CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION

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http://www.waterboards.ca.gov/sanfranciscobay

ORDER No. R2-2007-0077
NPDES No. CA0038849

WASTE DISCHARGE REQUIREMENTS FOR MUNICIPAL AND INDUSTRIAL WASTEWATER DISCHARGES OF MERCURY TO SAN FRANCISCO BAY

The following Dischargers are subject to waste discharge requirements as set forth in this Order, for the purpose of implementing the San Francisco Bay Mercury Total Maximum Daily Load (TMDL) wasteload allocations for municipal and industrial wastewater discharges to San Francisco Bay and its contiguous bay segments:

Table 1. Discharger Information

Discharger **Name of Facility** **Facility Address**	See attached Tables 1A and 1B for Discharger Information.
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified these discharges as either major or minor discharges as indicated in Tables 1A and 1B.	

Discharges from the discharge points identified below are subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
See attached Tables 2A and 2B for Discharge Locations.				

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**November 1, 2007**
This Order shall become effective on:	**January 1, 2008**[1]
This Order shall expire on:	**December 31, 2012**

[1] This Order becomes effective on the latter of this date or on the 1st (first) of the month after the TMDL for Mercury in San Francisco Bay becomes effective, except that if the San Francisco Bay Mercury TMDL is not approved by U.S. EPA or is approved in a form that is substantially different than was approved by the State Water Board on July 17, 2007, and implemented herein, this Order shall not become effective.

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

Digitally signed by Bruce Wolfe
Date: 2007.11.07 10:30:59 -08'00'

Bruce H. Wolfe, Executive Officer

Table 1A. Municipal Discharger Information

Discharger	Name of Facility	Facility Address	Minor/ Major
American Canyon, City of	Wastewater Treatment and Reclamation Facility	151 Mezzetta Court American Canyon, CA 94503 Napa County	Major
Benicia, City of	Benicia Wastewater Treatment Plant	614 East Fifth Street Benicia, CA 94510 Solano County	Major
Burlingame, City of	Burlingame Wastewater Treatment Plant	1103 Airport Boulevard Burlingame, CA 94010 San Mateo County	Major
Calistoga, City of	Dunaweal Wastewater Treatment Plant	1185 Dunaweal Lane Calistoga, CA 94515 Napa County	Minor
Central Contra Costa Sanitary District	Central Contra Costa Sanitary District Wastewater Treatment Plant	5019 Imhoff Place Martinez, CA 94553 Contra Costa County	Major
Central Marin Sanitation Agency	Central Marin Sanitation Agency Wastewater Treatment Plant	1301 Andersen Drive San Rafael, CA 94901 Marin County	Major
Contra Costa County Sanitation District No. 5, Port Costa	Port Costa Wastewater Treatment Plant	End of Canyon Lake Drive Port Costa, CA 94569 Contra Costa County	Minor
Delta Diablo Sanitation District	Wastewater Treatment Plant	2500 Pittsburg-Antioch Highway Antioch, CA 94509 Contra Costa County	Major
East Bay Dischargers Authority; Cities of Hayward and San Leandro; Oro Loma Sanitary District; Castro Valley Sanitary District; Union Sanitary District; Livermore-Amador Valley Water Management Agency; Dublin San Ramon Services District; and City of Livermore.	EBDA Common Outfall	EBDA Common Outfall 14150 Monarch Bay Drive San Leandro, CA 94577 Alameda County	Major
	Hayward Water Pollution Control Facility		
	San Leandro Water Pollution Control Plant		
	Oro Loma/Castro Valley Sanitary Districts Water Pollution Control Plant		
	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	East Bay Municipal Utility District, Special District No. 1 Wastewater Treatment Plant	2020 Wake Avenue Oakland, CA 94607 Alameda County	Major
	Point Isabel Wet Weather Facility	2755 Isabel Street Richmond, CA 94804 Alameda County	Minor
	San Antonio Creek Wet Weather Facility	225 5th Avenue Oakland, CA 94606 Alameda County	Minor

Discharger	Name of Facility	Facility Address	Minor/ Major
	Oakport Wet Weather Facility	5597 Oakport Street Oakland, CA 94621 Alameda County	Minor
East Brother Light Station, Inc.[1]	East Brother Light Station	117 Park Place Point Richmond, CA 94801 Contra Costa County	Minor
Fairfield-Suisun Sewer District	Fairfield-Suisun Wastewater Treatment Plant	1010 Chadbourne Road Fairfield, CA 94534 Solano County	Major
Las Gallinas Valley Sanitary District	Las Gallinas Valley Sanitary District Sewage Treatment Plant	300 Smith Ranch Road San Rafael, CA 94903 Marin County	Major
Marin County (Paradise Cove), Sanitary District No. 5 of	Paradise Cove Treatment Plant	3700 Paradise Drive Tiburon, CA 94920 Marin County	Minor
Marin County (Tiburon), Sanitary District No. 5 of	Wastewater Treatment Plant	2001 Paradise Drive Tiburon, CA 94920 Marin County	Minor
Millbrae, City of	Water Pollution Control Plant	400 East Millbrae Avenue Millbrae, CA 94030 San Mateo County	Major
Mt. View Sanitary District	Mt. View Sanitary District Wastewater Treatment Plant	3800 Arthur Road Martinez, CA 94553 Contra Costa County	Major
Napa Sanitation District	Soscol Water Recycling Facility	1515 Soscol Ferry Road Napa, CA 94558 Napa County	Major
Novato Sanitary District	The Novato Treatment Plant, The Ignacio Treatment Plant	Novato Treatment Plant: 500 Davidson Street Novato, CA 94945 Ignacio Treatment Plant: 445 Bel Marin Keys Blvd. Novato, CA 94945 Both in Marin County	Major, Major
Palo Alto, City of	Palo Alto Regional Water Quality Control Plant	2501 Embarcadero Way Palo Alto, CA 94303 Santa Clara County	Major
Petaluma, City of	Municipal Wastewater Treatment Plant	950 Hopper Street Petaluma, CA 94952 Sonoma County	Major
Pinole, City of	Pinole-Hercules Water Pollution Control Plant	11 Tennent Avenue Pinole, CA, 94564 Contra Costa County	Major
Rodeo Sanitary District	Rodeo Sanitary District Water Pollution Control Facility	800 San Pablo Avenue Rodeo, CA 94572 Contra Costa County	Major
Saint Helena, City of	City of St. Helena Wastewater Treatment and Reclamation Plant	1 Thomann Lane St. Helena, CA 94574 Napa County	Minor
San Francisco, City and County of, San Francisco International Airport	Mel Leong Treatment Plant, Sanitary Plant	918 Clearwater Drive San Francisco International Airport San Francisco,CA 94128	Major
San Francisco (Southeast Plant), City and County of	Southeast Water Pollution Control Plant	750 Phelps Street San Francisco, CA 94124 San Francisco County	Major

Discharger	Name of Facility	Facility Address	Minor/ Major
San Jose/Santa Clara, Cities of	San Jose/Santa Clara Water Pollution Control Plant	4245 Zanker Road San Jose, CA 95134 Santa Clara County	Major
San Mateo, City of	City of San Mateo Wastewater Treatment Plant	2050 Detroit Drive San Mateo, CA 94404 San Mateo County	Major
Sausalito-Marin City Sanitary District	Sausalito-Marin City Sanitary District Wastewater Treatment Plant	#1 Fort Baker Road Sausalito, CA 94965 Marin County	Major
Seafirth Estates Company and Property Owners within the Seafirth Estates Subdivision[1]	Seafirth Estates Wastewater Treatment Plant	33 Seafirth Place Tiburon, CA 94920 Marin County	Minor
Sewerage Agency of Southern Marin	Wastewater Treatment Plant	450 Sycamore Avenue Mill Valley, CA 94941 Marin County	Major
Sonoma Valley County Sanitary District	Municipal Wastewater Treatment Plant	22675 8th Street East Sonoma, CA 95476 Sonoma County	Major
South Bayside System Authority	South Bayside System Authority Wastewater Treatment Plant	1400 Radio Road Redwood City, CA 94065 San Mateo County	Major
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	Major
Sunnyvale, City of	Sunnyvale Water Pollution Control Plant	1444 Borregas Avenue, Sunnyvale, CA 94089 Santa Clara County	Major
US Naval Support Activity, Treasure Island	Wastewater Treatment Plant	681 Avenue M, Treasure island San Francisco, CA 94130-1807	Major
Vallejo Sanitation and Flood Control District	Vallejo Sanitation and Flood Control District Wastewater Treatment Plant	450 Ryder Street Vallejo, CA 94590 Solano County	Major
West County Agency (West County Wastewater District and City of Richmond Municipal Sewer District)	West County Agency Combined Outfall	601 Canal Blvd. Richmond, CA 94804 Contra Costa County	Major
Yountville, Town of	Municipal Wastewater Treatment Plant	7501 Solano Avenue Yountville, CA 94599 Napa County	Minor

[1] This Discharger serves domestic customers but is not a municipal government agency.

Table 1B. Industrial Discharger Information

Discharger	Name of Facility	Facility Address	Minor/ Major
Industrial Wastewater Discharger (Non-Petroleum Refinery):			
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	Major
Crockett Cogeneration, LP and Pacific Crockett Energy, Inc.	Crockett Cogeneration Plant	550 Loring Avenue Crockett, CA 94525-1232 Contra Costa County	Minor
The Dow Chemical Company	The Dow Chemical Company	901 Loveridge Road Pittsburg, CA 94565 Contra Costa County	Major
General Chemical West, LLC[2]	Pittsburg Plant	501 Nichols Road Pittsburgh, CA 94565 Contra Costa County	Major
GWF Power Systems L. P., Site I	GWF -Site I (E. Third St.) Power Plant	895 East 3rd Street Pittsburg, CA 94565 Contra Costa County	Minor
GWF Power Systems L. P., Site V	GWF - Site V (Nichols Rd) Power Plant	555 Nichols Road Bay Point, CA 94565 Solano County	Minor
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	Minor
Rhodia, Inc.	Sulfuric Acid Regeneration Martinez Plant	100 Mococo Road Martinez, CA 94553 Contra Costa County	Major
San Francisco City and County of, San Francisco International Airport	Mel Leong Treatment Plant, Industrial Plant	676 McDonnell Road San Francisco, CA 94128 San Francisco County	Major
Mirant Delta, LLC	Pittsburg Power Plant	Mirant Delta LLC, Pittsburg Power Plant 696 W. 10th Street Pittsburg, CA 94565 Contra Costa County	Major
Mirant Potrero LLC	Potrero Power Plant	Mirant Potrero, LLC, Potrero Power Plant 1201-A Illinois Street San Francisco, CA 94107 San Francisco County	Major
USS-Posco Industries	Pittsburg Plant	900 Loveridge Road Pittsburg, CA 94565 Contra Costa County	Major
Industrial Wastewater Discharger (Petroleum Refinery):			
Chevron Products Company	Richmond Refinery	841 Chevron Way Richmond, CA 94801 Contra Costa County	Major
ConocoPhillips	San Francisco Refinery	1380 San Pablo Avenue Rodeo, CA 94572-1354 Contra Costa County	Major
Shell Oil Products US and Equilon Enterprises LLC	Shell Martinez Refinery	3485 Pacheco Blvd Martinez CA 94553 Contra Costa County	Major

Discharger	Name of Facility	Facility Address	Minor/ Major
Tesoro Refining & Marketing Co.	Golden Eagle Refinery	150 Solano Way Martinez, CA 94553 Contra Costa County	Major
Valero Refining Company	Valero Benicia Refinery	3400 East Second Street Benicia, CA 94510-1005 Solano County	Major

[2] The Regional Water Board adopted Order R2-2007-0065 on August 8, 2007, terminating the individual discharge permit for General Chemical West LLC effective April 1, 2008. This Discharger will cease discharge no later than this date. The requirements of this Order do not apply to this Discharger if the effective date of this Order falls after the Discharger ceases to discharge.

Table 2A. Municipal Discharger Location Information

Discharger	Discharge Point(s)	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
American Canyon, City of	001-S	38º 11' 3.7" N	122º 16' 39.0" W	North Slough
	003-R	38º 11' 5.7" N	122º 16' 44.8" W	Constructed freshwater wetlands
Benicia, City of	E-001	38º 02' 30" N	122º 09' 03" W	Carquinez Strait
Burlingame, City of	E-002[(b)]	37º 39' 55" N	122º 21' 41" W	Lower San Francisco Bay
Calistoga, City of	001	38º 33' 34" N	122º 33' 28" W	Napa River
	002	38º 33' 13" N	122º 33' 40" W	Napa River
Central Contra Costa Sanitary District	001	38º 2' 44" N	122º 5' 55" W	Suisun Bay
Central Marin Sanitation Agency	001	37º 56' 54" N	122º 27' 23" W	Central San Francisco Bay
Contra Costa County Sanitation District No. 5, Port Costa	001	38° 02' 55'' N	122° 10' 56'' W	Carquinez Strait
Delta Diablo Sanitation District	E-001	38º 01' 40" N	121º 50' 14" W	New York Slough
East Bay Dischargers Authority, including City of Hayward, City of San Leandro, Oro Loma Sanitary District, Castro Valley Sanitary District, Union Sanitary District, Livermore-Amador Valley Water Management Agency (LAVWMA), Dublin San Ramon Services District, and City of Livermore	001	37º 41' 40" N	122 º 17' 42" W	Lower San Francisco Bay
EBMUD – Main Wastewater Treatment Plant	E-001	37º 49' 2 " N	122º 20' 55" W	Central San Francisco Bay
EBMUD – Point Isabel Wet Weather Facility	E-001	37°53'43"N	122°19'24"W	Richmond Inner Harbor, part of Central San Francisco Bay
EBMUD – San Antonio Creek Wet Weather Facility	E-002	37°47'30"N	122°15'44"W	Oakland Inner Harbor, Part of Lower San Francisco Bay
East Bay Municipal Utilities District – Oakport Wet Weather Facility	E-003	37°45'39"N	122°12'52"W	Oakland Inner Harbor, part of lower San Francisco Bay
East Brother Light Station, Inc.[(a)]	E-001	37º 57' 48" N	122º 25' 55" W	San Pablo Bay
Fairfield-Suisun Sewer District	E-001	38° 12' 33" N	122° 03' 24" W	Boynton Slough
	E-002	38° 12' 52" N	122° 03' 56" W	Boynton Slough
	E-003	38° 12' 35" N	122° 03' 29" W	Boynton Slough
	E-005	38° 14' 06" N	122° 03' 31" W	Ledgewood Creek
Las Gallinas Valley Sanitary District	E-001	38° 01' 32" N	122° 30' 58" W	Miller Creek
	E-002	38° 01' 36" N	122° 30' 45" W	Miller Creek
Marin County (Paradise Cove), Sanitary District No. 5 of	001	37 º 53' 50" N	122 º 27' 40" W	Central San Francisco Bay
Marin County (Tiburon), Sanitary District No. 5 of	E-001	37º 52' 12" N	122º 27' 5" W	Raccoon Strait, Central San Francisco Bay
Millbrae, City of	E-001	37º 39' 55" N	122º 21' 41" W	Lower San Francisco Bay
Mt. View Sanitary District	E-001	38º 01' 12" N	122º 05' 47" W	Peyton Slough, a tributary to Carquinez Strait
Napa Sanitation District	E-001	38° 14' 09"N	122° 17' 10" W	Napa River
Novato Sanitary District	E-003	38° 03' 36" N	122º 29' 24" W	San Pablo Bay
Palo Alto, City of	E-001	37º 27' 30"N	122º 06' 37" W	An unnamed manmade channel, a tributary to Lower San Francisco Bay

Discharger	Discharge Point(s)	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
	E-002	37º 26' 30" N	122º 06' 45" W	Renzel Marsh Pond, a tributary to Matedero Creek
Petaluma, City of	E-001	38° 12' 33" N	122° 34' 22" W	Petaluma River
Pinole, City of	001	38° 03' 06" N	122° 14' 55" W	San Pablo Bay
	002	38° 00' 47" N	122° 17' 45" W	San Pablo Bay
Rodeo Sanitary District	001	38º 03' 06" N	122º 14' 55" W	San Pablo Bay
Saint Helena, City of	E-001	30° 30'10" N	122º 26' 15" W	Napa River
San Francisco, City and County of, San Francisco International Airport, Sanitary	E-002[(b)]	37° 39' 55" N	122° 21' 41" W	Lower San Francisco Bay
San Francisco (Southeast Plant), City and County of	E-001	37° 44' 58" N	122° 22' 22" W	Lower San Francisco Bay
San Jose/Santa Clara, Cities of	E-001	37° 26' 06"N	121° 57' 08" W	Artesian Slough, a tributary to Coyote Creek and South San Francisco Bay
San Mateo, City of	E-001	37º 34' 50" N	122º 14' 45" W	Lower San Francisco Bay
Sausalito-Marin City Sanitary District	001	37º 50' 37" N	122º 28' 3" W	Central San Francisco Bay
Seafirth Estates Company and Property Owners within the Seafirth Estates Subdivision[1]	001	37º 45' 08" N	122º 28' 08" W	Central San Francisco Bay
Sewerage Agency of Southern Marin	E-001	37° 52' 12" N	122° 27' 5" W	Raccoon Strait
Sonoma Valley County Sanitary District	001	38° 14' 14" N	122° 25' 51" W	Schell Slough, a tributary to the San Pablo Bay
South Bayside System Authority	001	37° 33' 40" N	122° 13' 02" W	Lower San Francisco Bay
South San Francisco and San Bruno, Cities of	E-002[(b)]	37° 39' 55" N	122° 21' 41" W	Lower San Francisco Bay
Sunnyvale, City of	E-001	37° 25' 13" N	122° 1' 0" W	Moffett Channel, a tributary to Guadalupe Slough and South San Francisco Bay
US Naval Support Activity, Treasure Island	E-001	37° 49' 50" N	122° 21' 25" W	San Francisco Bay
Vallejo Sanitation and Flood Control District	E-001	38º 3' 53" N	122 º 13' 42" W	Carquinez Strait
	E-002	38º 5' 23" N	122º 15' 12" W	Mare Island Strait, a tributary to Carquinez Strait
West County Agency (West County Wastewater District and City of Richmond Municipal Sewer District)	E-001	37°54'47"N	122°25'06"W	Central San Francisco Bay
Yountville, Town of	E-001	38° 24' 30''N	122°20'25''W	Napa River

[(a)] This Discharger serves domestic customers but is not a municipal government agency.

[(b)] These Dischargers share the North Bayside System Unit outfall which serves as the combined discharge point E-002 into San Francisco Bay. However, compliance with the requirements of this Order are by each Discharger at its individual compliance station specified in the Monitoring and Reporting Program, Attachment E, of this Order.

Table 2B. Industrial Discharger Location Information

Discharger	Discharge Point	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
Industrial Wastewater Discharger (Non-Petroleum Refinery):				
C&H Sugar Company Inc. and Crockett Community Services District	002	38º 03' 30" N	122º 13' 28″ W	Carquinez Strait
Crockett Cogeneration, LP and Pacific Crockett Energy, Inc.	E-001	38º 3' 22" N	122º 13' 5" W	Carquinez Strait
The Dow Chemical Company	E-001	38º 1' 48" N	121º 51' 7" W	New York Slough
General Chemical West, LLC©	E-001	38º 2' 48" N	121º 59' 10" W	Suisun Bay
GWF Power Systems L. P.	E-001	38º 2' 00" N	121º 52' 15" W	New York Slough
GWF Power Systems L. P.	E-001	38º 3' 15" N	121º 59' 15" W	New York Slough
Pacific Gas and Electric Company (PG&E)	E-001	38º 2' 34" N	121º 57' 14" W	Suisun Bay
Rhodia, Inc.	E-001	38º 2' 18" N	122º 7' 1" W	Suisun Bay
San Francisco, City and County of, San Francisco International Airport, Industrial	E-002[(b)]	37º 39', 55" N	122º 21' 41" W	Lower San Francisco Bay
Mirant Delta, LLC	E-001[(a)]	38º 2' 29" N	121º 53' 25" W	Suisun Bay
Mirant Potrero LLC	E-001[(a)]	37º 45' 23" N	122º 22' 52" W	San Francisco Bay
USS-Posco Industries	E-001	38º 1' 48" N	121º 51' 32" W	Suisun Bay
	E-002	38º 1' 51" N	121º 51' 58" W	Suisun Bay
Industrial Wastewater Discharger (Petroleum Refinery):				
Chevron Products Company	E-001	37º 58' 15" N	122º 25' 45" W	San Pablo Bay
ConocoPhillips	E-002	38º 3' 22" N	122º 15' 36" W	San Pablo Bay
Shell Oil Products US and Equilon Enterprises LLC	E-001	38º 1' 56" N	122º 7' 44" W	Carquinez Strait
Tesoro Refining & Marketing Co.	E-001	38º 2' 54" N	122º 5' 22" W	Suisun Bay
Valero Refining Company	E-001	38º 3' 18" N	122º 7' 7" W	Suisun Bay

(a) This Order applies to the mercury discharges from internal waste streams discharged through these discharge points, and not to the once through cooling water discharges of these discharge points.

(b) This Discharger shares the North Bayside System Unit outfall with the Dischargers indicated in footnote (b) of Table 2A. This outfall serves as the combined discharge point E-002 into San Francisco Bay for these Dischargers. However, compliance with the requirements of this Order are by each Discharger at its individual compliance station specified in the Monitoring and Reporting Program, Attachment E, of this Order.

(c) The Regional Water Board adopted Order R2-2007-0065 on August 8, 2007, terminating the individual discharge permit for General Chemical West LLC effective April 1, 2008. This Discharger will cease discharge from this outfall no later than this date. The requirements of this Order do not apply to this Discharger if the effective date of this Order falls after the Discharger ceases to discharge.

Table of Contents

List of Tables

List of Attachments

The following Documents are part of this Permit, but are not physically attached as Attachment G due to volume. They are available on the internet at www.waterboards.ca.gov/sanfranciscobay/

- Standard Provisions and Reporting Requirements, August 1993
- Self-Monitoring Program, Part A, August 1993

I. FACILITY INFORMATION

The following Dischargers are subject to waste discharge requirements as set forth in this Order:

Table 4. Facility Information

Discharger	See Tables 1A and 1B above.
Name of Facility	
Facility Address	
Facility Contact, Title, and Phone	See Tables 4A and 4B below.
Mailing Address	
Type of Facility	
Facility Design Flow	

Table 4A. Additional Information on Municipal Facility (see also Table 1A)

Discharger	Facility Contact, Title, and Phone	Mailing Address	Effluent Description	Facility Design Flow (mgd)
American Canyon, City of	Robert C. Weil Public Works Director (707) 647-4550	300 Crawford Way American Canyon, CA 94503	Advanced Secondary	2.5
Benicia, City of	Jerry Gall Superintendent (707)-746-4336	Same as Facility Address	Secondary	4.5
Burlingame, City of	Phil Scott, Public Works Superintendent (650)-738-4663	501 Primrose Burlingame, CA 94010	Secondary	5.5
Calistoga, City of	Paul Wade Public Works Director (707) 942-2828 and Water Systems Super't (707) 942-2837or (707) 942-2847	414 Washington Street Calistoga, CA 94515	Secondary	0.84
Central Contra Costa Sanitary District	Douglas J. Craig Director of Operations (925) 228-9500	Same as Facility Address	Secondary	53.8
Central Marin Sanitation Agency	Robert Cole Environmental Services Manager (415) 459-1455	1301 Andersen Drive San Rafael, CA 94901	Secondary	10
Contra Costa County Sanitation District No. 5, Port Costa	Warren Lai (925) 313-2253 wlai@pw.co.contra-costa.ca.us	Contra Costa County Public Works 255 Glacier Drive Martinez, CA 94553	Secondary	0.033
Delta Diablo Sanitation District	Gary W. Darling General Manager (925) 756-1920	Same as Facility Address	Secondary	16.5
East Bay Dischargers Authority: EBDA Common Outfall Hayward Water Pollution Control Facility	Charles V. Weir General Manager (510) 278-5910	2651 Grant Avenue San Lorenzo, CA 94580	Secondary	105.8

Discharger	Facility Contact, Title, and Phone	Mailing Address	Effluent Description	Facility Design Flow (mgd)
San Leandro Water Pollution Control Plant				
Oro Loma/Castro Valley Sanitary Districts Water Pollution Control Plant				
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 Main Wastewater Treatment Plant	Dave Williams Director of Wastewater (510) 287-1496	P.O. Box 24055 Oakland, CA 94623-1055	Secondary	120
Point Isabel WWF			Primary	100
San Antonio Creek WWF			Primary	51
Oakport WWF			Primary	158
East Brother Light Station, Inc.[1]	Tom Butt President of East Bros. Light Station Inc. (510)236-7435	117 Park Place Richmond, CA 94801	Secondary	0.00025
Fairfield-Suisun Sewer District	Larry Bahr Regulatory Program Director (707) 429-8930	Same as Facility Address	Advanced Secondary	17.5
Las Gallinas Valley Sanitary District	Mark Williams District Manager (415) 472-1734	300 Smith Ranch Rd San Rafael, CA 94903-1929	Secondary	2.92
Marin County (Paradise Cove), Sanitary District No. 5 of	Robert L. Lynch Interim District Manager (415) 435-1501	P.O. Box 227 Tiburon, CA 94920	Secondary	0.08
Marin County (Tiburon), Sanitary District No. 5 of	Robert L. Lynch Interim District Manager (415) 435-1501	P.O. Box 227 Tiburon, CA 94920	Secondary	0.98
Millbrae, City of	Khee Lim City Engineer (650) 259-2347	621 Magnolia Avenue Millbrae, CA 94030	Secondary	3
Mt. View Sanitary District	David R. Contreras District Manager (925) 228-5635 ext. 32	P. O. Box 2757 Martinez, CA 94553	Advanced Secondary	3.2
Napa Sanitation District	Mr. Tim Healy Assistant General Manager/District Engineer (707) 258-6000 x508	935 Hartle Court Napa, CA 94559	Secondary	15.4

Discharger	Facility Contact, Title, and Phone	Mailing Address	Effluent Description	Facility Design Flow (mgd)
Novato Sanitary District	Beverly James General Manager (415) 892-1694 x111	500 Davidson Street Novato, CA 94945	Secondary	5.4
Palo Alto, City of	Phil Bobel Environmental Compliance Manager (650) 329-2285	2501 Embarcadero Way, Palo Alto, CA 94303	Advanced Secondary	39
Petaluma, City of	Michael J. Ban Director of Water Resources and Conservation (707) 778-4487	202 N. McDowell Blvd. Petaluma, CA 94954	Secondary	5.2
Pinole, City of	Julian Misra Plant Manager (510) 724-8963	1 Tennant Avenue, Pinole, CA, 94564	Secondary	4.06
Rodeo Sanitary District	Steven S. Beall Engineer-Manager 510-799-2970	Same as Facility Address	Secondary	1.14
Saint Helena, City of	Jonathon Goldman Director of Public Works (707) 968-2746	1480 Main Street St. Helena, CA 94574	Secondary	0.05
San Francisco, City and County of (Airport Commission)	Mark Costanzo Utilities Manager (650) 642-4798	676 McDonnell Road San Francisco, CA 94128	Secondary	2.2
San Francisco (Southeast Plant), City and County of	Thomas Franza Assistant General Manager of Wastewater (415) 554-2475	1155 Market St., 11th Floor San Francisco, CA 94103	Secondary	150
San Jose/Santa Clara, Cities of	Dale Ihrke Deputy Director (408)-945-5198	700 Los Esteros Road San Jose, CA 95134	Advanced Secondary	167
San Mateo, City of	Mark Von Aspern Plant Manager (650) 522-7385	Same as Facility Address	Secondary	15.7
Sausalito-Marin City Sanitary District	Robert Simmons General Manager (415) 331-4712	#1 East Road P.O. Box 39 Sausalito, CA 94966-0039	Secondary	1.8
Seafirth Estates Company and Property Owners within the Seafirth Estates Subdivision[1]	Bonner Buehler Plant Operator (415) 388-1345	Same as Facility Address	Secondary	0.0075
Sewerage Agency of Southern Marin	Steve Danehy Manager (415) 388-2402	26 Corte Madera Ave. Mill Valley, CA 94941	Secondary	3.6
Sonoma Valley County Sanitary District	Jim Zambenini Operations Coordinator (707)975-5616	Sonoma County Water Agency P.O. Box 11628 Santa Rosa, CA 95406	Secondary	3
South Bayside System Authority	Daniel Child Manager (650) 594-8411	Same as Facility Address	Secondary	29

Discharger	Facility Contact, Title, and Phone	Mailing Address	Effluent Description	Facility Design Flow (mgd)
South San Francisco and San Bruno, Cities of	Cassie Prudhel Technical Services Director (650) 829-3840	South San Francisco-San Bruno Water Pollution Control Plant 195 Belle Air Road South San Francisco, CA 94080	Secondary	13
Sunnyvale, City of	Lorrie Gervin Division Manager (408) 730-7268	Sunnyvale Water Pollution Control Plant P.O. Box 3707 Sunnyvale, CA 94088-3707	Advanced Secondary	29.5
US Naval Support Activity, Treasure Island	Patricia A. McFadden Brac Field Team Leader San Francisco Bay Area (415) 743-4720	Navy BRAC PMOW 410 Palm Avenue, Bldg 1, Suite 161 Treasure Island, San Francisco, CA 94130-1807	Secondary	2
Vallejo Sanitation and Flood Control District	Barry Pomeroy Director of Operations and Maintenance (707) 644-8949	Same as Facility Address	Secondary	15.5
West County Agency (West County Wastewater District and City of Richmond Municipal Sewer District)	E.J. Shalaby, District Manager 510-222-6700	2910 Hilltop Drive Richmond, CA 94806	Secondary	28.5
Yountville, Town of	Myke Praul Director of Public Works (707) 944-8851	6550 Yount Street Yountville, CA 94599	Secondary	0.55

[1] This Discharger serves domestic customers but is not a municipal government agency.

Table 4B. Additional Information on Industrial Facility (see also Table 1B)

Discharger	Facility Contact, Title, and Phone	Mailing Address	Type of Facility	Facility Design Flow (mgd)
Industrial Wastewater Discharger (Non-Petroleum Refinery):				
C&H Sugar and Crockett Community Services District	Tanya Akkerman Environmental Compliance Manager (510) 787-4352	Same as Facility Address	Sugar Cane Crystalline Industry	0.93
Crockett Cogeneration, LP and Pacific Crockett Energy, Inc.	Christopher Sargent Environmental Coordinator (510) 787-4101	Same as Facility Address	Industrial – Electrical Generation, SIC Code 4931	0.243 (Daily Discharge Rate From 2000 to 2002)
The Dow Chemical Company	Greg Dubitsky General Manager (925) 432-5154	P.O. Box 1398, Pittsburg, CA 94565	Industrial - SIC Code 2811	0.5
General Chemical West, LLC	James Craig Director of Operations (925) 458-7363	Same as Facility Address	Industrial – Chemical and Allied Products, SIC Code 2811	0.31 (Long Term Average)
GWF Power Systems L. P.	Neftali Nevarez (925) 431-1445	4300 Railroad Ave. Pittsburg, CA 94565	Industrial - SIC Code 4911	0.045 (average)
GWF Power Systems L. P.	Neftali Nevarez (925) 431-1445	4300 Railroad Ave. Pittsburg, CA 94565	Industrial - SIC Code 4911	0.047 (average)
Pacific Gas and Electric Company (PG&E)	Robert M. Gray Consulting Environmental Scientist (925) 866-5508	3400 Crow Canyon Road, M-138 San Ramon, CA 94583	Flow-through pond for habitat enhancement	1 (Maximum Average Dry Weather Flow)
Rhodia, Inc.	Anthony Koo Environmental Coordinator (925) 313-8281	Same as Facility Address	Industrial – Chemical and Allied Products, SIC Code 2891	0.779 (Potential Maximum Daily Rate)
San Francisco, City and County of, San Francisco International Airport	Mark Costanzo Utility Manager (650) 821-7809	P.O. Box 8097 San Francisco, CA 94128	Industrial SIC Code 3721	1.7
Mirant Delta, LLC	Steve Bauman, Senior Environmental Engineer (925) 427-3381	Pittsburg Power Plant P.O. Box 192 Pittsburg, CA 94565	Electric Power generation	506
Mirant Potrero, LLC	Steve Bauman Senior Environmental Engineer (925) 427-3381	Mirant Potrero, LLC, Potrero Power Plant, 1201-A Illinois Street San Francisco, CA 94107	Electric Power generation	226
USS-Posco Industries	David Allen Regulations Manager (925) 439-6290	P.O. Box 471 Pittsburg, CA 94565	Industrial - SIC Code 3312	28

Discharger	Facility Contact, Title, and Phone	Mailing Address	Type of Facility	Facility Design Flow (mgd)
Industrial Wastewater Discharger (Petroleum Refinery):				
Chevron Products Company	Rich Sandman (510) 242-5017	Same as Facility Address	Industrial - Petroleum Refining	7.6
ConocoPhillips	Dennis Quilici Water Compliance Specialist (510) 245-4403	Same as Facility Address	Industrial – Petroleum Refining	10
Shell Oil Products US and Equilon Enterprises LLC	Steven D. Overman Senior Staff Engineer (925) 313-3281	Same as Facility Address	Industrial – Petroleum Refining	10
Tesoro Refining & Marketing Co.	Rose Pedregosa (925) 370-3625	Same as Facility Address	Industrial - Petroleum Refining	5.1
Valero Refining Company	Marcus Cole Senior Environmental Engineer (707) 745-7807	Same as Facility Address	Industrial - Petroleum Refining	2.34

II. FINDINGS

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

A. Background. The dischargers listed in this Order in Tables 1A and 1B (collectively, Dischargers; individually, Discharger) are currently discharging pursuant to the Order Nos. and National Pollutant Discharge Elimination System (NPDES) Permit Nos. as shown in Attachment B. This Order is the mercury watershed permit and implements the wasteload allocations and implementation requirements of the mercury TMDL and implementation plan adopted by the Regional Water Board on August 9, 2006, and supersedes mercury requirements in those permits.

For the purposes of this Order, references to the "dischargers" or "permittees" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Dischargers herein.

B. Facility Description. The Dischargers listed in Table 1A (Municipal Dischargers) own and operate secondary and advanced secondary wastewater treatment facilities as described in their respective Orders. The Dischargers listed in Table 1B (Industrial Dischargers) own and operate wastewater treatment facilities as described in their respective Orders. Wastewater is discharged from the Discharge points indicated in Tables 2A and 2B to San Francisco Bay and its tributaries, which are waters of the United States within the San Francisco Bay watershed. Attachment C shows a map of the Dischargers subject to this Order.

C. Legal Authorities. This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges of mercury from Dischargers' facilities to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on detailed technical analyses which provide the foundation for the mercury TMDL. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through G are also incorporated into this Order.

E. California Environmental Quality Act (CEQA). Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.

G. Water Quality-Based Effluent Limitations. Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order sets forth water quality-based effluent limitations for mercury,

which implement and are consistent with the assumptions and requirements of the mercurty TMDL wasteload allocations.

H. Water Quality Control Plans. The Regional Water Board adopted a Water Quality Control Plan for the San Francisco Bay Basin, *Water Quality Control Basin (Region 2)* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the San Francisco Bay are as follows:

Table 5. Basin Plan Beneficial Uses

Receiving Water Name	Beneficial Use(s)
San Francisco Bay and Applicable Tributaries – See individual Order Nos. (Attachment B) for specific Beneficial Uses that apply.	Agricultural Supply (AGR), Cold Freshwater Habitat (COLD), Ocean, Commercial, and Sport Fishing (COMM), Estuarine habitat (EST), Industrial Service Supply (IND), Marine Habitat (MAR), Fish Migration (MIGR), Municipal and domestic Supply (MUN), Navigation (NAV), Industrial Process Supply (PROC), Preservation of Rare and Endangered Species (RARE), Water Contact Recreation (REC1), Noncontact Water Recreation (REC2), Shellfish Harvesting (SHELL), Fish Spawning (SPWN), Warm Freshwater Habitat (WARM) Wildlife Habitat (WILD)

Requirements of this Order implement the Basin Plan.

The Regional Water Board adopted a Basin Plan Amendment on August 9, 2006, that establishes new water quality objectives for mercury, and that establishes the San Francisco Bay Mercury TMDL to attain the new mercury objectives in San Francisco Bay and contiguous bay segments. The Regional Water Board's Executive Officer made corrections on May 23, 2007, and the State Water Board approved the Basin Plan Amendment (as corrected), and new water quality objectives on July 17, 2007. The new objectives and TMDL become effective after approval by the USEPA. Elevated mercury concentrations currently exist in the tissues of fish, and methylmercury, a highly toxic form of mercury, is a persistent bioaccumulative pollutant. The mercury TMDL calls for reduction of mercury mass loadings to San Francisco Bay. Additional details regarding mercury sources to San Francisco Bay, and technical information related to the San Francisco Bay Mercury TMDL, are provided in the Fact Sheet. The purpose of this Order is to implement the San Francisco Bay Mercury TMDL wasteload allocations for Dischargers listed in Tables 1A and 1B.

I. State Implementation Policy. On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the California Toxics Rule and National Toxics Rule, and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The State Water Board adopted amendments to the

SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

J. Antidegradation Policy. Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet, the permitted discharges are consistent with the antidegradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16.

K. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Because the water quality-based effluent limitations in this Order are based on a TMDL, there is no backsliding.

L. Monitoring and Reporting. Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

M. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Dischargers must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Dischargers. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).

N. Provisions and Requirements Implementing State Law. Not applicable.

O. Notification of Interested Parties. The Regional Water Board has notified the Dischargers and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharges and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.

P. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharges. Details of the Public Hearing are provided in the Fact Sheet of this Order.

IT IS HEREBY ORDERED, that this Order supersedes all mercury requirements for Discharge Points listed in Table 2A and 2B that are regulated by the Order Nos. listed in Attachment B, except for applicable enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Dischargers shall comply with the requirements in this Order.

III. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Municipal Discharger Effluent Limits

The mass and concentration of mercury in the effluent at the Discharge Points indicated in Table 4A, with compliance measured at the Monitoring Location as described in the MRP (Attachment E) for each Discharger shall not exceed the limitations in Table 6.

Table 6. Municipal -- Individual Mercury Effluent Limitations

Discharger	Average Annual Effluent Limit[1,2,5] (kg/yr)	Effective in 10 years Average Annual Effluent Limit[1,2,5] (kg/yr)	Effective in 20 years Average Annual Effluent Limit[1,2,5] (kg/yr)	Average Monthly Effluent Limit[2](µg/L)	Average Weekly Effluent Limit[2] (µg/L)
American Canyon, City of	0.12	0.095	0.095	0.025	0.027
Benicia, City of	0.088	0.088	0.088	0.066	0.072
Burlingame, City of	0.089	0.089	0.089	0.066	0.072
Calistoga, City of	0.016	0.016	0.016	0.066	0.072
Central Contra Costa Sanitary District	2.23	1.8	1.3	0.066	0.072
Central Marin Sanitation Agency	0.18	0.15	0.11	0.066	0.072
Contra Costa County Sanitation District No. 5, Port Costa	0.00072	0.00072	0.00072	0.066	0.072
Delta Diablo Sanitation District	0.31	0.25	0.19	0.066	0.072
East Bay Dischargers Authority, including City of Hayward, City of San Leandro, Oro Loma Sanitary District, Castro Valley Sanitary District, Union Sanitary District, Livermore-Amador Valley Water Management Agency (LAVWMA), Dublin San Ramon Services District, and City of Livermore	3.6	2.9	2.2	0.066	0.072

Discharger	Average Annual Effluent Limit[1,2,5] (kg/yr)	Effective in 10 years Average Annual Effluent Limit[1,2,5] (kg/yr)	Effective in 20 years Average Annual Effluent Limit[1,2,5] (kg/yr)	Average Monthly Effluent Limit[2](µg/L)	Average Weekly Effluent Limit[2] (µg/L)
East Bay Municipal Utilities District, including its Wastewater Treatment Plant and Wet Weather Facilities	2.6	2.1	1.5	0.066	0.072
East Brother Light Station, Inc.[3]	0.00001	0.000012	0.000012	0.066	0.072
Fairfield-Suisun Sewer District	0.22	0.17	0.17	0.025	0.027
Las Gallinas Valley Sanitary District	0.17	0.13	0.10	0.066	0.072
Marin County (Paradise Cove), Sanitary District No. 5 of	0.00055	0.00055	0.00055	0.066	0.072
Marin County (Tiburon), Sanitary District No. 5 of	0.0099	0.0099	0.0099	0.066	0.072
Millbrae, City of	0.052	0.052	0.052	0.066	0.072
Mt. View Sanitary District	0.034	0.034	0.034	0.025	0.027
Napa Sanitation District	0.28	0.23	0.17	0.066	0.072
Novato Sanitary District	0.079	0.079	0.079	0.066	0.072
Palo Alto, City of	0.38	0.31	0.31	0.025	0.027
Petaluma, City of	0.063	0.063	0.063	0.066	0.072
Pinole, City of	0.055	0.055	0.055	0.066	0.072
Rodeo Sanitary District	0.060	0.060	0.060	0.066	0.072
Saint Helena, City of	0.047	0.047	0.047	0.066	0.072
San Francisco , City and County of, San Francisco International Airport, Sanitary	0.032	0.032	0.032	0.066	0.072
San Francisco (Southeast Plant), City and County of	2.7	2.1	1.6	0.066	0.072
San Jose/Santa Clara, Cities of	1.0	0.80	0.80	0.025	0.027
San Mateo, City of	0.32	0.26	0.19	0.066	0.072
Sausalito-Marin City Sanitary District	0.078	0.078	0.078	0.066	0.072
Seafirth Estates Company and Property Owners within the Seafirth Estates Subdivision[3]	0.00036	0.00036	0.00036	0.066	0.072
Sewerage Agency of Southern Marin	0.13	0.10	0.076	0.066	0.072
Sonoma Valley County Sanitary District	0.041	0.041	0.041	0.066	0.072
South Bayside System Authority	0.53	0.42	0.32	0.066	0.072
South San Francisco and San Bruno, Cities of	0.29	0.24	0.18	0.066	0.072

Discharger	Average Annual Effluent Limit[1,2,5] (kg/yr)	Effective in 10 years Average Annual Effluent Limit[1,2,5] (kg/yr)	Effective in 20 years Average Annual Effluent Limit[1,2,5] (kg/yr)	Average Monthly Effluent Limit[2](µg/L)	Average Weekly Effluent Limit[2] (µg/L)
Sunnyvale, City of	0.15	0.12	0.12	0.025	0.027
US Naval Support Activity[3] (Treasure Island)	0.026	0.026	0.026	0.066	0.072
Vallejo Sanitation and Flood Control District	0.57	0.46	0.34	0.066	0.072
West County Agency (West County Wastewater District and City of Richmond Municipal Sewer District)	0.38	0.30	0.23	0.066	0.072
Yountville, Town of	0.040	0.040	0.040	0.066	0.072
Aggregate Mass Emission Limit[1,4,5](kg/yr)	**17**	**14**	**11**	**Not applicable**	**Not applicable**

Footnotes:

(1) Compliance with the Average Annual Effluent Limitations is determined annually for each Municipal Discharger each calendar year, and is attained if the sum of all individual Municipal Dischargers' mercury mass emissions, calculated as described below, is not greater than the Aggregate Mass Emission Limit of 17 kg/yr (or 14 kg/yr in 10 years, or 11 kg/yr in 20 years). If the sum of all individual Municipal Dischargers' mercury mass emission(s) is greater than 17 kg/yr (or 14 kg/yr in 10 years, or 11 kg/yr in 20 years), the Municipal Discharger(s) whose mercury mass emission(s) exceed(s) its (their) individual limitation(s) in Table 6, shall be deemed to be in violation of its (their) mercury mass limitation(s). For compliance determination, mass emissions shall be determined as defined below:

a. The total annual aggregate mass emission shall be the sum of the individual annual mass emissions from each Municipal Discharger. The sum shall be rounded to the nearest kilogram for comparison with the 17 kg/yr.

b. The annual average mass emission for each Discharger shall be computed for the period January 1 through December 31, annually. If this Order becomes effective on or after April 1st, no annual average mass emission calculation shall be necessary on this first partial calendar year. In this case, annual average mass emission calculation and compliance determination shall commence on the following full calendar year and all subsequent years.

c. The annual average mass emission for each Discharger listed in Table 6 above shall be the sum of monthly emissions on a calendar year basis and computed as follows:

$$Annual\ Mass\ Emission, kg/year = \sum \left(Monthly\ Mass\ Emission\ Rates, kg/month \right)$$

or, for Dischargers with less frequent mercury monitoring than monthly, or if this Order becomes effective after January 1st and prior to March 1st, the Annual Mass Emission shall be computed using the arithmetic average of available monthly mass emissions as follows:

$$Annual\ Mass\ Emission, kg/year = \left(\frac{\sum MonthlyMassEmission, kg/mo}{NumberofMonthlyMassEmissionsCalculated} \right) * 12 mo/year$$

where

$$Monthly\ Mass\ Emission, kg/mo = \left(\frac{0.003785}{N}\right) * \left(\sum_{i=1}^{N} Q_i C_i\right) * 30.5 = \frac{0.1154425}{N} * \left(\sum_{i=1}^{N} Q_i C_i\right)$$

and where

C_i = mercury concentration of each individual sample, µg/l
Q_i = Discharger flow rate on date of sample, millions of gallons per day (mgd)
N = number of samples collected during the month
0.003785 = conversion factor to convert (µg/l)*(mgd) into kg/day
30.5 = number of days in a standard month
0.1154425= product of (conversion factor)·(number of standard days per month)

and where Q_i for intermittent Dischargers [Dischargers who do not discharge every day in a calendar month, or have no discharge for an entire month (Q_i = 0)] shall be computed as follows:

$$Q_i = \left(\frac{\sum_{d=1}^{D} Q_d}{30.5}\right)$$

where

Q_d = is the total flow for the day when discharge occurred, million gallons
D = total number of days where discharge occurred in a month
30.5 = number of days in a standard month

d. The Monthly Mass Emission for a Discharger who provides recycled wastewater for industrial supply, shall include the effluent discharge adjustment granted to the industrial Discharger for its recycled wastewater use as described in III.B and Provision V.C.5 of this Order. The monthly effluent discharge adjustment mass shall be reported in each Self-Monitoring Report and in the Annual Mercury Information Reporting Form Part 2 of 3 under "Comments on Data."

(2) For compliance determination as defined in Section VI and Attachment A of this Order, the Discharger shall achieve the following, Minimum Level (ML).

Table 7. Minimum Levels

Constituent	Minimum Level	Units
Mercury	0.0005	µg/L

(3) This Discharger serves domestic customers but is not a municipal government agency. For the purpose of this Order, this Discharger is a "Municipal Discharger."

(4) Total differs slightly from the column sum due to rounding to the nearest kilogram.

(5) The first Annual Average Effluent Limits represent the San Francisco Bay Mercury TMDL's initial mass limits for Municipal Dischargers. In accordance with the TMDL and the compliance schedule provision that the Regional Water Board will submit to USEPA for approval, the Municipal Dischargers listed in this table have up to 10 years from the effective date of this Order to achieve the "Effective in 10 Years Annual Average Effluent Limits" and its respective Aggregate Annual Mass Emission Limit, and up to 20 years to achieve the "Effective in 20 Years Annual Average Effluent Limits" and its respective Aggregate Annual Mass Emission Limit listed in Table 6.

B. Industrial Discharger Effluent Limits

The mass and concentration of mercury in the effluent at the Discharge Points indicated in Table 4B for each Discharger shall not exceed the limitations in Table 8. Monitoring locations are described in Attachment E of this Order.

Table 8. Industrial -- Individual Mercury Effluent Limitations

Permitted Entity	Average Annual Effluent Limit[1,2] (kg/yr)	Average Monthly Effluent Limit[2] (µg/L)	Maximum Daily Effluent Limit[2]
Industrial Wastewater Discharger (Non-Petroleum Refinery):			
C&H Sugar Company Inc., and Crockett Community Services District	0.045	0.079	0.12
Crockett Cogeneration, LP and Pacific Crockett Energy, Inc.	0.0047	0.079	0.12
The Dow Chemical Company	0.041	0.079	0.12
General Chemical West, LLC	0.21	0.079	0.12
GWF Power Systems L. P., Site I	0.0016	0.079	0.12
GWF Power Systems L. P., Site V	0.0025	0.079	0.12
Pacific Gas and Electric Company	0.00063	0.079	0.12
Rhodia, Inc.	0.011	0.079	0.12
San Francisco Airport Commission	0.051	0.079	0.12
Mirant Delta, LLC	0.0078	0.079	0.12
Mirant Potrero LLC	0.0031	0.079	0.12
USS-Posco Industries	0.045	0.079	0.12
Industrial Wastewater Discharger (Petroleum Refinery):			
Chevron Products Company	0.34	0.079	0.12
ConocoPhillips	0.13	0.079	0.12
Shell Oil Products US and Equilon Enterprises LLC	0.22	0.079	0.12
Tesoro Refining & Marketing Co.	0.11	0.079	0.12
Valero Refining Company	0.08	0.079	0.12
Aggregate Mass Emission Limit[4](kg/yr)	**1.3[4]**	**Not applicable**	**Not applicable**

Footnotes:

(1) Compliance with the Average Annual Effluent Limitations is determined annually for each Industrial Discharger each calendar year, and is attained if the sum of the individual Industrial Dischargers' mercury mass emissions, calculated as described below, is not greater than the Aggregate Mass Emission Limit of 1.3 kg/yr. If the sum of all individual Industrial Dischargers' mercury mass emission(s) is greater than 1.3 kg/yr, the Industrial Discharger(s) whose mercury mass emission(s) exceed(s) its (their) individual limitation, above, shall be deemed to be in violation of its (their) mercury mass limitation(s). For compliance determination, mass emissions shall be determined as defined below:

a. The total annual aggregate mass emission shall be the sum of the individual annual mass emissions from each Industrial Discharger. The sum shall be rounded to the nearest kilogram for comparison with the 1.3 kg/yr.

b. The annual average mass emission for each Industrial Discharger shall be computed for the period January 1 through December 31, annually. If this Order becomes effective on or after April 1st, no annual average mass emission calculation shall be necessary on this first partial calendar year. In this case, annual average mass emission calculation and compliance determination shall commence on the following full calendar year and all subsequent years.

c. The annual average mass emission for each Discharger listed in Table 8 above shall be the sum of monthly emissions on a calendar year basis and computed as follows:

$$Annual\ Mass\ Emission, kg/year = \sum \left(Monthly\ Mass\ Emission\ Rates, kg/month \right)$$

Or, for Dischargers with less than monthly mercury monitoring, the Annual Mass Emission shall be computed using the arithmetic average of available monthly mass emissions as follows:

$$Annual\ Mass\ Emission, kg/year = \left(\frac{\sum MonthlyMassEmission, kg/mo}{NumberofMonthlyMassEmissionsCalculated} \right) * 12 mo/year$$

where

$$Monthly\ Mass\ Emission, kg/mo = \left(\frac{0.003785}{N} \right) * \left(\sum_{i=1}^{N} Q_i C_i \right) * 30.5 = \frac{0.1154425}{N} * \left(\sum_{i=1}^{N} Q_i C_i \right)$$

and where

C_i = mercury concentration of each individual sample, µg/l
Q_i = Discharger flow rate on date of sample, millions of gallons per day (mgd)
N = number of samples collected during the month
0.003785 = conversion factor to convert (µg/l)*(mgd) into kg/day
30.5 = number of days in a standard month
0.1154425= product of (conversion factor)·(number of standard days per month)

and where Q_i for intermittent Dischargers [Dischargers who do not discharge every day in a calendar month, or have no discharge for an entire month (Q_i = 0)] shall be computed as follows:

$$Q_i = \left(\frac{\sum_{d=1}^{D} Q_d}{30.5} \right)$$

where

Q_d = is the total flow for the day when discharge occurred, million gallons
D = total number of days where discharge occurred in a month
30.5 = number of days in a standard month

d. For an Industrial Discharger who uses treated recycled wastewater for industrial supply from a Municipal Discharger named in this Order, the Industrial Discharger shall subtract from its Monthly Mass Emission in c., above, an adjustment for the recycled water used and discharged through its discharge point as provided in Provision V.C.5 of this Order. The Industrial Discharger shall report this effluent discharge adjustment mass to the Municipal Discharger that provided the recycled wastewater within 15 days following the end of the calendar month for which an adjustment is applied, and shall report the adjustment in each Self-Monitoring Report and in the Annual Mercury Information Reporting Form Part 2 of 3 under “Comments on Data.”

(2) For compliance determination as defined in Section VI and Attachment A of this Order, the Discharger shall achieve the following, Minimum Level (ML).

Table 9. Minimum Levels

Constituent	Minimum Level	Units
Mercury	0.0005	µg/L

(3) N/A means that a concentration-based limit is not applicable at this time.

(4) Total differs slightly from the column sum due to rounding to two significant digits.

IV. RECEIVING WATER LIMITATIONS – Receiving water limitations are provided in each Discharger's individual NPDES Permits (see Attachment B).

V. PROVISIONS

A. Standard Provisions

The Dischargers shall comply with all Standard Provisions included in Attachment D of this Order, except for Standard Provisions V.D related to compliance schedules.

B. Monitoring and Reporting Program Requirements. The Dischargers shall comply with the Monitoring and Reporting Program (MRP), and future revisions thereto, in Attachment E of this Order. The Dischargers shall also comply with the requirements contained in Self-Monitoring Program, Part A (August 1993) (Attachment G), including any amendments thereto.

C. Special Provisions

1. Triggers for Additional Mercury Control

a. Each individual Discharger shall comply with C.1.c. of this Order if its discharge exceeds any of the applicable triggers described in Tables 10 and 11.

Table 10. Triggers for Municipal Dischargers

Type of Trigger	Average Monthly	Maximum Daily
Concentration for Secondary Treatment Plants	0.041 µg/L	0.065 µg/L
Concentration for Advanced Secondary Treatment Plants	0.011 µg/L	0.021 µg/L
Mass Emission	Individual annual mass emission limit, as depicted in Table 6, above, and computed as a 12-month running average, as shown in C.1.b., below.	

Table 11. Triggers for Industrial Dischargers

Type of Trigger	Average Monthly	Maximum Daily
Concentration	0.037 μg/L	0.062 μg/L
Mass Emission	Individual annual mass emission limit, as depicted in Table 8, above, and computed as a 12-month running average, as shown in C.1.b., below.	

b. The running 12-month average mass emission shall be computed monthly for each calendar month as follows:

$$(12-month\ Running\ Average, kg) = (Current\ Mass\ Emission, kg) + \sum (Previous\ 11\ months'\ mass\ emissions, kg)$$

where the current mass emission is the emission for the current calendar month computed as shown in III.A. above.

c. Each Discharger who exceeds any of the applicable triggers listed in Table 10 or 11, above, shall comply with the following action requirements:

Table 12. Action Plan for Trigger Exceedance

Task	Deadline
i. *Accelerated Sampling.* As soon as the Discharger becomes aware of the exceedance, resample within 48 hours and commence weekly sampling (or more frequent than weekly) for a total of at least 6 new samples. If all 6 new samples show mercury levels below the triggers, return to routine sampling. If during the accelerated sampling, (1) any of the new samples are above the maximum daily trigger, or (2) the monthly average of the new samples is above the monthly trigger, or (3) the 12-month running average mass is above the mass trigger, then proceed with action plan for mercury reduction and continue sampling monthly until the observed mercury discharge is below the trigger levels for 3 consecutive months, at which point the Discharger shall complete the reporting of this exceedance as required by Tasks ii. and ix, and return to routine monitoring, and discontinue efforts under Task iii, below.	See deadlines in task description.
ii. *Report Trigger Exceedance.* The Discharger shall report to the Regional Water Board any exceedance of trigger levels in the cover letter of its Self-Monitoring Report, and the status of its plans and actions to accelerate monitoring and/or develop and implement an action plan for mercury reduction.	In the Self-Monitoring Report due 30 days after the end of the monitoring period.
iii. *Action Plan for Mercury Reduction*. Develop, submit, and implement an Action Plan that (1) evaluates the cause[1] of the trigger exceedance(s); (2) evaluates the effectiveness of existing pollution prevention or pretreatment programs and methods for preventing future exceedances; (3) evaluates the feasibility and effectiveness of technology enhancements to improve treatment plant performance; and (4) evaluates other measures for preventing future exceedances. In addition, the Discharger shall identify in the Action Plan mercury reduction measures it will take along with an implementation schedule for those measures to correct current and prevent future trigger exceedances.	Within 130 days of the initial trigger exceedance

[1] *Possible causes of exceedances include (but are not limited to) changes in reclamation, increases in the number of sewer connections, increases in infiltration and inflow (I/I), changes in the type or number of industrial, commercial, or residential sources, changes in the raw material used in manufacturing processes, changes in treatment system operation, or factors beyond the Discharger's control, such as a natural disaster, vandalism, illegal dumping, or extreme flood event.*	
iv. *Annual Reporting*. The Discharger shall provide a status of its mercury reduction efforts in the annual Self-Monitoring Report. Additionally, as causes and corrective actions are identified, the Discharger shall amend or supplement its Action Plan as appropriate. Such changes shall be reported to the Regional Water Board in the Discharger's Annual Self-Monitoring Report.	Annually due February 1st of each year until the Discharger demonstrates compliance with trigger levels for a continuous 3-month period of sampling.

2. Mercury Source Control Program for Municipal Dischargers

The Dischargers in Table 1A shall develop, implement, and document cost-effective pretreatment/pollution prevention reduction strategies for dental offices to manage and reduce the amount of mercury amalgam that is discharged from dental offices into the public wastewater collection systems in accordance with the following:

a. The target for this program is that 85% of dental offices that generate mercury amalgam waste in the region will be participating in an amalgam program within 5 years after the effective date of this Order. Within 2 years of the effective date of this Order, the municipal wastewater Dischargers (Table 1A) shall develop and begin to implement a dental amalgam program with the goal of achieving the target within five years.

b. The municipal wastewater Dischargers in Table 1A shall estimate the dental amalgam collected (and describe the basis for its estimation) and describe any other mercury pollution prevention programs that are implemented and maintained by individual municipal wastewater dischargers. The municipal wastewater Dischargers shall provide this information to the Regional Water Board no later than June 30, 2012. The municipal wastewater Dischargers may collaborate to provide this information in a single report to satisfy this requirement for the entire group.

3. Additional Special Studies for Adaptive Management

The Dischargers in Tables 1A and 1B, or their agent(s), shall submit a work plan within one year of the effective date of this Order, to include an implementation schedule for the following activities:

a. Conduct or cause to be conducted studies aimed at better understanding mercury fate, transport, the conditions under which mercury methylation occurs, and biological uptake in San Francisco Bay, its contiguous segments, and tidal areas; and

b. Conduct or cause to be conducted studies to evaluate the presence of, or potential for, local effects on fish, wildlife, and rare and endangered species in the vicinity of wastewater discharges.

The work plan shall include annual progress reports, due April 1st to the Regional Water Board. This progress report shall be combined with any group compliance reporting required by IV.C. of the Monitoring and Reporting Program, Attachment E of this Order.

4. Risk Reduction Programs

The Dischargers shall develop and implement or participate in effective programs to reduce mercury-related risks to humans and quantify the resulting risk reductions from these activities. The activities may be performed by a third party if the Dischargers wish to provide funding for this purpose. This requirement may be satisfied by a combination of related efforts through the Regional Monitoring Program or other similar collaborative efforts.

The risk reduction activities shall include investigating ways to address public health impacts of mercury in San Francisco Bay/Delta fish, including activities that reduce actual and potential exposure of health impacts to those people and communities most likely to be affected by mercury in San Francisco Bay-caught fish, such as subsistence fishers and their families. Such strategies should include public participation in developing effective programs in order to ensure their effectiveness. The Dischargers may include studies needed to establish effective exposure reduction activities and risk communication messages as part of their planning.

Within 1 year of the effective date of this Order, the Dischargers shall submit, or cause to be submitted, a progress report describing their efforts in developing risk management and reduction programs, with community participation and input.

Within 2 years of the effective date of this Order, the Dischargers shall submit, or cause to be submitted, a report describing the details of their risk management and reduction programs, the community participation process that was involved in developing such programs, any third parties involved in implementing the programs, and a plan for evaluating the programs' effectiveness. The report shall include an implementation schedule with implementation beginning within 3 years of the effective date of this Order. The Dischargers shall describe the progress of their efforts in the Annual Self-Monitoring Report required by IV.B.2.b. (or IV.C, Optional Group Compliance Reporting) in Attachment E of this Order.

5. Mercury Discharge Adjustment for Recycled Wastewater Use by Industrial Dischargers

When an industrial Discharger named on Table 1B of this Order uses recycled wastewater from a municipal Discharger named on Table 1A of this Order, the industrial Discharger may, at its option, apply an adjustment (hereinafter Adjustment) to its mercury mass emission or discharge concentration when determining compliance with its concentration and mass limits specified in III.B. of this Order.

The Adjustment shall be based on measured influent mercury levels from the recycled wastewater in accordance with the following:

a. The Industrial Discharger shall sample and analyze the influent recycled wastewater and the effluent discharge at least monthly. Influent sampling shall include measurement of daily flow volume for the entire duration that Adjustments are applied. Influent sampling shall occur at an appropriate influent sampling station as identified in the Discharger's individual permit.

b. The Industrial Discharger shall determine the time interval between introduction of a given constituent of concern in the influent recycled water and the first appearance of the constituent in the final effluent. The basis for this determination must be included in any calculation of Adjustment.

c. Calculation of Mercury Discharge Adjustment.

<u>Concentration Adjustment</u>
Influent concentration multiplied by total influent recycled water flow volume for that monitoring interval will yield an influent mass, which is valid for that monitoring interval. This influent mass is then divided by the total effluent flow volume for the time interval following the appropriate time lag described in 5.b. above, for that monitoring period to give a concentration Adjustment that will apply for the monitoring interval. The monitoring interval is the time between sampling days. For example, monthly sampling yields a one month monitoring interval. An example follows:

ex. Mercury is monitored monthly. The lag time is Y days.

Step 1: {(Influent concentration of mercury in Recycled Wastewater) – (Influent concentration of mercury in potable water)} x (Total Influent Volume of Recycled Wastewater for the month) = (Influent mass of mercury from Recycled Wastewater)

Step 2: (Influent mass) ÷ (Total effluent discharge volume for the 30-day period, Y days after influent sampled) = (Concentration Adjustment to be subtracted from concentration of mercury in the discharge, valid for that month)

<u>Mass Adjustment</u>
Influent concentration multiplied by total influent recycled water flow volume for that monitoring interval will yield an influent mass, which is valid for that monitoring interval. This influent mass is divided by the number of days in that monitoring period to give a mass Adjustment that will apply for the monitoring interval. The monitoring interval is the time between sampling days. For example, monthly sampling yields a one month monitoring interval. A schematic example follows:

ex. Constituent B is monitored monthly. The lag time is Y days.

Step 1: {(Influent concentration of mercury in Recycled Wastewater) – (Influent concentration of mercury in potable water)} x (Total Influent Volume of Recycled Wastewater for the month) = (Influent mass of mercury in Recycled Wastewater)

Step 2: (Influent mass) ÷ (30.5, the number of days in a standard month) = (Mass Emission Adjustment to be subtracted from monthly mass emission for that month)

d. If an Industrial Discharger opts to apply a Mass Emission Adjustment, the Regional Water Board shall transfer that Adjustment to the mass emission for the corresponding discharge interval from the Municipal Discharger who is the producer and source of the recycled wastewater. If this reverse Adjustment results in an adjusted mass discharge level above both of the following criteria, then, that Municipal Discharger is in violation of its Annual Average Effluent Limit and is subject to enforcement action by the Regional Water Board:

   i. The sum of the adjusted mass discharge levels from the Industrial Discharger and the Municipal Discharger exceeds the sum of the individual Average Annual Effluent Limits for these two Dischargers; and

   ii. The adjusted mass discharge levels from the Municipal Discharger results in an aggregate mass emission from all Municipal Dischargers that exceeds the Aggregate Mass Emission Limit for Municipal Dischargers.

6. Reopener Provision

This Order may be reopened for modification, or revocation and reissuance, as a result of the following:

a. if the State Water Board has not established a pollutant offset program that can be implemented within 20 years of the effective date of this Order; or

b. if there is modification of the San Francisco Bay Mercury TMDL implementation provisions.

VI. COMPLIANCE DETERMINATION

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

A. General.

Compliance with effluent limitations for mercury shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, a Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

B. Multiple Sample Data.

When determining compliance with an average monthly effluent limit (AMEL) for priority pollutants and more than one sample result is available, the Dischargers shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in 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.

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

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

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

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

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

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

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

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

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

Not Detected (ND) are those sample results less than the laboratory's MDL.
Pollutant Minimization Program (PMP)

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

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

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

Total Maximum Daily Load (TMDL) is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources.

ATTACHMENT B – EXISTING ORDER NOS. AND NPDES PERMIT NOS.

Municipal Dischargers:

Discharger	NPDES Permit No.	Existing Order No.[1]	Existing Order Adoption Date	Existing Order Expiration Date
American Canyon, City of	CA0038768	R2-2006-0036	6/14/06	6/30/11
Benicia, City of	CA0038091	01-096[2]	8/15/01	7/31/06
Burlingame, City of	CA0037788	R2-2002-0027[2]	2/27/02	1/31/07
Calistoga, City of	CA0037966	R2-2006-0066	10/11/06	2/28/10
Central Contra Costa Sanitary District	CA0037648	R2-2007-008	1/23/07	3/31/12
Central Marin Sanitation Agency	CA0038628	R2-2007-007	1/23/07	3/31/12
Contra Costa County Sanitation District No. 5, Port Costa	CA0037885	R2-2003-0009[2]	1/22/03	12/31/07
Delta Diablo Sanitation District	CA0038547	R2-2003-0114	12/03/03	1/01/09
East Bay Dischargers Authority	CA0037869	R2-2006-0053	8/09/06	9/30/11
Union S.D. Wet Weather Outfall	CA0038733	R2-2004-0002	1/21/04	2/28/09
Union S.D. Hayward Marsh	CA0038636	R2-2006-0031	5/10/06	5/09/11
Dublin San Ramon Services District	CA0037613	R2-2006-0054	8/09/06	9/30/11
City of Livermore	CA0038008	R2-2006-0055	8/09/06	9/30/11
LAVWMA Wet Weather Outfall	CA0038679	R2-2006-0026	4/12/06	6/08/11
East Bay Municipal Utilities Dist. WWTP	CA0037702	01-072[2]	6/20/01	5/31/06
EBMUD Wet Weather Facilities	CA0038440	R2-2005-0047	9/21/05	3/31/10
East Brother Light Station, Inc.	CA0038806	R2-2004-0079	9/15/04	11/30/09
Fairfield-Suisun Sewer District	CA0038024	R2-2003-0072	8/20/03	9/30/08
Las Gallinas Valley Sanitary District	CA0037851	R2-2003-0108	12/03/03	11/30/08
Marin County (Paradise Cove), Sanitary District No. 5 of	CA0037427	R2-2006-0037	6/14/06	6/30/11
Marin County (Tiburon), Sanitary District No. 5 of	CA0037753	R2-2002-0097[2]	9/18/02	10/31/07
Millbrae, City of	CA0037532	01-143	11/28/01	10/31/06
Mt. View Sanitary District	CA0037770	R2-2006-0063	9/13/06	5/17/10
Napa Sanitation District	CA0037575	R2-2005-0008	4/20/05	3/31/10
Novato Sanitary District	CA0037958	R2-2004-0093	11/17/04	12/31/09
Palo Alto, City of	CA0037834	R2-2003-0078	8/20/03	9/30/08
Petaluma, City of	CA0037810	R2-2005-0058	10/19/05	10/20/10
Pinole, City of	CA0037796	R2-2007-0024	3/14/07	5/31/12
Rodeo Sanitary District	CA0037826	R2-2006-0062	9/13/06	11/30/11
Saint Helena, City of	CA0038016	R2-2005-0025	6/15/05	4/27/10
San Francisco, City and County of, San Francisco International Airport, Sanitary	CA0038318	R2-2007-0058	8/8/07	9/30/12
San Francisco (Southeast Plant), City and County of	CA0037664	R2-2002-0073[2]	6/19/02	5/31/07
San Jose/Santa Clara, Cities of	CA0037842	R2-2003-0085	6/17/03	9/30/08
San Mateo, City of	CA0037541	01-071[2]	6/20/01	5/31/06
Sausalito-Marin City Sanitary District	CA0038067	R2-2007-0054	8/8/07	9/30/12
Seafirth Estates Company and Property Owners with the Seafirth Estates Subdivision	CA0038893	R2-2006-0082	12/13/06	2/29/12
Sewerage Agency of Southern Marin	CA0037711	R2-2007-0057	8/8/07	9/30/12
Sonoma Valley County Sanitary District	CA0037800	R2-2002-0046[2]	3/20/02	2/28/07
South Bayside System Authority	CA0038369	R2-2007-0006	1/23/07	3/31/12
South San Francisco and San Bruno, Cities of	CA0038130	R2-2003-0010	1/22/03	3/31/08
Sunnyvale, City of	CA0037621	R2-2003-0079	8/20/03	9/30/08

Discharger	NPDES Permit No.	Existing Order No.[1]	Existing Order Adoption Date	Existing Order Expiration Date
US Naval Support Activity, Treasure Island	CA0110116	R2-2004-0036	5/19/04	12/30/09
Vallejo Sanitation and Flood Control District	CA0037699	R2-2006-0056	8/09/06	9/30/11
West County Agency (West County Wastewater District and City of Richmond Municipal Sewer District)	CA0038539	01-144[2]	11/28/01	10/31/06
Yountville, Town of	CA0038121	R2-2004-0017	3/17/04	4/30/09

[1] The orders shown are for the primary permit reissuance and do not include permit amendments.

[2] The individual permits specified in these orders are scheduled for reissuance in 2007 and the first calendar quarter of 2008, prior to the effective date of this Order.

Industrial Dischargers:

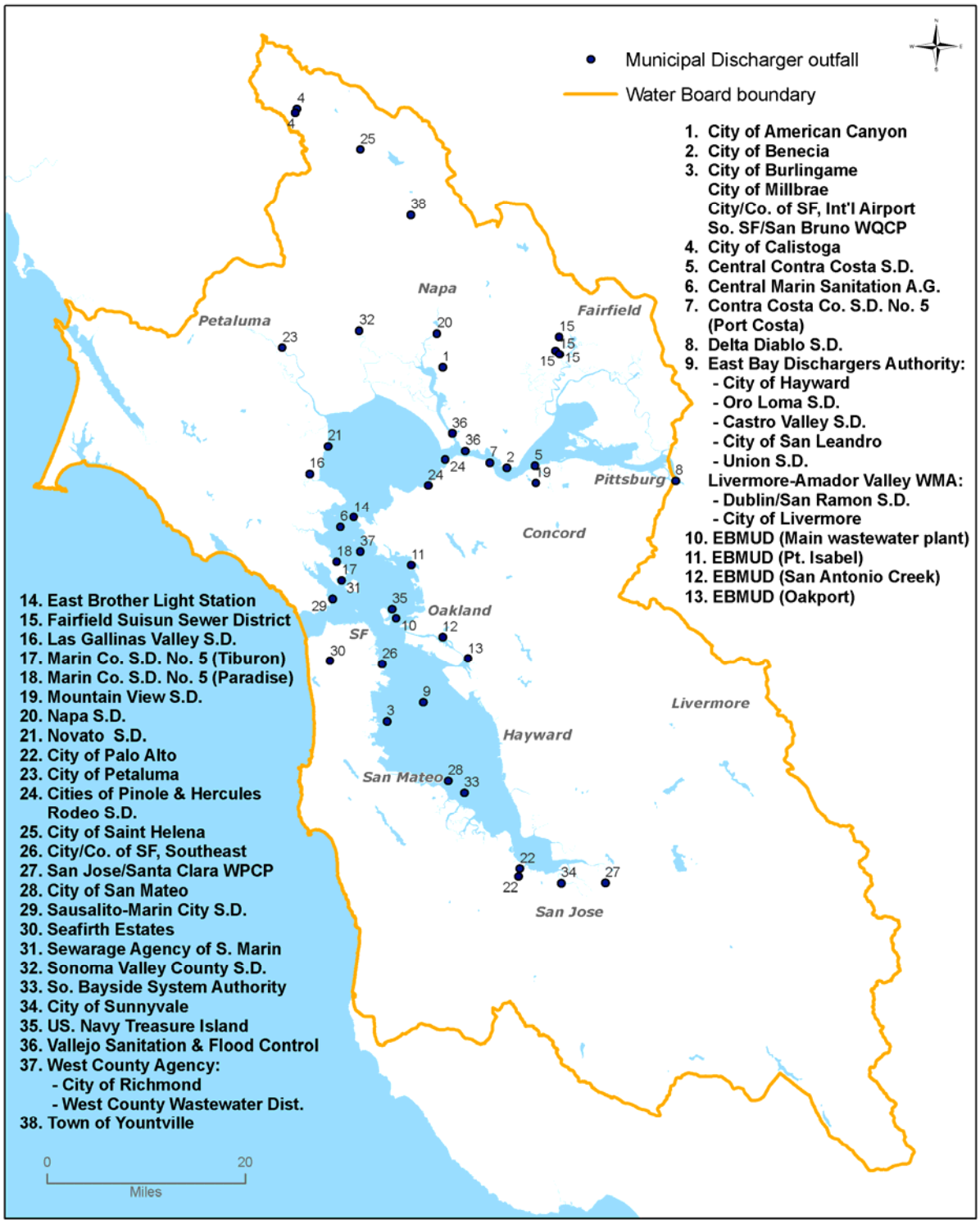
Discharger	NPDES Permit No.	Existing Order No.	Existing Order Adoption Date	Existing Order Expiration Date
Industrial Wastewater Discharger (Non-Petroleum Refinery):				
C&H Sugar and Crockett Community Services District	CA0005240	R2-2007-0032	4/11/07	5/31/2012
Crockett Cogeneration, LP and Pacific Crockett Energy, Inc.	CA0029904	R2-2004-0026	5/19/04	6/30/09
The Dow Chemical Company	CA0004910	01-142	11/28/01	10/31/06
General Chemical West, LLC	CA0004979	R2-2002-0071[3]	6/19/02	5/31/07
GWF Power Systems L. P. Site I	CA0029106	R2-2005-0018	5/18/05	4/19/10
GWF Power Systems L. P. Site V	CA0029122	R2-2005-0019	5/18/05	4/19/10
Pacific Gas and Electric Company (PG&E)	CA0030082	R2-2006-0010	2/8/06	3/31/11
Rhodia, Inc.	CA0006165	R2-2004-0042	6/16/04	7/31/09
San Francisco, City and County of, San Francisco International Airport, Industrial	CA0028070	R2 2007-0060	8/8/08	9/30/12
Mirant Delta, LLC	CA0004880	R2-2002-0072	6/19/02	5/31/07
Mirant Potrero LLC	CA0005657	R2-2006-0032	5/10/06	12/31/08
USS-Posco Industries	CA0005002	R2-2006-0029	5/10/06	6/30/11
Industrial Wastewater Discharger (Petroleum Refinery):				
Chevron Products Company	CA0005134	R2-2006-0035	6/14/06	6/13/11
ConocoPhillips	CA0005053	R2-2005-0030	6/15/05	8/31/10
Shell Oil Products US and Equilon Enterprises LLC	CA0005789	R2-2006-0070	10/11/06	10/31/11
Tesoro Refining & Marketing Co.	CA0004961	R2-2005-0041	9/21/05	11/30/10
Valero Refining Company	CA0005550	R2-2002-0112	10/16/02	11/30/07

[2] The individual permits specified in these orders are scheduled for reissuance in 2007 and the first calendar quarter of 2008, prior to the effective date of this Order.

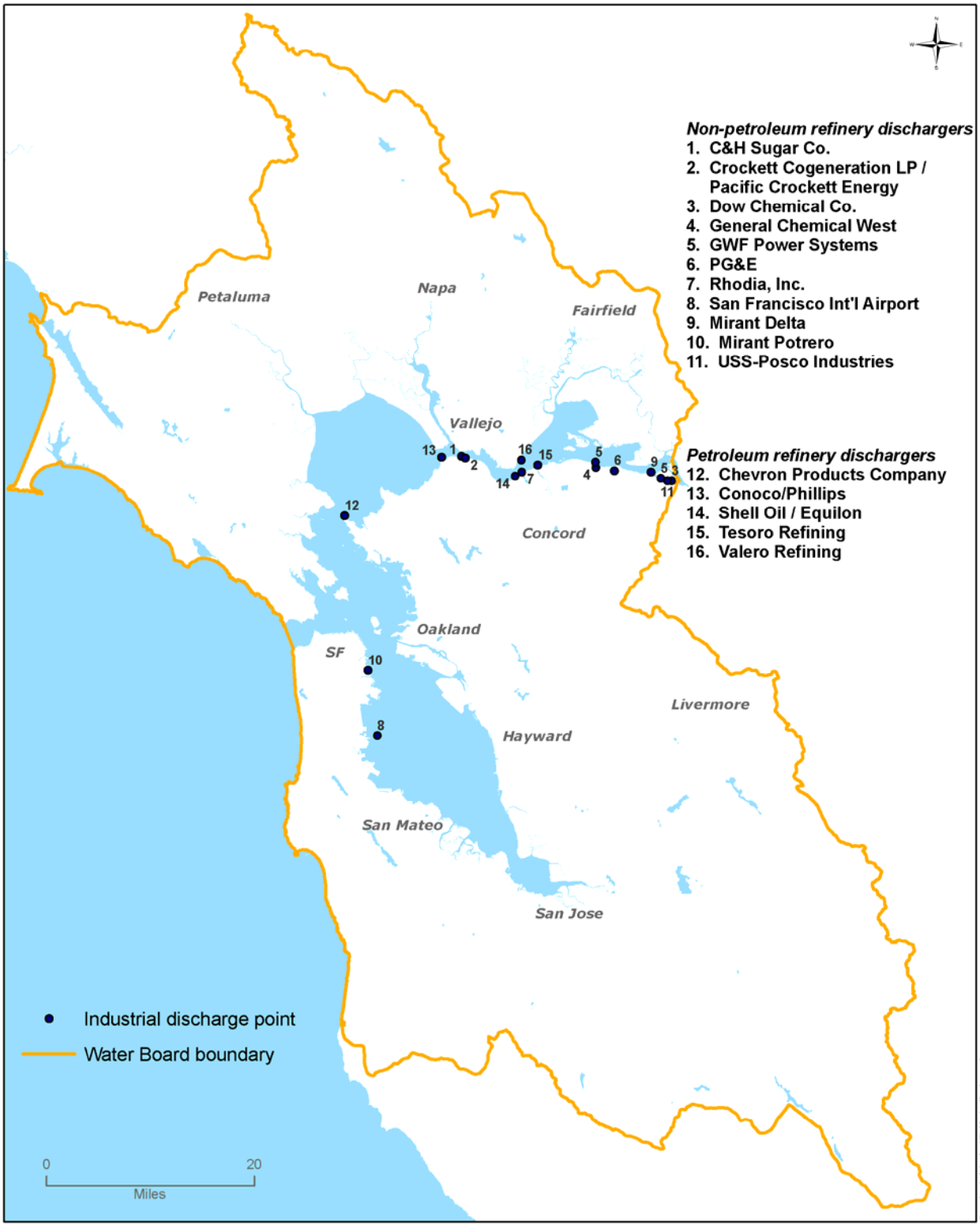
[3] The Regional Water Board adopted Order R2-2007-0065 on August 8, 2007, terminating the individual discharge permit for General Chemical West LLC effective April 1, 2008.

ATTACHMENT C – MAP OF MUNICIPAL AND INDUSTRIAL DISCHARGERS

Municipal Discharger outfall locations



Industrial Discharge Outfalls



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Dischargers must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 C.F.R. § 122.41(a).)

2. The Dischargers shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

F. Inspection and Entry

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

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 C.F.R. § 122.41(i)(1));

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 C.F.R. § 122.41(i)(2));

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 C.F.R. § 122.41(i)(3)); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 C.F.R. § 122.41(i)(4).)

G. Bypass

1. Definitions

   a. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)

   b. “Severe property damage” means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Dischargers may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and

   c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)

4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

5. Notice

   a. Anticipated bypass. If a Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i).)

   b. Unanticipated bypass. A Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii).)

H. Upset

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

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).).

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));

   b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));

   c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

If the Dischargers wish to continue an activity regulated by this Order after the expiration date of this Order, the Dischargers must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)

B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and

6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)

PLUS

For Industrial Dischargers that are corporations:

2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)

For Industrial Dischargers that are partnerships or sole proprietorships:

2. All permit applications shall be signed by a general partner or the proprietor, respectively. (40 C.F.R. § 122.22(a)(2).)

For a municipality, State, federal, or other public agency:

2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 C.F.R. § 122.22(a)(3).).

PLUS, for all Dischargers:

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

   c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

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

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.22(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)

3. If a Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Dischargers shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Dischargers become aware of the circumstances. A written submission shall also be provided within five (5) days of the time a Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)

   b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

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

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or

For Municipal Dischargers:

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)

For Industries:

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 C.F.R. § 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R.§ 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):

   a. 100 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(1)(i));

   b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));

   c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or

   d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels" (40 C.F.R. § 122.42(a)(2)):

a. 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));

b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or

d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

B. Publicly-Owned Treatment Works (POTWs)

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

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 C.F.R. § 122.42(b)(1)); and

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 C.F.R. § 122.42(b)(2).)

3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 C.F.R. § 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations section 122.48 requires that all NPDES permits specify monitoring and reporting requirements. Water Code Sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. The Dischargers shall comply with the MRP for this Order as adopted by the Regional Water Board, and with all of the Self-Monitoring Program, Part A, adopted August 1993 (SMP, Attachment G of this Order). The MRP and SMP may be amended by the Executive Officer pursuant to US EPA regulations 40 CFR122.62, 122.63, and 124.5. If any discrepancies exist between the MRP and SMP, the MRP prevails.

B. Sampling is required during the entire year when discharging. All analyses shall be conducted using current US EPA methods, or that have been approved by the US EPA Regional Administrator pursuant to 40 CFR 136.4 and 40 CFR 136.5, or equivalent methods that are commercially and reasonably available, and that provide quantification of sampling parameters and constituents sufficient to evaluate compliance with applicable effluent limits. Equivalent methods must be more sensitive than those specified in 40 CFR 136, must be specified in the permit, and must be approved for use by the Executive Officer, following consultation with the State Water Board's Quality Assurance Program. The Regional Water Board will find a Discharger in violation of the limitation if the discharge concentration exceeds the effluent limitation and the Reporting Level for the analysis for that constituent.

C. Minimum Levels. For compliance monitoring, analyses shall be conducted using the lowest commercially available and reasonably achievable detection levels. The objective is to provide quantification of constituents sufficient to allow evaluation of observed concentrations with respect to the Minimum Levels given below. All Minimum Levels are expressed as µg/L approximately equal to parts per billion (ppb).

According to the SIP, method-specific factors can be applied. In such cases, this additional factor must be applied in the computation of the Reporting Level. Application of such factors will alter the Reporting Level from the Minimum Level for the analysis. Dischargers are to instruct laboratories to establish calibration standards so that the Minimum Level value is the lowest calibration standard. At no time is a Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve. The table below indicates the highest minimum level that the Discharger's laboratory must achieve for calibration purposes.

Constituent	Minimum Level	Units
Mercury	0.0005	µg/L

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
Discharge point indicated in individual NPDES permits for discharge from the Discharger's wastewater treatment plant (often but not always E-001)	Location as indicated in individual NPDES permits for mercury or other toxic pollutants For C&H Sugar Company, location is M-002. For Mirant Delta, LLC, locations are E-001B through to and including E-001I. For Mirant Potrero, LLC, location is E-001C. For San Francisco International Airport, location is EFF-001A for both its Sanitary and Industrial Plants (or at the Discharger's option, the locations are at EFF-001-Ind for the Industrial Plant and EFF-001-San for the Sanitary Plant for monitoring compliance with the different concentration based limits for each facilitiy). Discharge flow rates shall be at location EFF-001-Ind for the Industrial Plant, and EFF-001-San for the Sanitary Plant.	As described in individual NPDES permits for mercury or other toxic pollutants

III. EFFLUENT MONITORING REQUIREMENTS

The Dischargers shall monitor mercury in effluent as shown in Table E-2 below and reported on the form included in the next section:

Table E-2. Mercury Monitoring Requirements

Parameter	Units[1]	Sample Type[2]	Minimum Sampling Frequency[3,4]
Total mercury[5]	µg/L	C-24 or Grab[6]	Monthly for Major Dischargers (see Table 1A and 1B)
			Quarterly for Minor Dischargers (see Table 1A and 1B), except as otherwise indicated below
			Annually for East Brothers Light Station Inc. Marin County Sanitary District No. 5, Paradise Cove Seafirth Estates Company and Property Owners
Methylmercury[7]	µg/L	C-24 or Grab	Quarterly for Dischargers with Average Annual Mass Limits greater than or equal to 0.08 kg/yr
			Semi-annually for Dischargers with Average Annual Mass Limits between 0.08 and 0.04 kg/yr
			Annually for Dischargers with Average Annual Mass Limits less than or equal to 0.04 kg/yr

(1) Unit Abbreviation: µg/L = micrograms per liter

(2) Sample Type: C-24 = 24-hour composite. 24-hour composites may be made up of discrete grab samples collected over a 24-hour period, or may be collected using automatic compositing equipment.

If using compositing equipment, the Discharger shall implement all feasible ultra clean techniques to reduce sample contamination (such as use of ultra clean Teflon tubing).

(3) Intermittent or seasonal dischargers shall collect samples during those months for which a discharge occurs.

(4) Monitoring frequency: Monitoring frequency may be increased subsequent to reissuance of this Order.

(5) Total mercury: The Dischargers shall use ultra-clean sampling (USEPA 1669), and ultra-clean analytical methods (USEPA 1631) for total mercury monitoring.

(6) Grab Samples shall be collected coincident with composite samples collected for the analysis of other regulated parameters.

(7) Methylmercury: These Dischargers shall use ultra-clean sampling (USEPA 1669) to collect unfiltered methylmercury samples, and ultraclean analytical methods (USEPA 1630/1631, Revision E) with a method detection limit of 0.02 ng/L.

IV. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

The Dischargers shall comply with all Standard Provisions (Attachments D and G) related to monitoring, reporting, and recordkeeping.

B. Individual Reporting in Self Monitoring Reports (SMRs)

1. Compliance with CIWQS

At any time during the term of this permit, the State or Regional Water Board may notify the Dischargers to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Dischargers shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. Due Dates and Information Required for SMRs

a. Report Data with Routine SMR

The Dischargers shall submit mercury data collected as part of this Order in the regular monthly or quarterly Self Monitoring Reports (SMR) required in each Discharger's individual permit. As required in each Discharger's individual permit, for those Dischargers required to report monthly, monthly reports shall be due no later than 30 days after the end of each calendar month. For those Dischargers required to report quarterly in its individual permit, quarterly reports are due 30 days after the end of each calendar quarter.

(i) For Industrial Dischargers claiming an effluent credit for recvcled water use pursuant to Provision V.C.5, the amount of credit claimed for that month shall be reported monthly to the Municipal Discharger that supplied the recycled water. The reporting from the Industrial Discharger to the Municipal Discharger shall be completed no later than 15 days following the end of the

calendar month. The municipal and industrial Dischargers shall then include this information in their respective monthly (or quarterly) and annual SMRs.

(ii) If a Discharger monitors mercury more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

b. **Annual SMR and Required Forms**
Annual SMRs are due February 1 following each calendar year. Each Discharger shall provide its mercury information on the forms shown at the end of this section (pages E-9 through E-13) as an attachment to the cover letter for the Discharger's annual SMR required by its individual permit. Furthermore, by February 1, each Discharger shall send an additional copy of its completed forms to the Regional Water Board by email (in PDF), mail, or fax. This duplicate reporting is necessary to facilitate the Regional Water Board's compilation of the data for compliance determination with the group annual average limitation from all affected Dischargers. Dischargers not required by their individual permits to submit annual SMRs shall still submit annual SMRs for mercury as described in this subsection. The reporting required in this subsection "b." is waived only if the Discharge participates in the Group Compliance Reporting described in IV.C, below.

3. **Monitoring Periods**
Monitoring periods for all required monitoring shall be completed according to the following schedule:

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period
Monthly	Effective date of permit	1st day of calendar month through last day of calendar month
Quarterly	Effective date of permit	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31
Semiannually	Effective date of permit	January 1 through June 30 July 1 through December 31
Annually	Effective date of permit	January 1 through December 31

4. **Reporting of ML or RL, DNQ, and ND, and Establishing Calibration Standards**
The Dischargers shall report with each sample result the applicable Minimum Level (ML) or Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

The Dischargers shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

   For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is a Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.

5. **Reporting Data in Tabular Format**
   The Dischargers shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with effluent limitations. The Dischargers are not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Dischargers shall electronically submit the data in a tabular format as an attachment.

6. **Cover Letter for SMR**
   Each Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs and any exceedances of trigger levels; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation or trigger level exceedance.

7. **Signatory and Certification of SMR**
   SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

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

8. **Optional Electronic Reporting System**
The Dischargers have the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. The Electronic Reporting System (ERS) format includes, but is not limited to, a transmittal letter, summary of violation details and corrective actions, and transmittal receipt.

C. Optional Group Compliance Reporting

As an alternative to IV.B.2.b. above, each Discharger at its option, may submit its annual mercury discharge forms to a regional entity, such as the

- Bay Area Clean Water Agencies (BACWA) for Dischargers listed in Table 4A, and non-petroleum refinery Industrial Dischargers listed in Table 4B (provided these Industrial Dischargers have made prior arrangement with BACWA to report on their behalf), of the Order, at
  BACWA
  P.O. Box 24055, MS 702
  Oakland, CA 94623
  ATTN: SF Bay Mercury Watershed Wastewater Permit Compliance Reporting

or

- Western State Petroleum Association (WSPA) for Petroleum Refinery Industrial Dischargers listed in Table 4B of the Order, at
  WSPA
  1415 L Street, Suite 600
  Sacramento, CA 95814
  ATTN: SF Bay Mercury Watershed Wastewater Permit Compliance Reporting

If the Discharger chooses this alternative, it shall indicate in the cover letter of its annual report due to the Regional Water Board on February 1st of its intent and commitment to report with a group by February 15th. **Each Discharger shall provide its mercury information on the form shown at the end of this section** by February 15th so as to allow the respective regional entity to provide compiled information to the Regional Water Board as indicated below. If the Discharger fails to meet its commitment, it will be subject to enforcement action by the Regional Water Board for failure to meet the February 1st reporting deadline and requirement.

1. Compliance Report of Mercury Discharge Levels

By April 1st of each year, the Dischargers' group will submit a report describing the group's mercury discharges for the preceding calendar year. The report will contain the following:

- Summary tables depicting each Discharger's annual and monthly flows, mercury concentrations, and mercury mass loads, calculated as described

in Effluent Limitations III.A. and B. of the Order, and the sum of all the individual Dischargers' annual mass loads (if the Dischargers' group did not receive completed forms from the each group member, the sum should be left blank along with blank rows or columns left in the summary tables those group members);

- An analysis of the effluent data, including discussion of all statistical methods used;
- A discussion of apparent trends in mercury loading of each Discharger; and
- An electronic file containing all the data, in a format compatible with the Regional Water Board's Electronic Reporting System or California Integrated Water Quality System.
- Copies of the completed forms from each Discharger who provided forms.

2. Report on Mercury Reduction Efforts

By April 1st of each year, the Dischargers' group will submit a report describing their mercury reduction efforts. This report will contain the following:

a. A discussion of events that may have affected mercury loading for the preceding calendar year; and

b. A description of mercury source control projects, planned or under way, including where applicable, but not limited to:

   i. descriptions of project activities; and

   ii. implementation schedules for planned source control projects; and

   iii. estimates of mercury mass loads that can be avoided through program activities unrelated to normal treatment, including recycled water delivered, summarized by activity if appropriate.

San Francisco Bay Regional Water Quality Control Board

Annual Mercury Information Reporting Form
Part 1 of 3 – Basic Information

Complete and return all 3 parts of this form to the Regional Water Board no later than February 1st in your Annual Self Monitoring Report, to report on the previous calendar year. You must also mail, fax, or email PDF file of a second copy of this completed form to the address below. In lieu of this dual reporting to the Regional Water Board, you may complete one set of these forms and report through a group in accordance with MRP Section IV.C. (see page E-6).

San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
Attention: SF Bay Mercury Watershed Wastewater Permit Compliance Reporting
Email: MercuryWasteWaterShed@waterboards.ca.gov
Fax: (510) 622-2460

Name of Discharger: _____

Individual NPDES Permit Number(s): _____

Discharger Contact Person: _____

Contact Person Phone Number: _____

Contact Person Email: _____

Calendar Year Reporting: _____ (Example: for data collected in 2009, enter "2009")

Certification:

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

_____ _____
Signature of Responsible Discharger Representative Date

_____
Print Name and Title

San Francisco Bay Regional Water Quality Control Board

Annual Mercury Information Reporting Form
Part 2 of 3 – Mercury Data

Discharger: _____

Calendar Year Reporting: _____ Monitoring Station: _____

Use separate Part 2 sheets for multiple monitoring stations

☐ A Discharger reporting data to the optional Electronic Report System (ERS), may check and initial this box to certify that its **mercury data in ERS are complete and correct**, if it wishes to skip this part (Part 2) of the Annual Mercury Information Reporting Form requirement. Any recycled water adjustments must still be shown on this sheet.

Month	Sample Date	Effluent Flow (mgd) Enter the effluent flow for only the days when mercury was sampled.	Mercury Concentration (µg/L)	Average Monthly Mass Load (kg/mo)
			Only fill in boxes for month(s) sampled. Indicate "no data" for month(s) not sampled. Only provide total mass load if sampled every month.	
Jan				
Feb				
Mar				
Apr				
May				
Jun				
Jul				
Aug				
Sep				
Oct				
Nov				
Dec				
Total				
Average				

Note: if more than one sample in a month at the same station, report flows and concentrations for all sample days above, and calculate average monthly mass load in accordance with the methodology described in Effluent Limitations III of this Order.

Comments on data (if any):

For Dischargers claiming an effluent credit for recycled wastewater use pursuant to Provision V.C.5 of the Order, please indicate the credit(s) that will be applied to the mass loads listed above, and show on the back of this sheet the credit calculation and basis (use additional sheets if necessary). For Dischargers who provide or use recycled wastewater tor industrial supply pursuant to Provision V.C.5 of the Order, please indicate any adjustments that have been applied to the mass loads listed above.

San Francisco Bay Regional Water Quality Control Board

Annual Mercury Information Reporting Form
Part 3 of 3 – Source Control Information

Discharger: _____

Calendar Year Reporting: _____

1. Discussion of any events that affected mercury loading for the calendar year:

2. Description of mercury source control projects underway or planned. Each project shall include: (1) description of project activities; (2) implementation schedule(s); and (3) estimates of mercury mass loads that can be avoided through program activities unrelated to normal treatment, summarized by activity if appropriate.

    a. Projects completed or underway during the reporting year:

    b. Projects planned for the near future (include information about expected schedule):

D. Discharge Monitoring Reports (DMRs)

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the Dischargers to electronically submit self-monitoring reports. Until such notification is given, major Dischargers (See Tables 1A and 1B in cover section of permit) shall submit mercury results as part of their discharge monitoring reports (DMRs) in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). Each Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

Standard Mail	**FedEx/UPS/ Other Private Carriers**
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

3. All discharge monitoring results must be reported on the official US EPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of EPA Form 3320-1.

ATTACHMENT F – FACT SHEET

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List of Tables

ATTACHMENT F – FACT SHEET

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order. This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information
(information not already presented in this Order is shown in bold)

WDID	
Discharger	See Tables 1A and 1B attached to cover page above.
Name of Facility	
Facility Address	
Facility Contact, Title and Phone	See Tables 4A and 4B starting on page 3 above.
Authorized Person to Sign and Submit Reports	**See Tables F-1A and F-1B below.**
Mailing Address	See Tables 4A and 4B starting on page 3 above.
Billing Address	**See Tables F-1A and F-1B below.**
Type of Facility	See Tables 4A and 4B starting on page 3 above.
Major or Minor Facility	See Tables 1A and 1B attached to cover page above.
Threat to Water Quality	**See Tables F-1A and F-1B below.**
Complexity	
Pretreatment Program	
Reclamation Requirements	**Not applicable.**
Facility Permitted Flow	See Facility Design Flow below.
Facility Design Flow	See Tables 4A and 4B starting on page 3 above.
Watershed	**San Francisco Bay**
Receiving Water	**See Tables F-1A and F-1B below.**
Receiving Water Type	

Table. F-1A. Additional Information on Municipal Facilities

Discharger	Authorized Person to Sign and Submit Reports	Billing Address (if different from mailing address)	Threat to Water Quality	Complexity	Pretreatment Program	Receiving Water Type
American Canyon, City of	Robert C. Weil, Public Works Director (707) 647-4550 Also Peter Lee	Same as mailing address	1	A	Y	Estuarine
Benicia, City of	Jerry Gall Superintendent (707) 746-4336	Same as mailing address	2	A	Y	Estuarine
Burlingame, City of	Same as contact	Same as mailing address	2	A	Y	Marine
Calistoga, City of	Paul Wade Public Works Director (707) 746-4336	Same as mailing address	2	B	N	Freshwater
Central Contra Costa Sanitary District	Same as contact	Same as mailing address	1	A	Y	Estuarine
Central Marin Sanitation Agency	Robert Cole Environmental Services Manager (415) 459-1455 ext. 142	Same as mailing address	2	A	Y	Estuarine
Contra Costa County Sanitation District No. 5, Port Costa	Same as contact	Same as mailing address	3	B	N	Estuarine
Delta Diablo Sanitation District	Same as contact	Same as mailing address	1	A	Y	Estuarine
East Bay Dischargers Authority	Charles V. Weir General Manager (510) 278-5910	Same as mailing address	1	A	Y	Marine
Hayward Water Pollution Control Facility						
San Leandro Water Pollution Control Plant						
Oro Loma/Castro Valley Sanitary Districts Water Pollution Control Plant						
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						

Discharger	Authorized Person to Sign and Submit Reports	Billing Address (if different from mailing address)	Threat to Water Quality	Complexity	Pretreatment Program	Receiving Water Type
East Bay Municipal Utilities District	Same as contact	EBMUD Accounts Payable P.O. Box 23060 Oakland, CA 94623-2306	1	A	Y	Marine
EBMUD – Wet Weather Facilities	Same as contact	EBMUD Accounts Payable P.O. Box 23060 Oakland, CA 94623-2306	2	A	N	
East Brother Light Station, Inc.[1]	Same as contact	Same as mailing address	3	B	N	Estuarine
Fairfield-Suisun Sewer District	Same as contact	Same as mailing address	1	A	Y	Estuarine
Las Gallinas Valley Sanitary District	Same as contact	Same as mailing address	2	A	N	Estuarine
Marin County (Paradise Cove), Sanitary District No. 5 of	Tim O'Day Wastewater Facility Manager (415) 435-1501	Same as mailing address	3	B	N	Marine
Marin County (Tiburon), Sanitary District No. 5 of	Tim O'Day Wastewater Facility Manager (415) 435-1501	Same as mailing address	2	A	N	Marine
Millbrae, City of	Same as contact	Same as mailing address	2	A	N	Marine
Mt. View Sanitary District	David R. Contreras District Manager (925) 228-5635 ext. 32	Same as mailing address	2	A	N	Estuarine
Napa Sanitation District	Same as contact	Same as mailing address	1	A	Y	Estuarine
Novato Sanitary District	Same as contact	Same as mailing address	2	A	Y	Estuarine
Palo Alto, City of	Same as contact	Same as mailing address	1	A	Y	Estuarine
Petaluma, City of	Same as contact	Same as mailing address	2	A	Y	Estuarine
Pinole, City of	Same as contact	Same as mailing address	3	A	N	Marine
Rodeo Sanitary District	Steven S. Beall Engineer-Manager (510) 799-2970	Same as mailing address	3	A	N	Estuarine
Saint Helena, City of	Same as contact	Same as mailing address	2	B	N	Freshwater
San Francisco, City and County of, San Francisco International Airport, Sanitary	Ernie Eavis	676 McDonnell Road San Francisco, CA 94128	3	B	Y	Marine
San Francisco (Southeast Plant), City and County of	Gregory Mayer Operations Superintendent	Same as mailing address	1	A	Y	Marine

Discharger	Authorized Person to Sign and Submit Reports	Billing Address (if different from mailing address)	Threat to Water Quality	Complexity	Pretreatment Program	Receiving Water Type
San Jose/Santa Clara, Cities of	Same as contact	Same as mailing address	1	A	Y	Estuarine
San Mateo, City of	Same as contact	Same as mailing address	1	A	Y	Marine
Sausalito-Marin City Sanitary District	Same as contact	Same as mailing address	2	A	N	Marine
Seafirth Estates Company and Property Owners within the Seafirth Estates Subdivision[1]	Bonner Buehler Plant Operator (415) 388-1345	Same as mailing address	3	B	N	Marine
Sewerage Agency of Southern Marin	Same as contact	Same as mailing address	2	A	N	Marine
Sonoma Valley County Sanitary District	Same as contact	Same as mailing address	2	A	N	Estuarine
South Bayside System Authority	Same as contact	Same as mailing address	1	A	Y	Marine
South San Francisco and San Bruno, Cities of	Same as contact	Same as mailing address	1	A	Y	Marine
Sunnyvale, City of	Same as contact	Same as mailing address	1	A	Y	Estuarine
US Naval Support Activity, Treasure Island	Patricia McFadden Brac Field Team Leader OR Michael Mentink Environmental Coordinator	Same as mailing address	2	A	N	Marine
Vallejo Sanitation and Flood Control District	Ronald J. Matheson District Manager (707) 644-8949	Same as mailing address	1	A	Y	Estuarine
West County Agency (West County Wastewater District and City of Richmond Municipal Sewer District)	E.J. Shalaby District Manager (510) 222-6700	Same as mailing address	2	A	Y	Estuarine
Yountville, Town of	Don Moore Wastewater Assistant System Supervisor (707) 944-2988	Same as mailing address	2	B	N	Freshwater

Table. F-1B. Additional Information for Industrial Facilities

Discharger	Authorized Person to Sign and Submit Reports	Billing Address (if different from mailing address)	Threat to Water Quality	Complexity	Pretreatment Program	Receiving Water Type
Industrial Wastewater Discharger (Non-Petroleum Refinery):						
C&H Sugar and Crockett Community Services District	Elizabeth M. Crowley Environmental Compliance Manager	Same as mailing address	2	A	N	Enclosed Bay
Crockett Cogeneration, LP and Pacific Crockett Energy, Inc.	Don Burkard Plant Manager (510) 787-4155	Same as mailing address	2	B	N	Enclosed Bay
The Dow Chemical Company	Greg Dubitsky General Manager (925) 432-5154	Same as mailing address	2	A	N	Enclosed Bay
General Chemical West, LLC	Brad Klock General Manager (925) 458-7359	Same as mailing address	2	B	N	Enclosed Bay
GWF Power Systems L. P., Site I	Neftali Nevarez (925) 431-1445	Same as mailing address	3	C	N	Enclosed Bay
GWF Power Systems L. P., Site V	Neftali Nevarez (925) 431-1445	Same as mailing address	3	C	N	Enclosed Bay
Pacific Gas and Electric Company (PG&E)	David Harnish Site Remediation Manager (925) 866-5882	Same as mailing address	3	B	N	Enclosed Bay
Rhodia, Inc.	Peter Jurichko Plant Manager	Same as mailing address	1	A	N	Enclosed Bay
San Francisco, City and County of, San Francisco International Airport, Industrial	Ernie Eavis Deputy Airport Director	P.O. Box 8097, San Francisco, CA, 94128	1	A	N	Enclosed Bay
Mirant Delta, LLC	James P. Garlick, Sr. Vice President, Operations	Pittsburg Power Plant P.O. Box 192 Pittsburg, CA 94565	1	A	N	Estuary
Mirant Potrero LLC	James P. Garlick, Sr. Vice President, Operations	Mirant Potrero, LLC, Potrero Power Plant, 1201-A Illinois Street San Francisco, CA 94107	2	A	N	Enclosed Bay

Discharger	Authorized Person to Sign and Submit Reports	Billing Address (if different from mailing address)	Threat to Water Quality	Complexity	Pretreatment Program	Receiving Water Type
USS-Posco Industries	David Allen Regulations Manager (925) 439-6290	Same as mailing address	1	A	N	Enclosed Bay
Industrial Wastewater Discharger (Petroleum Refinery):						
Chevron Products Company	J.G. Whiteside General Manager (510) 242-4400	Same as mailing address	1	A	N	Enclosed Bay
ConocoPhillips	J.M. Kenney Manager, San Francisco Refinery (510) 245-4415	Same as mailing address	1	A	N	Enclosed Bay
Shell Oil Products US and Equilon Enterprises LLC	Aamir Farid Refinery Manager (925) 313-3000	Same as mailing address	1	A	N	Enclosed Bay
Tesoro Refining & Marketing Co.	Alan Savage Environmental Manager (925) 335-3490	Same as mailing address	1	A	N	Enclosed Bay
Valero Refining Company	Marcus Cole Senior Environmental Engineer (707) 745-7807	Same as mailing address	1	A	N	Enclosed Bay

A. The Dischargers listed in this Order are currently discharging pursuant to the Order Nos. and National Pollutant Discharge Elimination System (NPDES) Permit Nos. as shown in Attachment B. This Mercury Watershed Permit implements the San Francisco Bay mercury Total Maximum Daily Load (TMDL) adopted by the Regional Water Board on December 13, 2006. The TMDL will be effective once USEPA approves it. Upon this Order's effective date, it will supersede mercury requirements in the Orders listed in Attachment B, or in the Orders that will be adopted by the Regional Water Board in reissuing the expired or expiring NPDES permits prior to the effective date of this Order.

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

B. The Dischargers listed in Table 1A of the Order own and operate secondary and advanced secondary wastewater treatment facilities as described in their respective Orders. The Dischargers listed in Table 1B of the Order own and operate wastewater treatment facilities as described in their respective Orders. Wastewater is discharged to San Francisco Bay and its tributaries, which are waters of the United States within the San Francisco Bay watershed. Attachment C shows a map of the dischargers subject to this Order.

II. FACILITIES DESCRIPTION

A. Description of Wastewater Treatment

Municipal wastewater treatment plants provide secondary treatment, which includes settling, filtration, and biological treatment. Some plants also provide advanced treatment, which removes additional solids. Removing additional solids removes additional pollutants, like mercury, that adhere to particles. Municipal wastewater treatment plants generally remove over 90% of the mercury in their influent. While the removed mercury is not directly discharged to water, some is returned to the environment through landfills, incinerators, or soil amendments. The primary sources of mercury in municipal wastewater are expected to be human waste and medical and dental facilities.

Industrial Dischargers include petroleum refineries, chemical plants, and other large industrial facilities. The mercury loads depend on the types of activities in which these Dischargers engage. The wastewater treatment facilities also vary depending on the activities. Individual permits, listed in Attachment B, provide further descriptions of treatment processes.

B. Discharge Points and Receiving Waters

The locations of discharge points are shown in Tables 4A and 4B of the Order, above. Treated wastewater is discharged to San Francisco Bay and its tributaries as indicated on Tables 2A and 2B of the Order.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effective effluent limitations contained in current individual permits for the Dischargers subject to this Order are shown in the table below. Information for each Discharger is available in the individual permit and monitoring reports for that Discharger. All limits are specified in ug/l.

Table F-2. Current Individual Permit Mercury Effluent Limits for Municipal Dischargers

Discharger	Average Monthly	Maximum Daily
American Canyon, City of	0.021	0.039
Benicia, City of	0.087	
Burlingame, City of	0.087	
Calistoga, City of	0.020	0.042
Central Contra Costa Sanitary District	0.087	1.0
Central Marin Sanitation Agency	0.087	
Contra Costa County Sanitation District No. 5, Port Costa	No limit because no reasonable potential	
Delta Diablo Sanitation District	0.084	
East Bay Dischargers Authority – Combined Outfall	0.087	
Union S.D. Wet Weather Outfall		0.087
Union S.D. Hayward Marsh	0.087	
LAVWMA Wet Weather Outfall	No limit because no reasonable potential	
East Bay Municipal Utilities Dist. – Main WWTP	0.087	
EBMUD – Point Isabel WWF		0.40
EBMUD – San Antonio Creek WWF		1.0
EBMUD – Oakport WWF		0.25
East Brother Light Station, Inc.	No limit because no reasonable potential	
Fairfield-Suisun Sewer District	0.023	
Las Gallinas Valley Sanitary District	0.087	
Marin County (Paradise Cove), Sanitary District No. 5 of	No limit because no reasonable potential	
Marin County (Tiburon), Sanitary District No. 5 of	0.087	
Millbrae, City of	0.087	
Mt. View Sanitary District	0.021	0.038
Napa Sanitation District	0.087	
Novato Sanitary District	0.087	
Palo Alto, City of	0.023	
Petaluma, City of	0.021	0.04
Pinole, City of	0.087	
Rodeo Sanitary District	0.021	0.041
Saint Helena, City of	0.08	
San Francisco, City and County of, SF International Airport, Sanitary	0.087	1.0

Discharger	Average Monthly	Maximum Daily
San Francisco (Southeast Plant), City and County of	0.087	
San Jose/Santa Clara, Cities of	0.012	2.1
San Mateo, City of	0.087 winter 0.023 summer	
Sausalito-Marin City Sanitary District	0.2	1
Seafirth Estates Company and Property Owners with the Seafirth Estates Subdivision	No limit because no reasonable potential	
Sewerage Agency of Southern Marin	0.087	1
Sonoma Valley County Sanitary District	0.087	1
South Bayside System Authority	0.023	0.034
South San Francisco and San Bruno, Cities of	0.087	
Sunnyvale, City of	0.012	2.1
US Naval Support Activity, Treasure Island	0.087	
Vallejo Sanitation and Flood Control District	0.087	
West County Agency (West County Wastewater District and City of Richmond Municipal Sewer District)	0.087	
Yountville, Town of	0.084	

Table F-3. Current Individual Permit Mercury Effluent Limits for Industries

Discharger	Average Monthly, µg/L	Maximum Daily, µg/L
Industrial Wastewater Discharger (Non-Petroleum Refinery):		
C&H Sugar - 002	0.21	1.0
Crockett Cogeneration, LP and Pacific Crockett Energy, Inc.	No limit because no reasonable potential	
The Dow Chemical Company	0.084	1
General Chemical West, LLC		1
GWF Power Systems L. P., Site I		0.134
GWF Power Systems L. P., Site V		0.071
Pacific Gas and Electric Company (PG&E)	0.02	0.041
Rhodia, Inc.		0.32
San Francisco, City and County of, SF International Airport, Industrial	0.087	1
Mirant Delta, LLC	0.165	
Mirant Potrero LLC	0.032	
USS-Posco Industries	No limit because no reasonable potential	
Industrial Wastewater Discharger (Petroleum Refinery):		
Chevron Products Company	0.075	
ConocoPhillips	0.075	
Shell Oil Products US and Equilon Enterprises LLC	0.075	
Tesoro Refining & Marketing Co.	0.019	0.044
Valero Refining Company	0.075	

D. Compliance Summary

There have been no serious exceedances of mercury effluent limitations for the Dischargers in recent years.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as a NPDES permit for point source discharges or mercury from the facilities listed in this Order to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100 through 21177.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Quality Control Board (Regional Water Board) adopted a Water Quality Control Plan for the San Francisco Bay Basin (Region 2) (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to San Francisco Bay Water are as follows:

Table F-4. Basin Plan Beneficial Uses

Receiving Water Name	Beneficial Use(s)
San Francisco Bay and Applicable Tributaries – See individual Order Nos. (Attachment B) for specific Beneficial Uses that apply.	Agricultural Supply (AGR), Cold Freshwater Habitat (COLD), Ocean, Commercial, and Sport Fishing (COMM), Estuarine habitat (EST), Industrial Service Supply (IND), Marine Habitat (MAR), Fish Migration (MIGR), Municipal and domestic Supply (MUN), Navigation (NAV), Industrial Process Supply (PROC), Preservation of Rare and Endangered Species (RARE), Water Contact Recreation (REC1), Noncontact Water Recreation (REC2), Shellfish Harvesting (SHELL), Fish Spawning (SPWN), Warm Freshwater Habitat (WARM) Wildlife Habitat (WILD)

Requirements of this Order implement the Basin Plan.

The Regional Water Board adopted a Basin Plan Amendment on December 13, 2006, that establishes new water quality objectives for mercury, and that establishes the San Francisco Bay Mercury TMDL to attain the new mercury objectives in San Francisco Bay and contiguous bay segments. The new objectives and TMDL become effective after approval by the State Water Board and USEPA. Elevated mercury concentrations currently exist in the tissues of fish, and methylmercury, a highly toxic form of mercury, is a persistent bioaccumulative pollutant. The mercury TMDL calls for reduction of mercury mass loadings to San Francisco Bay. Additional details regarding mercury sources to San Francisco Bay, and technical information related to the San Francisco Bay Mercury TMDL, are provided in the Fact Sheet. The purpose of this Order is to implement the San Francisco Bay Mercury TMDL wasteload allocations for Dischargers listed in Tables 1A and 1B.

2. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the California Toxics Rule and National Toxics Rule and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

3. **Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal

antidegradation policies. The permitted discharges must be consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

4. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations[1] section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

D. Impaired Water Bodies on CWA 303(d) List

On June 6, 2003, the USEPA approved a revised list of impaired water bodies prepared by the State (hereinafter referred to as the 303(d) list), prepared pursuant to provisions of Section 303(d) of the Federal CWA requiring identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. San Francisco Bay is listed as an impaired waterbody for mercury. The SIP requires final effluent limitations for all 303(d)-listed pollutants to be based on total maximum daily loads and associated wasteload allocations.

San Francisco Bay is impaired for mercury because mercury contamination is adversely affecting existing beneficial uses, including sport fishing, preservation of rare and endangered species, and wildlife habitat. Mercury concentrations in San Francisco Bay fish are high enough to threaten the health of humans who consume them. In addition, mercury concentrations in some bird eggs harvested from the shores of San Francisco Bay are high enough to account for abnormally high rates of eggs failing to hatch.

The San Francisco Bay mercury TMDL was adopted by the Regional Water Board on August 9, 2006. The numeric targets, allocations, and associated implementation plan will ensure that all San Francisco Bay segments attain applicable water quality standards, including new mercury water quality objectives indicated in section IV.A.2. to protect and support beneficial uses.

The TMDL allocations and implementation plan focus on controlling the amount of mercury that reaches the Bay and identifying and implementing actions to minimize mercury bioavailability. The organic form of mercury (methylmercury) is toxic and bioavailable, but information on ways of controlling methylmercury production is limited. However, this is an area of active research and strategies for controlling this process are forthcoming. The effectiveness of implementation actions, monitoring to track progress toward targets, and the scientific understanding pertaining to mercury will be periodically reviewed and the TMDL may be adapted as warranted.

The mercury TMDL implementation plan has four objectives: (1) reduce mercury loads to achieve load and wasteload allocations, (2) reduce methylmercury production and consequent risk to humans and wildlife exposed to methylmercury, (3) conduct monitoring and focused studies to track progress and improve the scientific

[1] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

understanding of the system, and (4) encourage actions that address multiple pollutants. The plan establishes requirements for Dischargers to reduce or control mercury loads and identifies actions necessary to better understand and control methylmercury production. In addition, it addresses potential mercury sources and describes actions necessary to manage risks to Bay fish consumers. The adaptive implementation section describes the method and schedule for evaluating and adapting the TMDL and implementation plan as needed to assure water quality standards are attained.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. Section 122.44(d) of the Code of Federal Regulations requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. Water quality-based effluent limitations are included in this permit to implement wasteload allocations which are part of the San Francisco Bay mercury TMDL.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The WQC and WQOs applicable to the receiving waters for this discharge are from the Basin Plan. A Basin Plan amendment, adopted by the Regional Water Board on August 9, 2006, and corrected by the Regional Water Board Executive Officer on May 23, 2007 (for the WLA for C&H Sugar Co.), was approved by the State Water Board on July 17, 2007. This Basin Plan amendment added two new mercury water quality objectives and vacated an outdated objective. The new objectives apply to all segments of San Francisco Bay, including all marine and estuarine waters contiguous to San Francisco Bay. The new objective to protect people who consume Bay fish applies to fish large enough to be consumed by humans. The objective is 0.2 mg mercury per kg fish tissue (average wet weight concentration measured in the muscle tissue of fish large enough to be consumed by humans). The proposed objective to protect aquatic organisms and wildlife applies to small fish (3–5 cm in length) commonly consumed by the California least tern, an endangered species. This objective is 0.03 mg mercury per kg fish (average wet weight concentration).

These two new objectives replace the water column four-day average marine mercury objective of 0.025 µg/L, which no longer applies to San Francisco Bay waters. Effluent limitations, and provisions contained in this Order are designed to

implement the new objectives in accordance with the implementation provisions of the San Francisco Bay Mercury TMDL, based on available information.

3. Determining the Need for WQBELs

This Order contains WQBELs for mercury. As required by section 122.44(d)(1)(vii), the Regional Water Board is including WQBELs for mercury in this Order that are consistent with the assumptions and requirements of the San Francisco Bay Mercury TMDL wasteload allocation. Based on the water quality monitoring done at the time of the TMDL adoption, which set the wasteload allocation at the level necessary to attain water quality standards, the Regional Water Board has determined that the WQBEL is consistent with the assumptions of the TMDL. Similarly, compliance with the effluent limitations will satisfy the requirements of the TMDL.

The Regional Water Board has developed water quality-based effluent limitations for mercury pursuant to section 122.44(d)(1)(vii), which does not require or contemplate a reasonable potential analysis. Similarly, the SIP at Section 1.3 recognizes that reasonable potential analysis is not appropriate if a TMDL has been developed.

4. WQBEL Calculations

There are two sets of WQBELs in this Order: mass-based and concentration-based.

Mass-based WQBELs

The mass-based WQBEL's are based on the established aggregate wasteload allocations for municipal Dischargers and industrial Dischargers which comprise a portion of the San Francisco Bay mercury TMDL. For the San Francisco Bay mercury TMDL, loads are expressed in terms of annual mercury loads in kilograms per year (kg/yr) because the adverse effects of mercury occur through long-term bioaccumulation. The loads are intended to represent long-term averages and account for long-term variability, including seasonal variability.

The San Francisco Bay mercury TMDL's initial aggregate load limit of 17 kg/yr and associated individual load limits for Municipal Dischargers are shown in Table F-5 below. Also shown are the interim aggregate load limit and associated individual load limits applicable in 10 years, and final wasteloads allocations that apply in 20 years.

The Order implements the 10 and 20 year timeframe for compliance with the interim and final aggregate load limits of the TMDL's wasteload allocations. These timeframes are appropriate to allow Municipal Dischargers time to implement additional measures to reduce their contribution of mercury discharge to San Francisco Bay. The timeframes are as soon as possible because of the high level of uncertainty in pollution prevention methods and other measures envisioned in the TMDL for reducing mercury discharge concentrations from municipalities. As indicated in the TMDL, the other measures that would be necessary include wastewater re-use, pollutant trading, offsets and/or system improvements. The

uncertainties inherent in developing a pollutant trading and offset program warrant this long timeframe as state policies for these programs are still in their initial stages. The development and design of plans for the infrastructure and funding required for significantly increasing wastewater re-use, and system improvements by public agencies also warrant such a timeframe.

Table F-5. TMDL Mass Limits and Wasteload Allocations for Municipal Wastewater Dischargers

Permitted Entity	NPDES Permit	2000–2003 Initial Load Limit (kg/yr)	Interim Load Limit (kg/yr)	Final Allocation (kg/yr)
American Canyon, City of	**CA0038768**	**0.12**	**0.095**	**0.095**
California Department of Parks and Recreation Angel Island State Park	CA0037401	0.013	0.013	0.013
Benicia, City of	CA0038091	0.088	0.088	0.088
Burlingame, City of	CA0037788	0.089	0.089	0.089
Calistoga, City of	CA0037966	0.016	0.016	0.016
Central Contra Costa Sanitary District	CA0037648	2.23	1.8	1.3
Central Marin Sanitation Agency	CA0038628	0.18	0.15	0.11
Delta Diablo Sanitation District	CA0038547	0.31	0.25	0.19
East Bay Dischargers Authority Dublin-San Ramon Services District (CA0037613) Hayward Shoreline Marsh (CA0038636) Livermore, City of (CA0038008) Union Sanitary District, wet weather (CA0038733)	CA0037869	3.6	2.9	2.2
East Bay Municipal Utilities District	CA0037702	2.6[a]	2.1	1.5
East Brother Light Station	CA0038806	0.001	0.000012	0.000012
Fairfield-Suisun Sewer District	**CA0038024**	**0.22**	**0.17**	**0.17**
Las Gallinas Valley Sanitary District	CA0037851	0.17	0.13	0.10
Marin County Sanitary District, Paradise Cove	CA0037427	0.00055	0.00055	0.00055
Marin County Sanitary District, Tiburon	CA0037753	0.0099	0.0099	0.0099
Millbrae, City of	CA0037532	0.052	0.052	0.052
Mountain View Sanitary District	**CA0037770**	**0.034**	**0.034**	**0.034**
Napa Sanitation District	CA0037575	0.28	0.23	0.17
Novato Sanitary District	CA0037958	0.079	0.079	0.079
Palo Alto, City of	**CA0037834**	**0.38**	**0.31**	**0.31**
Petaluma, City of	CA0037810	0.063	0.063	0.063
Pinole, City of	CA0037796	0.055	0.055	0.055
Contra Costa County, Port Costa WWTP	CA0037885	0.00072	0.00072	0.00072
Rodeo Sanitary District	CA0037826	0.060	0.060	0.060
Saint Helena, City of	CA0038016	0.047	0.047	0.047
San Francisco, City and County of, San Francisco Airport	CA0038318	0.032	0.032	0.032
San Francisco, City and County of, Southeast Plant	CA0037664	2.7	2.1	1.6
San Jose/Santa Clara WPCP	**CA0037842**	**1.0**	**0.80**	**0.80**
San Mateo, City of	CA0037541	0.32	0.26	0.19
Sausalito-Marin City Sanitary District	CA0038067	0.078	0.078	0.078
Seafirth Estates	CA0038893	0.00036	0.00036	0.00036
Sewerage Agency of Southern Marin	CA0037711	0.13	0.10	0.076
Sonoma Valley County Sanitary District	CA0037800	0.041	0.041	0.041
South Bayside System Authority	CA0038369	0.53	0.42	0.32
South San Francisco/San Bruno WQCP	CA0038130	0.29	0.24	0.18
Sunnyvale, City of	**CA0037621**	**0.15**	**0.12**	**0.12**
US Naval Support Activity, Treasure Island WWTP	CA0110116	0.026	0.026	0.026

Permitted Entity	NPDES Permit	2000–2003 Initial Load Limit (kg/yr)	Interim Load Limit (kg/yr)	Final Allocation (kg/yr)
Vallejo Sanitation & Flood Control District	CA0037699	0.57	0.46	0.34
West County Agency, Combined Outfall	CA0038539	0.38	0.30	0.23
Yountville, Town of	CA0038121	0.040	0.040	0.04
Total		***17*** [b]	***14*** [b]	***11*** [b]

Notes to Table F-5:

Bold text indicates advanced secondary treatment.

[a] This allocation includes wastewater treatment and all wet weather facilities.

[b] Total differs slightly from the column sum due to rounding.

The San Francisco Bay mercury TMDL's wasteload allocations for industrial Dischargers, summing to 1.3 kg/yr, are shown in Tables F-6 and F-7 below.

Table F-6. TMDL Wasteload Allocations for Industrial (Non-Petroleum Refinery) Wastewater Discharges

Permitted Entity	NPDES Permit	Allocation (kg/yr)
C&H Sugar Co.[b]	CA0005240	0.045
Crockett Cogeneration	CA0029904	0.0047
The Dow Chemical Company	CA0004910	0.041
General Chemical	CA0004979	0.21
GWF Power Systems, Site I	CA0029106	0.0016
GWF Power Systems, Site V	CA0029122	0.0025
Hanson Aggregates, Amador Street	CA0030139	0.000005
Hanson Aggregates, Olin Jones Dredge Spoils Disposal	CA0028321	0.000005
Hanson Aggregates, Tidewater Ave. Oakland	CAA030147	0.000005
Pacific Gas and Electric, East Shell Pond	CA0030082	0.00063
Pacific Gas and Electric, Hunters Point Power Plant	CA0005649	0.020
Rhodia, Inc.	CA0006165	0.011
San Francisco, City and Co., SF International Airport Industrial WWTP	CA0028070	0.051
Southern Energy California, Pittsburg Power Plant[b]	CA0004880	0.0078
Southern Energy Delta LLC, Potrero Power Plant[b]	CA0005657	0.0031
United States Navy, Point Molate	CA0030074	0.013
USS-Posco	CA0005002	0.045
Total[a]		**0.45**

Table F-7. TMDL Wasteload Allocations for Petroleum Refinery Wastewater Discharges

Permitted Entity	NPDES Permit	Allocation (kg/yr)
Chevron Products Company	CA0005134	0.34
ConocoPhillips[b]	CA0005053	0.13
Martinez Refining Co. (formerly Shell)	CA0005789	0.22
Ultramar, Golden Eagle	CA0004961	0.11
Valero Refining Company	CA0005550	0.08
Total[a]		**0.9**

Notes to Tables F-6 and F-7:

[a] Total differs slightly from the column sum due to rounding.

[b] Wasteload allocations for industrial wastewater discharges do not include mass from once-through cooling water. The Regional Water Board will apply intake credits to once-through cooling water as allowed by law.

Because wastewater Dischargers regularly monitor and report their discharges, their combined loads can be estimated more precisely than any of the other loads estimated for the San Francisco Bay mercury TMDL. Available data are sufficient to allow statistical analyses that quantitatively characterize variations from year to year. The initial waste load allocations were based on current load estimates computed using available data on effluent mercury concentrations and effluent discharge volumes from 2000 through 2003.

In order to account for the inter-annual variability of discharge given the relatively short data period, current loading for the two wastewater discharge groups (municipal and industrial) was estimated as the upper 99% confidence intervals about the mean. The combined mercury load for all municipal wastewater discharges to San Francisco Bay and its tributaries is about 17 kg/yr. The combined load of the industrial Dischargers and petroleum refineries is about 1.3 kg/yr. Together, these wastewater discharges account for a load of about 18.3 kg/yr, or about 2% of the bay's total mercury load. As stated in the TMDL implementation plan, "if any aggregate mass limit is exceeded, the Regional Water Board will pursue enforcement actions against those individual dischargers whose mass discharges exceed their individual mass limits. "

This Order does not contain requirements for the California Department of Parks and Recreation, Angel Island State Park, the PG&E Hunters Point facility, or the US Navy Point Molate facility, because the wastewater discharges from these facilties have ceased and the Regional Water Board has rescinded their NPDES permits. This Order also does not contain requirements for the three Hanson Aggregates facilities which currently are covered or will soon be covered in general NPDES permits. These facilities comprise a very small portion of the total wastewater mercury load to San Francisco Bay, although mercury TMDL wasteload allocations may be implemented for these facilities in the future through separate actions.

Concentration-based WQBELs

In addition to the mass limits, which are based directly on the TMDL's wasteload allocations, this Order requires Dischargers to meet concentration effluent limitations. This is consistent with the assumptions and requirements of the TMDL, as well as the State Water Board's understanding in Resolution No. 2007-0045 approving the TMDL whcih states in part "that any NPDES permit or permits that implement the San Francisco Bay mercury TMDL will include individual numeric effluent limitations consistent with the assumptions and requirements of waste load allocations for each wastewater discharger, that will be individually enforceable." A primary assumption and requirement of the TMDL is that wastewater dischargers maintain current treatment performance. This is stated in the TMDL and its supporting documents as follows:

- "The watershed NPDES permit for municipal facilities will put in place a set of triggered actions … intended … to ensure that municipal wastewater facilities maintain their ongoing operation, maintenance, and performance." (p. 75, Staff Report for the TMDL, September 2, 2004)
- The TMDL's "conditions are intended … to ensure that industrial wastewater facilities maintain proper operation, maintenance, and performance." (BPA-20, Basin Plan Amendment, August 9, 2006)

Moreover, the TMDL's initial wasteload allocations were calculated from actual discharge data from 2000 to 2003.

To set individual numeric limits consistent with this and the performance levels determined in the TMDL as necessary to attain water quality standards, Regional Water Board staff derived performance based concentration limits for three separate categories of performance using discharge data from the same time period (2000 through 2003) from representative sets of wastewater dischargers. These data were obtained from data reported by the Dischargers to the Regional Water Board's Electronic Reporting System (ERS), or entered into ERS by Regional Water Board staff from the Dischargers' self-monitoring reports. The calculations are described in Appendix F-2 of this Fact Sheet. The three categories of performance are municipal secondary treatment, municipal advanced secondary treatment, and industrial treatment based on petroleum refineries' performance.

The concentration limits for non-petroleum refinery Dischargers were determined using performance data from petroleum refineries (2000-2003). Though the manufacturing and treatment processes at those facilities differ from those at petroleum refineries, using petroleum refinery performance data is consistent with the way the performance based trigger levels were set for all industrial dischargers in the TMDL.

As required by 40 CFR 122.45(d), average monthly and average weekly effluent limits are set for "publically owned treatment plants"; these include the Municipal Dischargers. For Industrial Dischargers, this regulation requires average monthly and maximum daily effluent limits.

Individual mercury mass and concentration effluent limitations are shown in Tables F-8 and F-9 below. These limitations are intended to minimize the potential for adverse effects in the immediate vicinity of discharges and to ensure that wastewater facilities maintain proper operation, maintenance, and performance.

Table F-8. Municipal -- Individual Mercury Effluent Limitations

Permitted Entity	Average Annual Effluent Limit[1,2] (kg/yr)	Effective in 10 years Average Annual Effluent Limit[(1,2,5)] (kg/yr)	Effective in 20 years Average Annual Effluent Limit[(1,2,5)] (kg/yr)	Average Monthly Effluent Limit[2] (µg/L)	Average Weekly Effluent Limit[2] (µg/L)
American Canyon, City of	0.12	0.095	0.095	0.025	0.027
Benicia, City of	0.088	0.088	0.088	0.066	0.072
Burlingame, City of	0.089	0.089	0.089	0.066	0.072
Calistoga, City of	0.016	0.016	0.016	0.066	0.072
Central Contra Costa Sanitary District	2.23	1.8	1.3	0.066	0.072
Central Marin Sanitation Agency	0.18	0.15	0.11	0.066	0.072
Delta Diablo Sanitation District	0.31	0.25	0.19	0.066	0.072
East Bay Dischargers Authority, including City of Hayward, City of San Leandro, Oro Loma Sanitary District, Castro Valley Sanitary District, Union Sanitary District, Livermore-Amador Valley Water Management Agency (LAVWMA), Dublin San Ramon Services District, and City of Livermore	3.6	2.9	2.2	0.066	0.072
East Bay Municipal Utilities District, including Wastewater Treatment Plant and Wet Weather Facilities	2.6	2.1	1.5	0.066	0.072
East Brother Light Station, Inc.[3]	0.00001	0.000012	0.000012	0.066	0.072
Fairfield-Suisun Sewer District	0.22	0.17	0.17	0.025	0.027
Las Gallinas Valley Sanitary District	0.17	0.13	0.10	0.066	0.072
Marin County (Paradise Cove), Sanitary District No. 5 of	0.00055	0.00055	0.00055	0.066	0.072
Marin County (Tiburon), Sanitary District No. 5 of	0.0099	0.0099	0.0099	0.066	0.072
Millbrae, City of	0.052	0.052	0.052	0.066	0.072
Mt. View Sanitary District	0.034	0.034	0.034	0.025	0.027
Napa Sanitation District	0.28	0.23	0.17	0.066	0.072
Novato Sanitary District	0.079	0.079	0.079	0.066	0.072
Palo Alto, City of	0.38	0.31	0.31	0.025	0.027
Petaluma, City of	0.063	0.063	0.063	0.066	0.072

Permitted Entity	Average Annual Effluent Limit[1,2] (kg/yr)	Effective in 10 years Average Annual Effluent Limit[(1,2,5)] (kg/yr)	Effective in 20 years Average Annual Effluent Limit[(1,2,5)] (kg/yr)	Average Monthly Effluent Limit[2] (µg/L)	Average Weekly Effluent Limit[2] (µg/L)
Pinole, City of	0.055	0.055	0.055	0.066	0.072
Contra Costa County Sanitation District No. 5, Port Costa	0.00072	0.00072	0.00072	0.066	0.072
Rodeo Sanitary District	0.060	0.060	0.060	0.066	0.072
Saint Helena, City of	0.047	0.047	0.047	0.066	0.072
San Francisco, City and County of, San Francisco International Airport, Sanitary	0.032	0.032	0.032	0.066	0.072
San Francisco (Southeast Plant), City and County of	2.7	2.1	1.6	0.066	0.072
San Jose/Santa Clara, Cities of	1.0	0.80	0.80	0.025	0.027
San Mateo, City of	0.32	0.26	0.19	0.066	0.072
Sausalito-Marin City Sanitary District	0.078	0.078	0.078	0.066	0.072
Seafirth Estates Company and Property Owners within the Seafirth Estates Subdivision[3]	0.00036	0.00036	0.00036	0.066	0.072
Sewerage Agency of Southern Marin	0.13	0.10	0.076	0.066	0.072
Sonoma Valley County Sanitary District	0.041	0.041	0.041	0.066	0.072
South Bayside System Authority	0.53	0.42	0.32	0.066	0.072
South San Francisco and San Bruno, Cities of	0.29	0.24	0.18	0.066	0.072
Sunnyvale, City of	0.15	0.12	0.12	0.025	0.072
US Naval Support Activity, Treasure Island	0.026	0.026	0.026	0.066	0.072
Vallejo Sanitation and Flood Control District	0.57	0.46	0.34	0.066	0.072
West County Agency (West County Wastewater District and City of Richmond Municipal Sewer District)	0.38	0.30	0.23	0.066	0.072
Yountville, Town of	0.040	0.040	0.040	0.066	0.072
Aggregate Mass Emission Limit (kg/yr)	17[4]	**14**	**11**	Not Applicable	Not Applicable

Footnotes:

(1) Compliance with the Average Annual Effluent Limitations is determined annually for each Municipal Discharger each calendar year, and is attained if the sum of the individual Municipal Dischargers' mercury mass emissions, calculated as described below, is not greater than the Aggregate Mass

Emission Limit of 17 kg/yr (or 14 kg/yr in 10 year, or 11 kg/yr in 20 years). If the sum of all individual Municipal Dischargers' mercury mass emission(s) is greater than 17 kg/yr (or 14 kg/yr in 10 year, or 11 kg/yr in 20 years), the Municipal Discharger(s) whose mercury mass emission(s) exceed(s) its (their) individual limitation(s) in Table 6, shall be deemed to be in violation of its (their) mercury mass limitation(s). For compliance determination, mass emissions shall be determined as defined below:

a. The total annual aggregate mass emission shall be the sum of the individual annual mass emissions from each Municipal Discharger. The sum shall be rounded to the nearest kilogram for comparison with the Aggregate Mass Emission Limit.

b. The annual average mass emission for each Discharger shall be computed for the period January 1 through December 31, annually. Calendar timeframes for discharge limitations are consistent with federal regulations and USEPA guidance. If there are delays in USEPA's approval of the TMDL such that this Order does not become effective until well into a calendar year, say one calendar quarter, it is appropriate to delay compliance determination with the annual limit until the next full calendar year so as to not bias the annual mass emission calculation with data from just the remainder of the calendar year.

c. The annual average mass emission for each Discharger listed in Table F-8 above shall be the sum of monthly emissions on a calendar year basis and computed as follows:

$$Annual\ Mass\ Emission, kg/year = \sum \left(Monthly\ Mass\ Emission\ Rates, kg/month \right)$$

where

$$Monthly\ Mass\ Emission, kg = \left(\frac{0.003785}{N} \right) * \left(\sum_{i=1}^{N} Q_i C_i \right) * 30.5 = \frac{0.1154425}{N} * \left(\sum_{i=1}^{N} Q_i C_i \right)$$

and where

C_i = mercury concentration of each individual sample, µg/l
Q_i = Discharger flow rate on date of sample, millions of gallons per day (mgd)
N = number of samples collected during the month
0.003785 = conversion factor to convert (µg/l)*(mgd) into kg/day
30.5 = number of days in a standard month
0.1154425= product of (conversion factor)·(number of standard days per month)

(2) This Order requires the Dischargers to achieve an analytical minimum level based on that specified in USEPA Method 1613.

Minimum Levels

Constituent	Minimum Level	Units
Mercury	0.0005	µg/L

(3) This Discharger serves domestic customers but is not a municipal government agency.

(4) Total differs slightly from the column sum due to rounding to the nearest kilogram.

(5) The first Annual Average Effluent Limits represent the San Francisco Bay Mercury TMDL's initial mass limits for Municipal Dischargers. In accordance with the TMDL and the compliance schedule provision that the Regional Water Board will submit to USEPA for approval, the Municipal Dischargers listed in this table have up to 10 years from the effective date of this Order to achieve the "Effective in 10 Years Annual Average Effluent Limits" and its respective Aggregate Annual Mass Emission Limit, and up to 20 years to achieve the "Effective in 20 Years Annual Average Effluent Limits" and its respective Aggregate Annual Mass Emission Limit listed in Table 6.

Table F-9. Industrial -- Individual Mercury Effluent Limitations

Permitted Entity	Annual Average Effluent Limit[1,2] (kg/yr)	Monthly Average Effluent Limit[2] (µg/L)	Daily Maximum Effluent Limit[2] (µg/L)
Industrial Wastewater Discharger (Non-Petroleum Refinery):			
C&H Sugar and Crockett Community Services District	0.045	0.079	0.12
Crockett Cogeneration, LP and Pacific Crockett Energy, Inc.	0.0047	0.079	0.12
The Dow Chemical Company	0.041	0.079	0.12
General Chemical West, LLC	0.21	0.079	0.12
GWF Power Systems L. P., Site I	0.0016	0.079	0.12
GWF Power Systems L. P., Site V	0.0025	0.079	0.12
Pacific Gas and Electric Company	0.00063	0.079	0.12
Rhodia, Inc.	0.011	0.079	0.12
San Francisco, City and County of, SF International Airport, Industrial	0.051	0.079	0.12
Mirant Delta, LLC	0.0078	0.079	0.12
Mirant Potrero LLC	0.0031	0.079	0.12
USS-Posco Industries	0.045	0.079	0.12
Industrial Wastewater Discharger (Petroleum Refinery):			
Chevron Products Company	0.34	0.079	0.12
ConocoPhillips	0.13	0.079	0.12
Shell Oil Products US and Equilon Enterprises LLC	0.22	0.079	0.12
Tesoro Refining & Marketing Co.	0.11	0.079	0.12
Valero Refining Company	0.08	0.079	0.12
Aggregate Mass Emission Limit[3] (kg/yr)	**1.3**	Not Applicable	Not Applicable

Footnotes:

(1) Compliance with the Average Annual Effluent Limitations is determined annually for each Industrial Discharger each calendar year, and is attained if the sum of the individual Industrial Dischargers' mercury mass emissions, calculated as described below, is not greater than the Aggregate Mass Emission Limit of 1.3 kg/yr. If the sum of the individual Industrial Dischargers' mercury mass emission(s) is greater than 1.3 kg/yr, the Industrial Discharger(s) whose mercury mass emission(s) exceed(s) its (their) individual limitation(s) in Table 6, shall be deemed to be in violation of its (their) mercury mass limitation(s). For compliance determination, mass emissions shall be determined as defined below:

a. The total annual aggregate mass emission shall be the sum of the individual annual mass emissions from each Industrial Discharger. The sum shall be rounded to the nearest kilogram for comparison with the 1.3 kg/yr.

b. The annual average mass emission for each Discharger shall be computed for the period January 1 through December 31, annually. Calendar timeframes for discharge limitations are consistent with federal regulations and USEPA guidance. If there are delays in USEPA's approval of the TMDL such that this Order does not become effective until well into a calendar year, say one calendar quarter, it is appropriate to delay compliance determination with the annual limit until the next full calendar year so as to not bias the annual mass emission calculation with data from just the remainder of the calendar year.

c. The annual average mass emission for each Discharger listed in Table F-9 above shall be the sum of monthly emissions on a calendar year basis and computed as follows:

$$Annual\ Mass\ Emission, kg/year = \sum (Monthly\ Mass\ Emission\ Rates, kg/month)$$

where

$$Monthly\ Mass\ Emission, kg = \left(\frac{0.003785}{N}\right) * \left(\sum_{i=1}^{N} Q_i C_i\right) * 30.5 = \frac{0.1154425}{N} * \left(\sum_{i=1}^{N} Q_i C_i\right)$$

and where

C_i = mercury concentration of each individual sample, µg/l
Q_i = Discharger flow rate on date of sample, millions of gallons per day (mgd)
N = number of samples collected during the month
0.003785 = conversion factor to convert (µg/l)*(mgd) into kg/day
30.5 = number of days in a standard month
0.1154425= product of (conversion factor)·(number of standard days per month)

(2) This Order requires the Dischargers to achieve an analytical minimum level based on that specified in USEPA Method 1613.

Minimum Levels

Constituent	Minimum Level	Units
Mercury	0.0005	µg/L

(3) Total differs slightly from the column sum due to rounding, and from several industrial dischargers discontinuing their discharges.

5. Satisfaction of Anti-Backsliding Requirements

Effluent limits based on a TMDL are afforded certain latitude in terms of anti-backsliding. As outlined in the State Water Board's Office of Chief Counsel memorandum pertaining to offsets, pollutant trading, and market programs, dated November 22, 2006, when a TMDL is in place, the Clean Water Act and the Porter-Cologne Water Quality Control Act give latitude to develop means of achieving compliance with water quality standards, subject to certain limitations. Water quality based objectives may be adjusted upwards or downwards to be consistent with the TMDL. While the Clean Water Act's anti-backsliding provisions generally prohibit allowing less stringent effluent limitations, section 402(o) contains an express exception applicable when a TMDL is in place. It allows relaxation consistent with the TMDL if "the cumulative effect of all such revised effluent limitations based on such total maximum daily load or waste load allocation will assure attainment of such water quality standards. . . ." 33 U.S.C. § 1313(d)(4)(A)(i). Federal regulations bolster this and require WQBELs to be "consistent with the assumptions and requirements of any available wasteload allocations." 40 CFR 122.44(d)(1)(vii)(B). As set forth in the above-mentioned memorandum, "…as long as the cumulative effect of all WQBELs for NPDES-permitted discharges to a water is consistent with the assumptions and requirements of an applicable TMDL, the regional water board may adjust WQBELs using a variety of mechanisms that are designed to achieve the attainment of water quality standards."

Additionally, under the State Board Order WQ 2001-06 (Tosco Order[2]), the State Water Board held that a "limit that implements or is consistent with the wasteload allocations in a TMDL complies with the exception in Section 303(d)(4)."

It is important to keep the above principles in mind when implementing a TMDL. In any event, in this specific case, anti-backsliding is not even applicable. Anti-backsliding prevents backsliding from comparable limits (Tosco Order). All of the proposed limits in the proposed permit are either equal to or consistent with the assumption and requirements of the TMDL. The previous limits were not. Therefore, they are not comparable.

Even if anti-backsliding did apply here, for the current individual permits that specify water quality based mass effluent limits for mercury, Section 303(d)(4) allows relaxation of those limits because the annual average mass limits in this Order are based on the wasteload allocations in the San Francisco Bay mercury TMDL, and the implementation of this TMDL will assure attainment of the water quality standard for mercury.

Similarly, section 303(d)(4) also allows backsliding for the ten Municipal Dischargers and eight Industrial Dischargers whose monthly concentration limits are less stringent than their current (water quality based) individual permits. The newly calculated concentration limits are based on the dataset used to derive the wasteload allocations of the TMDL. They also reflect the levels that, as determined by the TMDL, will attain the water quality objective for mercury. Therefore, they are consistent with the assumptions and requirements of the mercury TMDL and will assure attainment of water quality standards, consistent with section 303(d)(4) and 40 CFR 122.44(d)(1)(vii)(B).

Section 402(o)(2)(B)(i) further provides justification for relaxing the ten Municipal and two Industrial (PG&E and Tesoro) Dischargers' concentration limits. This section allows backsliding if new information (other than revised regulations, guidance, or test methods) is available that justifies less stringent limits. The new information is that the basis for these previous limits is not a scientifically reliable indicator for protecting water quality and beneficial uses from mercury. Specifically, the previous permit limits were based directly, or carried over from limits based directly, on the scientifically outdated mercury objective of 0.025 μg/L (or the equally outdated and illegal footnoted criterion of 0.012 μg/L) of the Basin Plan. Further, as a policy matter, anti-backsliding requirements should not canonize bad science or illegally derived limits. Limits based on a TMDL reflect the latest science and will assure attainment of water quality objectives in a coherent and consistent manner that takes into account all loading inputs to a waterbody and which does not penalize good performing dischargers.

[2] The Tosco Order has been upheld in two Court of Appeal decisions, *CBE et al. v. State Water Resources Control Board et al*., 109 Cal.App.4th 1089 (2003) and 132 Cal.App.4th 1313 (2005).

6. Satisfaction of Antidegradation Policy

The Order's mercury effluent limitations, which implement wasteload allocations, have been computed to satisfy the total maximum daily load that will allow the San Francisco Bay to come into attainment with water quality objectives. This Order includes requirements that are part of an overall comprehensive plan to restore mercury levels in San Francisco Bay. Because the TMDL is consistent with protecting existing instream water uses and the level of water quality necessary to protect the existing uses, antidegradation requirements are satisfied. Furthermore, this Order specifies performance based effluent limits that will assure compliance with antidegredation.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

No additional receiving water limits beyond those already specified in the Dischargers' individual permits are necessary in this Order.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

The mercury TMDL contains a requirement to "prepare an annual report that documents mercury loads from each facility, mercury and methylmercury effluent concentrations, and ongoing source control activities, including mercury loads avoided through control actions." Dischargers are therefore required by this Order to report mercury discharge levels and trends, and mercury reduction measurements in Self-Monitoring Reports to facilitate the adaptive management process for implementation of the San Francisco Bay mercury TMDL. A special form is provided for use in compiling information for determining compliance with the group mass limit. Duplicate reporting using the form is required which the Regional Water Board believes is not burdensome for the Dischargers, but will facilitate the Regional Water Board's timely determination of compliance with the group mass limit. Incentive is provided for the optional group reporting by eliminating the duplicative reporting requirement, and allowing the Dischargers a little more time to provide the data. This optional group reporting facilitates adaptive management, and also consolidates the information in one place for ease of access by the public.

The monitoring frequencies specified in the MRP are dependent on each Discharger's contribution of mercury, and its resources to conduct the monitoring. For example, those with higher mercury limits and/or are major dischargers are required to monitor more frequently.

Also, pursuant to USEPA guidance (Technical Support Document, March 1991) the following factors were considered in selecting the frequencies. (The data referenced below are summarized in Appendix F-3.):

- Effluent variability – The individual discharge concentrations are generally not highly variable with the coefficient of variation for a representative set of Dischargers at a median of 0.5 (full range is from about 0.3 up to 2).

- Type of treatment process including retention times – the majority of the treatment processes involves biological processes with a few of the smaller industrial facilities relying upon physical/chemical treatment. For the most part, these systems have long retention times on the order of days up to a week for some systems.

- Compliance history – All Dischargers have complied with their applicable effluent limits for mercury in the past 5 years with very few exceptions. Pursuant to USEPA "Interim Guidance for Performance-Based Reductions of NPDES Permit Monitoring Frequencies," dated April 19, 1996, lower frequencies than those proposed in this Order may be appropriate. However, in consideration of the other factors listed here, those Dischargers are required by this Order to monitor at least once per month.

- Cost of monitoring relative to the Discharger's capabilities – Mercury and methylmercury sampling requires use of ultra-clean low detection techniques requiring at least two personnel to properly perform. The analysis is also specialized and costs more for this reason. As indicated in the paragraph above, the monitoring frequency was staggered based on each Discharger's resources to conduct the monitoring.

- Number of monthly samples used in developing the permit limit – previous individual permits have for the most part required monthly monitoring with a few permits requiring weekly or biweekly monitoring and others at quarterly or annual frequencies. Some Dischargers monitored more frequently than required. All these data were used in calculating the wasteload allocations that formed the effluent limits in this Order.

- Environmental significance and nature of the pollutant – Mercury is a pollutant of great concern in San Francisco Bay because it is bioaccumulative and is an impairment to beneficial uses. The Dischargers covered by this Order make up close to 2 percent of the total mercury load to the Bay.

The Regional Water Board finds that these monitoring and reporting requirements bear a reasonable relationship to the Regional Water Board's need for and the benefits obtained from the reports.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in

accordance with section 122.42, are provided in Attachment D. The Dischargers must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. Standard Provisions section V.D does not apply in this Order because it pertains to compliance schedule which is not required in this Order.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Triggers for Additional Mercury Control

Mass and concentration triggers were developed to allow for early required actions in the event an increasing trend in mercury discharge is observed by individual Dischargers. The purpose of the triggers is to evaluate the source of new mercury and identify a method for reduction before levels become elevated.

Consistent with the TMDL, mass triggers for municipal and industrial Dischargers are equivalent to the individual mass limits stated in the Order, but determined monthly, instead of annually, using a rolling 12-month average. This is necessary in order to capture any increases in a more timely fashion to allow development and implementation of reduction measures that may avoid an actual effluent limit violation.

For concentration triggers, there are two broad categories of municipal facilities—those that provide secondary treatment, and those that provide advanced treatment. Facilities providing advanced treatment have better performance, hence lower effluent concentrations than those providing secondary treatment, so the trigger concentrations for advanced facilities are lower than those for secondary treatment facilities.

Consistent with the TMDL implementation plan, the proposed effluent mercury concentration trigger values for municipal secondary treatment facilities are a daily maximum of 0.065 µg/l total mercury (derived from the 99th percentile concentration of effluent data collected from January 2000 to September 2002) and a monthly average of 0.041 µg/l total mercury (derived from the 95th percentile concentration of effluent data collected from January 2000 to September 2002). For facilities providing advanced treatment, the proposed concentration triggers are a daily maximum of 0.021 µg/l total mercury (the 99th percentile concentration) and a monthly average of 0.011 µg/l total mercury (the 95th percentile concentration).

Consistent with the TMDL implementation plan, the proposed effluent trigger concentrations for industrial Dischargers are a daily maximum of 0.062 µg/l total mercury (derived from the 99th percentile concentration of effluent data collected from January 2000 to September 2002) and a monthly average of 0.037 µg/l total mercury (derived from the 95th percentile concentration of effluent data collected from January 2000 to September 2002).

Consistent with the TMDL if a Discharger exceeds either the mass or concentration trigger, the Order requires the Discharger to report the exceedance in its individual Self-Monitoring Report, and to submit a report that:

- Evaluates the cause of the trigger exceedances;
- Evaluates the effectiveness of existing pollution prevention or pretreatment programs and methods for preventing future exceedances;
- Evaluates the feasibility and effectiveness of technology enhancements to improve plant performance.

The Order provides for 130 days to provide this report, which allows for 30 days for standard laboratory turnaround on ultra clean samples, plus 40 days for accelerated monitoring to verify and better characterize trigger exceedances, and finally the 60-day timeframe from the TMDL implementation plan to submit the report. The Regional Water Board will pursue enforcement action against Dischargers that do not respond to exceedances of triggers or do not implement actions to correct and prevent trigger exceedances. Determination of appropriate actions will be based on an updated assessment of source control measures and wastewater treatment technologies applicable for the term of each issued or reissued permit.

The TMDL implementation plan requires the permit to specify that an exceedance of a trigger level would trigger the discharger to take corrective actions. The TMDL implementation plan explains that one of the concepts behind requiring triggered actions is to ensure that wastewater dischargers maintain ongoing operation, maintenance, and performance of their treatment facilities. Therefore, it is consistent with this concept for this Order to allow further characterization through accelerated monitoring to determine if ongoing performance was maintained before corrective measures must be taken. Accelerated weekly monitoring for at least six events that would span over two months would provide reasonable and convincing weight of evidence that the first initial trigger was either an anomaly or a spurious source and could be disregarded. These additional samples would also help to characterize the duration and magnitude of the exceedance and help with development of the action plan should one be necessary.

See Appendix F-1 for an example of actions required in response to initial trigger exceedances:

2. Mercury Source Control Program for Municipal Dischargers

The mercury TMDL includes a requirement to “develop and implement effective programs that include but are not limited to pollution prevention to control mercury sources and loading, a plan and schedule of actions and effectiveness measures

applicable for the term of the permit, based on identification of the largest and most controllable sources and an updated assessment of source control measures and wastewater treatment technologies (the level of effort shall be commensurate with the mercury load and performance of the facility) and quantify the mercury load avoided or reduced…" Therefore, this Order contains requirements for source control. Dischargers are responsible for investigating the sources and strategies for controlling those sources. However, a major source of mercury to wastewater treatment plants is from dental offices, and efforts are already underway by municipal wastewater facilities to manage and reduce the amount of mercury amalgam that is discharged from dental offices into the public collection systems. The target for this program is that 85 percent of dental offices in the region will be participating in an amalgam program five years after full adoption of the TMDL.

3. Additional Special Studies for Adaptive Management

The potential availability of wastewater mercury for methylation and biological uptake, and possible local effects of such discharges, is not well understood. Consistent with the TMDL, this Order requires Dischargers to undertake or otherwise support studies to evaluate local impacts and bioavailability. If evidence of local effects from wastewater effluent is discovered, or if municipal wastewater facilities significantly contribute to mercury concentrations in the food web, the Regional Water Board may impose discharge restrictions aimed at minimizing or avoiding adverse impacts.

Due to the uncertainties in assessing the nature of sources and impacts of mercury, the TMDL was designed with an adaptive management approach. In particular, the TMDL implementation plan specifies requirements for Dischargers to:

- Conduct or cause to be conducted studies aimed at better understanding mercury fate, transport, the conditions under which mercury methylation occurs, and biological uptake in San Francisco Bay and tidal areas, and
- Conduct or cause to be conducted studies to evaluate the presence or potential for local effects on fish, wildlife, and rare and endangered species in the vicinity of wastewater discharges

Consistent with the adaptive management approach, after the activities in the initial years of the permit for evaluating group mercury discharges, collecting methylmercury data of wastewater effluent, conducting source control programs, and engaging in risk management, this Order requires the development of a work plan by Dischargers within the permit term to conduct or participate in management studies. It is intended that information gathered to date will be used to begin the process of evaluating sources and impacts of mercury to identify next steps to control mercury in San Francisco Bay.

These studies may be undertaken by BACWA or WSPA on the Dischargers' behalf, or by such other agents (e.g., CEP, Regional Monitoring Program) as may exist or come into existence for this purpose. The Dischargers are collectively and individually responsible for undertaking such studies. It is the intent of the Regional

Water Board to maximize the use of existing programs and resources for monitoring and research efforts.

4. Risk Reduction Programs

The TMDL requires municipal and industrial wastewater Dischargers to "develop and implement effective programs to reduce mercury-related risks to humans and wildlife and quantify risk reductions resulting from these activities." This provision is based on this requirement. We envision a multi-phase process to develop a regional risk management strategy. The Order requires Dischargers to include public participation in the development process as this could make the programs more effective. The first phase should focus on identifying specific risk-management needs, the appropriate measures to address those needs, and the associated costs and mechanisms to implement the measures. This could reasonably take one to two years to develop. Another year is a reasonable timeframe for municipal entities to secure resources and identify the appropriate mechanisms to start implementing the risk reduction programs.

As indicated in the TMDL, in this effort, the Regional Water Board will work with the California Office of Environmental Health Hazard Assessment, the California Department of Public Health, and other organizations including Dischargers that pursue risk management as part of their mercury-related programs. For an effective and efficient regional program, the Order allows that the activities may be performed by a third party if the Dischargers wish to provide funding for this purpose. The Regional Monitoring Program is one such vehicle because it has an equitable and accepted cost allocation system already in place along with an established stakeholder overview and participation process.

5. Effluent Discharge Adjustment for Recycled Wastewater Use by Industrial Dischargers

As dictated by California Water Code sections 13510 through 13512, the Regional Water Board should support and encourage water recycling facilities. The use of recycled wastewater preserves fresh potable water supply sources. The effluent discharge adjustment (or Adjustment) provided in this Order is to avoid penalizing Dischargers who produce recycled wastewater and Dischargers who use recycled wastewater in industrial processes, and is based on the principles outlined in the Basin Plan at 4.6.1.1. It is also similar to an existing provision in the individual permits for the petroleum refineries.

The Adjustment is only applicable if the mercury in the recycled wastewater is ultimately discharged through an industrial discharger's outfall. The Adjustments are calculated based on mass balance principles and will thus not result in any net increase in mercury loadings to the Bay. The mass Adjustment subtracted from one industrial discharger, is then added to the municipal discharger who supplied the recycled wastewater and who would have otherwise discharged that mercury through its municipal treatment plant discharge outfall. Local impacts from this shifting in load will be minimal because the discharge locations for the two will be to the same receiving water body. This is because the cost of water transport between

facilities that are very far apart would make the reuse project infeasible. Furthermore, this Order's Provision V.C.3 requires Additional Special Studies that will look for the "presence of, or potential for, local effects in the vicinity of wastewater discharges." If any local impacts are determined, the Regional Water Board will require appropriate corrective measures.

A concentration Adjustment is also provided because a typical reuse project involves use of the recycled wastewater in cooling towers or boilers where the concentration of mercury increases through evaporative losses. The blowdown would go to the industrial discharger's sewer and potentially elevate its discharge concentration. Since the concentration limit is established based on past performance, future recycled wastewater use could impact the industrial discharger's compliance with the performance limit. Therefore, a concentration Adjustment is provided. Unlike the mass Adjustment, it is inappropriate to apply the concentration Adjustment in reverse to the municipal discharger because the reason for the Adjustment is to account for evaporative losses. These losses occur at the industrial facility and do not affect the municipal discharger's performance.

However, it may be appropriate some time in the future to provide a concentration Adjustment when a municipal discharger installs advanced recycled wastewater treatment facilities at its treatment plant site (e.g. reverse osmosis) and blends the concentrated waste stream with its effluent prior to discharge. The mass discharged through the municipal discharger's outfall would not increase but the concentration would. No such projects currently exists in this region.

Currently, the only reuse project where an Adjustment would be applied is between Chevron Products Company (Chevron) and the West County Wastewater District. Chevron currently uses about 4 million gallons per day of recycled wastewater. A new reuse project is scheduled to go on line in 2009 that will bring the amount to approximately 7-8 million gallons per day. West County Wastewater District (WCWD) discharges through a joint outfall with the City of Richmond under the West County Agency NPDES permit. Based on this provision, any mass Adjustment subtracted from Chevron would be added to the mass emission reported by the West County Agency prior to determining compliance with the average annual mass limit.

Under this two way Adjustment, for projects like the WCWD and Chevron recycled water project, the allowable mass discharge to the Bay under this Order would be the sum of the WCWD and Chevron individual mass limits that were based on the wasteload allocations in the TMDL. Only if the sum of WCWD's and Chevron's mass discharge exceed the sum of their individual mass limits would there be a real mass discharge greater than that allowed in the TMDL from these two dischargers. Therefore, this Order allows that a violation would only occur from an Adjustment if the sum of the mass discharge from both exceeds the sum of the individual mass limits, and the adjusted mass discharge from Municipal Dischargers as a group exceeds the aggregate mass limit for the Municipal Dischargers.

6. Reopener Provision

Two reopener conditions are provided in the Order. These are based on the TMDL's adaptive implementation provisions as they relate to the final waste load allocations for municipal dischargers. The TMDL implementation plan states at page BPA 26,

> "the final wasteload allocations are expected to be attained through wastewater treatment system improvements and/or implementation of a pollutant offset program. Approximately 10 years after the effective date of the TMDL or any time thereafter, the [Regional] Water Board will consider modifying the schedule for achievement of the wasteload allocations or revisions to wasteload allocations if:
>
> - The State [Water] Board has not established a pollutant offset program that can be implemented within the 20 years required to achieve final wasteload allocations…"

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will supersede mercury requirements in existing National Pollutant Discharge Elimination System (NPDES) permits. As a step in the WDR adoption process, the Regional Water Board staff has developed this tentative WDR. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Dischargers and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharges and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the following: (a) paper copies of this Order were relayed to the Dischargers and other interested parties, and (b) the San Francisco Chronicle published a notice that this item would appear before the Regional Water Board in March 2007.

The Regional Water Board received comments on the March 2007 draft requirements. On July 17, 2007, the State Water Board adopted a resolution approving the San Francisco Bay Mercury TMDL (as corrected). This resolution called on the Regional Water Board to include specific limits in the waste discharge requirements implementing the TMDL. The Regional Water Board revised the draft waste discharge requirements in response to the resolution and comments received on the March 2007, draft.

The Regional Water Board has notified the Dischargers and interested agencies and persons of its intent to prescribe the requirements as revised and has provided them with an opportunity to submit their written comments and recommendations on the revisions. This Notification was provided through the following: (a) Dischargers received

paper copies of this Order, (b) interested agencies and persons received notification by email, and (c) the San Francisco Chronicle published a notice in August 2007 that this item would appear before the Regional Water Board.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning the revisions of this Tentative Order. Comments must be submitted either in person or by mail to the attention of **Lila Tang** at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by **5:00 p.m. on Monday, September 13, 2007.**

C. Public Hearing

The Regional Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **November 1, 2007**
Time: 9:00 am
Location: Elihu Harris State Office Building
1515 Clay Street, 1st Floor Auditorium
Oakland, CA 94612
Contact: Lila Tang, (510)622-2425, ltang@waterboards.ca.gov

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the discharges and Tentative Order. Oral testimony was heard; however, for accuracy of the record, important testimony was presented in writing.

Please be aware that dates and venues may change. Our Web address is www.waterboards.ca.gov/sanfranciscobay where you can access the current agenda for changes in dates and locations. Regional Water Board agenda material including staff's responses to written comments, and revisions to the Tentative Order was posted at this website one week prior to the hearing date, and Dischargers and interested parties were notified by email of their availability.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final Order. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The San Francisco Bay Mercury TMDL, Tentative Order, related documents, any comments received, and other information are available at www.waterboards.ca.gov/sanfranciscobay. These documents are also on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., except from noon to 1:00 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (510) 622-2300.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this permit, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to **Lila Tang** at **(510)622-2425, or by email at ltang@waterboards.ca.gov.**

APPENDIX F-1 -- EXAMPLE OF WHEN REQUIRED ACTIONS ARE TRIGGERED

Facility X is subject to the following triggers:

Average Monthly Trigger = 0.041 μg/L
Maximum Daily Trigger = 0.065 μg/L
12-month Mass Emission Trigger = 0.91 kg/yr

A sample collected on May 4th is 0.046 μg/L, with the results received on May 30th by discharger X from its contract laboratory.

Discharger Action: Initiate accelerated monitoring (weekly or more frequent) as soon as practical (within 48 hours) after receipt of sample result above trigger level (0.046 μg/L is above the monthly trigger of 0.041 μg/L).

Discharger Action: Report this exceedance in its cover sheet for the May self-monitoring report (due June 30th), and continue to report mercury data on the cover sheet until successful completion.

Discharger Action: Continue accelerated monitoring until not less than a total of 6 new samples have been collected.

Discharger X's accelerated samples reveal the following results:

Sample Date	Sample Result, μg/L	12-month mass, kg/yr
(May 4)	**(0.046)**	0.80
June 1	0.031	0.79
June 5	0.059	0.82
June 14	0.023	0.81
June 18	0.055	0.82
June 30	0.040	0.82
July 5	0.029	0.81

Discharger Action: Initiate, no later than July 5, development of Action Plan for Mercury Reduction..

Note: Despite the fact that the one sample for July are below all three triggers, the average of the samples in June is above the monthly average trigger.

Discharger Action: Discharger may shift to monthly monitoring after collection of the 6th accelerated sample.

Additional monitoring results:

Sample Date	Sample Result, μg/L	12-month mass, kg/yr
August 11	**0.027**	0.80
September 14	0.042	0.78
October 5	0.042	0.075
October 7	ND (<0.0005)	
November 5	0.035	**0.81**
December 10	0.022	**0.93**
January 5	0.018	**0.94**
February 14	0.028	0.85
March 25	0.010	0.81
April 7	0.023	0.75

Discharger Action: Submit and implement Action Plan for Mercury Reduction (due 130 days after May 30).

Note: Despite the July and August samples being below both concentration triggers, three consecutive months below **all** triggers are necessary before the Action Plan activities are no longer required. The May sample is still above the monthly trigger.

Note: In September, though that sample is above the monthly concentration trigger, accelerated monitoring is not required again because discharger X has already been triggered into Action Plan mode.

Note: In December, though the concentrations have been below concentration triggers for 3 consecutive months, discharger X must continue with the Action Plan because its 12-month running average mass discharge exceeds the mass trigger.

Discharger Action: Report on current mercury reduction efforts in its Annual Self-Monitoring Report due February 1st.

In April, three consecutive months show successful completion of this effort. Discharger X is no longer required to further implement its Action Plan, and may thus return to routine monitoring. Discharger X reports its mercury reduction efforts in its Annual Self-Monitoring Report due next February 1st.

APPENDIX F-2 -- CALCULATION OF CONCENTRATION BASED EFFLUENT LIMITS

Introduction

To calculate concentration based mercury limits that are consistent with the assumptions and requirements of the Mercury TMDL, the Regional Water Board analyzed mercury data from 2000 to 2003. We grouped data into three categories (municipal secondary treatment, municipal advanced secondary treatment involving filtration, and industrial treatment). The statistical analysis used data from 17 secondary treatment plants, 7 advanced secondary treatment plants, and 5 petroleum refineries.

The purpose of pooling mercury data to calculate limits based on category of treatment and/or process that are similar to reduce the likelihood of penalizing plants that have implemented effective control measures and are already performing well, and rewarding other plants that may not have implemented similar measures.

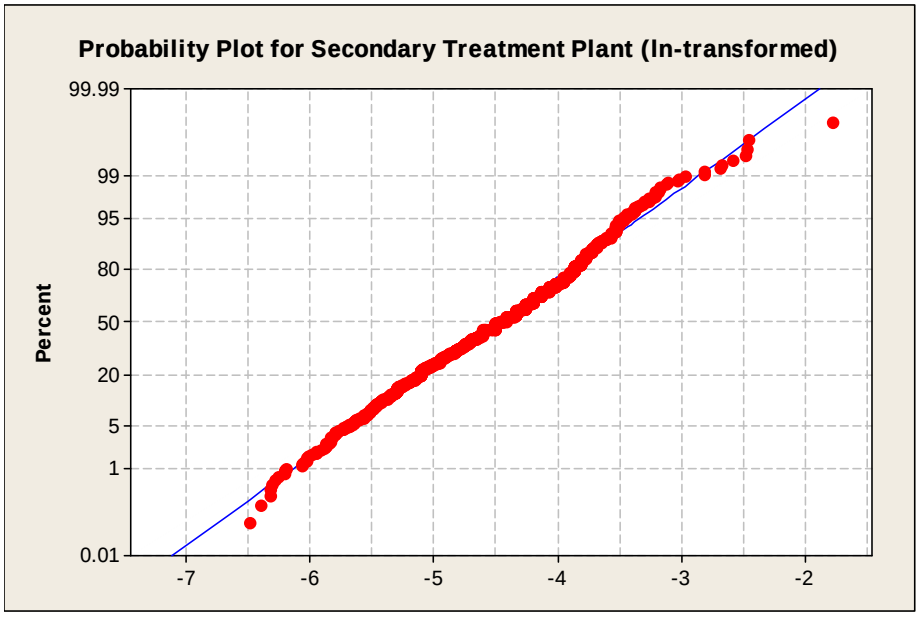
Data Analysis of Municipal Treatment Facilties

We analyzed mercury data from all POTWs that are using the Regional Water Board's electronic reporting system (ERS). Mercury data that did not appear to result from ultra-clean sampling because of high detection limits were removed (i.e., EBMUD data from January 2000 through May 2001, and San Francisco City and County Southeast from October 21, 2003). Additionally, when detection limits were very low (practical quantification limit (PQL) equaled 0.5 ng/L and method detection limit equaled 0.24 ng/L, we censored data at the PQL). Finally, we did not use data from the South Bayside System Authority because this treatment plant does not always filter treated wastewater, which makes it difficult to categorize this system as secondary or advanced secondary treatment.

Secondary Treatment Plants

Our analysis of secondary treatment plants indicates that mercury data fit a log-normal distribution since the data closely follow the line of normality, as shown in Figure 1 below:

Figure 1: Probability Plot of Mercury Data for Secondary Treatment Plants



Because natural log transformed mercury data for secondary treatment plants fits a normal distribution, it is possible to calculate performance-based limits based on select percentiles. For secondary treatment plants (sample size of 984), the mean and standard deviation in the natural log phase are -4.5212 and 0.7188, respectively. We calculated daily, weekly, and monthly mercury limits based on the 99.87th percentile (3 standard deviations above the mean), the 99.57th percentile (2.625 standard deviations above the mean), and the 99.38th percentile (2.5 standard deviations above the mean).

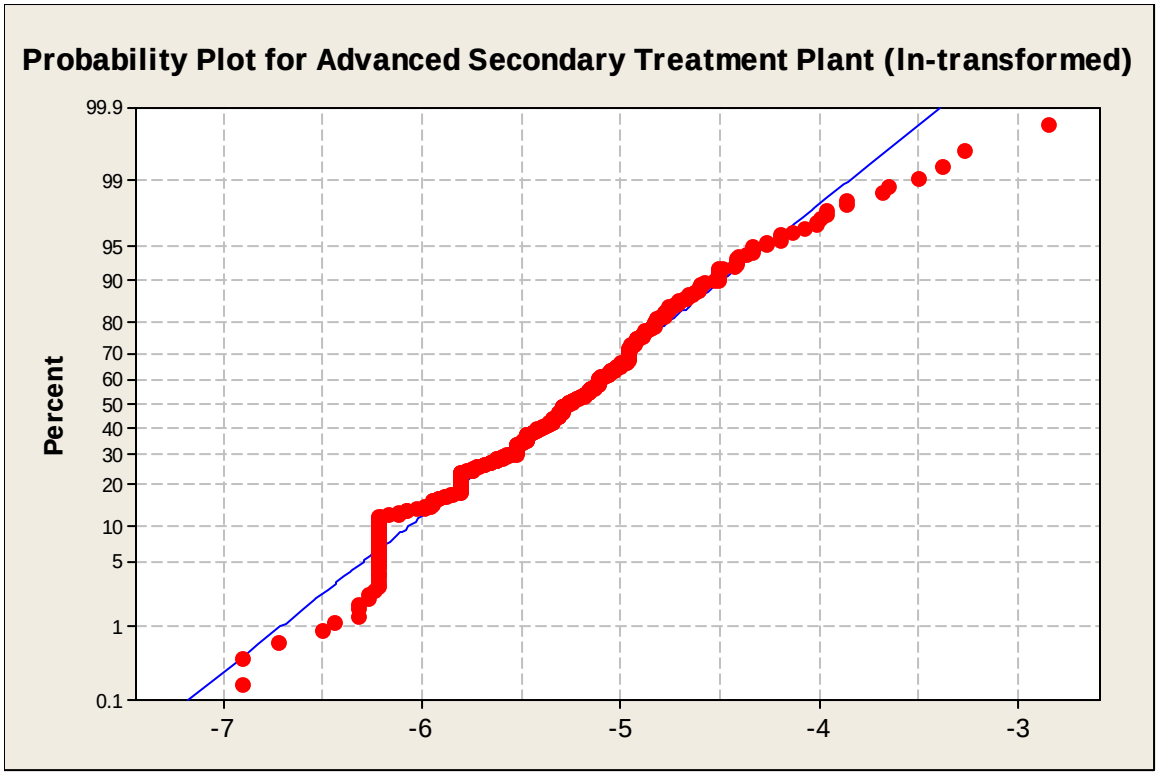
Table 1: Mercury Limits for Secondary Treatment Plants

Percentile	Averaging Period	Mercury Limit (ng/L)
99.87th	Daily	94
99.57th	Weekly	72
99.38th	Monthly	66

Advanced Secondary Treatment Plants

Our analysis of advanced secondary treatment plants indicates those data also fit a log-normal distribution since the data follow the line of normality, as shown in Figure 2 below.

Figure 2: Probability Plot of Mercury Data for Advanced Secondary Treatment Plants



Because natural log transformed mercury data for advanced secondary treatment plants fits a normal distribution, it is again possible to calculate performance-based limits based on select percentiles. For advanced secondary treatment plants (sample size of 434), the mean and standard deviation in the natural log phase are -5.3457 and 0.6664, respectively. We

calculated daily, weekly, and monthly mercury limits based on the 99.87th percentile, the 99.57th percentile, and the 99.38th percentile.

Table 2: Mercury Limits for Advanced Secondary Treatment Plants

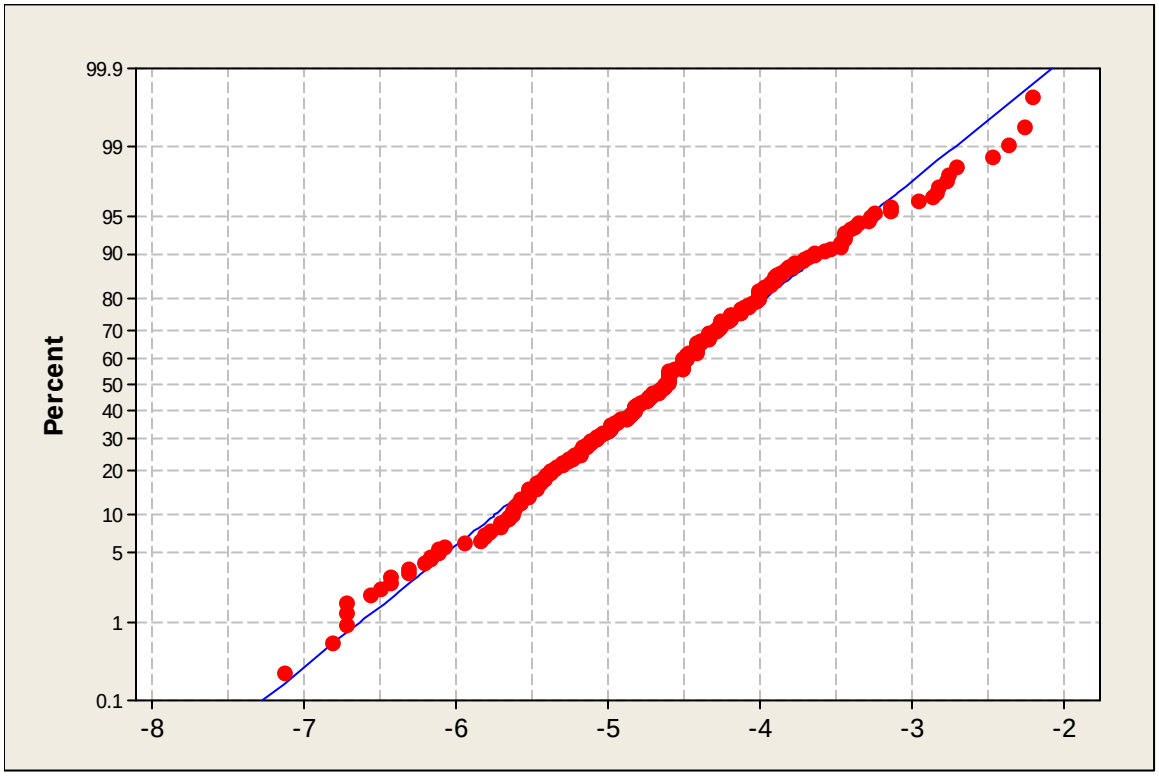
Percentile	Averaging Period	Mercury Limit (ng/L)
99.87th	Daily	35
99.57th	Weekly	27
99.38th	Monthly	25

Data Analysis of Industrial Treatment

We analyzed mercury data from five refineries that report data to the Water Board's electronic reporting system (ERS). As explained in the data tables, Regional Water Board staff determined that a number of data points from three of the refineries (i.e., Chevron, ConocoPhillips, and Shell) were not indicative of treatment plant performance, and therefore, should be removed. Additionally, when detection limits were very low (practical quantification limit (PQL) of 0.5 ng/L, we censored data at the PQL).

Our analysis of five Bay Area refineries indicates that mercury data fit a log-normal distribution since the data closely follow the line of normality, as shown in Figure 1 below:

Figure 3: Probability Plot of Mercury Data for Bay Area Refineries



Because natural log transformed mercury data fits a normal distribution, it is possible to calculate performance-based limits based on select percentiles. For refineries (sample size of 296), the mean and standard deviation in the natural log phase are -4.7000 and 0.8654,

respectively. We calculated daily, weekly, and monthly mercury limits based on the 99.87th percentile (3 standard deviations above the mean), the 99.57th percentile (2.625 standard deviations above the mean), and the 99.38th percentile (2.5 standard deviations above the mean).

Table 3: Mercury Limits for Industries Using Petroleum Refinery Performance

Percentile	Averaging Period	Mercury Limit (ng/L)
99.87th	Daily	122
99.57th	Weekly	88
99.38th	Monthly	79

APPENDIX F-3 -- SUMMARY OF DISCHARGE CHARACTERISTICS IN CONSIDERATION OF MONITORING FREQUENCIES

Discharger	Coefficient of Variation	Baseline Hg Sampling Frequency	2000-2003 Long Term Average (LTA), ug/l	Proposed AMEL (ug/l)	Ratio of LTA to AMEL	USEPA Performance-Based Frequency(1)
Mt. View Sanitary District	0.78	1/month	0.0092	0.025	0.37	1/Q
Petaluma Permit	0.50	1/month	0.0066	0.025	0.26	1/Q
Palo Alto	0.57	1/month	0.0058	0.025	0.23	2/yr
Sunnyvale	0.49	1/month	0.0036	0.025	0.14	2/yr
Fairfield-Suisun Sewer District	0.64	2/month	0.0050	0.025	0.20	1/Q
San Jose & Santa Clara	0.28	1/month	0.0024	0.025	0.10	2/yr
S.F.City & County Southeast, North Point & Bayside	1.22	4/month	0.0136	0.066	0.21	6/yr
Millbrae	0.48	1/month	0.0128	0.066	0.19	2/yr
EBMUD	0.62	1/month	0.0119	0.066	0.18	2/yr
EBDA	0.46	1/month	0.0201	0.066	0.30	1/Q
Delta Diablo Sanitation District	0.33	2/month	0.0131	0.066	0.20	1/Q
Central Marin Sanitation Agency	0.49	1/month	0.0067	0.066	0.10	2/yr
Central Contra Costa	0.27	1/month	0.0265	0.066	0.40	1/Q
Burlingame	0.49	1/month	0.0068	0.066	0.10	2/yr
Benicia, City of	0.71	1/month	0.0129	0.066	0.20	2/yr
Pinole-Hercules	0.95	1/month	0.0092	0.066	0.14	2/yr
San Mateo City, Winter	0.97	1/month	0.0128	0.066	0.19	2/yr
Sausalito-Marin Sanitary District Permit	0.27	1/month	0.0241	0.066	0.36	1/Q
Sewerage Agency of Southern Marin Permit	0.26	1/month	0.0196	0.066	0.30	1/Q
Sonoma Valley Permit	1.41	4/month	0.0062	0.066	0.09	6/yr
South San Francisco & San Bruno	0.49	1/month	0.0138	0.066	0.21	2/yr
Vallejo San & Flood Control District	0.29	1/month	0.0178	0.066	0.27	1/Q
S.F. Airport, Water Quality Control Plant	0.84	1/month	0.0196	0.066	0.30	1/Q
Chevron Richmond Refinery	2.38	1/month	0.0313	0.079	0.40	1/Q
ConocoPhillips (at Rodeo)	2.41	1/month	0.0299	0.079	0.38	1/Q
Martinez Refining Company	2.09	1/month	0.0302	0.079	0.38	1/Q
Tesoro Golden Eagle Refinery	0.92	1/month	0.0063	0.079	0.08	2/yr
Valero Benicia Refinery	0.52	1/month	0.0133	0.079	0.17	2/yr

(1) Interim Guidance for Performance-Based Reductions of NPDES Permit Monitoring Frequencies, USEPA, April 19, 1996.