CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION
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FACT SHEET
for

NPDES PERMIT AND WASTE DISCHARGE REQUIREMENTS FOR

U.S. NAVY, NAVAL SUPPORT ACTIVITY
TREASURE ISLAND
SAN FRANCISCO COUNTY

NPDES PERMIT NO. CA0110116
ORDER NO. R2-2004-0036

PUBLIC NOTICE:

Written Comments

- Interested persons are invited to submit written comments concerning this Order.
- Comments must be submitted to the Water Board no later than 5:00 p.m. on April 22, 2004.
- Send comments to the Attention of Ann M. Powell.

Public Hearing

- The Order will be considered for adoption by the Board at a public hearing during the Board's regular monthly meeting at: Elihu Harris State Office Building, 1515 Clay Street, Oakland, CA; 1st floor Auditorium.
- This meeting will be held on: May 19, 2004, starting at 9:00 am.

Additional Information

- For additional information about this matter, interested persons should contact Regional Board staff member: Ms. Ann M. Powell, Phone: (510) 622-2474; email: amp@rb2.swrcb.ca.gov

This Fact Sheet contains information regarding a reissuance of waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permit for the U.S. Navy, Naval Support Activity, Treasure Island for sanitary wastewater discharges. The Fact Sheet describes the factual, legal, and methodological basis for the sections addressed in the Order and provides supporting documentation to explain the rationale and assumptions used in deriving the effluent limitations.

I. INTRODUCTION

The Discharger applied to the Board for reissuance of waste discharge requirements and a permit to discharge sanitary wastewater to waters of the State and the United States under the NPDES. The application and Report of Waste Discharge are dated December 27, 1999.

1. Facility Description

The Discharger owns and operates a Wastewater Treatment Plant (the plant), located on the north side of Treasure Island, San Francisco County, California. Sewage system functions are performed by the City and County of San Francisco (City) under a 1997 Cooperative Agreement (CA) between the U.S. Navy and the City. Pursuant to the CA, the City, agreed to operate and maintain the utility systems at TI, including the plant, while the U.S. Navy retained ownership of all the utility systems. It is anticipated that ownership of the utility systems, including the plant, will be transferred to the City after the property is conveyed.

The plant provides secondary-level treatment for domestic wastewater from facilities on Treasure and Yerba Buena Islands (the Islands) located in San Francisco Bay. A location map of the Discharger's facility is included as Attachment A of this Order. Most of the facility has become inactive during the past several years, although several ongoing activities remain at the site. These include rental residential, businesses leases, firefighter training, Coast Guard Base on Yerba Buena Island, and Job Corps facilities. The current population is about 3,000. The facility ultimately is anticipated to be redeveloped by the City's Treasure Island Development Authority. Also, in the future, a pipeline may be constructed to divert wastewater from the islands to other treatment facilities

The plant has capacity to provide secondary-level treatment for 2.0 million gallons per day (MGD) of domestic wastewater. The plant's peak wet weather design flow is 8.0 MGD. With the reduced population on the Islands, the typical dry weather flows during 2002 were approximately 0.2 to 0.4 MGD. The upcoming redevelopment of the Islands will increase the population that is served by the plant. The Islands' population will increase from approximately 3,000 people (current level) to approximately 9,000 people (full build-out). The average dry weather flow will be approximately 1.1 MGD at full build-out.

2. Treatment Process Description

The Discharger's treatment process consists of screening, grit removal and primary clarification, secondary treatment by trickling filter, secondary clarification, chlorination, and dechlorination. Treated, disinfected and dechlorinated effluent from the plant is discharged into San Francisco Bay. The effluent is discharged through a submerged diffuser at latitude 37 degrees 49 minutes 50 seconds and longitude 122 degrees 21 minutes 25 seconds. The submerged diffuser is 400 feet offshore at a depth of 30 feet. The U.S. EPA and the Board have made the determination that this is a major facility.

3. Receiving Water Beneficial Uses

The receiving waters for the subject discharges are the waters of San Francisco Bay. The beneficial uses for San Francisco Bay, as identified in the Board's June 21, 1995 *Water Quality Control Plan San Francisco Bay Basin (Region 2)* (the Basin Plan) and based on known uses of the receiving waters near the discharge, are:

a. Industrial Service Supply
b. Industrial Process Supply
c. Navigation
d. Water Contact Recreation
e. Non-contact Water Recreation
f. Commercial and Sport Fishing

g. Wildlife Habitat
h. Preservation of Rare and Endangered Species
i. Fish Migration
j. Fish Spawning (potential for San Francisco Bay)
k. Shellfish Harvesting
l. Estuarine Habitat

4. Receiving Water Salinity

Salinity data from three Central San Francisco Bay monitoring stations (Yerba Buena, Point Isabel, and Richardson Bay) monitored through the San Francisco Bay Regional Monitoring Program for Trace Substances (the RMP) are all well above both the Basin Plan and California Toxics Rule (CTR) thresholds for salt water; therefore, the reasonable potential analysis (RPA) and effluent limitations specified in this Order for discharges to San Francisco Bay are based on saltwater Basin Plan water quality objectives (WQOs) and saltwater CTR and National Toxics Rule (NTR) water quality criteria (WQC).

II. DESCRIPTION OF EFFLUENT

The table below presents the quality of the discharge, based on January 2001 through December 2003 monitoring data for conventional and non-conventional pollutants and certain inorganic priority pollutants (metals and cyanide).

Table A. Summary of Discharge Data

Parameter	Average of All Measured Values, including ND[1]	Daily Maximum
BOD_5 (mg/L)	6	23
BOD_5 Removal (%)	97	95[2]
TSS (mg/L)	9	68
TSS Removal (%)	94	89 [2]
Settleable Solids (ml/L-hr)	<3	0.0
Oil and Grease (mg/L)	<5[3]	<5
Residual Chlorine (mg/L)	0	0
pH (s.u.)	6.0 (minimum)	8.0
Temperature (°C)	17.7	26.5
Ammonia (mg/L)	0.88	19.42
Total Coliform (mpn/100 ml)	<10 (minimum)	800
Arsenic (µg/L)	2.17	4.62
Cadmium (µg/L)	0.19	1.03
Chromium VI (µg/L)	0.83	2.53
Copper (µg/L)	11.87	21.77
Lead (µg/L)	3.07	13.88
Mercury (µg/L)	0.020	0.0591

Parameter	Average of All Measured Values, including ND[1]	Daily Maximum
Nickel (µg/L)	2.11	5.23
Selenium (µg/L)	0.35	1.07
Silver (µg/L)	0.24	3
Zinc (µg/L)	30.4	67.2
Cyanide (µg/L)	2.94	2.6[4]

BOD_5 = 5-day biochemical oxygen demand; TSS = total suspended solids; s.u. = standard units; ND = nondetect.

[1] ND indicates non detected values and are averaged at half the detection limit, except for BOD_5, TSS, and Oil & Grease, where detection limits are used to calculate the average values.

[2] These values represent the minimum percent removals for BOD_5 and TSS.

[3] Grease & Oil - all ND, detection limit is 5 mg/L

[4] Cyanide - only one value detected, but not quantified.

III. GENERAL RATIONALE AND REGULATORY BASES

Water quality objectives, criteria, effluent limitations, and calculations contained in the Order are based on:

- Sections 301 through 305, and 307 of the Federal *Water Pollution Control Act*, and amendments thereto, as applicable;

- The Board's June 21, 1995 *Water Quality Control Plan San Francisco Bay Basin (Region 2)* (the Basin Plan);

- The State Board's March 2, 2000 *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the State Implementation Plan or SIP), and as subsequently approved by the Office of Administrative Law and the U.S. EPA;

- The U.S. EPA's May 18, 2000 *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California* (the California Toxics Rule – the CTR);

- The U.S. EPA's National Toxics Rule as promulgated [Federal Register Volume 57, 22 December 1992, page 60848] and subsequently amended (the NTR);

- The U.S. EPA's *Quality Criteria for Water* [EPA 440/5-86-001, 1986], and subsequent amendments, (the U.S. EPA Gold Book);

- Applicable Federal Regulations [40 CFR Parts 122 and 131];

- 40 CFR Part 131.36(b) and amended [Federal Register Volume 60, Number 86, 4 May 1995, pages 22229-22237];

- U.S. EPA's December 10, 1998 *National Recommended Water Quality Criteria* compilation [Federal Register Vol. 63, No. 237, pp. 68354-68364];

- U.S. EPA's December 27, 2002 *Revision of National Recommended Water Quality Criteria* compilation [Federal Register Vol. 67, No. 249, pp. 79091-79095]; and

- Board staff's Best Professional Judgment (BPJ), as defined by the Basin Plan, involves consideration of many factors, including the following:

  - the Basin Plan;

  - U.S. EPA Region 9's February 1994 *Guidance For NPDES Permit Issuance*;

  - U.S. EPA's March 1991 *Technical Support Document for Water Quality-Based Toxics Control* (the TSD);

  - U.S. EPA's October 1, 1993 *Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria*;

  - U.S. EPA's July 1994 *Whole Effluent Toxicity (WET) Control Policy*;

  - U.S. EPA's August 14, 1995 *National Policy Regarding Whole Effluent Toxicity Enforcement*;

  - U.S. EPA's April 10, 1996 *Clarifications Regarding Flexibility in 40 CFR Part 136 Whole Effluent Toxicity (WET) Test Methods*;

  - U.S. EPA Regions 9 & 10's May 31, 1996 *Guidance for Implementing Whole Effluent Toxicity Programs* Final;

  - U.S. EPA's February 19, 1997 *Draft Whole Effluent Toxicity (WET) Implementation Strategy*.

IV. SPECIFIC RATIONALE

Several specific factors affecting the development of limitations and requirements in the Order are discussed as follows:

1. Recent Plant Performance

Section 402(o) of Clean Water Act (CWA) and 40 CFR § 122.44(l) require that water quality-based effluent limitations (WQBELs) in re-issued permits be at least as stringent as in the previous Order. The SIP specifies that interim effluent limitations, if required, must be based on current treatment facility performance or on previous Order limitations whichever is more stringent (unless anti-backsliding requirements are met). In determining what constitutes "recent plant performance," best professional judgment (BPJ) was used. Effluent monitoring data collected from January 2001 through December 2003 for certain inorganic priority pollutants, and from January 1998 to February 2003 for certain organic pollutants, are considered representative of recent plant performance.

2. Impaired Water Bodies on 303(d) List

On June 6, 2003, the U.S. EPA approved a revised list of impaired water bodies prepared by the State (hereinafter referred to as the 2002 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. The pollutants impairing Central San Francisco Bay include chlordane, DDT, diazinon, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, PCBs, dioxin-like PCBs, and selenium. Copper and nickel, which were previously identified as impairing Central San Francisco Bay, were not included as impairing pollutants in the 2002 303(d) list and have been placed on the new Monitoring List.

The SIP requires final effluent limitations for all 303(d)-listed pollutants to be based on total maximum daily loads (TMDLs) and associated wasteload allocations (WLAs). The SIP and U.S. EPA regulations also require that final concentration-based WQBELs be included for all pollutants having reasonable potential to cause or contribute to an exceedence of applicable water quality standards (having reasonable potential or RP). The SIP requires that where the discharger has demonstrated infeasibility to meet the final WQBELs, interim performance-based limitations (IPBLs) or previous Order limitations (whichever is more stringent) be established in the new Order, together with a compliance schedule that shall remain in effect until final effluent limitations are adopted. The SIP also requires the inclusion of appropriate provisions for waste minimization and source control where interim limitations are established.

3. Basis for Prohibitions

a). Prohibition A.1 (no discharges other than as described in the permit): This prohibition is based on the Basin Plan, previous Order, and BPJ.

b). Prohibitions A.2 (10:1 dilution): These prohibitions are based on the Basin Plan. The Basin Plan prohibits discharges not receiving a minimum initial dilution of 10:1 (Chapter 4, Discharge Prohibition No. 1).

c). Prohibition A.3 (no bypass or overflow): This prohibition is retained from the previous Order and is based on the U.S. EPA prohibition and/or restrictions regarding bypass and overflow contained in 40 CFR 122.41(m).

d). Prohibition A.4 (flow limitation): This prohibition is based on the reliable treatment capacity of the plant. Exceedence of the treatment plant's average dry weather flow design capacity may result in lowering the reliability of compliance with water quality requirements, unless the Discharger demonstrates otherwise through an antidegradation study. This prohibition is based on 40 CFR 122.41(l).

4. Basis for Effluent Limitations

a) Effluent Limitations B.1: Effluent limits for conventional and non-conventional pollutants.

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
B.1.a. Biochemical Oxygen Demand (BOD)	mg/L	30	45	--	--
B.1.b. Total Suspended Solids (TSS)	mg/L	30	45	--	--
B.1.c. Oil & Grease	mg/L	10	--	20	--
B.1.e. Total Chlorine Residual (1)	mg/L	--	--	--	0.0

These limits are technology-based limits representative of, and intended to ensure, adequate and reliable secondary level wastewater treatment. These limits are based on the Basin Plan (Chapter 4, pg 4-8, and Table 4-2, at pg 4-69). All other limits are unchanged from the previous Order, except that the daily maximum limits for BOD and TSS are removed to be consistent with the Basin Plan. In addition, the Basin Plan Amendment, adopted on January 21, 2004, removed the settleable matter (SM) effluent limitations for secondary sewage treatment plants because they are not an appropriate indicator for secondary sewage treatment plants. Although the amendment does not become effective until it is approved by the Office of Administrative Law (OAL), this Order does not impose the SM limits based on the same reasons they were removed from the Basin Plan. Should this change not be approved by the OAL, the Board will amend this Order to reinstate this requirement as appropriate. Compliance has been demonstrated by existing plant performance.

b) Effluent Limitation B.2 (pH, minimum 6.0, maximum 9.0): This effluent limitation is unchanged from the previous Order. The limitation is based on the Basin Plan (Chapter 4, Table 4-2), which is derived from federal requirements (40 CFR 133.102). This is a previous Order effluent limitation and compliance has been demonstrated by existing plant performance.

c) Effluent Limitation B.3 (BOD and TSS monthly average 85 percent removal): These are technology-based, standard secondary treatment requirements, and are retained from the previous Order. These requirements are based on Basin Plan requirements (Table 4-2, pg. 4–69), which are derived from U.S. EPA requirements at 40 CFR 133.102. Compliance has been demonstrated by existing plant performance for ordinary flows (dry weather flows and most wet weather flows). During the past few years, the Discharger has consistently met these removal efficiency limits.

d) Effluent Limitation B.4 (Bacteria): The purpose of this effluent limitation is to ensure adequate disinfection of the discharge in order to protect beneficial uses of the receiving waters. Effluent limits are based on WQOs for bacteriological parameters for receiving water beneficial uses. WQOs are given in terms of parameters, which serve as surrogates for pathogenic organisms. The traditional parameter for this purpose is coliform bacteria, either as total coliform or as fecal coliform. The U.S. EPA's May 2002 draft implementation guidance for bacteriological water quality criteria recommended either enterococcus or *E. coli*, or both together, as superior to total or fecal coliform as bacteriological indicators for human health pathogenic risk. This recommendation was based on multiple sources of coliform bacteria, including humans, and research results showing that many of these forms are unrelated to human pathogens or risk potential. A growing number of studies (including an 1995 epidemiological study conducted by the Santa Monica Bay Restoration Project and other studies referenced in the May 2002 U.S. EPA Guidance) have indicated that enterococcus and/or *E. coli* counts are more significantly

correlated with human health problems than coliform counts. Thus, enterococcus bacteria are recognized by U.S. EPA and others as an accurate indicator of human health risk potential from water contact.

However, until the Discharger undertakes a bacteriological study to conclusively demonstrate that substitution of fecal coliform, *E. coli*, or enterococcus for total coliform limits would be protective of the beneficial uses of the receiving water, the bacterioligical effluent limitation will continue to be expressed as total coliform. These are previous Order effluent limitations and compliance has been demonstrated by existing plant performance.

e) Effluent Limitation B.5 (Whole Effluent Acute Toxicity): The Basin Plan specifies a narrative objective for toxicity, requiring that all waters shall be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental response on aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alternations in population, community ecology, or receiving water biota. These effluent toxicity limitations are necessary to ensure that this objective is protected. The whole effluent acute toxicity limitations for an eleven-sample median and an eleven-sample 90th percentile value are consistent with the previous Order and are based on the Basin Plan (Table 4-4, pg. 4–70). The previous Order required testing of two species (rainbow trout and three-spine stickleback). This Order requires the Discharger to use the U.S. EPA most recently promulgated testing method, currently the 5th edition, with two testing species: rainbow trout and fathead minnow tested concurrently, until a more sensitive species can be identified.

f) Effluent Limitation B.6 (Toxic Substances):

1. Reasonable Potential Analysis (RPA)

Code of Federal Regulations Title 40, Part 122.44(d)(1)(i) (40 CFR 122.44(d)(1)(i)) specifies that permits must include WQBELs for all pollutants "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard" (have Reasonable Potential or RP). Thus, assessing whether a pollutant has RP is the fundamental step in determining whether or not a WQBEL is required. The following sections describe the RPA and the results of such an analysis for the pollutants identified in the Basin Plan and the CTR.

i) *WQOs and WQC*: The RPA uses Basin Plan WQOs, including narrative toxicity objectives in the Basin Plan, and applicable WQC in the CTR/NTR, or site-specific objectives (SSOs) if available, after adjusting for site-specific hardness and translators, if applicable. The governing WQOs/WQC are shown in **Attachment 1** of this Fact Sheet.

ii) *Methodology*: The RPA uses the methods and procedures prescribed in Section 1.3 of the SIP. Board staff has analyzed the effluent and background data and the nature of facility operations to determine if the discharge shows reasonable potential with respect to the governing WQOs or WQC. **Attachment 1** of this Fact Sheet shows the step-wise process described in Section 1.3 of the SIP.

iii) *Effluent and background data*: The RPA is based on effluent data collected by the Discharger from January 2001 through December 2003 for inorganic priority pollutants and from January 1998-February 2003 for certain organic priority pollutants. Water

quality data collected from San Francisco Bay at the Yerba Buena Island monitoring station through the RMP from March 1993 to August 2001 were reviewed to determine the maximum observed background values. The RMP station at Yerba Buena Island, located in the Central Bay, has been sampled for most of the inorganic and some of the organic toxic pollutants; however, not all the constituents listed in the CTR were analyzed by the RMP during this time. Effluent and RMP data are included in **Attachments 2 and 3, respectively**. On May 15, 2003, a group of several San Francisco Bay Region dischargers (known as the Bay Area Clean Water Agencies, or BACWA) submitted a collaborative receiving water study, entitled the *San Francisco Bay Ambient Water Monitoring Interim Report*. This study summarizes the monitoring results from sampling events in 2002 and 2003 for the remaining priority pollutants not monitored by the RMP. The RPA was conducted and the WQBELs were calculated using RMP data from March 1993 to August 2001 for inorganics and organics at the Yerba Buena Island, and additional data from the BACWA *Ambient Water Monitoring Interim Report* for the Yerba Buena Island RMP station.

iv) *RPA determination*: The RPA results are shown below in Table B and **Attachment 1** of this Fact Sheet. The pollutants that exhibit RP are copper, lead, mercury, silver, zinc, cyanide, 4,4'-DDE, dieldrin, and dioxin TEQ.

Table B. Summary of Reasonable Potential Results

# in CTR	PRIORITY POLLUTANTS	MEC or Minimum DL[1] (µg/L)	Governing WQO/WQC (ug/L)	Maximum Background or Minimum DL[1] (µg/L)	RPA Results[2]
1	Antimony	1	4300	**1.8**	N
2	Arsenic	**4.62**	36	**2.46**	N
3	Beryllium	1	NA	**0.215**	N
4	Cadmium	**1.03**	9.3	**0.1268**	N
5b	Chromium (VI)	**2.53**	50	**4.4**	N
6	Copper	**21.77**	3.73	**2.45**	Y
7	Lead	**13.88**	5.6	**0.8**	Y
8	Mercury	**0.0591**	0.025	**0.0086**	Y
9	Nickel	**5.23**	7.1	**3.7**	N
10	Selenium	**1.07**	5.0	**0.39**	N
11	Silver	**3**	2.3	**0.0516**	Y
12	Thallium	1	6.3	**0.21**	N
13	Zinc	**67.2**	58	**4.4**	Y
14	Cyanide	**2.6**	1	0.4	Y
16	2,3,7,8-TCDD (Dioxin)	0.00000095	0.000000014	1×10^{-9}	N
	TCDD TEQ	0.00000095	0.000000014	**0.000000071**	Y
17	Acrolein	NA	780	0.5	Ud
18	Acrylonitrile	NA	0.66	**0.03**	Ud
19	Benzene	1	71	0.05	N
20	Bromoform	NA	360	0.5	Ud
21	Carbon Tetrachloride	NA	4.4	**0.06**	Ud
22	Chlorobenzene	NA	21,000	0.5	Ud

# in CTR	PRIORITY POLLUTANTS	MEC or Minimum DL[1] (µg/L)	Governing WQO/WQC (ug/L)	Maximum Background or Minimum DL[1] (µg/L)	RPA Results[2]
23	Chlorodibromomethane	NA	34	0.05	Ud
24	Chloroethane	NA	NA	0.5	Uo, Ud
25	2-Chloroethylvinyl Ether	NA	NA	0.5	Uo, Ud
26	Chloroform	**5.8**	NA	0.5	Uo
27	Dichlorobromomethane	NA	46	0.05	Ud
28	1,1-Dichloroethane	NA	NA	0.05	Uo, Ud
29	1,2-Dichloroethane	NA	99	**0.04**	Ud
30	1,1-Dichloroethylene	NA	3.2	0.5	Ud
31	1,2-Dichloropropane	NA	39	0.05	Ud
32	1,3-Dichloropropylene	NA	1,700	NA	Ud
33	Ethylbenzene	NA	29,000	0.5	Ud
34	Methyl Bromide	NA	4,000	0.5	Ud
35	Methyl Chloride	NA	NA	0.5	Uo, Ud
36	Methylene Chloride	1	1,600	**0.5**	N
37	1,1,2,2-Tetrachloroethane	NA	11	0.05	Ud
38	Tetrachloroethylene	NA	8.85	0.05	Ud
39	Toluene	1	200,000	0.3	N
40	1,2-Trans-Dichloroethylene	NA	140,000	0.5	Ud
41	1,1,1-Trichloroethane	NA	NA	0.5	Uo, Ud
42	1,1,2-Trichloroethane	NA	42	0.05	Ud
43	Trichloroethylene	NA	81	0.5	Ud
44	Vinyl Chloride	NA	525	0.5	Ud
45	Chlorophenol	10	400	1.2	N
46	2,4-Dichlorophenol	10	790	1.3	N
47	2,4-Dimethylphenol	10	2,300	1.3	N
48	2-Methyl-4,6-Dinitrophenol	NA	765	1.2	Ud
49	2,4-Dinitrophenol	100	14,000	0.7	N
50	2-Nitrophenol	10	NA	1.3	Uo
51	4-Nitrophenol	20	NA	1.6	Uo
52	3-Methyl-4-Chlorophenol	NA	NA	1.1	Uo
53	Pentachlorophenol	0.5	7.9	1	N
54	Phenol	NA	4,600,000	1.3	Ud
55	2,4,6-Trichlorophenol	NA	6.5	1.3	Ud
56	Acenaphthene	0.03	2700	**0.0015**	N
57	Acenaphthylene	0.07	NA	**0.00053**	N
58	Anthracene	**0.005**	110000	**0.0005**	N
59	Benzidine	100	0.00054	0.0015	N
60	Benzo(a)Anthracene	0.007	0.049	**0.0053**	N
61	Benzo(a)Pyrene	0.01	0.049	**0.00029**	N
62	Benzo(b)Fluoranthene	0.003	0.049	**0.0046**	N
63	Benzo(ghi)Perylene	0.01	NA	**0.0027**	Uo

# in CTR	PRIORITY POLLUTANTS	MEC or Minimum DL[1] (µg/L)	Governing WQO/WQC (ug/L)	Maximum Background or Minimum DL[1] (µg/L)	RPA Results[2]
64	Benzo(k)Fluoranthene	0.001	0.049	**0.0015**	N
65	Bis(2-Chloroethoxy)Methane	20	NA	0.3	Uo
66	Bis(2-Chloroethyl)Ether	20	1.4	0.3	N
67	Bis(2-Chloroisopropyl)Ether	20	170000	NA	N
68	Bis(2-Ethylhexyl)Phthalate	NA	5.9	0.5	Ud
69	4-Bromophenyl Phenyl Ether	10	NA	0.23	Uo
70	Butylbenzyl Phthalate	10	5200	0.52	N
71	2-Chloronaphthalene	10	4300	0.3	N
72	4-Chlorophenyl Phenyl Ether	10	NA	0.3	Uo
73	Chrysene	0.002	0.049	**0.0024**	N
74	Dibenzo(a,h)Anthracene	0.007	0.049	**0.00064**	N
75	1,2 Dichlorobenzene	1	17000	0.8	N
76	1,3 Dichlorobenzene	1	2600	0.8	N
77	1,4 Dichlorobenzene	1	2600	0.8	N
78	3,3-Dichlorobenzidine	100	0.077	0.001	N
79	Diethyl Phthalate	10	120000	0.24	N
80	Dimethyl Phthalate	10	2900000	0.24	N
81	Di-n-Butyl Phthalate	20	12000	0.5	N
82	2,4-Dinitrotoluene	10	9.1	0.27	N
83	2,6-Dinitrotoluene	10	NA	0.29	Uo
84	Di-n-Octyl Phthalate	20	NA	0.38	Uo
85	1,2-Diphenylhydrazine	20	0.54	**0.0037**	N
86	Fluoranthene	0.04	370	**0.011**	N
87	Fluorene	0.008	14000	**0.00208**	N
88	Hexachlorobenzene	10	0.00077	**0.0000202**	N
89	Hexachlorobutadiene	20	50	0.3	N
90	Hexachlorocyclopentadiene	20	17000	0.31	N
91	Hexachloroethane	10	8.9	0.2	N
92	Indeno(1,2,3-cd) Pyrene	0.01	0.049	**0.004**	N
93	Isophorone	10	600	0.3	N
94	Naphthalene	0.06	NA	**0.0023**	Uo
95	Nitrobenzene	10	1900	0.25	N
96	N-Nitrosodimethylamine	10	8.1	0.3	N
97	N-Nitrosodi-n-Propylamine	10	1.4	0.001	N
98	N-Nitrosodiphenylamine	10	16	0.001	N
99	Phenanthrene	**0.149**	NA	**0.0061**	Uo
100	Pyrene	0.009	11000	**0.0051**	N

# in CTR	PRIORITY POLLUTANTS	MEC or Minimum DL[1] (µg/L)	Governing WQO/WQC (ug/L)	Maximum Background or Minimum DL[1] (µg/L)	RPA Results[2]
101	1,2,4-Trichlorobenzene	10	NA	0.3	Uo
102	Aldrin	0.00202	0.00014	NA	N
103	alpha-BHC	0.00108	0.013	**0.000496**	N
104	beta-BHC	0.00157	0.046	**0.000413**	N
105	gamma-BHC	0.00112	0.063	**0.0007034**	N
106	delta-BHC	0.001	NA	**0.000042**	N
107	Chlordane	0.0034	0.00059	**0.00018**	N
108	4,4'-DDT	0.00329	0.00059	**0.000066**	N
109	4,4'-DDE	0.00183	0.00059	**0.000693**	Y
110	4,4'-DDD	0.00183	0.00084	**0.000313**	N
111	Dieldrin	0.00193	0.00014	**0.000264**	Y
112	alpha-Endosulfan	0.00263	0.0087	**0.000031**	N
113	beta-Endosulfan	0.00183	0.0087	**0.000069**	N
114	Endosulfan Sulfate	0.00217	240	**0.0000819**	N
115	Endrin	0.00208	0.0023	**0.000036**	N
116	Endrin Aldehyde	0.00241	0.81	NA	N
117	Heptachlor	0.001	0.00021	**0.000019**	N
118	Heptachlor Epoxide	0.00123	0.00011	**0.000094**	N
119-125	PCBs	0.1	0.00017	NA	N
126	Toxaphene	0.035	0.0002	NA	N
	Tributyltin	**0.0046**	0.01	0.001	N
	Total PAHs	**0.155**	15	**0.052**	N

1) Values for MEC or maximum background in bold are the actual detected concentrations, otherwise the values shown are the minimum detection levels.
NA = Not Available (there is not monitoring data for this constituent).

2) RP =Yes, if either MEC or Background > WQO/WQC.
RP = No, if both MEC or background < WQO/WQC or all effluent concentrations non-detect and background <WQO/WQC or no background available.
RP = Ud (undetermined due to lack of effluent monitoring data).
RP = Uo (undetermined if no objective promulgated).

v) *Constituents with limited data*: Reasonable potential could not be determined for some of the organic priority pollutants due to the absence of effluent data or applicable WQO/WQC. As required by the Board's August 6, 2001 Letter from Board staff to all permittees, the Discharger is required to continue to monitor for those pollutants in this category using analytical methods that provide the best detection limits reasonably feasible. These pollutants' RP will be reevaluated in the future to determine whether there is a need to add numeric effluent limitations to the Order or to continue monitoring.

vi) *Pollutants with no reasonable potential*: WQBELs are not included in the Order for constituents that do not have reasonable potential to cause or contribute to exceedance of applicable WQOs or WQC. However, monitoring for those pollutants is still required, under the provisions of this Order. If concentrations of these constituents are found to increase significantly, the Discharger will be required to investigate the source(s) of the

increase(s). Remedial measures are required if the increases pose a threat to water quality in the receiving water.

vii) *Order reopener:* The Order includes a reopener provision to allow numeric effluent limitations to be added for any constituent that in the future exhibits reasonable potential to cause or contribute to exceedance of a WQO or WQC. This determination, based on monitoring results, will be made by the Board.

2. Dilution

The Board believes a conservative 10:1 dilution credit for discharges of non-bioaccumulative pollutants to San Francisco Bay is necessary for protection of beneficial uses. Just prior to Board consideration, the City submitted a Dilution Study (using U.S. EPA Visual Plume UM3) to model the discharge from this plant. Results included a determination that dilution factors for the zone of initial dilution range from 110 to 270. Due to technical deficiencies within the study, we are unable to grant these factors for dilution. Because a greater dilution credit was not currently justified, dilution will remain 10:1. The basis for limiting the dilution credit is based on SIP provisions in Section 1.4.2. The following outlines the basis for derivation of the dilution credit:

a. A far-field background station is appropriate because San Francisco Bay is a very complex estuarine system with highly variable and seasonal upstream freshwater inflows and diurnal tidal saltwater inputs.
b. Due to the complex hydrology of San Francisco Bay, a mixing zone cannot be accurately established.
c. Previous dilution studies do not fully account for the cumulative effects of other wastewater discharges to the system.
d. The SIP allows limiting a mixing zone and dilution credit for persistent pollutants (e.g., copper, lead, and nickel).

The main justification for using a 10:1 dilution credit is uncertainty in accurately determining ambient background and uncertainty in accurately determining the mixing zone in a complex estuarine system with multiple wastewater discharges.

a. **Complex Estuarine System Necessitates Far-Field Background** - The SIP allows background to be determined on a discharge-by-discharge or water body-by-water body basis (SIP section 1.4.3). Consistent with the SIP, Board staff has chosen to use a water body-by-water body basis because of the uncertainties inherent in accurately characterizing ambient background in a complex estuarine system on a discharge-by-discharge basis.

   With this in mind, the Yerba Buena Island Station fits the guidance for ambient background in the SIP compared to other stations in the RMP. The SIP states that background data are applicable if they are "representative of the ambient receiving water column that will mix with the discharge." Board Staff believe that data from this station are representative of water that will mix with the discharge from Outfall E-001.

b. **Uncertainties Prevent Accurate Mixing Zones in Complex Estuarine Systems** - There are uncertainties in accurately determining the mixing zones for each discharge. The models that have been used by dischargers to predict dilution have not considered the

three-dimensional nature of the currents in the estuary resulting from the interaction of tidal flushes and seasonal fresh water outflows. Saltwater is heavier than fresh water. Colder saltwater from the ocean flushes in twice a day generally under the warmer fresh river waters that flow out annually. When these waters mix and interact, complex circulation patterns occur due to the different densities of these waters. These complex patterns occur throughout the estuary but are most prevalent in the San Pablo Bay, Carquinez Strait, and Suisun Bay areas. The locations change depending on the strength of each tide and the variable rate of delta outflow. Additionally, sediment loads to the Bay from the Central Valley also change on a longer-term basis. These changes can result in changes to the depths of different parts of the Bay making some areas more shallow and/or other areas more deep. These changes affect flow patterns that in turn can affect the initial dilution achieved by a discharger's diffuser.

c. **Dye studies do not account for cumulative effects from other discharges -** The tracer and dye studies conducted are often not long enough in duration to fully assess the long residence time of a portion of the discharge that is not flushed out of the system. In other words, some of the discharge, albeit a small portion, makes up part of the dilution water. So unless the dye studies are of long enough duration, the diluting effect on the dye measures only the initial dilution with "clean" dilution water rather than the actual dilution with "clean" dilution water plus some amount of original discharge that resides in the system. Furthermore, both models and dye studies that have been conducted have not considered the effects of discharges from other nearby discharge sources, nor the cumulative effect of discharges from over 20 other major dischargers to San Francisco Bay system. While it can be argued the effects from other discharges are accounted for by factoring in the local background concentration in calculating the limitations, accurate characterization of local background levels are also subject to uncertainties resulting from the interaction of tidal flushing and seasonal fresh water outflows described above.

d. **Mixing Zone Is Further Limited for Persistent Pollutants -** Discharges to the Bay Area waters are not completely-mixed discharges as defined by the SIP. Thus, the dilution credit should be determined using site-specific information for incompletely-mixed discharges. The SIP in section 1.4.2.2 specifies that the Regional Board "significantly limit a mixing zone and dilution credit as necessary… For example, in determining the extent of … a mixing zone or dilution credit, the RWQCB shall consider the presence of pollutants in the discharge that are … persistent." The SIP defines persistent pollutants to be "substances for which degradation or decomposition in the environment is nonexistent or very slow." The pollutants at issue here are persistent pollutants (e.g., copper, lead, nickel, silver, and zinc). The dilution studies that estimate actual dilution do not address the effects of these persistent pollutants in the Bay environment, such as their long-term effects on sediment concentrations."

3. Assimilative Capacity, Mass Loading, and Mass Emission Limitations

The Order contains a mass emission limitation for mercury because the Board has determined that there is no additional assimilative capacity for mercury in the San Francisco Bay. This determination is consistent with SIP Section 2.1.1 requirements that the Board consider whether additional assimilative capacity exists for 303(d)-listed bioaccumulative pollutants. That determination also considered the fact that a fish consumption advisory currently exists to protect human health from elevated mercury concentrations in fish taken from San Francisco Bay.

4. Final Water Quality-Based Effluent Limitations

The final WQBELs were developed for the toxic and priority pollutants that were determined to have reasonable potential to cause or contribute to exceedances of the WQOs or WQC. Final effluent limitations were calculated based on appropriate WQOs /WQC and the appropriate procedures specified in Section 1.4 of the SIP (See **Attachment 4** of this Fact Sheet). For the purpose of this Order, final WQBELs refer to all non-interim effluent limitations. The WQOs or WQC used for each pollutant with Reasonable Potential is indicated in Table C below as well as in **Attachment 4**.

Table C. Water Quality Objectives/Criteria for Pollutants with RP

Pollutant	Chronic WQO/WQC (µg/L)	Acute WQO/WQC (µg/L)	Human Health WQC (µg/L)	Basis of Lowest WQO /WQC Used in RP
Copper	3.7	5.8	--	CTR
Lead	5.6	140	--	BP
Mercury	0.025	2.1	0.051	BP
Silver	--	2.3	--	BP
Zinc	58	170	--	BP
Cyanide	1.0	1.0	220,000	NTR
4,4'-DDE	--	--	0.00059	CTR
Dieldrin	0.0019	0.71	0.00014	CTR
TCDD TEQ	--	--	1.4×10^{-8}	BP

5. Comparison to Previous Order Limitations

The effluent limitations for arsenic, cadmium, chromium (VI), nickel, selenium, PAHs, and phenols have been discontinued because there is no demonstration of RP, and therefore, no WQBELs are required. Comparisons to the previous Order limitations for other pollutants are discussed in the following sections.

6. Interim Limitations

Interim effluent limitations were derived for those constituents (copper, mercury, cyanide, 4,4'-DDE, and dieldrin) for which the Discharger has shown infeasibility of complying with the respective final limitations and has demonstrated that compliance schedules are justified based on the Discharger's source control and pollution minimization efforts in the past and continued efforts in the present and future. The SIP requires the interim numeric effluent

limitation for the pollutant to be based on either current treatment facility performance, or on the previous Order's limitation, whichever is more stringent. The interim effluent concentration limitation for copper was based on the previous Order limit. The interim limitation for mercury is based on the limitation developed from a statistical analysis of pooled ultraclean mercury data for POTWs throughout the San Francisco Bay Region. The interim limit for cyanide is based on the previous Order limit. Interim limitations were established for 4,4'-DDE and dieldrin based on their respective method limits (MLs). The interim limitations are also discussed in more detail below.

7. Feasibility Evaluation

The Discharger submitted an infeasibility to comply report on March 5, 2004 for copper, mercury, cyanide, 4,4'-DDE, and dieldrin. For constituents on which Board staff could perform meaningful statistical analysis (i.e., copper and mercury), self-monitoring data from January 2001- December 2003 were used to compare the mean, 95th percentile, and 99th percentile with the long-term average (LTA), AMEL, and MDEL to confirm if it is feasible for the Discharger to comply with WQBELs. If the LTA, AMEL, and MDEL all exceed the mean, 95th percentile, and 99th percentile, it is feasible for the Discharger to comply with WQBELs. Table D below shows these comparisons in µg/L:

Table D: Summary of Feasibility Analysis

Constituent	Mean / LTA	95th / AMEL	99th / MDEL	Feasible to Comply
Copper	11.9> 11	17.6> 13.8	21 > 20.4	**No**
Mercury	0.020 > 0.014	0.037 > 0.021	0.050> 0.039	**No**

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Because cyanide was only detected in 1 out of 12 effluent samples, and the detection was made after the Discharger switched to an analytical method with a lower detection limit, Board staff cannot perform meaningful statistical analysis to determine feasibility to comply or to calculate an interim performance-based limit. Until sufficient effluent and background data is collected, an interim limit is necessary.

For 4,4'-DDE and dieldrin, the Discharger could not determine compliance with the final WQBELs as the MLs are higher than the final calculated WQBELs.

This Order establishes a compliance schedule until July 31, 2009 for copper, cyanide, 4,4'-DDE, and dieldrin. This Order establishes a compliance schedule until March 31, 2010 for mercury. These compliance schedules exceed the length of the Order; therefore, the calculated final limitations are intended for point of reference for the feasibility demonstration.

During the compliance schedules, interim limitations are included based on current treatment facility performance or on previous Order limitations, whichever is more stringent, to maintain existing water quality. **Attachment 5** details the general basis for final compliance dates. The Board may take appropriate enforcement actions if interim limitations and requirements are not met.

i. Copper – Further Discussion and Rationale for Interim Effluent Limitation: Interim effluent limitations are required for copper since the Discharger has demonstrated and the Board verified that the final effluent limitations calculated according to the SIP (AMEL

of 13.8 µg/L and MDEL of 20.4 µg/L) will be infeasible to meet. Self-monitoring data from January 2001- December 2003 indicate that effluent copper concentrations ranged from 8.1 µg/L to 21.77 µg/L (39 samples). Board staff calculated an IPBL of 25 µg/L (3 standard deviations above the mean), which is more stringent than the daily average limitation of 37 µg/L contained in the previous Order. Therefore, the 25 µg/L is established in this Order as the interim limitation, and will remain effect until July 31, 2009, or until the Board amends the limitation based on additional data or SSOs.

ii. Mercury – Further Discussion and Rationale for Interim Effluent Limitation: Interim effluent limitations are required for mercury since the Discharger has demonstrated and the Board verified that the final effluent limitations calculated according to the SIP (AMEL of 0.021 µg/L and MDEL of 0.039 µg/L) will be infeasible to meet. The existing monthly and daily average Order limitations for mercury are 0.21 µg/L and 1 µg/L. Effluent concentrations from January 2001 through December 2003 ranged from 0.0065 to 0.0591 µg/L (35 samples). The Board considered a 2001 staff report that identified two statistically derived IPBLs for mercury, 0.023 µg/L for advanced secondary treatment plants and 0.087 µg/L for secondary treatment plants. Since the Discharger operates a secondary treatment plant, the applicable IPBL is 0.087 µg/L. This IPBL shall remain in effect until March 31, 2010, or until the Board amends the limitation based on a WLA in the TMDL for mercury. However, during the next permit reissuance, the Board may reevaluate the interim mercury limitation.

iii. Cyanide – Further Discussion and Rationale for Interim Effluent Limitation: Interim effluent limitations are required for cyanide since the Discharger has demonstrated and the Board verified that the final effluent limitations calculated according to the SIP (AMEL of 3.2 µg/L and MDEL of 6.4 µg/L) will be infeasible to meet. Since Board staff cannot perform a meaningful statistical analysis on the limited effluent data, the previous Order limit of 10 µg/L is retained as the interim limit, and will remain in effect until July 31, 2009, or until the Board amends the limitation based on additional data or SSOs.

iv. 4,4'-DDE and Dieldrin – Further Discussion and Rationale for Interim Effluent Limitations: Interim effluent limitations are required for these pollutants because compliance with the final WQBELs (AMEL of 0.00059 µg/L and MDEL of 0.00118 µg/L for 4,4'-DDE and AMEL of 0.00014 µg/L and MDEL of 0.00028 µg/L for dieldrin) cannot be determined at this time as the MLs are higher than the final calculated WQBELs. Interim limitations are established at the respective MLs. The interim limitations are as follows; 4,4'-DDE is 0.05 µg/L and dieldrin is 0.01 µg/L. These interim limits shall remain in effect until July 31, 2009, or until the Board amends the limitation based on WLAs in the TMDL for 4,4'-DDE or dieldrin.

8. Interim Performance-Based Mercury Mass Emission Limitation

In addition to interim pooled performance-based concentration limitations, the Order includes an interim mercury mass-based effluent limitation of 0.0058 kilograms per month. This mass-based effluent limit is calculated based on the WQO of 0.025 ug/L and the dry weather design capacity of the WWTP (2 mgd), and applies only during the dry weather season (May through October).

2 mgd * 0.025ug/L * 0.1151 = 0.0058 kg/mo

It will maintain current loadings until a TMDL is established. The final mass-based effluent limitation will likely be based on the WLA derived from the mercury TMDL. As a prerequisite to being granted the compliance schedule and interim limits described above, the Discharger will

implement a mercury source control special project and mercury source control strategies consisting of those to be developed in the Treasure Island Wastewater Pollution Prevention Program. This should benefit overall mercury loadings to the Bay by reducing tube breakage during household garbage collection, which contributes mercury to storm runoff and the atmosphere.

9. Attainability of Interim Performance-Based Limitations

i. Copper

During the period January 2001 through December 2003, the plant's effluent concentrations for copper ranged from 8.1 to 21.77 µg/L (39 samples). All effluent copper concentrations were below the 25 µg/L interim limitation, it is, therefore, expected that the Discharger can comply with the interim limitation for copper.

ii. Mercury

Self-monitoring data from January 2001 through December 2003 indicate that mercury concentrations ranged from 0.0065 to 0.0591 µg/L. All of the 35 samples were below the interim limitation of 0.087 µg/L. It is, therefore, expected that the plant can comply with the interim concentration limitation of 0.087 µg/L for mercury. During that same period, the 12-month average mercury mass emissions ranged from 0.00058 kg/month to 0.0014 kg/month. Based on these results, the mass emission limitation of 0.0058 kg/mo should be attainable by the plant.

iii. Cyanide

During the period January 2001 through December 2003, the MEC for cyanide was 2.6 µg/L, which is the only detected value. All other 11 samples were non-detect at method detection limits of 10, 5, and 0.4 µg/L, respectively, which are all below the interim limit of 10 µg/L. Therefore, it is expected that the Discharger can comply with this interim limit.

iv. 4,4'-DDE and Dieldrin

Self-monitoring effluent data are available from September 1999 - February 2003. Neither pollutant was detected in any effluent samples. Therefore, it is expected that the Discharger can comply with this interim limit

2. Basis for Receiving Water Limitations

a) Receiving water limitations C.1 and C.2 (conditions to be avoided): These limitations are based on the previous Order and the narrative/numerical objectives contained in Chapter 3 of the Basin Plan, pages 3-2 – 3-5.

b) Receiving water limitation C.3 (compliance with State Law): This requirement is in the previous Order, requires compliance with Federal and State law, and is self-explanatory.

3. Basis for Sludge Management Practices

These requirements are based on Table 4.1 of the Basin Plan and 40 CFR 503.

4. Basis for Self-Monitoring Requirements

The SMP includes monitoring at the outfall for conventional, non-conventional, and toxic pollutants, and acute toxicity. This Order requires monthly monitoring for lead, silver, and zinc to demonstrate compliance with final effluent limitations. For copper, mercury, and cyanide, the Discharger will also perform monthly monitoring to demonstrate compliance with interim limitations. For dioxin, 4,4'-DDE, and dieldrin, twice yearly monitoring is required to demonstrate compliance with the interim limits. In lieu of near field discharge specific ambient monitoring, it is generally acceptable that the Discharger participate in collaborative receiving water monitoring with other dischargers under the provisions of the Board's August 6, 2001 Letter and the RMP.

5. Basis for Provisions

a) Provisions E.1. (Order Compliance and Rescission of Previous Waste Discharge Requirements): Time of compliance is based on 40 CFR 122. The basis of this Order superceding and rescinding the previous Order is on 40 CFR 122.46.

b) Provision E.2 (Effluent Characterization for Selected Constituents): This provision is based on the Basin Plan and the SIP.

c) Provision E.3 (Mercury Source Control Special Project): This provision is based on the Basin Plan and the SIP.

d) Provision E.4 (Ambient Background Receiving Water Study): This provision is based on the Basin Plan and the SIP.

e) Provision E.5 (Cyanide Compliance Schedule and SSO Study). This provision, based on BPJ, requires the Discharger to participate in regional efforts to develop an SSO for cyanide and other ongoing studies to evaluate cyanide analytical methods and control options.

f) Provision E.6 (Pollution Prevention and Pollutant Minimization Program): This provision is based on the Basin Plan, pages 4-25 – 4-28, and the SIP, Section 2.1.

g) Provision E.7 (Whole Effluent Acute Toxicity): This provision establishes conditions by which compliance with Order effluent limitations for acute toxicity will be demonstrated. Conditions initially include the use of 96-hour static renewal bioassays, the use of rainbow trout, and the use of approved test methods as specified, currently 5th Edition U.S. EPA protocol.

h) Provision E.8 (Regional Monitoring Program): This provision, which requires the Discharger to continue to participate in the RMP, is based on the Basin Plan.

i) Provision E.9 (Optional Mass Offset): This option is provided to encourage the Discharger to further implement aggressive reduction of mass loads to San Francisco Bay.

j) Provision E.10 (Optional Receiving Water Beneficial Use and Alternate Bacteriological Limits Study): This provision is based on the SIP. If the Discharger undertakes a bacteriological study to conclusively demonstrate that substitution of fecal coliform, *E. Coli*,

or enterococcus for total coliform limits would be protective of the beneficial uses of the receiving water, the Order will be amended to include the new bacteriological limits.

k) Provision E.11 (Optional Copper and Nickel Translator Study and Schedule): This provision allows the Discharger to conduct an optional copper and nickel translator study, based on BPJ and the SIP. This provision is based on the need to gather site-specific information in order to apply a different translator from the default translator specified in the CTR and SIP. Without site-specific data, the default translator of 0.83 has been used with the CTR chronic criterion to obtain a translated total copper criterion of 3.7 µg/L.

l) Provision E.12 (Wastewater Facilities, Review and Evaluation, Status Reports): This provision is based on the previous Order and the Basin Plan.

m) Provision E.13 (Operations and Maintenance Manual, Review and Status Reports), E.14 (Contingency Plan, Review and Status Reports), and E.15 (Annual Status Reports): These provisions are based on the Basin Plan, the requirements of 40 CFR 122, and the previous Order.

n) Provision E.16 (303(d)-listed Pollutants Site-Specific Objective and TMDL Status Review): Consistent with the SIP, the Discharger shall participate in the development of a TMDL or SSO for copper, cyanide, mercury, 4,4'-DDE, dioxin, and dieldrin. By January 31 of each year, the Discharger shall submit an update to the Board to document progress made on source control and pollutant minimization measures and development of TMDL or SSO. Board staff shall review the status of TMDL development. This Order may be reopened in the future to reflect any changes required by TMDL development.

o) Provision E.17 (New Water Quality Objectives): This provision allows future modification of the Order and effluent limitations as necessary in response to updated WQOs that may be established in the future. This provision is based on 40 CFR 123.

p) Provision E.18 (Self-Monitoring Program): The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with Order conditions. Monitoring requirements are contained in the Self Monitoring Program (SMP) of the Order. This provision requires compliance with the SMP, and is based on 40 CFR 122.44(i), 122.62, 122.63 and 124.5. The SMP is a standard requirement in almost all NPDES permits issued by the Board, including this Order. It contains definitions of terms, specifies general sampling and analytical protocols, and sets out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Board's policies. The SMP also contains a sampling program specific for the facility. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs for them.

q) Provision E.19 (Standard Provisions and Reporting Requirements): The purpose of this provision is to require compliance with the standard provisions and reporting requirements given in this Board's document titled *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993* (the Standard Provisions), or any amendments thereafter. That document is incorporated in the Order as an attachment to it.

Where provisions or reporting requirements specified in the Order are different from equivalent or related provisions or reporting requirements given in the Standard Provisions, the Order specifications shall apply. The standard provisions and reporting requirements given in the above document are based on various state and federal regulations with specific references cited therein.

r) Provisions E.20 (Change in Control or Ownership): This provision is based on 40 CFR 122.61.

s) Provision E.21 (Order Reopener): This provision is based on 40 CFR 123.

t) Provision E.22 (NPDES Permit): This provision is based on 40 CFR 123.

u) Provisions E.23 (Order Expiration and Reapplication): This provision is based on 40 CFR 122.46(a).

V. WASTE DISCHARGE REQUIREMENT APPEALS

Any person may petition the State Water Resources Control Board to review the decision of the Board regarding the Waste Discharge Requirements. A petition must be made within 30 days of the Board public hearing.

VI. ATTACHMENTS

Attachment 1: RPA Results for Priority Pollutants
Attachment 2: Effluent Data
Attachment 3: RMP Data
Attachment 4: Calculation of Final WQBELs
Attachment 5: General Basis for Final Compliance Dates

Attachment 1

RPA Results for Priority Pollutants

Attachment 2

Effluent Data

Attachment 3

RMP Data

Attachment 4

Calculation of Final WQBELs

Attachment 5

General Basis for Final Compliance Dates