilization, etc., shall be described.

g. Employee training

Employee training programs shall inform all personnel responsible for implementing the SWPP Plan. Training shall address spill response, good housekeeping, and material management practices. New employee and refresher training schedules shall be identified.

h. Inspections

All inspections shall be done by trained personnel. Material handling areas shall be inspected for evidence of, or the potential for, pollutants entering storm water discharges. A tracking or follow up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded. Inspection records shall be retained for five years.

i. Records

A tracking and follow-up procedure shall be described to ensure that adequate response and corrective actions have been taken in response to inspections.

4. Annual Verification of SWPP Plan

An annual facility inspection shall be conducted to verify that all elements of the SWPP Plan are accurate and up-to-date. The results of this review shall be reported in the Annual Report to the Regional Water Board described in Section V.C.f.

K. Biosolids Management – This section is an addition to Standard Provisions (Attachment D)

Biosolids must meet the following requirements prior to land application. The Discharger must either demonstrate compliance or, if it sends the biosolids to another party for further treatment or distribution, must give the recipient the information necessary to ensure compliance.

1. Exceptional quality biosolids meet the pollutant concentration limits in Table III of 40 CFR Part 503.13, Class A pathogen limits, and one of the vector attraction reduction requirements in 503.33(b)(1)-(b)(8). Such biosolids do not have to be tracked further for compliance with general requirements (503.12) and management practices (503.14).

2. Biosolids used for agricultural land, forest, or reclamation shall meet the pollutant limits in Table I (ceiling concentrations) and Table II or Table III (cumulative loadings or pollutant concentration limits) of 503.13. They shall also meet the general requirements (503.12) and management practices (503.14) (if not exceptional quality biosolids) for Class A or Class B pathogen levels with associated access restrictions (503.32) and one of the 10 vector attraction reduction requirements in 503.33(b)(1)-(b)(10).

3. Biosolids used for lawn or home gardens must meet exceptional quality biosolids limits.

4. Biosolids sold or given away in a bag or other container must meet the pollutant limits in either Table III or Table IV (pollutant concentration limits or annual pollutant loading rate limits) of 503.13. If Table IV is used, a label or information sheet must be attached to the biosolids packing that explains Table IV (see 503.14). The biosolids must also meet the Class A pathogen limits and one of the vector attraction reduction requirements in 503.33(b)(1)-(b)(8).

II. STANDARD PROVISIONS – PERMIT ACTION – Not Supplemented

III. STANDARD PROVISIONS – MONITORING

A. Sampling and Analyses – This section is a supplement to III.A and III.B of Standard Provisions (Attachment D)

1. Use of Certified Laboratories

Water and waste analyses shall be performed by a laboratory certified for these analyses in accordance with California Water Code Section 13176.

2. Use of Appropriate Minimum Levels

Table C lists the suggested analytical methods for the 126 priority pollutants and other toxic pollutants that should be used, unless a particular method or minimum level (ML) is required in the MRP.

For priority pollutant monitoring, when there is more than one ML value for a given substance, the Discharger may select any one of the analytical methods cited in Table C for compliance determination, or any other method described in 40 CFR part 136 or approved by USEPA (such as the 1600 series) if authorized by the Regional Water Board. However, the ML must be below the effluent limitation and water quality objective. If no ML value is below the effluent limitation and water quality objective, then the method must achieve an ML no greater than the lowest ML value indicated in Table C. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

3. Frequency of Monitoring

The minimum schedule of sampling analysis is specified in the MRP portion of the permit.

a. Timing of Sample Collection

1) The Discharger shall collect samples of influent on varying days selected at random and shall not include any plant recirculation or other sidestream wastes, unless otherwise stipulated by the MRP.

2) The Discharger shall collect samples of effluent on days coincident with influent sampling unless otherwise stipulated by the MRP or the Executive Officer. The Executive Officer may approve an alternative sampling plan if it is demonstrated to be representative of plant discharge flow and in compliance with all other permit requirements.

3) The Discharger shall collect grab samples of effluent during periods of day-time maximum peak effluent flows (or peak flows through secondary treatment units for facilities that recycle effluent flows).

4) Effluent sampling for conventional pollutants shall occur on at least one day of any multiple-day bioassay test the MRP requires. During the course of the test, on at least one day, the Discharger shall collect and retain samples of the discharge. In the event a bioassay test does not comply with permit limits, the Discharger shall analyze these retained samples for pollutants that could be toxic to aquatic life and for which it has effluent limits.

   i. The Discharger shall perform bioassay tests on final effluent samples; when chlorine is used for disinfection, bioassay tests shall be performed on effluent after chlorination-dechlorination; and

   ii. The Discharger shall analyze for total ammonia nitrogen and calculate the amount of un-ionized ammonia whenever test results fail to meet the percent survival specified in the permit.

b. Conditions Triggering Accelerated Monitoring

1) If the results from two consecutive samples of a constituent monitored in a 30-day period exceed the monthly average limit for any parameter (or if the required sampling frequency is once per month and the monthly sample exceeds the monthly average limit), the Discharger shall, within 24 hours after the results are received, increase its sampling frequency to daily until the results from the additional sampling show that the parameter is in compliance with the monthly average limit.

2) If any maximum daily limit is exceeded, the Discharger shall increase its sampling frequency to daily within 24 hours after the results are received that indicate the exceedance of the maximum daily limit until two samples collected on consecutive days show compliance with the maximum daily limit.

3) If final or intermediate results of an acute bioassay test indicate a violation or threatened violation (e.g., the percentage of surviving test organisms of any single acute bioassay test is less than 70 percent), the Discharger shall initiate a new test as soon as practical, and the Discharger shall investigate the cause of the mortalities and report its findings in the next self monitoring report (SMR).

4) The Discharger shall calibrate chlorine residual analyzers against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, the Discharger shall collect grab samples at least every 30 minutes until compliance with the limit is achieved, unless the Discharger monitors chlorine residual continuously. In such cases, the Discharger shall continue to conduct continuous monitoring as required by its permit.

5) When a bypass occurs (except one subject to provision III.A.3.b.6 below), the Discharger shall monitor flows and collect samples on a daily basis for all constituents at affected discharge points that have effluent limits for the duration of

the bypass (including acute toxicity using static renewals), except chronic toxicity, unless otherwise stipulated by the MRP.

6) Unless otherwise stipulated by the MRP, when a bypass approved pursuant to Attachment D, Standard Provisions, Sections I.G.2 or I.G.4, occurs, the Discharger shall monitor flows and, using appropriate procedures as specified in the MRP, collect and retain samples for affected discharge points on a daily basis for the duration of the bypass. The Discharger shall analyze for total suspended solids (TSS) using 24-hour composites (or more frequent increments) and for bacteria indicators with effluent limits using grab samples. If TSS exceeds 45 mg/L in any composite sample, the Discharger shall also analyze the retained samples for that discharge for all other constituents that have effluent limits, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity. Additionally, at least once each year, the Discharger shall analyze the retained samples for one approved bypass discharge event for all other constituents that have effluent limits, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity. This monitoring shall be in addition to the minimum monitoring specified in the MRP.

c. Storm Water Monitoring

The requirements of this section only apply to facilities that are not covered by an NPDES permit for storm water discharges and where not all site storm drainage from process areas (i.e., areas of the treatment facility where chemicals or wastewater could come in contact with storm water) is directed to the headworks. For storm water not directed to the headworks during the wet season (October 1 to April 30), the Discharger shall:

1) Conduct visual observations of the storm water discharge locations during daylight hours at least once per month during a storm event that produces significant storm water discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor, etc.

2) Measure (or estimate) the total volume of storm water discharge, collect grab samples of storm water discharge from at least two storm events that produce significant storm water discharge, and analyze the samples for oil and grease, pH, TSS, and specific conductance.

   The grab samples shall be taken during the first 30 minutes of the discharge. If collection of the grab samples during the first 30 minutes is impracticable, grab samples may be taken during the first hour of the discharge, and the Discharger shall explain in the Annual Report why the grab sample(s) could not be taken in the first 30 minutes.

3) Testing for the presence of non-storm water discharges shall be conducted no less than twice during the dry season (May 1 to September 30) at all storm water discharge locations. Tests may include visual observations of flows, stains, sludges, odors, and other abnormal conditions; dye tests; TV line surveys; or analysis and validation of accurate piping schematics. Records shall be maintained describing the method used, date of testing, locations observed, and test results.

4) Samples shall be collected from all locations where storm water is discharged. Samples shall represent the quality and quantity of storm water discharged from the facility. If a facility discharges storm water at multiple locations, the Discharger may sample a reduced number of locations if it establishes and documents through the monitoring program that storm water discharges from different locations are substantially identical.

5) Records of all storm water monitoring information and copies of all reports required by the permit shall be retained for a period of at least three years from the date of sample, observation, or report.

d. Receiving Water Monitoring

The requirements of this section only apply when the MRP requires receiving water sampling.

1) Receiving water samples shall be collected on days coincident with effluent sampling for conventional pollutants.

2) Receiving water samples shall be collected at each station on each sampling day during the period within one hour following low slack water. Where sampling during lower slack water is impractical, sampling shall be performed during higher slack water. Samples shall be collected within the discharge plume and down current of the discharge point so as to be representative, unless otherwise stipulated in the MRP.

3) Samples shall be collected within one foot of the surface of the receiving water, unless otherwise stipulated in the MRP.

B. Biosolids Monitoring – This section supplements III.B of Standard Provisions (Attachment D)

When biosolids are sent to a landfill, sent to a surface disposal site, or applied to land as a soil amendment, they must be monitored as follows:

1. Biosolids Monitoring Frequency

Biosolids disposal must be monitored at the following frequency:

Metric tons biosolids/365 days	Frequency
0-290	Once per year
290-1500	Quarterly
1500-15,000	Six times per year
Over 15,000	Once per month

(Metric tons are on a dry weight basis)

2. Biosolids Pollutants to Monitor

Biosolids shall be monitored for the following constituents:

Land Application: arsenic, cadmium, copper, mercury, molybdenum, nickel, lead, selenium, and zinc

Municipal Landfill: Paint filter test (pursuant to 40 CFR 258)

Biosolids-only Landfill or Surface Disposal Site (if no liner and leachate system): arsenic, chromium, and nickel

C. Standard Observations – This section is an addition to III of Standard Provisions (Attachment D)

1. Receiving Water Observations

The requirements of this section only apply when the MRP requires standard observations of the receiving water. Standard observations shall include the following:

a. *Floating and suspended materials* (e.g., oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.

b. *Discoloration and turbidity*: description of color, source, and size of affected area.

c. *Odor*: presence or absence, characterization, source, distance of travel, and wind direction.

d. *Beneficial water use*: presence of water-associated waterfowl or wildlife, fisherpeople, and other recreational activities in the vicinity of each sampling station.

e. *Hydrographic condition*: time and height of corrected high and low tides (corrected to nearest National Oceanic and Atmospheric Administration location for the sampling date and time of sample collection).

f. *Weather conditions*:

1) Air temperature; and

2) Total precipitation during the five days prior to observation.

2. Wastewater Effluent Observations

The requirements of this section only apply when the MRP requires wastewater effluent standard observations. Standard observations shall include the following:

a. *Floating and suspended material of wastewater origin* (e.g., oil, grease, algae, and other macroscopic particulate matter): presence or absence.

b. *Odor*: presence or absence, characterization, source, distance of travel, and wind direction.

3. Beach and Shoreline Observations

The requirements of this section only apply when the MRP requires beach and shoreline standard observations. Standard observations shall include the following:

a. *Material of wastewater origin*: presence or absence, description of material, estimated size of affected area, and source.

b. *Beneficial use*: estimate number of people participating in recreational water contact, non-water contact, or fishing activities.

4. Land Retention or Disposal Area Observations

The requirements of this section only apply to facilities with on-site surface impoundments or disposal areas that are in use. This section applies to both liquid and solid wastes, whether confined or unconfined. The Discharger shall conduct the following for each impoundment:

a. Determine the amount of freeboard at the lowest point of dikes confining liquid wastes.

b. Report evidence of leaching liquid from area of confinement and estimated size of affected area. Show affected area on a sketch and volume of flow (e.g., gallons per minute [gpm]).

c. Regarding odor, describe presence or absence, characterization, source, distance of travel, and wind direction.

d. Estimate number of waterfowl and other water-associated birds in the disposal area and vicinity.

5. Periphery of Waste Treatment and/or Disposal Facilities Observations

The requirements of this section only apply when the MRP specifies periphery standard observations. Standard observations shall include the following:

a. *Odor*: presence or absence, characterization, source, and distance of travel.

b. *Weather conditions*: wind direction and estimated velocity.

IV. STANDARD PROVISIONS – RECORDS

A. Records to be Maintained – This supplements IV.A of Standard Provisions (Attachment D)

The Discharger shall maintain records in a manner and at a location (e.g., wastewater treatment plant or Discharger offices) such that the records are accessible to Regional Water Board staff. The minimum period of retention specified in Section IV, Records, of the Federal Standard Provisions shall be extended during the course of any unresolved litigation regarding the subject discharge, or when requested by the Regional Water Board or Regional Administrator of USEPA, Region IX.

A copy of the permit shall be maintained at the discharge facility and be available at all times to operating personnel.

B. Records of monitoring information shall include – This supplements IV.B of Standard Provision (Attachment D)

1. Analytical Information

Records shall include analytical method detection limits, minimum levels, reporting levels, and related quantification parameters.

2. Flow Monitoring Data

For all required flow monitoring (e.g., influent and effluent flows), the additional records shall include the following, unless otherwise stipulated by the MRP:

a. Total volume for each day; and

b. Maximum, minimum, and average daily flows for each calendar month.

3. Wastewater Treatment Process Solids

a. For each treatment unit process that involves solids removal from the wastewater stream, records shall include the following:

1) Total volume or mass of solids removed from each collection unit (e.g., grit, skimmings, undigested biosolids, or combination) for each calendar month or other time period as appropriate, but not to exceed annually; and

2) Final disposition of such solids (e.g., landfill, other subsequent treatment unit).

b. For final dewatered biosolids from the treatment plant as a whole, records shall include the following:

1) Total volume or mass of dewatered biosolids for each calendar month;

2) Solids content of the dewatered biosolids; and

3) Final disposition of dewatered biosolids (disposal location and disposal method).

4. Disinfection Process

For the disinfection process, these additional records shall be maintained documenting process operation and performance:

a. For bacteriological analyses:

1) Wastewater flow rate at the time of sample collection; and

2) Required statistical parameters for cumulative bacterial values (e.g., moving median or geometric mean for the number of samples or sampling period identified in this Order).

b. For the chlorination process, when chlorine is used for disinfection, at least daily average values for the following:

1) Chlorine residual of treated wastewater as it enters the contact basin (mg/L);

2) Chlorine dosage (kg/day); and

3) Dechlorination chemical dosage (kg/day).

5. Treatment Process Bypasses

A chronological log of all treatment process bypasses, including wet weather blending, shall include the following:

a. Identification of the treatment process bypassed;

b. Dates and times of bypass beginning and end;

c. Total bypass duration;

d. Estimated total bypass volume; and

e. Description of, or reference to other reports describing, the bypass event, the cause, the corrective actions taken (except for wet weather blending that is in compliance with permit conditions), and any additional monitoring conducted.

6. Treatment Facility Overflows

This section applies to records for overflows at the treatment facility. This includes the headworks and all units and appurtenances downstream. The Discharger shall retain a chronological log of overflows at the treatment facility and records supporting the information provided in section V.E.2.

C. Claims of Confidentiality – Not Supplemented

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information – Not Supplemented

B. Signatory and Certification Requirements – Not Supplemented

C. Monitoring Reports – This section supplements V.C of Standard Provisions (Attachment D)

1. Self Monitoring Reports

For each reporting period established in the MRP, the Discharger shall submit an SMR to the Regional Water Board in accordance with the requirements listed in this document and at the frequency the MRP specifies. The purpose of the SMR is to document treatment performance, effluent quality, and compliance with the waste discharge requirements of this Order.

a. Transmittal letter

Each SMR shall be submitted with a transmittal letter. This letter shall include the following:

1) Identification of all violations of effluent limits or other waste discharge requirements found during the reporting period;

2) Details regarding violations: parameters, magnitude, test results, frequency, and dates;

3) Causes of violations;

4) Discussion of corrective actions taken or planned to resolve violations and prevent recurrences, and dates or time schedule of action implementation (if previous reports have been submitted that address corrective actions, reference to the earlier reports is satisfactory);

5) Data invalidation (Data should not be submitted in an SMR if it does not meet quality assurance/quality control standards. However, if the Discharger wishes to invalidate any measurement after it was submitted in an SMR, a letter shall identify the measurement suspected to be invalid and state the Discharger's intent to submit, within 60 days, a formal request to invalidate the measurement. This request shall include the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports invalidation [e.g., laboratory sheet, log entry, test results, etc.], and discussion of the corrective actions taken or planned [with a time schedule for completion] to prevent recurrence of the sampling or measurement problem.);

6) If the Discharger blends, the letter shall describe the duration of blending events and certify whether blended effluent was in compliance with the conditions for blending; and

7) Signature (The transmittal letter shall be signed according to Section V.B of this Order, Attachment D – Standard Provisions.).

b. Compliance evaluation summary

Each report shall include a compliance evaluation summary. This summary shall include each parameter for which the permit specifies effluent limits, the number of

samples taken during the monitoring period, and the number of samples that exceed applicable effluent limits.

c. Results of analyses and observations

1) Tabulations of all required analyses and observations, including parameter, date, time, sample station, type of sample, test result, method detection limit, method minimum level, and method reporting level, if applicable, signed by the laboratory director or other responsible official.

2) When determining compliance with an average monthly effluent limitation and more than one sample result is available in a month, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of detected but not quantified (DNQ) or nondetect (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

i. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

ii. 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 which 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.

If a sample result, or the arithmetic mean or median of multiple sample results, is below the reporting limit, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the Discharger conducts a Pollutant Minimization Program, the Discharger shall not be deemed out of compliance.

3) Dioxin-TEQ Reporting: The Discharger shall report for each dioxin and furan congener the analytical results of effluent monitoring, including the quantifiable limit (reporting level), the method detection limit, and the measured concentration. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating dioxin-TEQ, the Discharger shall set congener concentrations below the minimum levels (ML) to zero. The Discharger shall calculate and report dioxin-TEQs using the following formula, where the MLs, toxicity equivalency factors (TEFs), and bioaccumulation equivalency factors (BEFs) are as provided in Table A:

$$\text{Dioxin-TEQ} = \Sigma (C_x \times TEF_x \times BEF_x)$$

where: C_x = measured or estimated concentration of congener x
TEF_x = toxicity equivalency factor for congener x
BEFx = bioaccumulation equivalency factor for congener x

Table A

Minimum Levels, Toxicity Equivalency Factors,
and Bioaccumulation Equivalency Factors

Dioxin or Furan Congener	Minimum Level (pg/L)	1998 Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-TCDD	10	1.0	1.0
1,2,3,7,8-PeCDD	50	1.0	0.9
1,2,3,4,7,8-HxCDD	50	0.1	0.3
1,2,3,6,7,8-HxCDD	50	0.1	0.1
1,2,3,7,8,9-HxCDD	50	0.1	0.1
1,2,3,4,6,7,8-HpCDD	50	0.01	0.05
OCDD	100	0.0001	0.01
2,3,7,8-TCDF	10	0.1	0.8
1,2,3,7,8-PeCDF	50	0.05	0.2
2,3,4,7,8-PeCDF	50	0.5	1.6
1,2,3,4,7,8-HxCDF	50	0.1	0.08
1,2,3,6,7,8-HxCDF	50	0.1	0.2
1,2,3,7,8,9-HxCDF	50	0.1	0.6
2,3,4,6,7,8-HxCDF	50	0.1	0.7
1,2,3,4,6,7,8-HpCDF	50	0.01	0.01
1,2,3,4,7,8,9-HpCDF	50	0.01	0.4
OCDF	100	0.0001	0.02

d. Data reporting for results not yet available

The Discharger shall make all reasonable efforts to obtain analytical data for required parameter sampling in a timely manner. Certain analyses require additional time to complete analytical processes and report results. For cases where required monitoring parameters require additional time to complete analytical processes and reports, and results are not available in time to be included in the SMR for the subject monitoring period, the Discharger shall describe such circumstances in the SMR and include the data for these parameters and relevant discussions of any observed exceedances in the next SMR due after the results are available.

e. Flow data

The Discharger shall provide flow data tabulation pursuant to Section IV.B.2.

f. Annual self monitoring report requirements

By the date specified in the MRP, the Discharger shall submit an annual report to the Regional Water Board covering the previous calendar year. The report shall contain the following:

1) Annual compliance summary table of treatment plant performance, including documentation of any blending events;

2) Comprehensive discussion of treatment plant performance and compliance with the permit (This discussion shall include any corrective actions taken or planned, such as changes to facility equipment or operation practices that may be needed to achieve compliance, and any other actions taken or planned that are intended to improve performance and reliability of the Discharger's wastewater collection, treatment, or disposal practices.);

3) Both tabular and graphical summaries of the monitoring data for the previous year if parameters are monitored at a frequency of monthly or greater;

4) List of approved analyses, including the following:

   (i) List of analyses for which the Discharger is certified;

   (ii) List of analyses performed for the Discharger by a separate certified laboratory (copies of reports signed by the laboratory director of that laboratory shall not be submitted but be retained onsite); and

   (iii) List of "waived" analyses, as approved;

5) Plan view drawing or map showing the Discharger's facility, flow routing, and sampling and observation station locations;

6) Results of annual facility inspection to verify that all elements of the SWPP Plan are accurate and up to date (only required if the Discharger does not route all storm water to the headworks of its wastewater treatment plant); and

7) Results of facility report reviews (The Discharger shall regularly review, revise, and update, as necessary, the O&M Manual, the Contingency Plan, the Spill Prevention Plan, and Wastewater Facilities Status Report so that these documents remain useful and relevant to current practices. At a minimum, reviews shall be conducted annually. The Discharger shall include, in each Annual Report, a description or summary of review and evaluation procedures, recommended or planned actions, and an estimated time schedule for implementing these actions. The Discharger shall complete changes to these documents to ensure they are up-to-date.).

g. Report submittal

The Discharger shall submit SMRs to:

California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
Attn: NPDES Wastewater Division

h. Reporting data in electronic format

The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. If the Discharger chooses to submit SMRs electronically, the following shall apply:

1) *Reporting Method*: The Discharger shall submit SMRs electronically via a process approved by the Executive Officer (see, for example, the letter dated December 17, 1999, "Official Implementation of Electronic Reporting System [ERS]" and the progress report letter dated December 17, 2000).

2) *Monthly or Quarterly Reporting Requirements*: For each reporting period (monthly or quarterly as specified in the MRP), the Discharger shall submit an electronic SMR to the Regional Water Board in accordance with the provisions of Section V.C.1.a-e, except for requirements under Section V.C.1.c(1) where ERS does not have fields for dischargers to input certain information (e.g., sample time). However, until USEPA approves the electronic signature or other signature technologies, Dischargers that use ERS shall submit a hard copy of the original transmittal letter, an ERS printout of the data sheet, and a violation report (a receipt of the electronic transmittal shall be retained by the Discharger). This electronic SMR submittal suffices for the signed tabulations specified under Section V.C.1.c(1).

3) *Annual Reporting Requirements*: Dischargers who have submitted data using the ERS for at least one calendar year are exempt from submitting the portion of the annual report required under Section V.C.1.f(1) and (3).

D. Compliance Schedules – Not supplemented

E. Twenty-Four Hour Reporting – This section supplements V.E of Standard Provision (Attachment D)

1. Spill of Oil or Other Hazardous Material Reports

a. Within 24 hours of becoming aware of a spill of oil or other hazardous material that is not contained onsite and completely cleaned up, the Discharger shall report by telephone to the Regional Water Board at (510) 622-2369.

b. The Discharger shall also report such spills to the State Office of Emergency Services [telephone (800) 852-7550] only when the spills are in accordance with applicable reporting quantities for hazardous materials.

c. The Discharger shall submit a written report to the Regional Water Board within five working days following telephone notification unless directed otherwise by Regional Water Board staff. A report submitted electronically is acceptable. The written report shall include the following:

1) Date and time of spill, and duration if known;

2) Location of spill (street address or description of location);

3) Nature of material spilled;

4) Quantity of material involved;

5) Receiving water body affected, if any;

6) Cause of spill;

7) Estimated size of affected area;

8) Observed impacts to receiving waters (e.g., oil sheen, fish kill, water discoloration);

9) Corrective actions taken to contain, minimize, or clean up the spill;

10) Future corrective actions planned to be taken to prevent recurrence, and schedule of implementation; and

11) Persons or agencies notified.

2. Unauthorized Discharges from Municipal Wastewater Treatment Plants[1]

The following requirements apply to municipal wastewater treatment plants that experience an unauthorized discharge at their treatment facilities and are consistent with and supercede requirements imposed on the Discharger by the Executive Officer by letter of May 1, 2008, issued pursuant to California Water Code Section 13383.

a. Two (2)-Hour Notification

For any unauthorized discharges that result in a discharge to a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services (telephone 800-852-7550), the local health officers or directors of environmental health with jurisdiction over the affected water bodies, and the Regional Water Board. The notification to the Regional Water Board shall be via the Regional Water Board's online reporting system at www.wbers.net, and shall include the following:

1) Incident description and cause;

2) Location of threatened or involved waterway(s) or storm drains;

3) Date and time the unauthorized discharge started;

4) Estimated quantity and duration of the unauthorized discharge (to the extent known), and the estimated amount recovered;

[1] California Code of Regulations, Title 23, Section 2250(b), defines an unauthorized discharge to be a discharge, not regulated by waste discharge requirements, of treated, partially treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment or disposal system.

5) Level of treatment prior to discharge (e.g., raw wastewater, primary treated, undisinfected secondary treated, and so on); and

6) Identity of the person reporting the unauthorized discharge.

b. 24-hour Certification

Within 24 hours, the Discharger shall certify to the Regional Water Board, at www.wbers.net, that the State Office of Emergency Services and the local health officers or directors of environmental health with jurisdiction over the affected water bodies have been notified of the unauthorized discharge.

c. 5-Day Written Report

Within five business days, the Discharger shall submit a written report, via the Regional Water Board's online reporting system at www.wbers.net, that includes, in addition to the information required above, the following:

1) Methods used to delineate the geographical extent of the unauthorized discharge within receiving waters;

2) Efforts implemented to minimize public exposure to the unauthorized discharge;

3) Visual observations of the impacts (if any) noted in the receiving waters (e.g., fish kill, discoloration of water) and the extent of sampling if conducted;

4) Corrective measures taken to minimize the impact of the unauthorized discharge;

5) Measures to be taken to minimize the chances of a similar unauthorized discharge occurring in the future;

6) Summary of Spill Prevention Plan or O&M Manual modifications to be made, if necessary, to minimize the chances of future unauthorized discharges; and

7) Quantity and duration of the unauthorized discharge, and the amount recovered.

d. Communication Protocol

To clarify the multiple levels of notification, certification, and reporting, the current communication requirements for unauthorized discharges from municipal wastewater treatment plants are summarized in Table B that follows.

Table B

Summary of Communication Requirements for Unauthorized Discharges[1] from Municipal Wastewater Treatment Plants

Discharger is required to:	Agency Receiving Information	Time frame	Method for Contact
1. Notify	California Emergency Management Agency (Cal EMA)	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Telephone – (800) 852-7550 (obtain a control number from Cal EMA)
	Local health department	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Depends on local health department
	Regional Water Board	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Electronic[2] www.wbers.net
2. Certify	Regional Water Board	As soon as possible, but not later than **24 hours** after becoming aware of the unauthorized discharge.	Electronic[3] www.wbers.net
3. Report	Regional Water Board	Within **5 business days** of becoming aware of the unauthorized discharge.	Electronic[4] www.wbers.net

[1] California Code of Regulations, Title 23, Section 2250(b), defines an unauthorized discharge to be a discharge, not regulated by waste discharge requirements, of treated, partially treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment or disposal system.

[2] In the event that the Discharger is unable to provide online notification within 2 hours of becoming aware of an unauthorized discharge, it shall phone the Regional Water Board's spill hotline at (510) 622-2369 and convey the same information contained in the notification form. In addition, within 3 business days of becoming aware of the unauthorized discharge, the Discharger shall enter the notification information into the Regional Water Board's online system in electronic format.

[3] In most instances, the 2-hour notification will also satisfy 24-hour certification requirements. This is because the notification form includes fields for documenting that OES and the local health department have been contacted. In other words, if the Discharger is able to complete all the fields in the notification form within 2 hours, certification requirements are also satisfied. In the event that the Discharger is unable to provide online certification within 24 hours of becoming aware of an unauthorized discharge, it shall phone the Regional Water Board's spill hotline at (510) 622-2369 and convey the same information contained in the certification form. In addition, within 3 business days of becoming aware of the unauthorized discharge, the Discharger shall enter the certification information into the Regional Water Board's online system in electronic format.

[4] If the Discharger cannot satisfy the 5-day reporting requirements via the Regional Water Board's online reporting system, it shall submit a written report (preferably electronically in pdf) to the appropriate Regional Water Board case manager. In cases where the Discharger cannot satisfy the 5-day reporting requirements via the online reporting system, it must still complete the Regional Water Board's online reporting requirements within 15 calendar days of becoming aware of the unauthorized discharge.

F. Planned Changes – Not supplemented

G. Anticipated Noncompliance – Not supplemented

H. Other Noncompliance – Not supplemented

I. Other Information – Not supplemented

VI. STANDARD PROVISIONS – ENFORCEMENT – Not Supplemented

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS – Not Supplemented

VIII. DEFINITIONS – This section is an addition to Standard Provisions (Attachment D)

More definitions can be found in Attachment A of this NPDES Permit.

1. Arithmetic Calculations

   a. Geometric mean is the antilog of the log mean or the back-transformed mean of the logarithmically transformed variables, which is equivalent to the multiplication of the antilogarithms. The geometric mean can be calculated with either of the following equations:

   $$\text{Geometric Mean} = Anti\log\left(\frac{1}{N}\sum_{i=1}^{N} Log(C_i)\right)$$

   or

   $$\text{Geometric Mean} = (C_1 * C_2 * \ldots * C_N)^{1/N}$$

   Where "N" is the number of data points for the period analyzed and "C" is the concentration for each of the "N" data points.

   b. Mass emission rate is obtained from the following calculation for any calendar day:

   $$\text{Mass emission rate (lb/day)} = \frac{8.345}{N}\sum_{i=1}^{N} Q_i C_i$$

   $$\text{Mass emission rate (kg/day)} = \frac{3.785}{N}\sum_{i=1}^{N} Q_i C_i$$

   In which "N" is the number of samples analyzed in any calendar day and "Q_i" and "C_i" are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the "N" grab samples that may be taken in any calendar day. If a composite sample is taken, "C_i" is the concentration measured in the composite sample and "Q_i" is the average flow rate occurring during the period over which the samples are composited. The daily concentration of a constituent measured over any calendar day shall be determined from the flow-weighted average of the same constituent in the combined waste streams as follows:

C_d = Average daily concentration = $\frac{1}{Q_t}\sum_{i=1}^{N} Q_i C_i$

In which "N" is the number of component waste streams and "Q" and "C" are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the "N" waste streams. "Q_t" is the total flow rate of the combined waste streams.

c. Maximum allowable mass emission rate, whether for a 24-hour, weekly 7-day, monthly 30-day, or 6-month period, is a limitation expressed as a daily rate determined with the formulas in the paragraph above, using the effluent concentration limit specified in the permit for the period and the specified allowable flow.

d. POTW removal efficiency is the ratio of pollutants removed by the treatment facilities to pollutants entering the treatment facilities (expressed as a percentage). The Discharger shall determine removal efficiencies using monthly averages (by calendar month unless otherwise specified) of pollutant concentration of influent and effluent samples collected at about the same time and using the following equation (or its equivalent):

Removal Efficiency (%) = 100 × [1-(Effluent Concentration/Influent Concentration)]

2. Biosolids means the solids, semi-liquid suspensions of solids, residues, screenings, grit, scum, and precipitates separated from or created in wastewater by the unit processes of a treatment system. It also includes, but is not limited to, all supernatant, filtrate, centrate, decantate, and thickener overflow and underflow in the solids handling parts of the wastewater treatment system.

3. Blending is the practice of recombining wastewater that has been biologically treated with wastewater that has bypassed around biological treatment units.

4. Bottom sediment sample is (1) a separate grab sample taken at each sampling station for the determination of selected physical-chemical parameters, or (2) four grab samples collected from different locations in the immediate vicinity of a sampling station while the boat is anchored and analyzed separately for macroinvertebrates.

5. Composite sample is a sample composed of individual grab samples collected manually or by an automatic sampling device on the basis of time or flow as specified in the MRP. For flow-based composites, the proportion of each grab sample included in the composite sample shall be within plus or minus five percent (+/-5%) of the representative flow rate of the waste stream being measured at the time of grab sample collection. Alternatively, equal volume grab samples may be individually analyzed with the flow-weighted average calculated by averaging flow-weighted ratios of each grab sample analytical result. Grab samples comprising time-based composite samples shall be collected at intervals not greater than those specified in the MRP. The quantity of each grab sample comprising a time-based composite sample shall be a set of flow proportional volumes as specified in the MRP. If a particular time-based or flow-based composite sampling protocol is not specified in the MRP, the Discharger shall determine and implement the most representative sampling protocol for the given parameter subject to Executive Officer approval.

6. Depth-integrated sample is defined as a water or waste sample collected by allowing a sampling device to fill during a vertical traverse in the waste or receiving water body being sampled. The

Discharger shall collect depth-integrated samples in such a manner that the collected sample will be representative of the waste or water body at that sampling point.

7. Flow sample is an accurate measurement of the average daily flow volume using a properly calibrated and maintained flow measuring device.

8. Grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples represent only the condition that exists at the time the wastewater is collected.

9. Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with receiving water around the point of discharge.

10. Overflow is the intentional or unintentional spilling or forcing out of untreated or partially treated wastes from a transport system (e.g., through manholes, at pump stations, and at collection points) upstream from the treatment plant headworks or from any part of a treatment plant facility.

11. Priority pollutants are those constituents referred to in 40 CFR Part 122 as promulgated in the Federal Register, Vol. 65, No. 97, Thursday, May 18, 2000, also known as the California Toxics Rule, the presence or discharge of which could reasonably be expected to interfere with maintaining designated uses.

12. Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

13. Toxic pollutant means any pollutant listed as toxic under federal Clean Water Act section 307(a)(1) or under 40 CFR 401.15.

14. Untreated waste is raw wastewater.

15. Waste, waste discharge, discharge of waste, and discharge are used interchangeably in the permit. The requirements of the permit apply to the entire volume of water, and the material therein, that is disposed of to surface and ground waters of the State of California.

Table C

List of Monitoring Parameters and Analytical Methods

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
1.	Antimony	204.2					10	5	50	0.5	5	0.5		1000
2.	Arsenic	206.3				20		2	10	2	2	1		1000
3.	Beryllium						20	0.5	2	0.5	1			1000
4.	Cadmium	200 or 213				10	0.5	10	0.25	0.5				1000
5a.	Chromium (III)	SM 3500												
5b.	Chromium (VI)	SM 3500				10	5							1000
6.	Copper	200.9					25	5	10	0.5	2			1000
7.	Lead	200.9					20	5	5	0.5	2			10,000
8.	Mercury	1631 (note)[3]												
9.	Nickel	249.2					50	5	20	1	5			1000
10.	Selenium	200.8 or SM 3114B or C						5	10	2	5	1		1000
11.	Silver	272.2					10	1	10	0.25	2			1000
12.	Thallium	279.2					10	2	10	1	5			1000
13.	Zinc	200 or 289					20		20	1	10			
14.	Cyanide	SM 4500 CN^- C or I				5								
15.	Asbestos (only required for dischargers to MUN waters)[4]	0100.2 [5]												
16.	2,3,7,8-TCDD and 17 congeners (Dioxin)	1613												
17.	Acrolein	603	2.0	5										
18.	Acrylonitrile	603	2.0	2										
19.	Benzene	602	0.5	2										
33.	Ethylbenzene	602	0.5	2										
39.	Toluene	602	0.5	2										

[1] The suggested method is the USEPA Method unless otherwise specified (SM = Standard Methods). The Discharger may use another USEPA-approved or recognized method if that method has a level of quantification below the applicable water quality objective. Where no method is suggested, the Discharger has the discretion to use any standard method.

[2] Minimum levels are from the *State Implementation Policy*. They are the concentration of the lowest calibration standard for that technique based on a survey of contract laboratories. Laboratory techniques are defined as follows: GC = Gas Chromatography; GCMS = Gas Chromatography/Mass Spectrometry; LC = High Pressure Liquid Chromatography; Color = Colorimetric; FAA = Flame Atomic Absorption; GFAA = Graphite Furnace Atomic Absorption; ICP = Inductively Coupled Plasma; ICPMS = Inductively Coupled Plasma/Mass Spectrometry; SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption (i.e., USEPA 200.9); Hydride = Gaseous Hydride Atomic Absorption; CVAA = Cold Vapor Atomic Absorption; DCP = Direct Current Plasma.

[3] The Discharger shall use ultra-clean sampling (USEPA Method 1669) and ultra-clean analytical methods (USEPA Method 1631) for mercury monitoring. The minimum level for mercury is 2 ng/l (or 0.002 ug/l).

[4] MUN = Municipal and Domestic Supply. This designation, if applicable, is in the Findings of the permit.

[5] *Determination of Asbestos Structures over 10 [micrometers] in Length in Drinking Water Using MCE Filters*, USEPA 600/R-94-134, June 1994.

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
20.	Bromoform	601	0.5	2										
21.	Carbon Tetrachloride	601	0.5	2										
22.	Chlorobenzene	601	0.5	2										
23.	Chlorodibromomethane	601	0.5	2										
24.	Chloroethane	601	0.5	2										
25.	2-Chloroethylvinyl Ether	601	1	1										
26.	Chloroform	601	0.5	2										
75.	1,2-Dichlorobenzene	601	0.5	2										
76.	1,3-Dichlorobenzene	601	0.5	2										
77.	1,4-Dichlorobenzene	601	0.5	2										
27.	Dichlorobromomethane	601	0.5	2										
28.	1,1-Dichloroethane	601	0.5	1										
29.	1,2-Dichloroethane	601	0.5	2										
30.	1,1-Dichloroethylene or 1,1-Dichloroethene	601	0.5	2										
31.	1,2-Dichloropropane	601	0.5	1										
32.	1,3-Dichloropropylene or 1,3-Dichloropropene	601	0.5	2										
34.	Methyl Bromide or Bromomethane	601	1.0	2										
35.	Methyl Chloride or Chloromethane	601	0.5	2										
36.	Methylene Chloride or Dichlorormethane	601	0.5	2										
37.	1,1,2,2-Tetrachloroethane	601	0.5	1										
38.	Tetrachloroethylene	601	0.5	2										
40.	1,2-Trans-Dichloroethylene	601	0.5	1										
41.	1,1,1-Trichloroethane	601	0.5	2										
42.	1,1,2-Trichloroethane	601	0.5	2										
43.	Trichloroethene	601	0.5	2										
44.	Vinyl Chloride	601	0.5	2										
45.	2-Chlorophenol	604	2	5										
46.	2,4-Dichlorophenol	604	1	5										
47.	2,4-Dimethylphenol	604	1	2										
48.	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10	5										
49.	2,4-Dinitrophenol	604	5	5										
50.	2-Nitrophenol	604		10										
51.	4-Nitrophenol	604	5	10										
52.	3-Methyl-4-Chlorophenol	604	5	1										
53.	Pentachlorophenol	604	1	5										
54.	Phenol	604	1	1		50								
55.	2,4,6-Trichlorophenol	604	10	10										
56.	Acenaphthene	610 HPLC	1	1	0.5									
57.	Acenaphthylene	610 HPLC		10	0.2									
58.	Anthracene	610 HPLC		10	2									
60.	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	10	5										
61.	Benzo(a)Pyrene	610 HPLC		10	2									
62.	Benzo(b)Fluoranthene or 3,4 Benzofluoranthene	610 HPLC		10	10									
63.	Benzo(ghi)Perylene	610 HPLC		5	0.1									

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
64.	Benzo(k)Fluoranthene	610 HPLC		10	2									
74.	Dibenzo(a,h)Anthracene	610 HPLC		10	0.1									
86.	Fluoranthene	610 HPLC	10	1	0.05									
87.	Fluorene	610 HPLC		10	0.1									
92.	Indeno(1,2,3-cd) Pyrene	610 HPLC		10	0.05									
100.	Pyrene	610 HPLC		10	0.05									
68.	Bis(2-Ethylhexyl)Phthalate	606 or 625	10	5										
70.	Butylbenzyl Phthalate	606 or 625	10	10										
79.	Diethyl Phthalate	606 or 625	10	2										
80.	Dimethyl Phthalate	606 or 625	10	2										
81.	Di-n-Butyl Phthalate	606 or 625		10										
84.	Di-n-Octyl Phthalate	606 or 625		10										
59.	Benzidine	625		5										
65.	Bis(2-Chloroethoxy)Methane	625		5										
66.	Bis(2-Chloroethyl)Ether	625	10	1										
67.	Bis(2-Chloroisopropyl)Ether	625	10	2										
69.	4-Bromophenyl Phenyl Ether	625	10	5										
71.	2-Chloronaphthalene	625		10										
72.	4-Chlorophenyl Phenyl Ether	625		5										
73.	Chrysene	625		10	5									
78.	3,3'-Dichlorobenzidine	625		5										
82.	2,4-Dinitrotoluene	625	10	5										
83.	2,6-Dinitrotoluene	625		5										
85.	1,2-Diphenylhydrazine (note)[6]	625		1										
88.	Hexachlorobenzene	625	5	1										
89.	Hexachlorobutadiene	625	5	1										
90.	Hexachlorocyclopentadiene	625	5	5										
91.	Hexachloroethane	625	5	1										
93.	Isophorone	625	10	1										
94.	Naphthalene	625	10	1	0.2									
95.	Nitrobenzene	625	10	1										
96.	N-Nitrosodimethylamine	625	10	5										
97.	N-Nitrosodi-n-Propylamine	625	10	5										
98.	N-Nitrosodiphenylamine	625	10	1										
99.	Phenanthrene	625		5	0.05									
101.	1,2,4-Trichlorobenzene	625	1	5										
102.	Aldrin	608	0.005											
103.	α-BHC	608	0.01											
104.	β-BHC	608	0.005											
105.	γ-BHC (Lindane)	608	0.02											
106.	δ-BHC	608	0.005											
107.	Chlordane	608	0.1											
108.	4,4'-DDT	608	0.01											
109.	4,4'-DDE	608	0.05											
110.	4,4'-DDD	608	0.05											

[6] Measurement for 1,2-Diphenylhydrazine may use azobenzene as a screen: if azobenzene is measured at >1 ug/l, then the Discharger shall analyze for 1,2-Diphenylhydrazine.

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
111.	Dieldrin	608	0.01											
112.	Endosulfan (alpha)	608	0.02											
113.	Endosulfan (beta)	608	0.01											
114.	Endosulfan Sulfate	608	0.05											
115.	Endrin	608	0.01											
116.	Endrin Aldehyde	608	0.01											
117.	Heptachlor	608	0.01											
118.	Heptachlor Epoxide	608	0.01											
119-125	PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260	608	0.5											
126.	Toxaphene	608	0.5											

APPENDIX B

Bay Area Clean Water Agencies
A Joint Powers Public Agency
Leading the Way to Protect our Bay

December 21, 2009

VIA EMAIL: wjohnson@waterboards.ca.gov, bwolfe@waterboards.ca.gov, ltang@waterboards.ca.gov

Mr. Bill Johnson
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Comments on Tentative Order for Amendment of Discharge Permits

Dear Mr. Johnson:

The Bay Area Clean Water Agencies (BACWA) and its members appreciate the opportunity to comment on the Tentative Order (TO) for amendment of discharge permits. BACWA member agencies are public agencies, governed by elected officials and managed by professionals who are dedicated to protecting our water environment and the public health. BACWA members own and operate publicly-owned treatment works (POTWs) that collectively serve over 6.5 million people in the nine-county Bay Area.

BACWA appreciates the substantial effort the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) staff has put into developing this amendment, which updates existing standard provisions and other requirements and applies them consistently to all POTW permits. The Regional Water Board oversees the issuance of and compliance with more than one-fifth of the State's major NPDES permits. Over time, and with repeated reissuance, differences in permit language and requirements have emerged, even in the "standard provisions." This permit amendment is an efficient mechanism for ensuring consistency across these permits. In the interests of further standardizing POTW requirements, we ask that the Regional Water Board also establish baseline requirements for monitoring of approved bypasses.

For approved bypasses, establish standard monitoring requirements and create consistency across the region for POTWs.

BACWA requests changes to the Attachment G language that we believe will further the Regional Water Board's objective of uniformity. As shown in Sections 4.f. through 4.i., the permit language varies for the fourteen wastewater treatment plants that currently have permission to conduct alternate monitoring during certain types of bypasses. BACWA requests that the Regional Water Board establish baseline monitoring requirements for approved bypasses for purposes of determining compliance. If, considering particular plants' treatment processes or compliance history, additional monitoring is necessary and appropriate, these plants' individual permit monitoring programs may be revised accordingly, but the starting points for all POTWs would be the same.

Allow the use of TSS as an indicator parameter.

BACWA requests that the Attachment G standard provisions differentiate between monitoring requirements for approved versus non-approved bypass. BACWA recognizes that since protection of human health and the environment are of paramount concern, it is reasonable to expect that an agency begin monitoring of all permitted pollutants on a daily basis for the duration of an unplanned bypass, or until the event can otherwise be sufficiently controlled.

On the other hand, there are two situations in which a wastewater treatment plant may be approved by the Regional Water Board to bypass portions of its treatment processes. Multiple BACWA agencies have wastewater treatment plants that are designed and permitted to bypass portions of the treatment process during high-flow wet-weather events. NPDES permits also provide a procedure whereby a wastewater treatment plant may request approval to perform a planned and carefully controlled bypass event during exceptional maintenance or replacement of equipment. Because, under either approved bypass scenario, the wastewater treatment plant maintains full control of its operations and monitors treatment processes and effluent conditions that could impact receiving water quality, a substantial increase in monitoring during these events is unwarranted.

For approved bypasses, BACWA asks that the Regional Water Board allow the use of Total Suspended Solids (TSS) as an indicator for other parameters. Some POTWs are currently allowed to use this approach, in which the composite samples are collected and retained and, should the daily TSS value exceed the weekly average effluent limit, the samples are analyzed for additional constituents. Accelerated monitoring of TSS during an authorized bypass may be used as a surrogate trigger in lieu of monitoring for Biochemical Oxygen Demand (BOD), pathogens, metals, and other pollutants. Data available from Bay Area POTWs, and a Water Research Environment Federation (WERF) study, show that TSS is a reliable and practical indicator of plant performance and compliance with effluent limits during approved bypasses. Studies of effluent quality and TSS as an indicator of effluent quality have been submitted to the Regional Water Board in response to individual plants' NPDES permit provisions. However, if the Regional Water Board would like to view the data that are the basis for this request, BACWA will provide TSS and effluent quality data collected for Bay Area plants during approved bypasses, as well as the WERF study.

Grab sampling should not be required during approved bypasses.

Sampling of approved bypasses for mercury, bacteria, and oil and grease, presents considerable challenges and provides little information, which is why this monitoring has been eliminated from some POTW permits. Mercury, bacteria, and oil and grease must be collected as grab samples. The magnitude and duration of high flow wet weather bypass events cannot be predicted in advance. This creates logistical challenges in collecting grab samples that are representative of effluent quality during bypass events, especially if appropriately trained sampling personnel are not present. During large storm events, additional trained sampling personnel may be required to reduce safety issues involved in collecting grab samples.

Mercury samples must be individually grab sampled using "clean hands, dirty hands" technique, which requires at least two trained staff and special sampling containers. Bay Area POTW sampling results, including the results in the WERF study, show concentrations in approved bypasses are below effluent limits. Mercury sampling, therefore, is not necessary as concentrations in approved bypasses are not expected to exceed effluent limits, and the sampling requirements are onerous.

Bacteria sampling presents additional constraints because bacteriological samples have a six hour hold time limit prior to analysis that may not be achievable for samples collected during off-hours bypass events. Except during significant disinfection equipment and/or operational failure, available data show that effluent quality remains in compliance with bacteriological effluent limits during approved high flow wet weather bypass events. The WERF blending study provides extensive documentation of compliance with bacteriological limits. If a discharger requests approval for temporary bypass of its disinfection unit, then special monitoring conditions should be added to the permit rather than to these standard provisions.

Each oil and grease sampling event requires the collection of three grab samples taken at equal intervals during the sampling day and specific sample handling/preparation techniques. Noncompliance with oil and grease effluent limits is rare for POTWs and not expected to occur any more often during approved bypasses. Requiring sampling for oil and grease during every approved bypass is unnecessary, especially considering the challenges of collecting and handling these grab samples during inclement weather.

Dioxin analysis should not be required for every approved bypass.

BACWA requests that dioxin sampling not be routinely required for approved bypasses. Sample analysis for dioxins frequently costs more than $1,000 for each sample. Depending on the severity of a storm season, the costs of dioxin analysis alone could be very large, potentially consuming a significant portion of a POTW's annual budget for analytical procedures. Dioxins have been shown to correlate well with TSS concentrations and therefore should only be analyzed if needed.

Remove the requirement that approved bypasses be monitored for acute toxicity.

The new Attachment G specifically requires acute toxicity tests using static renewals during any type of bypass. Acute whole effluent toxicity tests require archival of sufficient water volume to conduct a 96-hour test. If acute toxicity is to be conducted during bypass events, test procedures will have to be modified significantly to account for holding time constraints, and because flow-through or daily test renewals cannot be made with a single grab sample. The modification of normal sample hold time from 24 to 48 hours seriously compromises the integrity of the test. Furthermore, there is a problem with acquiring test organisms for an unplanned toxicity test. Acute test organisms must be pre-ordered and often require an acclimation period prior to commencing a test. It is virtually impossible to conduct valid whole effluent toxicity tests on an ad hoc basis.

To implement these requests, BACWA asks that paragraphs 4.e. through 4.i., be removed from the amendment. These paragraphs contain the specific bypass monitoring requirements that are currently required by the fourteen different NPDES permits that authorize alternate monitoring in prescribed situations. In addition to, and concurrently with, removal of paragraphs 4.e. through 4.i., BACWA requests that language on page G-8 be revised as follows:

b. Conditions Triggering Accelerated Monitoring

5) During an approved bypass, ~~When any type of bypass occurs,~~ the Discharger shall collect and retain samples on a daily basis for all constituents at affected discharge points that have effluent limits for the duration of the bypass ~~(including acute toxicity using static renewals)~~, except for chronic and acute toxicity, dioxins, furans, mercury, pathogen indicators, and oil and grease, unless otherwise stipulated by the MRP.

The Discharger shall analyze samples for total suspended solids (TSS) with 24-hour composite or more frequent increments, and monitor flow. If a daily (or lesser frequency) TSS value exceeds the weekly average effluent limit, the Discharger shall perform analysis of the retained samples for the duration of the bypass or until the TSS values fall below the weekly average effluent limit. The Dischargers shall comply with holding times for the retained samples.

6) In the event of an unplanned or unapproved bypass event, the Discharger shall collect samples on a daily basis and perform analysis for all constituents at affected discharge points that have effluent limits for the duration of the bypass.

Remove the duplicative requirement that unauthorized discharges be reported within two hours.

POTWs are currently required to report unauthorized bypasses within two hours by a letter dated May 1, 2008 from Bruce Wolfe to the Bay Area Municipal Wastewater Treatment Plants, and by the State Water Resources Control Board's Waste Discharge Requirements for Sanitary Sewer Overflows (Order No. 2008-0002-EXEC). Revision of either of these documents could create requirements that are inconsistent with the standard provisions. In the interests of simplicity and consistency, Attachment G should not duplicate them, and we ask that the two-hour notification requirement on page G-20 be removed.

Clarify the language regarding the use of appropriate Minimum Levels.

BACWA requests that language at Section III.A.2. (page G-7) "Use of Appropriate Minimum Levels" be modified so that it does not appear to restrict dischargers from using any appropriate EPA-approved analytical method to achieve a Minimum Level (ML) below the effluent

limitation and the water quality objective. For example, a GC/MS method could be used in place of EPA Method 601 as long as the ML is below the effluent limitation and the water quality objective. Most POTWs currently use the GC/MS method, because the August 6, 2001 letter from Loretta K. Barsamian to Bay Area Permitted Wastewater Dischargers makes it clear that EPA-approved methods that meet equivalent ML values are acceptable. We believe that the Regional Water Board does not intend to restrict which federally-approved methods may be used for NPDES compliance purposes, but ask that this intent be reflected in the tentative order. We suggest the following changes to the language on page G-7 to clarify:

2. Use of Appropriate Minimum Levels

> For priority pollutant monitoring, when there is more than one ML value for a given substance, the Discharger may select any 40 CFR part 136 Clean Water Act approved method, or method specified by the Regional Water Board, ~~one of those cited analytical methods~~ for compliance determination provided the ML is below the effluent limitation and the water quality objective, or has an ML value that does not exceed the MLs listed in Table C for the analyte of interest. If no ML value is below the effluent limitation and water quality objective, then the Regional Water Board will assign the lowest ML value indicated in Table C, and its associated analytical method for inclusion in the MRP. The discharger is responsible for choosing a 40 C.F.R. or Regional Water Board approved method to comply. For effluent monitoring, this ~~alternate~~ method shall also be U.S. EPA-approved (such as the 1600 series) or one of those listed in Table C. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

BACWA appreciates the Regional Water Board's attention to the comments made herein. Representatives are happy to meet with staff to discuss these comments, and to provide additional information as needed.

Respectfully submitted,

David W. Tucker
BACWA Executive Board Chair

cc: BACWA Executive Board
James Ervin, BACWA Permits Committee Chair
Bruce Wolfe, Regional Water Board
Lila Tang, Regional Water Board

PSSEP
Partnership for Sound Science in Environmental Policy

December 19, 2009

Mr. Bill Johnson
San Francisco Bay
Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Via Email to: wjohnson@waterboards.ca.gov

Craig S.J. Johns
Program Manager

Re: Draft "Blanket" NPDES Permit Regarding Dioxins (11/17/2009)

Dear Mr. Johnson:

The Partnership for Sound Science in Environmental Policy (PSSEP) is an association of San Francisco Bay area and statewide public and private entities – businesses, municipal wastewater treatment agencies, trade associations and community organizations. PSSEP and its members support and promote regulatory actions that are based on sound science and achieve reasonable protection of human health and the environment. We appreciate the opportunity to provide these comments on the draft "blanket" NPDES Permit regarding dioxins as proposed in the Regional Board Staff's November 17, 2009 Tentative Order (hereafter, "Draft TO").

PSSEP writes in ***support*** of the Draft TO, and appreciates the very dedicated and hard work Staff has committed to developing this permit amendment. PSSEP specifically supports the well-reasoned, technically supportable, and legally valid approach that Staff proposes for calculating dioxin and furan equivalents ("dioxin-TEQ"). The approach recommended by your Staff will ensure the highest and most appropriate protection of water quality and the Bay Area ecosystem because it places emphasis on those dioxin congeners that have the highest level of bioaccumulation potential. By focusing on the "bioaccumulation equivalency factors" (BEFs) associated with each dioxin congener, the Regional Board's regulatory focus is more appropriately aimed at the dioxin congeners which have the potential to cause more serious harm.

Calculating dioxin-TEQ using the BEF approach recommended by your staff is certainly not new. As noted in the Fact Sheet accompanying the Tentative Order, US EPA has followed this calculation method since 1995 as part of the "Great Lakes Water Quality Initiative." Furthermore, ***both*** US EPA Region IX ***and*** the San Francisco Regional Board relied on this exact dioxin-TEQ calculation approach when it recently adopted the City of San Francisco's Oceanside Plant NPDES permit. (*See*, Order No. R2-2009-062, August 12, 2009.)

Fundamentally supporting the previous decision by US EPA Region IX and the San Francisco Regional Board, and on which the current Staff recommendation is based, are the conclusions derived from a panel of dioxin experts convened under the auspices of the San Francisco Estuary Institute in February, 2008. In relevant part, that expert panel recommended the BEF approach to calculating dioxin-TEQ values, and further concluded that using BEFs derived from the Great Lakes Water Quality Initiative is appropriate unless and until suitable data are available to establish site-specific BEFs for San Francisco Bay. As such, the Tentative Order being considered by the Regional Board is based upon the most up-to-date and sound science available on this topic.

For all of these reasons, PSSEP ***strongly*** urges the Regional Board to adopt the Tentative Order as recommended by Staff, and appreciates the opportunity to provide these comments on the "blanket" NPDES Permit regarding dioxins as proposed in the Regional Board Staff's November 17, 2009 Tentative Order.

Sincerely,

Craig S.J. Johns
Program Manager

SAN FRANCISCO BAYKEEPER

Bill Johnson
Senior Environmental Scientist
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
WJohnson@waterboards.ca.gov
sent via electronic mail

December 21, 2009

Re: Proposed Tentative Order R2-2009, Amendment of Waste Discharge Requirements for Municipal and Industrial Dischargers

Dear Mr. Johnson:

Thank you for the opportunity to comment on the proposed Tentative Order ("TO") to add bioaccumulation equivalency factors ("BEF"), and to reduce the minimum detection level ("ML") reporting requirement for dioxins and furans. San Francisco Baykeeper has long fought to reduce toxic loading to San Francisco Bay, and is very concerned about the detrimental effects that this TO would create by establishing less stringent measures for dioxin and furan effluent discharges. Dioxins and furans are, by their nature, detrimental to aquatic wildlife, particularly fish eating wildlife. Dioxins have been acknowledged as being one of four classes of pollutants as having the most severe impacts on bay water quality. [1] The entire Bay is impaired by dioxins, and this proposed TO permits an increase of dioxin and furan concentrations within existing effluent limitations.

Individually, and taken together, these changes would permit an increase in the total volume of dioxin/furan discharges to the San Francisco Bay. At the same time, the TO fails to include any requirements to reduce dioxin/furan loading, or mitigate or minimize the harm of such discharges, and fails to take any more conservative approach to BEF or ML limitations that would result in a lesser increase in dioxin/furan discharges than under the proposed TO. Furthermore, the tentative order does not describe or indicate why BEFs are a necessary addition to calculating total loading of dioxins and furans. Consequently, as discussed more fully, below, Baykeeper recommends that the Regional Board reject approval of the TO, and open this permit revision process to further public participation and dialogue for more protective alternatives.

[1] "Four pollutants – mercury (total mercury and methylmercury), PCBs, dioxins, and exotic species – are classified as having the most severe impacts on Bay water quality because the entire Bay is considered impaired by these pollutants, and the degree of impairment is well above established thresholds of concern." http://acwi.gov/monitoring/conference/2008/papers/H3-B.pdf

I. The Proposed BEF Increases Permitted Toxic Discharges.

Baykeeper is highly concerned that the net effect of multiplying the existing toxic equivalency factor ("TEF") values by the proposed BEF values would allow dischargers to discharge more dioxins and furans than before, and yet still remain in compliance with their permit limitations. All but one of the BEF values in Table F-1 of the TO is less than one. The table below shows that including the BEF factor into the equation can, in most instances, reduce the final estimated dioxin TEQ, listed here as a toxicity equivalence concentration or "TEC." On the left, highlighted in yellow, is what the TO is proposing - the authors show what happens to the values when you assume below-detects are zero and include BEFs. On the right in blue, are the values as currently evaluated, with below-detects estimated at ½ ML and no BEF (the table also depicts what happens to the numbers when you continue to estimate non-detects at ½ ML and multiply them by a BEF).

Table 1. This table is excerpted from the Bierman and Batelle presentation on Dioxins in SF Bay (slide 22 in presentation).

				Dioxins and Furans in WWTP Effluent, pg/L					
				ND=0			<ML=ML/2		
Congener	CTR ML	WHO 2005 TEF	GLI 1995 BEF	Conc.	TEC w/o BEF	TEC w/BEF	Conc.	TEC w/o BEF	TEC w/BEF
2,3,7,8-TCDD	10	1	1		0	0	5	5	5
1,2,3,7,8-PeCDD	50	1	0.9		0	0	25	25	22.5
1,2,3,4,7,8-HxCDD	50	0.1	0.3		0	0	25	2.5	0.75
1,2,3,6,7,8-HxCDD	50	0.1	0.1		0	0	25	2.5	0.25
1,2,3,7,8,9--HxCDD	50	0.1	0.1		0	0	25	2.5	0.25
1,2,3,4,6,7,8-HpCDD	50	0.01	0.05	25	0.25	0.0125	25	0.25	0.0125
OCDD	100	0.0003	0.01	100	0.03	0.0003	100	0.03	0.0003
2,3,7,8-TCDF	10	0.1	0.8		0	0	5	0.5	0.4
1,2,3,7,8-PeCDF	50	0.03	0.2		0	0	25	0.75	0.15
2,3,4,7,8-PeCDF	50	0.3	1.6		0	0	25	7.5	12
1,2,3,4,7,8-HxCDF	50	0.1	0.08		0	0	25	2.5	0.2
1,2,3,6,7,8-HxCDF	50	0.1	0.2		0	0	25	2.5	0.5
2,3,4,6,7,8-HxCDF	50	0.1	0.7		0	0	25	2.5	1.75
1,2,3,7,8,9-HxCDF	50	0.1	0.6		0	0	25	2.5	1.5
1,2,3,4,6,7,8-HpCDF	50	0.01	0.01		0	0	25	0.25	0.0025
1,2,3,4,7,8,9-HpCDF	50	0.01	0.4		0	0	25	0.25	0.1
OCDF	100	0.0003	0.02	50	0.015	0.0003	50	0.015	0.0003
Total				175	0.295	0.013	485	57	45
WQC					0.014	0.014		0.014	0.014

Baykeeper is further concerned about the methods used to develop these BEF values. Experts advising BACWA and the Regional Board to develop the proposed BEF stated that compliance values are "highly sensitive to assumptions about BEFs . . . ."[2] We question, therefore, which assumptions were used, why, and what different results would be reached with alternative

[2] Dioxin in San Francisco Bay *From a Point Source Problem to an Adaptive Watershed-Based Solution Fifth International Conference on Remediation of Contaminated Sediments Jacksonville, Florida February 2-5, 2009*
Victor. Bierman, Jr., Geoffrey H. Grubbs, Keith J. Linn, Michael Connor and Michele M. Pla.
http://www.limno.com/pdfs/Bierman_Battelle_2009_020509.pdf

assumptions. The TO states that BEFs have been used for regulatory purposes in other parts of the country, such as the Great Lakes region; however, the TO does not discuss whether the BEFs calculated for use in the Great Lakes are appropriate or sufficiently protective for human health, fish, and wildlife in San Francisco Bay. The organism used to develop the BEFs in the Great Lakes was Lake Trout.[3] It is not clear that the bioaccumulation potential to other sensitive species such as water birds and marine mammals will be adequately described by the proposed values, nor is it clear that the BEF calculated for Lake Trout will apply to estuarine fish species common to the San Francisco Bay.

Further, it is not clear from the TO that it is appropriate to sum bioaccumulation. What evidence is there that bioaccumulation is an additive process across congeners?

II. The Proposed ML Omits Too Much Dioxin/Furan Discharge from Reporting.

The Regional Board should reject adoption of the proposed TO, and instead retain the more conservative approach to dioxin and furan reporting already in place. At a minimum, further evaluation and public dialogue should take place to ensure that the most environmentally protective standard is adopted. The proposed TO would reduce all reporting of dioxin and furan discharges below the ML, to zero. While the purpose of the TO is to reduce the over-reporting of dioxin and furan discharges under the current ML, the approach taken by the TO instead results in an unknown amount of under-reporting, by incorrectly requiring any dioxin/furan discharges below the ML to be reported as zero. Despite the uncertainty that exists below the ML, the TO does not provide evidence to show, and should not assume, that no discharges below the ML will occur. Because the San Francisco Bay is listed as an impaired water body for dioxins and furans, any uncertainty in reporting should err on the side of caution, and not on the side of additional unreported discharges, as the TO proposes.

The Regional Board should take a more conservative approach, and retain the existing reporting requirements. Alternatively, the TO notes that "[m]any permits set forth the dioxin and furan MLs for reporting and compliance purposes as equal to one half the default MLs specified in Method 1613." Although this approach would still result in the underreporting of dioxin and furan discharges, such a compromise is more environmentally protective than the TO's proposal to reduce such reported discharges to zero. As the incorporation of the BEF factor implies, these congeners are bioaccumulative, and thus even small amounts are detrimental to water quality and the food web. The TO does not offer any data to evaluate the claim that using ½ ML will unrealistically inflate the total estimate of dioxins in a discharge. To properly evaluate whether ½ ML tends to overinflate the total sum, the TO should provide data that demonstrates how frequently non-detects are found to be less than the ML but greater than ½ the ML, and how often values fall below the ½ ML value.

---

[3] United States Environmental Protection Agency Office of Water EPA-820-B-95-005 March 1995. Great Lakes Water Quality Initiative Technical Support Document for the Procedure to Determine Bioaccumulation Factors, p 105.
http://www.epa.gov/region5/water/wqs5/pdf/baf_tsd.pdf

As a further alternative, the Regional Board could evaluate whether monitoring of other constituents could be used to estimate dioxins and furans below the ML. For example, in *National Wildlife Federation v. U.S. EPA*, 286 F.3d 554, the U.S. Court of Appeals for the District of Columbia upheld EPA's use of other effluents as proxies to estimate dioxin and furan discharges: "Limitations on AOX provide much more certainty than monitoring directly for [dioxin and furan] because AOX is detectable when [dioxin and furan] concentrations are below the analytical method minimum level." Another more protective approach could be concentrating large volumes of sample before measuring the concentrations. This was done for dioxins (among other trace contaminants) by SFEI in their 2001 study of trace organic contaminants in Bay area effluents.[4] Finally, even under the proposed approach, the Regional Board could require *some* mitigation or minimization techniques in an attempt to offset the harmful effects of unreported discharges below the ML.

In short, several alternatives exist to the TO's approach of not counting any discharges below the ML at all, and these alternatives and others should be reviewed to ensure that the most environmentally protective standard is adopted.

III. The TO is Contrary to the CWA's Anti-backsliding Provision, and the San Francisco Bay Basin Water Quality Control Plan.

The proposed TO would contradict the purpose and The Clean Water Act's anti-backsliding provision requires that "a permit may not be . . . modified on the basis of effluent guidelines . . . to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit." 33 U.S.C. § 1342(o)(1). In effect, this TO would raise the effluent limitation in each modified permit by allowing a greater concentration of dioxins and furans. As discussed above, the proposed BEF lowers the TEQ of all congeners except for one, thus allowing a greater concentration of these congeners within permitted limitations. As to the ML, the proposed TO eliminates reporting on all discharges below the newly proposed ML. Thus, each of these proposed modifications results in future effluent limitations that are less stringent on their controls of toxic discharges than are the existing permit effluent limitations. Such revisions run counter to the objective of the CWA's anti-backsliding requirement.

Similarly, this increase in toxic discharges that would be permitted by the TO contradicts the *San Francisco Bay Basin (Region 2) Water Quality Control Plan*'s bioaccumulation objective, which states that "Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances . . . ." Dioxins and furans are, by their nature, detrimental to aquatic wildlife, particularly fish eating wildlife, and each of the proposed permit revisions included in the TO would allow for an increase in dioxin and furan discharges, to the detriment of the San Francisco Bay.

[4] South Bay/Fairfield Suisun Trace Organic Contamination in Effluent Study. March 28, 2001. Prepared by San Francisco Estuary Institute.

IV. Conclusion

Baykeeper respectfully requests that the Regional Board declines to adopt the proposed Tentative Order at this time. The Regional Board should not consider any approaches to bioaccumulation or ML reporting that could have the effect of increasing toxic discharges to the Bay. We look forward to working with the Regional Board to this end.

Sincerely,

/s/ Jason Flanders
Staff Attorney, San Francisco Baykeeper

SAUSALITO-MARIN CITY SANITARY DISTRICT

#1 FORT BAKER ROAD • P. O. BOX 39 • SAUSALITO, CALIFORNIA 94966-0039
OFFICE 415.332.0244 • PLANT 415.332.0240 • FAX 415.332.0453

December 17, 2009

Bill Johnson, Senior Environmental Scientist
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

SUBJECT: TENTATIVE ORDER R2-2009-XXXX
REVIEW COMMENTS

Dear Mr. Johnson,

Attached are our District's comments on the referenced Tentative Order.

If you have any questions concerning our comments, please feel free contact me at bob@smcsd.net. My staff and I are also available to meet with you to discuss them.

Very truly yours,

Robert A. Simmons
General Manager

cc: Vince Christian, Water Resources Control Engineer
Yoshi Uemura, Plant Superintendent
Omar Arias-Montez, Laboratory Director

ATTACHMENT

Sausalito- Marin City Sanitary District
Comments on Tentative Order R2-2009-XXXX

Amendment of Waste Discharge Requirements for Municipal and Industrial Discharges

The following are our comments on the Tentative Order that was sent to us with your transmittal correspondence dated November 18, 2009 for our review:

1. It is recommended that the tentative order include a precise definition of the term "bypass", consistent usage of the term throughout the order and a more uniform approach to the additional monitoring required of an agency when "bypassing" occurs. On page 7, Paragraph 4 of the Tentative Order, reference is made to four seemingly different bypass scenarios, including "any type of bypass", "bypassing of a primary or secondary unit", "bypassing of any treatment process" and "bypassing from any treatment process during high wet weather inflow". From our perspective, we would interpret a "treatment unit" differently from a "treatment process"; the former being a subset of the entire process and the later, the entire process. When terms are not consistent it creates confusion, which can lead to unintentional non-compliance, which we wish to avoid.

   Moreover, if it is truly the Regional Water Board's intent to require the prescribed additional testing for "any bypass event" as presently defined, the Regional Water Board should be aware that there are significant logistical difficulties and cost impacts that could cause problems for agencies in complying with the new regulatory requirements. It is recommended that these logistical and cost impacts be considered in revising the tentative order to accommodate the concerns of agencies while meeting the needs of the Water Board.

2. <u>Definition and Consistent Usage of the term "bypass"</u>

   From our understanding of the tentative order as written, an agency is required to collect samples on a daily basis for all constituents for the duration of the bypass including acute toxicity using static renewal, but excepting chronic toxicity unless otherwise stipulated by the RMP (Attachment G, Section III, Paragraph 3, part b.5) We interpret a bypass to mean the diversion of flow passed any liquid or solid stream treatment process or subset thereof, including preliminary, primary, secondary, tertiary, disinfection, dechlorination, thickening, digestion, and dewatering treatment processes, irrespective of flow or loading conditions or duration of bypass. We interpret all constituents to include BOD, TSS, pH, DO, metals, Dioxin, oil and grease, and acute toxicity. Exceptions are provided when bypassing occurs during

high wet weather flows. We feel such broad interpretation leads to unwarranted and costly new regulatory requirement that may not have commensurate benefit.

It is recommended that the Regional Water Board revise the order and delete the requirement for additional monitoring when an individual treatment unit is removed from service for maintenance, repair, or rehabilitation when any of the three following conditions exist:

a.) The hydraulic and/or loading conditions are within the design parameter of the remaining treatment units that are in service.

b.) The treatment unit removed from service is used to treat the solids stream, such as a gravity thickener or digester.

c.) The treatment unit that is removed from service is used for preliminary treatment.

3. Sand Filters and Chlorination Processes

Another clarification that is recommended involves sand filters, which are commonly used in trickling filter plants as polishing processes following secondary treatment. As a polishing process, the filters do not typically treat the entire secondary flow stream and are not needed at all times to meet effluent limits. In addition, the rate of filtration is an operational variable that is adjusted based on loading conditions. Sand filters are typically turned down during high wet weather flow to prevent blinding of the filters and the subsequent need to remove them from service for media cleaning and restoration. It is recommended that Tentative Order not require additional monitoring when adjustments are made to the filtration rate and when individual sand filters are removed from service as process loading conditions might warrant.

The dosing rate of the chlorination process is also an operational variable, not unlike the filtration rate of sand filters. It is common to reduce the number of basins in service during dry weather when flows are reduced. Chlorine dosing rate is an operational variable that can be adjusted similar to filtration rates for sand filters, to optimize the performance of the process irrespective of the number of basins in service. It has been SMCSD's experience that operational difficulties develop when the number of basins is not reduced, especially during dry weather, early morning flows. It is recommended that the chlorination process not be subject to accelerated monitoring when process loading factors are within generally accepted design value for the process.

4. Logistical Impacts and Costs of the Tentative Order

The tentative order places a significant burden on agencies in terms of additional costs and staffing requirements. For a small agency, such as SMCSD, which does not provide 24-hour plant coverage, the additional monitoring requirements are especially burdensome, requiring overtime and significantly higher monitoring and laboratory costs. In addition, there are significant logistical problems that affect an agency's ability to comply with the new monitoring requirements. For instance, acute bioassay tests require the ordering of larval fish and sampling and testing over a five day period. This is not reasonable for a bypass involving the repair or maintenance of a treatment unit that is of a short term nature, such as when one of the two fixed film reactors (FFR) is removed sequentially from service for an hour each week to remove accumulated plastics and debris from the surface of the media each week. In addition, it is common practice to turn-off unneeded FFR units as flow and loading decrease. Other logistical problems include arranging for testing by outside contract laboratories that do not work after normal business hours and on the weekend and holidays.

It is recommended that these factors be considered in revising the additional monitoring requirements of the Tentative Order. It is suggested that a trigger be established, similar to the 45 mg/L TSS limit which serves as a trigger during blending, to require testing of all constituents that have limits, with the exception of toxicity and oil and grease. These logistical problems would need to be overcome for an agency to consistently comply with the new monitoring requirements.

5. Continuous pH Monitoring

Page 7, Paragraph 4 of the Tentative Order specifies continuous monitoring of pH during blending events. The District's composite sampler is configured with a pH probe/module, which takes pH readings at approximately one minute intervals. Does this satisfy the "continuous" requirement of the order? It is recommended that "continuous" be better defined?

6. Timing of Sample Collection

Page G-7, III A.3.a.1 of the Tentative Order discusses the timing of sample collection. Timing of sample collection is an issue for a small District. Selection of random days for our effluent monitoring could lead to a situation where our Laboratory Director would be required to work overtime on the weekends to ensure tests are conducted when trained staff is not available to collect and run the tests. Given our small staff,

both in the lab and in operations, we request language in the TO that exempts small agencies from the "random" requirement or, instead, adds language that provides the District the ability to submit individual sampling plans to the Executive Officer for approval, similar to is allowed under Tentative Order Section G-7, III.A.3.a.2

7. Effluent Sampling for Conventional Pollutants on at Least One Day of the Bioassay Test

   Page G-8, III A4 of the tentative Order requires sampling for conventional pollutants on at least one day of any multiple-day bioassay test the MRP requires. For those agencies that use contract or outside laboratories for their bioassay tests, this can lead to having to schedule sampling for pollutants as late as the middle of the month. Given a normal two week turnaround time for contract laboratories, we could receive notice of a higher than normal constituent value or a violation of a limit too late to re-sample in that month. Most months, this requirement can be met without a problem (most of the time we try to schedule bioassays on the first or second week of the month) but at other times, this may not be possible. It is recommended that the word "shall" be changed to "should" so that the sentence reads "Effluent sampling for conventional pollutants should occur on at least one day of any multiple-day bioassay test the MRP requires."

WEST COUNTY AGENCY
A JOINT POWERS AGENCY
of
West County Wastewater District
and
City of Richmond Municipal Sewer District

2910 Hilltop Drive
Richmond, California 94806-1974
(510) 222-6700

December 21, 2009

Mr. Bill Johnson
Senior Environmental Scientist
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
By email: wjohnson@waterboards.ca.gov

Subject: **Comments on Amendment for Waste Discharge Requirements for Municipal and Industrial Dischargers (Tentative Order)**

Dear Mr. Johnson:

West County Agency (WCA) is submitting comments on the Tentative Order, entitled "Amendment of Waste Discharge Requirements for Municipal and Industrial Dischargers (Attachment G)," released for public comment on November 20, 2009. WCA is a Joint Powers Agency whose member agencies include the West County Wastewater District (WCWD), the City of Richmond, and the Richmond Municipal Sewer District No. 1 (RMSD). WCA and its member agencies operate two separate wastewater treatment plants and a joint deepwater outfall in the Central San Francisco Bay. Use of the joint outfall is regulated by Order No. R2-2008-0003 (NPDES Permit No. CA0038539). WCA is the permitted authority for the joint outfall.

WCA thanks the Regional Water Board for consolidating the standard monitoring and reporting provisions into one document. However, as shown in Sections 4.e. through 4.i., the monitoring requirements for approved bypasses differ significantly between dischargers. **WCA is requesting a change in the Tentative Order that will standardize these requirements and reduce the sampling/analytical burden during approved bypass events, such as blending.**

Order No. R2-2008-0003 allows the RMSD Water Pollution Control Plant (WPCP) to blend primary and secondary effluent when flowrates associated with extreme wet weather conditions exceed the secondary treatment capacity. The permit and the Tentative Order require RMSD to collect and analyze samples on a daily basis for any constituent with effluent limits during the duration of the bypass (the Tentative Order expands this regime to include acute toxicity testing using static renewals). The sampling and analytical requirements are difficult to implement, costly, and provide little data of value. During the last 12 blending events, no effluent limits were exceeded by RMSD or WCA.

RMSD submitted a study on blended water quality to the Regional Water Board on November 2nd, 2009. The study showed no exceedance of effluent limits during blending events and that compliance with effluent limits can be assessed by measuring Total Suspended Solids (TSS) as a surrogate constituent. RMSD requested approval for an alternate monitoring regime during approved wet-weather blending events. During blending, daily samples would be collected and analyzed initially for TSS. If the TSS concentration is measured lower than a specific trigger level, there would be no need to analyze for any other constituents with effluent limits. If the TSS concentration is measured higher than the specific trigger level, the samples would be analyzed for constituents with effluent limits. This approach has been approved for several other dischargers and TSS has been shown (through their studies and RMSD's study) to be an appropriate surrogate during blending events.

WCA, on behalf of RMSD, requests that Section III.A.3.b.5) of the Tentative Order be revised to incorporate a standard monitoring regime for approved bypass events. The standard provision would allow use of a TSS surrogate to indicate effluent quality and eliminate grab sampling and acute toxicity testing. The analytical exceptions are requested based on expected compliance with these limits and the sampling, staffing, and logistical constraints that are encountered during bypass/blending. The full suite of required sampling and analytical activities would be conducted during any type of unplanned or unapproved bypass event. The suggested changes for the Tentative Order are included below:

b. Conditions Triggering Accelerated Monitoring

5) During an approved bypass, ~~When any type of bypass occurs,~~ the Discharger shall collect and retain samples on a daily basis for all constituents at affected discharge points that have effluent limits for the duration of the bypass ~~(including acute toxicity using static renewals),~~ except chronic and acute toxicity, dioxins, furans, mercury, pathogen indicators, and oil and grease, unless otherwise stipulated by the MRP.

The Discharger shall analyze samples for total suspended solids (TSS) with 24-hour composite or more frequent increments, and monitor flow. If a daily (or lesser frequency) TSS value exceeds the weekly average effluent limit, the Discharger shall perform daily analysis of the retained samples for the duration of the bypass or until the TSS values fall below the weekly average

effluent limit. The Dischargers shall comply with holding times for the retained samples.

6) In the event of an unplanned or unapproved bypass event, the Discharger shall collect samples on a daily basis and perform analysis for all constituents at affected discharge points that have effluent limits for the duration of the bypass.

Thank you for your consideration of these changes. Please contact me at (510) 222-6700 or eshalaby@wcwd.org for questions regarding WCA NPDES permit conditions. Any questions regarding specific sampling and handling requirements at the RMSD WPCP should be directed to Mary Phelps at (510) 621-1269 or Mary_Phelps@ci.richmond.ca.us.

Sincerely,

E.J. Shalaby
Agency Manager

Cc. Chad Davisson, City of Richmond (Chad_Davisson@ci.richmond.ca.us)
Mary Phelps, City of Richmond (Mary_Phelps@ci.richmond.ca.us)
Lila Tang, SF Bay Regional Water Quality Control Board (LTang@waterboards.ca.gov)
Alfred "Mick" Cabral, WCA General Counsel
WCA Board of Directors

Western States Petroleum Association
Credible Solutions • Responsive Service • Since 1907

Kevin Buchan
Senior Coordinator, Bay Area and State Water Issues

VIA ELECTRONIC MAIL

December 18, 2009

Mr. Bill Johnson
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Re: Proposed Blanket NPDES Permit Amendment for Dioxins

Mr. Johnson,

The Western States Petroleum Association (WSPA) is a trade association that represents the majority of petroleum related interests in the western United States. These interests include production, transportation, refining, and marketing of petroleum and petroleum-based products.

We appreciate the opportunity to provide these comments on the proposed "blanket" NPDES Permit amendment for dioxins as issued for public comment in the November 17, 2009 Tentative Order (T.O.).

WSPA supports the proposed T.O. to amend limits in NPDES permits for dioxin using the bioaccumulation equivalency factors approach. The T.O. reflects the implementation of sound science for dioxin and demonstrates proper and effective regulation for the San Francisco Bay watershed by Board staff. Please contact me in our Sacramento offices if you have any questions.

Sincerely,

Kevin Buchan

1415 "L" Street, Suite 600, Sacramento, California 95814
(916) 498-7755 • FAX: (916) 444-5745 • Kevin@wspa.org • www.wspa.org

APPENDIX C

RESPONSE TO COMMENTS

**Updated Regional Standard Provisions,
and Monitoring and Reporting Requirements—
Amendment of NPDES Permits**

We received six comment letters regarding the tentative order circulated for public review. Below, we provide abridged quotations from each letter, followed by our response. Each party's comments and our responses begin on the pages indicated below:

Interested persons should refer to the original letters to ascertain the full substance and context of each comment. Revisions to the tentative order are indicated below with underline for additions and ~~strikeout~~ for deletions. A list of staff-initiated revisions begins on page 19. Revisions to the Fact Sheet are not shown.

BAY AREA CLEAN WATER AGENCIES (BACWA)

BACWA Comment 1A
For approved bypasses, establish standard monitoring requirements and create consistency across the region for POTWs. Allow the use of TSS as an indicator parameter.

"…the permit language varies for the fourteen wastewater treatment plants that currently have permission to conduct alternate monitoring during certain types of bypasses. BACWA requests that the Regional Water Board establish baseline monitoring requirements for approved bypasses for purposes of determining compliance….

"BACWA requests that the Attachment G standard provisions differentiate between monitoring requirements for approved versus non-approved bypass. BACWA recognizes that since protection of human health and the environment are of paramount concern, it is reasonable to expect that an agency begin monitoring of all permitted pollutants on a daily basis for the duration of an unplanned bypass, or until the event can otherwise be sufficiently controlled.

"On the other hand, there are two situations in which a wastewater treatment plant may be approved by the Regional Water Board to bypass portions of its treatment processes.

Multiple BACWA agencies have wastewater treatment plants that are designed and permitted to bypass portions of the treatment process during high-flow wet-weather events. NPDES permits also provide a procedure whereby a wastewater treatment plant may request approval to perform a planned and carefully controlled bypass event during exceptional maintenance or replacement of equipment. Because, under either approved bypass scenario, the wastewater treatment plant maintains full control of its operations and monitors treatment processes and effluent conditions that could impact receiving water quality, a substantial increase in monitoring during these events is unwarranted.

"For approved bypasses, BACWA asks that the Regional Water Board allow the use of Total Suspended Solids (TSS) as an indicator for other parameters. Some POTWs are currently allowed to use this approach…. Data available from Bay Area POTWs, and a Water Research Environment Federation (WERF) study, show that TSS is a reliable and practical indicator of plant performance and compliance with effluent limits during approved bypasses…."

Response to BACWA Comment 1A

We partly agree. We revised the tentative order in response to this comment. We agree that wastewater dischargers should (and normally do) maintain control of their treatment plant operations during approved bypasses, such as approved blending events. However, monitoring ensures that dischargers consistently maintain such control. While a substantial increase in monitoring during approved bypasses may be unwarranted, some monitoring remains appropriate.

We agree that existing permits are inconsistent in how they address monitoring during approved bypasses. We revised the tentative order as follows to provide clarity and consistency. First, we revised Attachment G to provide for more limited monitoring during approved bypasses:

> 5) When a ~~any type of~~ bypass occurs (except one subject to provision III.A.3.b.6 below), the Discharger shall monitor flows and collect samples on a daily basis for all constituents at affected discharge points that have effluent limits for the duration of the bypass (including acute toxicity using static renewals), except chronic toxicity, unless otherwise stipulated by the MRP.
>
> 6) Unless otherwise stipulated by the MRP, when a bypass approved pursuant to Attachment D, Standard Provisions, Sections I.G.2 or I.G.4, occurs, the Discharger shall monitor flows and, using appropriate procedures as specified in the MRP, collect and retain samples for affected discharge points on a daily basis for the duration of the bypass. The Discharger shall analyze for total suspended solids (TSS) using 24-hour composites (or more frequent increments) and for bacteria indicators with effluent limits using grab samples. If TSS exceeds 45 mg/L in any composite sample, the Discharger shall also analyze the retained samples for that discharge for all other constituents that have effluent limits, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity. Additionally, at least once each year, the Discharger shall analyze the retained samples for one approved bypass discharge event for all other constituents that have effluent limits, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity.

Then we modified the tentative order to no longer retain special monitoring requirements for dischargers whose permits currently allow limited monitoring when blending:

3. The following provisions currently in effect for specific facilities remain in effect and shall modify the new Attachment G for the orders specifically identified below.

a. *Crockett Community Services District (Order Number R2-2008-0005):*

The Discharger shall monitor the perimeter of the fence line surrounding the treatment facilities at the corners and midpoints for odors weekly.

b. *Delta Diablo Sanitation District (Order Number R2-2009-0018):*

The Discharger shall collect composite influent samples on varying days selected at random and shall not include any plant recirculation or other side stream wastes unless the flows originate from the Recycled Water Facility. The Executive Officer must approve any deviation.

c. *East Bay Regional Park District, Union Sanitary District, and East Bay Dischargers Authority (Hayward Shoreline Marsh) (Order Number R2-2006-0031):*

i. With respect to standard observations at the periphery of waste treatment and/or disposal facilities, the Dischargers shall pay special attention to observations for vector nuisance and signs of waterfowl botulism per the Marsh Management Plan.

ii. The Dischargers may file separate self monitoring reports detailing permit compliance.

iii. The Dischargers shall collect receiving water samples during the higher slack water period. The Dischargers shall collect samples within the discharge plume and down current of the discharge point so as to be representative, unless otherwise stipulated.

d. *Novato Sanitary District (Order Numbers R2-2004-0093 and R2-2008-0026):*

i. Influent samples for the Novato Plant may include side-streams from sludge storage pond supernatant, digester supernatant, filter backwash, and DAF supernatant.

ii. Monthly self monitoring reports shall be due 30 days after the end of each calendar month. If the Discharger monitors any pollutant more frequently than the permit requires, it shall include the results of this monitoring in the calculations and reporting of the data submitted in the self monitoring report. Annual self monitoring reports shall be due February 1 of each year, covering the previous calendar year.

~~e. *City of American Canyon (Order Number R2-2006-0036)*~~
~~*Sanitary District No. 5 of Marin County (Paradise Cove) (Order Number R2-2006-0037)*~~
~~*City of Petaluma (Order Number R2-2005-0058)*~~
~~*City of St. Helena (Order Number R2-2005-0025)*~~
~~*Cities of South San Francisco and San Bruno (Order Number R2-2008-0094)*~~
~~*Vallejo Sanitation and Flood Control District (Order Number R2-2006-0056)*~~
~~*Town of Yountville (Order Number R2-2004-0017):*~~

~~When any type of bypass occurs, except for bypasses consistent with the Discharge Prohibitions in the permit, the Discharger shall collect composite samples on a daily basis for all constituents at all affected discharge points with effluent limits for the duration of the bypass. When bypassing occurs from any treatment process (i.e., primary, secondary,~~

chlorination, dechlorination, etc.) within the treatment facility consistent with the Discharge Prohibitions in the permit during high wet weather inflow, the self monitoring program shall include the following sampling and analyses, in addition to the schedule given in the Monitoring and Reporting Program:

i. When bypassing occurs from any primary or secondary treatment unit, the Discharger shall collect discharge samples for the duration of the bypass, monitor them for biochemical oxygen demand (BOD) and total suspected solids (TSS) with 24-hour composite or smaller increments, monitor flow and chlorine residual continuously, and monitor pH and bacteria daily using grab samples. (The City of St. Helena, the Cities of South San Francisco and San Bruno, and the Town of Yountville need not monitor chlorine residual, pH, and bacteria; the Vallejo Sanitation and Flood Control District need not monitor BOD.) For all other pollutant parameters for which the permit imposes limits, the Discharger shall collect and retain samples in accordance with proper sampling techniques for later analysis if necessary. If BOD or TSS exceeds the weekly average effluent limits, the Discharger shall analyze the retained samples for all the pollutant constituents with effluent limits for the duration of the bypass (the Vallejo Sanitation and Flood Control District need not conduct acute or chronic whole effluent toxicity tests), or until the BOD and TSS values comply with the weekly effluent limitations. The Discharger shall comply with holding times for retained samples.

ii. When bypassing the chlorination process, the Discharger shall collect and analyze grab samples for bacteria at least daily and monitor flow continuously.

iii. When bypassing the dechlorination process, the Discharger shall collect and analyze grab samples for chlorine residual hourly and monitor flow continuously.

f. *Central Marin Sanitary Agency (Order Number R2-2007-0007)*
Sanitary District No. 5 of Marin County (Tiburon) (Order Number R2-2008-0057)
Sausalito-Marin City Sanitary District (Order Number R2-2007-0054):

When any type of bypass occurs, except for bypasses consistent with the Discharge Prohibitions in the permit, the Discharger shall collect composite samples on a daily basis for all constituents at all affected discharge points with effluent limits for the duration of the bypass. When bypassing occurs from any treatment process (i.e., primary, secondary, chlorination, dechlorination, etc.) within the treatment facility consistent with the Discharge Prohibitions in the permit during high wet weather inflow, the self monitoring program shall include the following sampling and analyses, in addition to the schedule given in the Monitoring and Reporting Program:

When bypassing occurs from any primary or secondary treatment unit, the Discharger shall collect discharge samples for the duration of the bypass, monitor them for TSS with 24-hour composite or smaller increments, monitor flow and pH continuously, monitor chlorine residual every two hours (or, for Sanitary District No. 5 of Marin County [Tiburon], either continuously or every two hours), and analyze grab samples for bacteria daily. The Discharger shall collect and retain samples for all other pollutant parameters for which the permit imposes limits, except bacteria, in accordance with proper sampling techniques for later analysis if necessary. If a daily TSS value exceeds the weekly average effluent limit, the Discharger shall analyze the retained samples for all pollutant constituents that have limits, except acute and chronic whole effluent toxicity and oil and grease, for the duration of the bypass. The Dischargers shall comply with holding times for the retained samples.

g. *West County Agency (West County Wastewater District, City of Richmond, and Richmond Municipal Sewer District No. 1) (Order Number R2-2008-0003):*

~~When any type of bypass occurs, except for bypasses consistent with the Discharge Prohibitions in the permit, the Dischargers shall collect composite samples on a daily basis for all constituents at all affected discharge points with effluent limits for the duration of the bypass. When bypassing occurs from any treatment process (i.e., primary, secondary, chlorination, dechlorination, etc.) within the treatment facility consistent with the Discharge Prohibitions in the permit during high wet weather inflow, the self monitoring program shall include the following sampling and analyses, in addition to the schedule given in the Monitoring and Reporting Program:~~

~~When bypassing occurs from any primary or secondary treatment unit, the Dischargers shall collect representative samples for each 24-hour increment of the bypass for the duration of the bypass for all pollutants with effluent limits. The Dischargers shall monitor flow and pH continuously. The Dischargers shall monitor residual chlorine every two hours and collect and monitor grab samples for temperature and total coliform daily. The Dischargers shall use monitoring location E-001 for flow measurements, monitoring location E-001-DC for toxic substances and chlorine residual measurements, and monitoring location E-001-D2 for pH, temperature, and total coliform measurements.~~

~~h. *City of Benicia (Order Number R2-2008-0014):*~~

~~During bypasses, except those consistent with the Discharge Prohibitions in the permit, the Discharger shall collect composite samples of the discharge for the day during which the bypass occurred and analyze the samples for oil and grease, pH, TSS, BOD, total chlorine residual (hourly), fecal coliform and enterococcus bacteria, copper, selenium, cyanide, and ammonia. The Discharger shall monitor flow continuously.~~

~~i. *Napa Sanitation District (Order Number R2-2005-0008):*~~

~~When any type of bypass occurs, except for bypasses consistent with Prohibition 2 of the permit, the Discharger shall estimate flow volume and collect samples for constituents listed in Table 1 E-001-P of the permit at all affected discharge points for the duration of the bypass. The Discharger shall follow the requirements for sample type (grab or composite) and frequency in Table 1 of the permit.~~

Finally, we revised the Fact Sheet to reflect these changes and to provide the rationale for the proposed revised requirements. The effect of these changes is that consistent monitoring requirements now apply to all dischargers during approved bypasses.

BACWA Comment 1B
Grab sampling should not be required during approved bypasses.

"Sampling of approved bypasses for mercury, bacteria, and oil and grease, presents considerable challenges and provides little information, which is why this monitoring has been eliminated from some POTW permits. Mercury, bacteria, and oil and grease must be collected as grab samples. The magnitude and duration of high flow wet weather bypass events cannot be predicted in advance. This creates logistical challenges in collecting grab samples that are representative of effluent quality during bypass events, especially if appropriately trained sampling personnel are not present. During large storm events, additional trained sampling personnel may be required to reduce safety issues involved in collecting grab samples.

"Mercury samples must be individually grab sampled using 'clean hands, dirty hands' technique, which requires at least two trained staff and special sampling containers…. Mercury sampling…is not necessary as concentrations in approved bypasses are not expected to exceed effluent limits….

"Bacteria sampling presents additional constraints because bacteriological samples have a six hour hold time limit prior to analysis that may not be achievable for samples collected during off-hours bypass events. Except during significant disinfection equipment and/or operational failure, available data show that effluent quality remains in compliance with bacteriological effluent limits during approved high flow wet weather bypass events….

"Each oil and grease sampling event requires the collection of three grab samples taken at equal intervals during the sampling day and specific sample handling/preparation techniques. Noncompliance with oil and grease effluent limits is rare for POTWs and not expected to occur any more often during approved bypasses. Requiring sampling for oil and grease during every approved bypass is unnecessary, especially considering the challenges of collecting and handling these grab samples during inclement weather."

Response to BACWA Comment 1B

We partly agree. We revised the tentative order in response to this comment. We agree that monitoring mercury and oil and grease during approved bypasses produces little useful information and is therefore unnecessary. The changes to the tentative order indicated in our Response to BACWA Comment 1A exclude mercury and oil and grease monitoring during approved bypasses. However, we disagree that collecting grab samples during a bypass is necessarily impractical or unsafe. We also disagree that bacteria monitoring is unnecessary.

Bacteria monitoring provides useful information. Although available data generally show compliance with bacteria limits during approved bypasses, bacteria monitoring is needed to ensure that disinfection processes are well managed during bypasses. Increased flows and TSS and BOD concentrations can disrupt normal operations. While dischargers can generally respond to changing conditions, bacteria monitoring is a necessary check on performance. TSS monitoring cannot substitute for bacteria monitoring since there is no correlation between TSS concentrations and bacteria levels. Although bacteria monitoring may pose challenges related to sample holding times, information from samples that exceed holding times is more useful than no information at all.

BACWA Comment 1C
Dioxin analysis should not be required for every approved bypass.

"BACWA requests that dioxin sampling not be routinely required for approved bypasses. Sample analysis for dioxins frequently costs more than $1,000 for each sample…. Dioxins have been shown to correlate well with TSS concentrations and therefore should only be analyzed if needed."

Response to BACWA Comment 1C

We agree. We revised the tentative order in response to this comment. Monitoring dioxins and furans during approved bypasses produces little useful information and is therefore unnecessary. The changes to the tentative order indicated in our Response to BACWA Comment 1A exclude dioxin and furan monitoring during approved bypasses.

BACWA Comment 1D
Remove the requirement that approved bypasses be monitored for acute toxicity.

"The new Attachment G specifically requires acute toxicity tests using static renewals during any type of bypass. Acute whole effluent toxicity tests require archival of sufficient water volume to conduct a 96-hour test. If acute toxicity is to be conducted during bypass events, test procedures will have to be modified significantly to account for holding time constraints, and because flow-through or daily test renewals cannot be made with a single grab sample. The modification of normal sample hold time from 24 to 48 hours seriously compromises the integrity of the test. Furthermore, there is a problem with acquiring test organisms for an unplanned toxicity test. Acute test organisms must be pre-ordered and often require an acclimation period prior to commencing a test…."

Response to BACWA Comment 1D

We partly agree. We revised the tentative order in response to this comment. We agree that acute toxicity monitoring poses logistical challenges, but we do not believe these challenges are insurmountable, particularly with the availability of commercial laboratories that can perform these tests. However, our review of available data for a few select, yet representative, discharges indicates that discharges during blending routinely comply with acute toxicity limits. Therefore, the changes to the tentative order indicated in our Response to BACWA Comment 1A exclude acute toxicity monitoring during approved bypasses.

BACWA Comment 2
Remove the duplicative requirement that unauthorized discharges be reported within two hours.

"POTWs are currently required to report unauthorized bypasses within two hours by a letter dated May 1, 2008 from Bruce Wolfe to the Bay Area Municipal Wastewater Treatment Plants, and by the State Water Resources Control Board's Waste Discharge Requirements for Sanitary Sewer Overflows (Order No. 2008-0002-EXEC). Revision of either of these documents could create requirements that are inconsistent with the standard provisions. In the interests of simplicity and consistency, Attachment G should not duplicate them…."

Response to BACWA Comment 2

We disagree. We retained the requirement to report unauthorized discharges within two hours. Although we already require this reporting pursuant to Water Code § 13267, and the State Water Board requires it pursuant to its Order No. 2008-0002-EXEC, we contend that including all reporting requirements in one place in the standard provisions will facilitate compliance. BACWA claims revising the various documents could result in inconsistent requirements, but neither the State Water Board nor the Regional Water Board's Executive Officer has proposed changing these requirements. If the reporting requirements were to become inconsistent in the future, they would not necessarily be confusing; the most stringent requirements would apply.

BACWA Comment 3
Clarify the language regarding the use of appropriate Minimum Levels.

"BACWA requests that language at Section III.A.2. (page G-7) 'Use of Appropriate Minimum Levels' be modified so that it does not appear to restrict dischargers from using any appropriate EPA-approved analytical method to achieve a Minimum Level (ML) below the effluent limitation and the water quality objective…. We believe that the Regional Water Board does not intend to restrict which federally-approved methods may be used for NPDES compliance purposes, but ask that this intent be reflected in the tentative order…."

Response to BACWA Comment 3

We agree. We revised Attachment G as follows.

> **2. Use of Appropriate Minimum Levels**
>
> Table C lists the suggested analytical methods for the 126 priority pollutants and other toxic pollutants that should be used, unless a particular method or minimum level (ML) is required in the MRP.
>
> For priority pollutant monitoring, when there is more than one ML value for a given substance, the Discharger may select any one of the ~~those cited~~ analytical methods cited in Table C for compliance determination, or any other method described in 40 CFR part 136 or approved by USEPA (such as the 1600 series) if authorized by the Regional Water Board. However, the ML must be ~~provided the ML is~~ below the effluent limitation and ~~the~~ water quality objective. If no ML value is below the effluent limitation and water quality objective, then the method must achieve an ML no greater than ~~Regional Water Board will assign~~ the lowest ML value indicated in Table C~~, and its associated analytical method for inclusion in the MRP~~. ~~For effluent monitoring, this alternate method shall also be U.S. EPA approved (such as the 1600 series) or one of those listed in Table C~~. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

PARTNERSHIP FOR SOUND SCIENCE IN ENVIRONMENTAL POLICY

Partnership Comment 1

"The Partnership for Sound Science in Environmental Policy (PSSEP)…writes in support of the Draft TO…. PSSEP specifically supports the…approach that Staff proposes for calculating dioxin and furan equivalents ('dioxin-TEQ'). The approach…will ensure the highest and most appropriate protection of water quality and the Bay Area ecosystem because it places emphasis on those dioxin congeners that have the highest level of bioaccumulation potential…."

Response to Partnership Comment 1

No response is necessary.

SAN FRANCISCO BAYKEEPER

Baykeeper Comment 1
The Proposed BEF Increases Permitted Toxic Discharges.

"Baykeeper is highly concerned that the net effect of multiplying the existing toxic equivalency factor ('TEF') values by the proposed BEF values would allow dischargers to discharge more dioxins and furans than before, and yet still remain in compliance with their permit limitations….

"Baykeeper is further concerned about the methods used to develop these BEF values. Experts advising BACWA and the Regional Board to develop the proposed BEF stated that compliance values are 'highly sensitive to assumptions about BEFs….' We question, therefore, which assumptions were used, why, and what different results would be reached with alternative assumptions. The TO states that BEFs have been used for regulatory purposes in other parts of the country, such as the Great Lakes region; however, the TO does not discuss whether the BEFs calculated for use in the Great Lakes are appropriate or sufficiently protective for human health, fish, and wildlife in San Francisco Bay. The organism used to develop the BEFs in the Great Lakes was Lake Trout. It is not clear that the bioaccumulation potential to other sensitive species such as water birds and marine mammals will be adequately described by the proposed values, nor is it clear that the BEF calculated for Lake Trout will apply to estuarine fish species common to the San Francisco Bay.

"Further, it is not clear from the TO that it is appropriate to sum bioaccumulation. What evidence is there that bioaccumulation is an additive process across congeners?"

Response to Baykeeper Comment 1

We did not revise the tentative order in response to this comment. We do not agree that incorporating BEFs into dioxin-TEQ calculations will increase dioxin and furan discharges. No discharger has upgraded its treatment operations specifically to control dioxin-TEQ; therefore, no discharger will forego any existing treatment because of the tentative order. Furthermore, all pollution minimization requirements in existing permits related to dioxins and furans will remain in place.

We acknowledge that assumptions about dioxin and furan bioaccumulation affect dioxin-TEQ calculations, which in turn affect how readily dischargers can comply with dioxin-TEQ effluent limits. We considered two possible assumptions: (1) all dioxin and furan congeners are equally bioavailable, and (2) the bioavailability of different dioxin and furan congeners varies as representated by BEFs. The first assumption reflects the previous approach, but available evidence does not support it. Available evidence does suggest that different dioxin and furan congeners bioaccumulate very differently within the food web, and BEFs represent our best estimate of these differences.

We contend that the BEFs developed for the Great Lakes better represent bioaccumulation in San Francisco Bay than our previous assumption that all congeners are equally bioavailable. Site-specific BEFs would be preferable, but no one has developed them, and developing them would require substantial effort and cost. In the absence of site-specific BEFs, the U.S. Environmental Protection Agency supports the use of national BEFs, stating, "…EPA believes that national bioaccumulation factors are broadly applicable to sites throughout the United States and can be applied to achieve an acceptable degree of accuracy when estimating bioaccumulation potential at most sites." The U.S. Environmental Protection Agency has also stated, "Limited comparison to BEFs calculated from data obtained for other ecosystems confirms these bioaccumulation potential differences for [dioxins and furans] for fish in ecosystems outside the Great Lakes." The San Francisco Estuary Institute's expert panel concluded that, if suitable data are unavailable to derive site-specific BEFs for the San Francisco Bay Region, use of the BEFs derived for the Great Lakes System is preferable to omitting BEFs altogether, particularly since omitting BEFs greatly overstates the potential for most congeners to accumulate within the food web.

The approach of summing toxicity-weighted dioxin and furan congener concentrations to estimate their combined effect is well established. Intrinsic to this approach is the assumption that the congeners bioaccumulate within the food web in an additive manner, which is reasonable given the similar chemical structures dioxins and furans share. The BEFs simply refine this assumption to better account for variability in the extent to which the congeners bioaccumulate within the food web.

Baykeeper Comment 2
The Proposed ML Omits Too Much Dioxin/Furan Discharge from Reporting.

"The Regional Board should reject adoption of the proposed TO, and instead retain the more conservative approach to dioxin and furan reporting already in place. At a minimum, further evaluation and public dialogue should take place to ensure that the most environmentally protective standard is adopted. The proposed TO would reduce all reporting of dioxin and furan discharges below the ML to zero. While the purpose of the TO is to reduce the over-reporting of dioxin and furan discharges under the current ML, the approach taken by the TO instead results in an unknown amount of under-reporting, by incorrectly requiring any dioxin/furan discharges below the ML to be reported as zero…. Because the San Francisco Bay is listed as an impaired water body for dioxins and furans, any uncertainty in reporting should err on the side of caution, and not on the side of additional unreported discharges….

"…the TO notes that '[m]any permits set forth the dioxin and furan MLs for reporting and compliance purposes as equal to one half the default MLs specified in Method 1613.' Although this approach would still result in the underreporting of dioxin and furan discharges, such a compromise is more environmentally protective than the TO's proposal to reduce such reported discharges to zero…. The TO does not offer any data to evaluate the claim that using ½ ML will unrealistically inflate the total estimate of dioxins in a discharge. To properly evaluate whether ½ ML tends to overinflate the total sum, the TO should provide data that demonstrates how frequently non-detects are found to be less than the ML but greater than ½ the ML, and how often values fall below the ½ ML value.

"As a further alternative, the Regional Board could evaluate whether monitoring of other constituents could be used to estimate dioxins and furans below the ML…. Another more protective approach could be concentrating large volumes of sample before measuring the concentrations…. Finally, even under the proposed approach, the Regional Board could require some mitigation or minimization techniques in an attempt to offset the harmful effects of unreported discharges below the ML."

Response to Baykeeper Comment 2

We did not revise the tentative order in response to this comment. More time is not necessary for evaluation and dialogue. We solicited written comments, and the Regional Water Board hearing provides an additional opportunity for public dialogue.

The tentative order would not reduce all reporting of dioxin and furan discharges below MLs to zero. It continues to require the dischargers to report all dioxin and furan monitoring results, including estimated values, by congener. However, it clarifies how values below the ML are to be treated when adding congeners together to calculate dioxin-TEQ for compliance purposes. The ML is the concentration at which the entire analytical system gives a recognizable signal and acceptable calibration point. Since values reported below the ML represent values where the analytical system produces

unreliable results, such values are merely estimates. Regardless of pollutant, it is bad public policy to use mere estimates for compliance purposes. The tentative order clarifies that, when adding the weighted concentrations of dioxin and furan congeners, estimated values below the ML should not be included in the calculated dioxin-TEQ used for compliance purposes. In other words, unreliable data should not be added to reliable data; otherwise, the sum would be unreliable.

The "ML" concept is intended to ensure that only reliable measurements are used to determine compliance. The tentative order revises the MLs to be consistent among all permits and with Method 1613. Baykeeper prefers to set the MLs in the permits equal to one-half the default MLs published with the analytical method, believing this would be more environmentally protective. We disagree. Moreover, this misses the point; we contend that values that fall between one-half the default MLs and the default MLs are sufficiently unreliable that we should not use them for compliance purposes.

Baykeeper asks whether we could monitor a surrogate constituent to estimate dioxin and furan concentrations below the MLs. In a sense, Baykeeper proposes that the Regional Water Board revise how it translates its narrative bioaccumulation water quality objective into numeric effluent limits. The current scheme relies on toxic equivalents and is based on some assumptions that introduce uncertainties. The result is a simple means to implement the narrative water quality objective as numeric effluent limits. To use a surrogate to estimate dioxin-TEQ would require many more assumptions and introduce significant new uncertainties. Baykeeper does not suggest any particular surrogate for this purpose, and we doubt that this approach would more effectively implement the bioaccumulation objective. We contend that the bioaccumulative objective is best translated and evaluated using the specific pollutants actually bioaccumulating within the food web (i.e., the various dioxin and furan congeners).

Baykeeper suggests concentrating large-volume samples to obtain lower MLs. Larger samples would contain more dioxins and furans, which theoretically would be easier to detect and quantify when concentrated. However, concentrating large-volume samples would also concentrate other matrix constituents within the wastewater, thereby increasing analytical interferences. The consequence may be higher MLs, not lower ones.

Finally, Baykeeper suggests that the Regional Water Board could require additional dioxin and furan mitigation. The tentative order does not remove any existing dioxin and furan minimization requirements in existing permits. Dioxin-TEQ reduction requirements associated with compliance schedules and all generic pollutant minimization requirements remain in place. Nevertheless, there is little dischargers can do to significantly reduce dioxins and furans in San Francisco Bay since most sources relate to combustion and atmospheric deposition.

Baykeeper Comment 3
The TO is Contrary to the CWA's Anti-backsliding Provision, and the San Francisco Bay Basin Water Quality Control Plan.

"…The Clean Water Act's anti-backsliding provision requires that 'a permit may not be…modified…to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.' …In effect, this TO would raise the effluent limitation in each modified permit by allowing a greater concentration of dioxins and furans….

"…this increase in toxic discharges that would be permitted by the TO contradicts the San Francisco Bay Basin (Region 2) Water Quality Control Plan*'s bioaccumulation objective, which states that 'Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances….' Dioxins and furans are, by their nature, detrimental to aquatic wildlife, particularly fish eating wildlife, and each of the proposed permit revisions included in the TO would allow for an increase in dioxin and furan discharges, to the detriment of the San Francisco Bay."*

Response to Baykeeper Comment 3

We disagree. Anti-backsliding requirements demand that revised effluent limitations be at least as stringent as those previously in place. Although the tentative order changes how dioxin-TEQ is to be calculated, these changes do not revise any dioxin-TEQ effluent limits, which remain as stringent as before.

Even if incorporating BEFs into dioxin-TEQ calculations were to be considered a relaxation of effluent limits (which it is not), the resulting backsliding would still be permissible. Clean Water Act § 402(o)(2)(B) allows backsliding if "information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance." This tentative order represents the first time the Regional Water Board has considered BEFs in the context of San Francisco Bay discharges. Backsliding is permissible because this new information supports the use of BEFs.

The tentative order also does not conflict with the Basin Plan's bioaccumulation objective or antidegradation policies. Because dioxin and furan discharges would not increase as a result of the discharge, it would not be detrimental to San Francisco Bay water quality. See our response to Baykeeper Comment 1.

SAUSALITO-MARIN CITY SANITARY DISTRICT

District Comment 1
Definition of "Bypass"

"It is recommended that the tentative order include a precise definition of the term 'bypass,' consistent usage of the term throughout the order and a more uniform approach to the additional monitoring required of an agency when 'bypassing' occurs. On page 7, Paragraph 4 of the Tentative Order, reference is made to four seemingly different bypass scenarios…. When terms are not consistent it creates confusion, which can lead to unintentional non-compliance, which we wish to avoid.

"Moreover, if it is truly the Regional Water Board's intent to require the prescribed additional testing for 'any bypass event' as presently defined, the Regional Water Board should be aware that there are significant logistical difficulties and cost impacts that could cause problems for agencies in complying with the new regulatory requirements…."

Response to District Comment 1

Federal Standard Provisions attached to nearly every NPDES permit (Attachment D, Section I.G.1, in most permits) and 40 CFR 122.41(m)(1)(i) define the term "bypass" as "the intentional diversion of waste streams from any portion of a treatment facility." Enhanced monitoring during bypasses is not new. With the exception of some of the dischargers listed in tentative order provision 4 (including the District), the standard provisions (i.e., *Self Monitoring Program Part A*) have required enhanced monitoring during bypasses since 1993. Provision 4 did not refer to different bypass scenarios. It reiterated existing (often inconsistent) monitoring requirements in existing permits. The revised tentative order replaces the requirements that had been delineated in Provision 4 with new standard requirements applicable to all dischargers. See our responses to BACWA Comments 1A through 1D.

District Comment 2
Definition and Consistent Usage of the term "bypass"

"From our understanding of the tentative order as written, an agency is required to collect samples on a daily basis for all constituents for the duration of the bypass including acute toxicity using static renewal, but excepting chronic toxicity unless otherwise stipulated by the RMP…. We feel such broad interpretation leads to unwarranted and costly new regulatory requirement that may not have commensurate benefit.

"It is recommended that the Regional Water Board revise the order and delete the requirement for additional monitoring when an individual treatment unit is removed from service for maintenance, repair, or rehabilitation when any of the three following conditions exist:

a. *The hydraulic and/or loading conditions are within the design parameter of the remaining treatment units that are in service.*

b. *The treatment unit removed from service is used to treat the solids stream, such as a gravity thickener or digester.*

c. *The treatment unit that is removed from service is used for preliminary treatment."*

Response to District Comment 2

The revised tentative order reduces monitoring requirements for approved bypasses for many dischargers, leaving the existing requirements for unapproved bypasses in place. Pursuant to 40 CFR 122.41(m)(2), the Regional Water Board may approve bypasses for essential maintenance to ensure efficient treatment operations. See our responses to BACWA Comments 1A through 1D.

District Comment 3
Sand Filters and Chlorination Processes

"Another clarification that is recommended involves sand filters, which are commonly used in trickling filter plants as polishing processes following secondary treatment. As a polishing process, the filters do not typically treat the entire secondary flow stream and are not needed at all times to meet effluent limits. In addition, the rate of filtration is an operational variable that is adjusted based on loading conditions. Sand filters are typically turned down during high wet weather flow to prevent blinding of the filters and the subsequent need to remove them from service for media cleaning and restoration. It is recommended that Tentative Order not require additional monitoring when adjustments are made to the filtration rate and when individual sand filters are removed from service as process loading conditions might warrant.

"The dosing rate of the chlorination process is also an operational variable, not unlike the filtration rate of sand filters. It is common to reduce the number of basins in service during dry weather when flows are reduced. Chlorine dosing rate is an operational variable that can be adjusted similar to filtration rates for sand filters, to optimize the performance of the process irrespective of the number of basins in service. It has been SMCSD's experience that operational difficulties develop when the number of basins is not reduced, especially during dry weather, early morning flows. It is recommended that the chlorination process not be subject to accelerated monitoring when process loading factors are within generally accepted design value for the process."

Response to District Comment 3

The revised tentative order does not require any special monitoring when dischargers adjust filtration or chlorination processes during normal operations. The revised tentative

order retains existing requirements for enhanced monitoring during unapproved bypasses. See our responses to BACWA Comments 1A through 1D.

District Comment 4
Logistical Impacts and Costs of the Tentative Order

"The tentative order places a significant burden on agencies in terms of additional costs and staffing requirements. For a small agency, such as SMCSD, which does not provide 24-hour plant coverage, the additional monitoring requirements are especially burdensome, requiring overtime and significantly higher monitoring and laboratory costs. In addition, there are significant logistical problems that affect an agency's ability to comply with the new monitoring requirements. For instance, acute bioassay tests require the ordering of larval fish and sampling and testing over a five day period. This is not reasonable for a bypass involving the repair or maintenance of a treatment unit that is of a short term nature…. Other logistical problems include arranging for testing by outside contract laboratories that do not work after normal business hours and on the weekend and holidays.

"…It is suggested that a trigger be established, similar to the 45 mg/L TSS limit which serves as a trigger during blending, to require testing of all constituents that have limits, with the exception of toxicity and oil and grease…."

Response to District Comment 4

The tentative order circulated for review imposed no new monitoring requirements; however, it clarified that monitoring requirements during unapproved bypasses continue to include acute toxicity tests. Nevertheless, the revised tentative order removes the requirement for oil and grease and acute toxicity tests during approved bypasses, which may reduce monitoring costs. See our responses to BACWA Comments 1A through 1D.

District Comment 5
Continuous pH Monitoring

"Page 7, Paragraph 4 of the Tentative Order specifies continuous monitoring of pH during blending events. The District's composite sampler is configured with a pH probe/module, which takes pH readings at approximately one minute intervals. Does this satisfy the "continuous" requirement of the order? It is recommended that "continuous" be better defined?"

Response to District Comment 5

Whereas Provision 4 of the tentative order had reiterated the pH monitoring requirement currently in the District's permit, we revised this provision to eliminate this unique requirement. The revised tentative order requires pH monitoring during unapproved bypasses, and in those cases, the monitoring is to be carried out as described in each

permit's Monitoring and Reporting Program (i.e., Attachment E for most permits). See our responses to BACWA Comments 1A through 1D.

District Comment 6
Timing of Sample Collection

"Page G-7, III A.3.a.1 of the Tentative Order discusses the timing of sample collection. Timing of sample collection is an issue for a small District. Selection of random days for our effluent monitoring could lead to a situation where our Laboratory Director would be required to work overtime on the weekends to ensure tests are conducted when trained staff is not available to collect and run the tests. Given our small staff, both in the lab and in operations, we request language in the TO that exempts small agencies from the 'random' requirement or, instead, adds language that provides the District the ability to submit individual sampling plans to the Executive Officer for approval, similar to is allowed under Tentative Order Section G-7, III.A.3.a.2."

Response to District Comment 6

We did not revise the tentative order in response to this comment. The random sampling requirement is not new. The standard provisions (i.e., *Self Monitoring Program Part A*) have required random sampling since 1993. Random sampling is necessary to represent all operating conditions. Influent conditions can differ from day to day, and between weekdays and weekends. Illegal dumping within a wastewater treatment plant's service area could occur on weekends, and monitoring is necessary to detect its effects, if any. Likewise, if sampling is not random, an unscrupulous discharger could modify its operations on weekends with impunity. While these circumstances are presumably rare, random sampling is one of our primary means of detecting such problems if they occur.

District Comment 7
Effluent Sampling for Conventional Pollutants on at Least One Day of the Bioassay Test

"Page G-8, III A4 of the tentative Order requires sampling for conventional pollutants on at least one day of any multiple-day bioassay test the MRP requires. For those agencies that use contract or outside laboratories for their bioassay tests, this can lead to having to schedule sampling for pollutants as late as the middle of the month. Given a normal two week turnaround time for contract laboratories, we could receive notice of a higher than normal constituent value or a violation of a limit too late to re-sample in that month. Most months, this requirement can be met without a problem (most of the time we try to schedule bioassays on the first or second week of the month) but at other times, this may not be possible. It is recommended that the word 'shall' be changed to 'should' so that the sentence reads 'Effluent sampling for conventional pollutants should occur on at least one day of any multiple-day bioassay test the MRP requires.'"

Response to District Comment 7

We did not revise the tentative order in response to this comment. The requirement to sample conventional pollutants on at least one day of any multiple-day bioassay test is not new. The standard provisions (i.e., *Self Monitoring Program Part A*) have required this sampling since 1993. This monitoring would indicate whether toxicity tests were representative of typical effluent conditions. If a discharger is concerned that a single sample may not demonstrate compliance with an average monthly effluent limit, nothing precludes the discharger from monitoring for conventional pollutants earlier in that month and then again later in the same month.

WEST COUNTY AGENCY

Agency Comment 1

"…the monitoring requirements for approved bypasses differ significantly between dischargers. WCA is requesting a change in the Tentative Order that will standardize these requirements and reduce the sampling/analytical burden during approved bypass events, such as blending….

"RMSD submitted a study on blended water quality to the Regional Water Board on November 2nd, 2009. The study showed no exceedance of effluent limits during blending events and that compliance with effluent limits can be assessed by measuring Total Suspended Solids (TSS) as a surrogate constituent. RMSD requested approval for an alternate monitoring regime during approved wet-weather blending events….

"WCA, on behalf of RMSD, requests that Section III.A.3.b.5) of the Tentative Order be revised to incorporate a standard monitoring regime for approved bypass events. The standard provision would allow use of a TSS surrogate to indicate effluent quality and eliminate grab sampling and acute toxicity testing…."

Response to Agency Comment 1

We agree. See our responses to BACWA Comments 1A through 1D.

WESTERN STATES PETROLEUM ASSOCIATION (WSPA)

WSPA Comment 1

"WSPA supports the proposed T.O. to amend limits in NPDES permits for dioxin using the bioaccumulation equivalency factors approach. The T.O. reflects the implementation of sound science for dioxin and demonstrates proper and effective regulation for the San Francisco Bay watershed by Board staff."

Response to WSPA Comment 1

No response is necessary.

STAFF-INITIATED REVISIONS

Upon reviewing the tentative order, Regional Water Board staff initiated several necessary revisions unrelated to the comments interested parties submitted.

First, staff removed from Table 1 and Table F-2 all references to dischargers whose permits have expired (see table below). The Regional Water Board may consider attaching the new Attachment G to these permits when it reissues them.

DISCHARGERS REMOVED FROM THE TENTATIVE ORDER

Discharger	Permit Number	Order Number	Adoption Date
Crockett Cogeneration, LP and Pacific Crockett Energy, Inc.	CA0029904	R2-2004-0026	5/19/04
East Brother Light Station, Inc.	CA0038806	R2-2004-0079	9/15/04
Mirant Delta, LLC	CA0004880	R2-2002-0072	6/19/02
Mirant Potrero, LLC	CA0005657	R2-2006-0032	5/10/06
Novato Sanitary District	CA0037958	R2-2004-0093	11/17/04
		R2-2008-0026	5/14/08
Union Sanitary District (Intermittent Wet Weather)	CA0038733	R2-2004-0002	1/21/04
Yountville, Town of	CA0038121	R2-2004-0017	3/17/04

Next, because the Novato Sanitary District's permit has expired, staff removed the specific reference to it from Provision 4 of the Order:

> **4. The following provisions currently in effect for specific facilities remain in effect and shall modify the new Attachment G for the orders specifically identified below.**
>
> a. *Crockett Community Services District (Order Number R2-2008-0005):*
>
> The Discharger shall monitor the perimeter of the fence line surrounding the treatment facilities at the corners and midpoints for odors weekly.
>
> b. *Delta Diablo Sanitation District (Order Number R2-2009-0018):*
>
> The Discharger shall collect composite influent samples on varying days selected at random and shall not include any plant recirculation or other side stream wastes unless the flows originate from the Recycled Water Facility. The Executive Officer must approve any deviation.

c. *East Bay Regional Park District, Union Sanitary District, and East Bay Dischargers Authority (Hayward Shoreline Marsh) (Order Number R2-2006-0031):*

i. With respect to standard observations at the periphery of waste treatment and/or disposal facilities, the Dischargers shall pay special attention to observations for vector nuisance and signs of waterfowl botulism per the Marsh Management Plan.

ii. The Dischargers may file separate self monitoring reports detailing permit compliance.

iii. The Dischargers shall collect receiving water samples during the higher slack water period. The Dischargers shall collect samples within the discharge plume and down current of the discharge point so as to be representative, unless otherwise stipulated.

~~d. *Novato Sanitary District (Order Numbers R2-2004-0093 and R2-2008-0026):*~~

~~i. Influent samples for the Novato Plant may include side-streams from sludge storage pond supernatant, digester supernatant, filter backwash, and DAF supernatant.~~

~~ii. Monthly self monitoring reports shall be due 30 days after the end of each calendar month. If the Discharger monitors any pollutant more frequently than the permit requires, it shall include the results of this monitoring in the calculations and reporting of the data submitted in the self monitoring report. Annual self monitoring reports shall be due February 1 of each year, covering the previous calendar year.~~

Next, because the Mercury Watershed Permit (CA0038849, Order No. R2-2007-0077) incorporates the same older attachments that the revised tentative order replaces, staff added the Mercury Watershed Permit to Table 1 and Table F-2. The Mercury Watershed Permit implements the San Francisco Bay Mercury TMDL wasteload allocations for municipal and industrial wastewater discharges.

Finally, staff added findings to the Fact Sheet explaining the Regional Water Board's authority to reopen the permits subject to this amendment.