

- iii. *Copper WQBELs*. WQBELs for copper, calculated according to SIP procedures, with an effluent data coefficient of variation (CV) of 0.37, are an AMEL of 11 µg/L and an MDEL of 19 µg/L. The previous Order included an AMEL of 12 µg/L and an MDEL of 18 µg/L. Although the newly calculated MDEL is slightly higher than the previous Order's MDEL, the new WQBELs are considered to be more protective of water quality because the new, lower AMEL will limit the discharge to a lower long-term average (LTA) concentration than the previous AMEL. Therefore, the new WQBELs established by this Order are considered to be more stringent.
- iv. *Immediate Compliance Feasible*. Statistical analysis of the effluent data for copper, collected over the period of February 2005 through January 2008, shows that the 95<sup>th</sup> percentile (5.0 µg/L) is less than the AMEL (11 µg/L); the 99<sup>th</sup> percentile (6.2 µg/L) is less than the MDEL (19 µg/L); and the mean (3.1 µg/L) is less than the LTA (8.6 µg/L) of the effluent data set after accounting for effluent variability. The Regional Water Board concludes, therefore, that immediate compliance with these WQBELs is feasible.<sup>1</sup>
- v. *Antibacksliding*. The copper WQBELs are more stringent than those in the previous Order; therefore, antibacksliding requirements are met.

## (2) Nickel

- i. *Nickel WQC*. The most stringent chronic and acute marine WQC of 11.9 and 62.4 µg/L are the Basin Plan SSOs for South San Francisco Bay, expressed as dissolved metal. Regional Water Board staff converted these WQC to total recoverable metal using the Basin Plan site-specific translator of 0.44. The resulting chronic WQC of 27 µg/L and acute WQC of 142 µg/L were used in the RPA.
- ii. *RPA Results*. Nickel has historically been a pollutant of concern in South San Francisco Bay. To ensure that ambient levels of nickel in South San Francisco Bay do not increase as a result of POTW discharges, the Basin Plan requires NPDES permits to include nickel effluent limits for South San Francisco Bay dischargers.

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<sup>1</sup>The statistical feasibility analysis consisted of the following steps:

- Use statistical software (MiniTab) to fit a statistical distribution to the effluent data.
- Calculate the mean, 95<sup>th</sup> and 99<sup>th</sup> percentiles of the effluent data for each constituent considered (using the fitted distribution for percentiles calculation).
  - Compare the mean, 95<sup>th</sup> and 99<sup>th</sup> percentile values with the long-term average (LTA), AMEL, and MDEL calculated using the SIP procedure, respectively.
  - If any of the LTA, AMEL, and MDEL exceeds the mean, 95<sup>th</sup> percentile, and 99<sup>th</sup> percentile, it may be infeasible for the Discharger to immediately comply with WQBELs.
  - Where the 95<sup>th</sup> and 99<sup>th</sup> percentile values cannot be estimated due to too few data or too many data being non-detect, the determination was based on staff judgment after examination of the raw data, such as direct comparison of MEC with AMEL. If MEC > AMEL, it may be infeasible for the Discharger to immediately comply with WQBELs.

- iii. *Nickel WQBELs*. WQBELs for nickel, calculated according to SIP procedures, with an effluent CV of 0.19, are an AMEL of 25 µg/L and an MDEL of 33 µg/L.
- iv. *Immediate Compliance Feasible*. Statistical analysis of the effluent data for nickel over the period of February 2005 – January 2008 shows that the 95<sup>th</sup> percentile (8.6 µg/L) is less than the AMEL (25 µg/L); the 99<sup>th</sup> percentile (10 µg/L) is less than the MDEL (33 µg/L); and the mean (6.4 µg/L) is less than the LTA (22 µg/L). The Regional Water Board concludes that immediate compliance with these WQBELs is feasible.
- v. *Antibacksliding*. Antibacksliding requirements are satisfied as limitations for nickel established by this Order are more stringent than the limitations established by the previous Order, which were an AMEL of 25 µg/L and an MDEL of 34 µg/L.

### (3) Cyanide

- i. *Cyanide WQC*. The most stringent applicable WQC for cyanide are from the Basin Plan SSOs for marine waters, which are 2.9 µg/L as a four-day average (chronic objective), and 9.4 µg/L as a one-hour average (acute objective).
- ii. *RPA Results*. This Order finds reasonable potential and thus establishes effluent limitations for cyanide because the MEC of 31 µg/L exceeds the governing WQC of 2.9 µg/L, demonstrating Reasonable Potential by Trigger 1.
- iii. *Cyanide WQBELs*. Final WQBELs for cyanide, calculated according to SIP procedures with an effluent CV of 1.0 and a dilution credit of 2.0, are an AMEL of 5.7 µg/L and an MDEL of 14 µg/L.
- iv. *Immediate Compliance Feasible*. The cyanide effluent data contain too many non-detected values; therefore, it is not possible to perform a meaningful statistical analysis to determine compliance feasibility. Although there is one data point (MEC=31 µg/L) above the MDEL of 14 µg/L, and one monthly average concentration above the AMEL, the Discharger believes that it can comply with these WQBELs for cyanide because it believes the observed MEC was related to a dumping incident; future similar incidents can be prevented by enforcing its pretreatment program.
- v. *Antibacksliding*. Antibacksliding requirements are satisfied because the previous Order did not include final effluent limitations for cyanide.

### (4) Dioxin-TEQ

- i. *Dioxin-TEQ WQC*. The Basin Plan narrative WQC for bioaccumulative substances states “[M]any pollutants can accumulate on particulates, in sediments, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered.”

Because it is the consensus of the scientific community that dioxins and furans associate with particulates, accumulate in sediments, and bioaccumulate in the

fatty tissue of fish and other organisms, the Basin Plan's narrative bioaccumulation WQO is applicable to these pollutants. Elevated levels of dioxins and furans in fish tissue in San Francisco Bay demonstrate that the narrative bioaccumulation WQO is not being met. USEPA has therefore included the South San Francisco Bay as impaired by dioxin and furan compounds in the current 303(d) listing of receiving waters where WQOs are not being met after imposition of applicable technology-based requirements.

The CTR establishes a numeric WQO for 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD) of  $1.4 \times 10^{-8}$   $\mu\text{g/L}$  for the protection of human health, when aquatic organisms are consumed. When the CTR was promulgated, USEPA stated its support of the regulation of other dioxin and dioxin-like compounds through the use of toxicity equivalencies (TEQs) in NPDES permits. For California waters, USEPA stated specifically, "if the discharge of dioxin or dioxin-like compounds has reasonable potential to cause or contribute to a violation of a narrative criterion, numeric WQBELs for dioxin or dioxin-like compounds should be included in NPDES permits and should be expressed using a TEQ scheme." [65 Fed. Reg. 31682, 31695 (2000)] This procedure, developed by the World Health Organization (WHO) in 1998, uses a set of toxicity equivalency factors (TEFs) to convert the concentration of any congener of dioxin or furan into an equivalent concentration of 2,3,7,8-TCDD. The CTR criterion is used as a criterion for dioxin-TEQ because dioxin-TEQ represents a toxicity weighted concentration equivalent to 2,3,7,8-TCDD, thus translating the narrative bioaccumulation objective into a numeric criterion appropriate for the RPA.

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

- ii. *RPA Results*. This Order establishes WQBELs for dioxin-TEQ because the MEC ( $1.9 \times 10^{-8}$   $\mu\text{g/L}$ ) exceeds the applicable WQC ( $1.4 \times 10^{-8}$   $\mu\text{g/L}$ ), demonstrating Reasonable Potential by Trigger 1.
- iii. *Dioxin-TEQ WQBELs*. WQBELs for dioxin-TEQ, calculated using SIP procedures as guidance, with a SIP default CV of 0.6 (for a data set with fewer than 10 data points), are an AMEL of  $1.4 \times 10^{-8}$   $\mu\text{g/L}$  and an MDEL of  $2.8 \times 10^{-8}$   $\mu\text{g/L}$ .
- iv. *Immediate Compliance Infeasible*. The Discharger's Infeasibility Study dated July 2, 2008, asserts that the facility cannot immediately comply with WQBELs for dioxin-TEQ. With insufficient effluent data to determine the distribution of the effluent data set or to calculate a mean and standard deviation, feasibility to

comply with final effluent limitations is determined by comparing the MEC ( $1.9 \times 10^{-8}$   $\mu\text{g/L}$ ) to the AMEL ( $1.4 \times 10^{-8}$   $\mu\text{g/L}$ ) and the MDEL ( $2.8 \times 10^{-8}$   $\mu\text{g/L}$ ). The Regional Water Board concurs with the Discharger's assertion of infeasibility to comply because the MEC exceeds the AMEL.

- v. *Need for a Compliance Schedule.* This Order contains a compliance schedule based on the Basin Plan and on State Water Board Resolution No. 2008-0025 (Compliance Schedule Policy) to allow time for the Discharger to comply with these effluent limits based on new interpretation of a narrative objective. The Compliance Schedule Policy applies to pollutants that are not addressed by the SIP, and requires that compliance schedules include interim limits. These final effluent limits will become effective on June 1, 2019. The Regional Water Board may amend these limits based on new information or a TMDL for dioxin-TEQ.
- vi. *Interim Effluent Limits.* Since it is infeasible for the Discharger to comply with the final WQBELs for dioxin-TEQ, and there are not enough data to calculate an interim limit statistically, this Order establishes an interim limit based on the MLs of all congeners and their respective TEFs. The sum of the each congener's ML times its respective TEF is  $6.3 \times 10^{-5}$   $\mu\text{g/L}$  and is established as a monthly average limit. This interim limit will remain in effect until May 31, 2019.
- vii. *Antibacksliding.* Antibacksliding requirements are satisfied because the previous Order did not include an effluent limitation for dioxin-TEQ.

#### (5) Heptachlor

- i. *Heptachlor WQC.* The most stringent applicable WQC for heptachlor is the CTR criterion for protection of human health of 0.00021  $\mu\text{g/L}$ .
- ii. *RPA Results.* This Order finds reasonable potential and thus establishes effluent limitations for heptachlor because the MEC (0.038  $\mu\text{g/L}$ ) exceeds the most stringent applicable criterion (0.00021  $\mu\text{g/L}$ ), demonstrating reasonable potential by Trigger 1.
- iii. *Heptachlor WQBELs.* WQBELs for heptachlor, calculated according to SIP procedures, with a SIP default CV of 0.60, are an AMEL of 0.00021  $\mu\text{g/L}$  and an MDEL of 0.00042  $\mu\text{g/L}$ .
- iv. *Immediate Compliance Feasible.* There are not enough heptachlor effluent data to perform a meaningful statistical analysis to determine compliance feasibility. Although the only detected value (0.038  $\mu\text{g/L}$ ) is above the AMEL of 0.00021  $\mu\text{g/L}$ , the Discharger believes that it can comply with these WQBELs. The Discharger suspects the only detected concentration was a bad data or related to a dumping incident because heptachlor was banned for use in killing insects in homes, buildings, and on food crops in 1988. Its current use is limited to fire ant control in underground power transformers.
- v. *Antibacksliding.* Antibacksliding requirements are satisfied because the previous Order did not include an effluent limit for heptachlor.

**(6) Tributyltin**

- i. *Tributyltin WQC.* The Basin Plan contains a narrative WQO for toxicity which states “[A]ll waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.” This narrative WQO applies to tributyltin, an anti-fouling agent which is extremely toxic to aquatic organisms. USEPA has developed fresh- and salt- WQC for tributyltin by authority under Section 304(a) of the Clean Water Act, found at *Ambient Aquatic Life Water Quality criteria for Tributyltin (TBT) – Final* EPA-822-031, December 2003. The most stringent of these criteria are the chronic and acute criteria for saltwater, 0.0074 µg/L and 0.42 µg/L, respectively.
  - ii. *RPA Results.* This Order finds reasonable potential and thus establishes effluent limitations for tributyltin because the MEC (0.013 µg/L) exceeds the most stringent applicable criterion (0.0074 µg/L), demonstrating reasonable potential by Trigger 1.
  - iii. *Tributyltin WQBELs.* WQBELs for tributyltin, calculated according to SIP procedures, with a SIP default CV of 0.60, are an AMEL of 0.0061 µg/L and an MDEL of 0.012 µg/L.
  - iv. *Immediate Compliance Feasible.* The tributyltin effluent data contain too many non-detected values; therefore, it is not possible to perform a meaningful statistical analysis to determine compliance feasibility. Although the only detected value (0.013 µg/L) is above the AMEL of 0.0061 µg/L, the Discharger believes that it can comply with these WQBELs because of tributyltin’s restricted use in California.
  - v. *Antibacksliding.* Antibacksliding requirements are satisfied because the previous Order did not include an effluent limit for tributyltin.
- e. **Effluent Limit Calculations.** The following table shows the derivation of WQBELs for copper, nickel, cyanide, dioxin-TEQ, heptachlor, and tributyltin.

**Table F-11. Effluent Limit Calculations**

PRIORITY POLLUTANTS	Copper	Nickel	Cyanide	Dioxin TEQ	Heptachlor	Tributyltin
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Basis and Criteria type	Basin Plan SSOs	Basin Plan SSOs	Basin- Plan SSOs	BP Narrative	CTR HH	Basin Plan narrative SW
Criteria -Acute	10.8	62.4	9.4	-----	0.053	0.42
Criteria -Chronic	6.9	11.9	2.9	-----	0.0036	0.0074
Water Effects Ratio (WER)	1	1	1	1	1	1
Lowest WQO	6.9	11.9	2.9	1.4E-08	0.0036	0.0074
Site Specific Translator - MDEL	0.53	0.44	-----	-----	-----	-----
Site Specific Translator - AMEL	0.53	0.44	-----	-----	-----	-----
Dilution Factor (D) (if applicable)	0	0	2.0	0	0	0
No. of samples per month	4	4	4	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	N	Y	Y

PRIORITY POLLUTANTS	Copper	Nickel	Cyanide	Dioxin TEQ	Heptachlor	Tributyltin
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
HH criteria analysis required? (Y/N)	N	Y	Y	Y	Y	N
Applicable Acute WQO	20	142	9.4	----	0.053	0.42
Applicable Chronic WQO	13	27	2.9	----	0.0036	0.0074
HH criteria	----	4,600	220000	1.4E-08	0.00021	----
Background (Maximum Conc for Aquatic Life calc)	8.6	16	0.4	2.6E-07	0.000022	0.003
Background (Average Conc for Human Health calc)	----	5.8	0.4	1.1E-07	0.0000061	----
Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)	N	N	N	Y	N	N
ECA acute	20	142	27	----	0.053	0.42
ECA chronic	13	27	8	----	0.0036	0.0074
ECA HH	----	4600	659999	1.4E-08	0.00021	----
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	N	N	Y	Y	Y
Avg of effluent data points	3.1	6.4	2.8	----	----	----
Std Dev of effluent data points	1.1	1.2	2.8	----	----	----
CV calculated	0.37	0.19	1.00	N/A	N/A	N/A
CV (Selected) - Final	0.37	0.19	1.00	0.60	0.60	0.60
ECA acute mult99	0.46	0.66	0.20	----	0.32	0.32
ECA chronic mult99	0.66	0.81	0.37	----	0.53	0.53
LTA acute	9.4	93.6	5.6	----	0.017	0.135
LTA chronic	8.6	21.9	2.9	----	0.0019	0.0039
minimum of LTAs	8.6	21.9	2.9	----	0.0019	0.0039
AMEL mult95	1.3	1.2	1.9	1.6	1.6	1.6
MDEL mult99	2.2	1.5	4.9	3.1	3.1	3.1
AMEL (aq life)	11.5	25.4	5.7	----	0.0029	0.0061
MDEL (aq life)	18.6	33.1	14.4	----	0.0059	0.0122
MDEL/AMEL Multiplier	1.62	1.30	2.52	2.01	2.0	2.0
AMEL (human hlth)	----	4600	659999	1.4E-08	0.00021	----
MDEL (human hlth)	----	6000	1663604	2.8E-08	0.00042	----
minimum of AMEL for Aq. life vs HH	11.5	25.38	5.73	1.4E-08	0.00021	0.00606
minimum of MDEL for Aq. Life vs HH	18.6	33.1	14.4	2.8E-08	0.00042	0.01216
Current limit in permit (30-day average)	12	25	None	None	None	None
Current limit in permit (daily)	18	34	None	None	None	None
Final limit - AMEL	11	25	5.7	1.4E-08	0.00021	0.0061
Final limit - MDEL	19	33	14	2.8E-08	0.00042	0.012
Max Effl Conc (MEC)	9.5	12	31	1.9E-08	0.038	0.013

## 5. Whole Effluent Acute Toxicity

- a. **Permit Requirements.** This Order includes effluent limits for whole-effluent acute toxicity that are based on Basin Plan Table 4-3 and are unchanged from the previous permit for Discharge Point 001. All bioassays are to be performed according to the USEPA approved method in 40 CFR 136, currently "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5<sup>th</sup> Edition."
- b. **Compliance History.** The Discharger's acute toxicity monitoring data show that bioassay results from November 2003 – March 2008 ranged from 93.3% to 100.0% survival. There have been no acute toxicity effluent limit violations.

## 6. Whole Effluent Chronic Toxicity

- a. **Permit Requirements.** This Order includes requirements for chronic toxicity monitoring based on the Basin Plan narrative toxicity objective. This permit includes the Basin Plan narrative toxicity objective as a monitoring "trigger," which, when exceeded, initiates accelerated monitoring requirements, including in some circumstances a chronic toxicity reduction evaluation (TRE). These permit requirements for chronic toxicity are consistent with the CTR and SIP requirements.
- b. **Chronic Toxicity Triggers.** This Order includes chronic toxicity triggers of 1.0 chronic toxicity unit (TUc) as a three-sample median, and a single sample maximum of 2.0 TUc or greater. These triggers are based on Basin Plan Table 4-5.
- c. **Monitoring History.** The Discharger's chronic toxicity monitoring data from November 2003 – March 2008 show that out of 71 chronic toxicity tests, only one chronic toxicity monitoring result exceeded the monitoring trigger, with a result of 2.4 TUc (May 2007). The chronic toxicity tests were conducted in duplicate by two contract laboratories; one laboratory reported a chronic toxicity testing result of 2.4 TUc and the other reported a chronic toxicity testing result of <1.0 TUc. Chemical testing for priority pollutant organics and metals did not indicate any elevated concentration of concern, and repeated testing did not identify any further chronic toxicity.
- d. **Screening Phase Study.** The Discharger is required to conduct a chronic toxicity screening phase study, as described in Appendix E-1 of the MRP (Attachment E), prior to the next permit issuance.

## 7. Antibacksliding/Antidegradation

Effluent limits that are less stringent than those in the previous Order or are no longer retained from the previous Order are in compliance with antibacksliding and antidegradation requirements

- The single sample maximum effluent limit for enterococcus is no longer retained from this Order, as stated under Section C.2.g above. The removal of this limit is in compliance

with antibacksliding requirement and is not expected to cause degradation of water quality because the Discharge will maintain its treatment at current level and the 5-day geometric mean limit will hold the discharge at its current level.

- Effluent limitations for settleable matter are not retained by this Order. The Plant provides advanced treatment, and the settleable matter effluent limits of the previous Order were technology-based effluent limitations for primary treatment. The Regional Water Board has determined that compliance with the requirements of 40 CFR 133 and of Table 4-2 of the Basin Plan will also ensure removal of settleable solids to acceptably low levels - below 0.1 ml/L/hr (30 day average) and 0.2 ml/L/hr (daily maximum). The Basin Plan was amended on January 21, 2004, in part, because it mistakenly applied these limits to secondary and advanced treatment plants, and therefore, the non-retention of limitations for settleable solids is consistent with the exception to the backsliding prohibition expressed at CWA section 402(o)(2)(B)(ii), when technical mistakes or mistaken interpretations of law were made in establishing the limitation in the previous permit. The removal of these limits is not expected to cause degradation of the receiving water because the Discharger will maintain its performance. Limits for total suspended solids will hold the Discharger at its current discharge level.
- The effluent limits for 4,4-DDE, dieldrin, heptachlor epoxide, benzo(b)fluoranthene, and indeno(1,2,3-cd)pyrene are not retained in this Order because monitoring data during the past five years do not exhibit reasonable potential for these pollutants. The removal of these effluent limits is consistent with anti-backsliding requirements in accordance with State Water Board Order WQ 2001-16, and antidegradation is not expected because the Discharger will maintain its current performance level.

## **E. Interim Effluent Limitations**

### **1. Feasibility Evaluation and Interim Effluent Limits**

The Discharger submitted an Infeasibility Analysis on July 2, 2008, demonstrating that it cannot immediately comply with final WQBELs for dioxin-TEQ. As stated in the previous findings in D.4.(d)(4), the Regional Water Board staff concurred with the Discharger's infeasibility assertion. This Order establishes a compliance schedule and an interim limit for dioxin-TEQ that will remain in effect for ten years following the effective date of this Order. Since there are not enough data to calculate an interim limit for dioxin-TEQ statistically, this Order establishes an interim limit based on the MLs of all congeners and their respective TEFs. The sum of the each congener's ML times its respective TEF is  $6.3 \times 10^{-5}$   $\mu\text{g/L}$  and is established as a monthly average limit.

### **2. Compliance Schedule Requirements**

The SIP and the Basin Plan authorize compliance schedules in a permit if an existing discharger cannot immediately comply with new and more stringent objectives. On April 15, 2008, the State Water Board adopted Resolution No. 2008-0025 (Compliance Schedule Policy), which includes compliance schedule policies for pollutants that are not addressed by the SIP. This Policy was approved by the USEPA on August 27, 2008. This Policy therefore supersedes the Basin Plan's compliance policy. This Order grants a compliance schedule for dioxin-TEQ in a manner that is consistent with the Policy. The compliance schedule policy

requires the following documentation to be submitted to the Regional Water Board to justify a compliance schedule:

- Descriptions of diligent efforts the Discharger has made to quantify pollutant levels in the discharge, sources of the pollutant in the waste stream, and the results of those efforts.
- Descriptions of source control and/or pollutant minimization efforts currently under way or completed.
- A proposed schedule for additional or future source control measures, pollutant minimization, or waste treatment.
- A demonstration that the proposed schedule is as short as practicable.

### **3. Compliance Schedule for Dioxin-TEQ**

The compliance schedule for dioxin-TEQ and the requirement to submit reports on further measures to reduce concentrations to ensure compliance with final limits are based on the above compliance schedule policies. As previously described, the Discharger submitted an Infeasibility Report, and the Regional Water Board staff confirmed their assertions. Based on this, a compliance schedule is appropriate for dioxin-TEQ because the Discharger has made good faith and reasonable efforts towards characterizing the sources. However, time to allow additional efforts is necessary to achieve compliance.

Maximum allowable compliance schedules are granted to the Discharger for this pollutant because of the considerable uncertainty in determining effective measures (e.g., pollution prevention, treatment upgrades) that should be implemented to ensure compliance with final limits. It is appropriate to allow the Discharger sufficient time to first explore source control measures before requiring it to propose further actions, such as treatment plant upgrades, that are likely to be much more costly. This approach is supported by the Basin Plan section 4.13, which states; "In general, it is often more economical to reduce overall pollutant loadings into the treatment systems than to install complex and expensive technology at the Plant."

Dioxin-TEQ WQBELs are based on Basin Plan narrative objectives for bioaccumulation; therefore, the discharge qualifies for a 10-year compliance schedule from the date this Order becomes effective. Finally, because of the ubiquitous nature of the sources of dioxin-TEQ, this provision allows the Discharger to address compliance with calculated WQBELs through other strategies such as mass offsets.

### **F. Land Discharge Specifications**

Not Applicable.

### **G. Reclamation Specifications**

Water reclamation requirements for this Discharger are established by Regional Water Board Order No. 95-117.

## V. RATIONALE FOR RECEIVING WATER LIMITATIONS

### A. Surface Water

1. Receiving Water Limitations V.A.1 and V.A.2 are based on the narrative and numeric objectives contained in Chapter 3 of the Basin Plan. The receiving water limits for total ammonia are no longer required because there are effluent limits to ensure compliance with the receiving water limits.
2. Receiving Water Limitations V.A.3 is in the previous permit, requires compliance with Federal and state law, and is self-explanatory.

### B. Groundwater

Not applicable.

## VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The MRP, **Attachment E**, establishes monitoring and reporting requirements to implement federal and state requirements.

The principal purposes of a MRP are to:

- Document compliance with waste discharge requirements and prohibitions established by the Regional Water Board,
- Facilitate self-policing by the Discharger in the prevention and abatement of pollution arising from waste discharge,
- Develop or assist in the development of limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and to
- Prepare water and wastewater quality inventories.

The MRP is a standard requirement in almost all NPDES permits issued by the Regional Water 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 CWC, and the Regional Water Board's policies. The MRP also defines sampling stations and monitoring frequencies, 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.

The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

### **A. Influent Monitoring**

Influent monitoring requirements for flow, CBOD<sub>5</sub> and TSS are not changed from the previous permit and allow determination of compliance with this Order's 85 percent removal requirement. Influent monitoring for cyanide is required under the Basin Plan cyanide SSOs. However, the requirement is not new because the Discharger has been sampling cyanide according to its pretreatment requirements.

### **B. Effluent Monitoring**

The MRP retains most effluent monitoring requirements from the previous Order. Changes in effluent monitoring are summarized as follows.

Monitoring for settleable matter is no longer required, as this Order does not retain the effluent limitation for this parameter.

Routine effluent monitoring is required for copper, nickel, cyanide, dioxin-TEQ, heptachlor, tributyltin because this Order establishes effluent limitations for these pollutants. Monitoring for all other priority toxic pollutants must be conducted in accordance with methods described in the Regional Water Board's August 6, 2001, Letter for major dischargers.

Semiannual monitoring for benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene, aldrin, 4,4'-DDE, heptachlor epoxide, and dieldrin is no longer required because these pollutants no longer demonstrate reasonable potential.

### **C. Whole Effluent Toxicity Testing Requirements**

- 1. Acute Toxicity.** Monthly 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity.
- 2. Chronic Toxicity.** Chronic toxicity testing is required monthly in order to demonstrate compliance with the Basin Plan's narrative toxicity objective. The Discharger conducted an effluent toxicity screening study prior to the expiration of the previous permit, which indicated *Ceriodaphnia dubia* is the most sensitive species for chronic toxicity testing. The Discharger shall re-screen during the anticipated term of this Order.

### **D. Receiving Water Monitoring**

On April 15, 1992, the Regional Water Board adopted Resolution No. 92-043 directing the Executive Officer to implement the RMP for the San Francisco Bay. Subsequent to a public hearing and various meetings, Regional Water Board staff requested major permit holders in this Region, under authority of section 13267 of CWC, to report on the water quality of the estuary. These permit holders responded to this request by participating in a collaborative effort, through the San Francisco Estuary Institute. This effort has come to be known as the San Francisco Bay RMP for Trace Substances. This Order specifies that the Discharger shall continue to participate in the RMP, which involves collection of data on pollutants and toxicity in water, sediment, and biota of the estuary.

### **E. Pretreatment and Biosolids Monitoring Requirements**

Pretreatment monitoring requirements for the influent, effluent, and biosolids are retained from the previous permit, and are required to assess compliance with the Discharger's USEPA approved pretreatment program. Biosolids monitoring is required pursuant to 40 CFR Part 503.

This Order specifies the sampling type for pretreatment monitoring. Specifically, this Order requires multiple grabs for VOCs, BNA, cyanide, and hexavalent chromium to make the requirement consistent both with the Federal pretreatment requirements in 40 CFR 403.12, which requires 24-hour composites and with the Water Board's August 6, 2001, letter. Composites made up of discrete grabs for these parameters are necessary because of potential loss of the constituents during automatic compositing. VOCs are volatile; hexavalent chromium is chemically unstable; it, cyanide, and BNAs are also somewhat volatile.

## **VII. RATIONALE FOR PROVISIONS**

### **A. Standard Provisions (Provision VI.A)**

Standard Provisions, which, in accordance with 40 CFR 122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachments D and G to this Order. The Discharger must comply with all standard provisions and with those additional conditions that apply under 40 CFR 122.42.

40 CFR 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 CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC section 13387(e).

### **B. Monitoring and Reporting Requirements (Provision VI.B)**

The Discharger is required to monitor the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the MRP (Attachment E), the Regional Water Board Standard Provisions, and SMP Part A (Attachment G) of this Order. This provision requires compliance with these documents and is based on 40 CFR 122.63.

### **C. Special Provisions (Provision VI.C)**

#### **1. Reopener Provisions**

These provisions are based on 40 CFR 123 and allow modification of this Order and its effluent limitations, as necessary, to respond to updated information.

## 2. Special Studies and Additional Monitoring Requirements

- a. **Effluent Characterization Study.** This Order does not include effluent limitations for priority pollutants that do not demonstrate Reasonable Potential, but this provision requires the Discharger to continue monitoring for these pollutants as described in the August 6, 2001, Letter and as specified in the MRP. If concentrations of these constituents increase significantly, the Discharger will be required to investigate the source of the increases and establish remedial measures, if the increases result in reasonable potential to cause or contribute to an excursion above the applicable WQC. This provision is based on the SIP and is retained from the previous Order.
- b. **Ambient Background Receiving Water Study.** This provision is based on the Basin Plan, the SIP, and the August 6, 2001, Letter for priority pollutant monitoring. As indicated in this Order, this requirement may be met by participating in the collaborative BACWA study. This provision is retained from the previous Order.
- c. **Avian Botulism Control Program.** This provision is retained from the previous Order. The requirement to monitor nearby sloughs for the presence of avian botulism and to control any outbreaks is based on State Water Board Order No. WQ 90-5. In that Order, the State Water Board found that discharges of wastewater promote conditions in the receiving waters conducive to fostering avian botulism. Exceptions to the Basin Plan discharge prohibitions granted to the Discharger are conditioned, in part, upon continued efforts by the Discharger to control avian botulism.
- d. **Salt Marsh Vegetative Assessment.** The provision to continue to document changes in marsh habitat is retained from the previous Order and is based on State Water Board Order No. WQ 90-5. That Order requires the Regional Water Board to evaluate the impacts of the Discharger's effluent on the potential conversion of salt marsh habitat to fresh water or brackish habitat when issuing or re-issuing permits to the Discharger. Order No. WQ 90-5 also requires the Discharger to submit a plan of study prior to conducting each salt marsh vegetative assessment, and it requires the Discharger to provide for the creation or restoration of 380 acres of wetlands.

Salt marsh was historically the predominant marsh type in South San Francisco Bay and important habitat for a number of rare and endangered species, particularly the salt marsh harvest mouse and the California clapper rail. Regional Water Board Order No. 93-117 (which re-issued the NPDES permit in 1993) required the Discharger to either acquire or make funds available to acquire 380 acres of land for mitigation by June 30, 2004, and to establish a salt marsh bank containing sufficient acreage to mitigate any potential future conversion of salt marsh due to future discharge. The Regional Water Board, by Resolution 96-152, and the State Water Board, by letter dated October 10, 1996, accepted a salt marsh mitigation proposal for Moseley and Baumberg Tracts, which would provide for 380 acres of mitigated land and 10 acres of bank to satisfy the requirements of Order No. 93-117.

Regional Water Board Order No. 98-052, which again re-issued the NPDES permit in 1998, required the Discharger to submit a plan for mitigation of wetland losses not previously covered. To satisfy this requirement, the Discharger contributed to the purchase of Bair Island.

By 2004, the Discharger had been unable to restore the Moseley Tract and, in an alternate agreement, contributed to the Peninsula Open Space Trust to assist in restoration of Bair Island. This action satisfied the wetland mitigation requirements of Order No. 93-117. The Discharger also purchased salt pond A18 from Cargill in 2005 for future marsh mitigation projects.

In issuing the previous Order, the Regional Water Board determined that no salt marsh conversions occurred during the period of 1998 – 2002. The Discharger's most recent salt marsh vegetative assessment (2007) indicates that, since the previous assessment, a large scale conversion of brackish marsh to salt marsh occurred across the main study area, and also in the study reference area. The assessment indicated that this favorable conversion was related to a number of factors, but was unrelated to the discharge from the Plant. Factors included low wet season rains, increased tidal prism related to passive restoration of nearby island salt ponds, and low mean sea level.

- e. **Optional Mass Offset Plan.** This option is provided to encourage the Discharger to further implement aggressive reduction of mass loadings of pollutants to South San Francisco Bay. If the Discharger wishes to pursue a mass offset program, it must submit a mass offset plan for reducing 303(d) listed pollutants to the same receiving water body for Regional Water Board approval. The Regional Water Board will consider any proposed mass offset plan and amend this Order accordingly.
- f. **Optional Near-Field Site Specific Translator Study.** This provision is newly established by this Order. Site-specific translators were calculated for this Order for zinc, lead, and chromium (VI), using data collected from the Dumbarton Bridge RMP station. USEPA guidance for developing site-specific translators requires that site-specific translators be developed using data collected at near-field stations. The Discharger has the option to conduct a receiving water study to develop a data set for dissolved and total zinc, chromium (VI), and lead concentrations in the receiving water in the vicinity of the discharge for site-specific translator development in future permit reissuances.

### 3. Best Management Practices and Pollution Minimization Program

This provision for a Pollutant Minimization Program is based on Chapter 4 (section 4.13.2) of the Basin Plan and Chapter 2 (section 2.4.5) of the SIP.

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

- a. **Wastewater Facilities, Review and Evaluation, and Status Reports.** This provision is based on the Basin Plan and is retained from the previous Order.
- b. **Operations and Maintenance Manual, Review and Status Reports.** This provision is based on the Basin Plan, the requirements of 40 CFR 122 and is retained from the previous Order.
- c. **Reliability Report.** This provision is retained from the previous Order and is required as part of reviewing requests for exceptions to the Basin Plan discharge prohibitions.

- d. **Contingency Plan, Review and Status Reports.** This provision is based Regional Water Board Resolution 74-10 and is retained from the previous Order.

**5. Special Provisions for Municipal Facilities (POTWs Only)**

- a. **Pretreatment Program.** This provision is based on 40 CFR Part 403 (General Pretreatment Regulations for Existing and New Sources of Pollution) and is retained from the previous Order.

The Discharger has an approved pretreatment program, which include approved local limits, as required by prior permits. The previous permit required the Discharger to evaluate its local limits to ensure compliance with updated effluent limits. The cities of San Jose, Santa Clara, Milpitas; West Valley Sanitation District, and Cupertino Sanitation District adopted new local limits on varying dates between December 2007 and June 2008. New local limits were adopted for pollutants including chromium, copper, nickel, and selenium. These new local limits are approved as part of the pretreatment program required by this permit.

- b. **Sludge Management Practices Requirements.** This provision is based on the Basin Plan (Chapter 4) and 40 CFR Parts 257 and 503 and is retained from the previous Order.
- c. **Sanitary Sewer Overflows and Sewer System Management Plan.** This provision is to explain the Order's requirements as they relate to the City of San Jose's collection system and the City of Santa Clara's collection system, and to promote consistency with the State Water Board adopted General Collection System WDRs (General Order, Order No. 2006-0003-DWQ).

The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows, among other requirements and prohibitions.

Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. Inasmuch as the City of San Jose's collection system and the City of Santa Clara's collection system are part of the facility that is subject to this Order, certain standard provisions are applicable as specified in Provisions, Section VI.C.5. For instance, the 24-hour reporting requirements in this Order are not included in the General Order. The City of San Jose and the City of Santa Clara must comply with both the General Order and this Order. The Discharger and public agencies that are discharging wastewater into the facility were required to obtain enrollment for regulation under the General Order by December 1, 2006.

The State Water Board amended the General Order on February 20, 2008, in Order No. WQ 2008-0002-EXEC, to strengthen the notification and reporting requirements for sanitary sewer overflows. The Regional Water Board issued a 13267 letter on May 1, 2008, requiring dischargers to comply with the new notification requirements for sanitary

sewer overflows, and to comply with similar notification and reporting requirements for spills from wastewater treatment facilities.

## 6. Other Special Provisions

- a. **South Bay Action Plan (SBAP).** This provision is retained from the previous Order and is based on Regional Water Board Resolution No. 91-152. In State Water Board Order No. WQ 90-5, the State Water Board ordered that a condition be added to the San Jose/Santa Clara permit limiting effluent flows discharged to South San Francisco Bay to an average dry weather flow of not more than 120 MGD, or to those flows which would not further adversely impact rare and endangered species. On March 6, 1991, the Discharger submitted an "Action Plan" with a request that the Action Plan be accepted by the Regional Water Board as a fulfillment of this State Water Board requirement. In Resolution No. 91-152, the Regional Water Board stated that the Action Plan, revised as of September 30, 1991, fulfilled the intent of the State Water Board Order No. WQ 90-5, but also stated the Regional Water Board would conduct a hearing to consider adopting a 120 MGD average dry weather effluent flow discharge limitation if the average dry weather effluent flow exceeds 120 MGD, or if delays occur in completing and implementing reclamation projects. The State Water Board concurred with this resolution by letter dated November 26, 1991.

In 1996, an average dry weather effluent flow of 136 MGD triggered the requirement in Resolution No. 91-152 for the Regional Water Board to conduct a hearing, and led to adoption of Regional Water Board Order No. 97-111. This Order required the Discharger to propose an alternate solution to limiting effluent flows to below 120 MGD by June 1997. The Discharger responded by submitting a South Bay Action Plan (SBAP) to the Regional Water Board, which proposed near- and long-term solutions to reduce effluent flow. Proposed projects included public education for water conservation and on-site reuse, indoor water conservation, water recycling, industrial water recycling, and environmental enhancement projects.

The requirement to continue updating and implementing an SBAP is necessary for compliance with Regional Water Board Resolution No. 91-152. During the term of Order No. R2-2003-0085, the Discharger consistently maintained an average dry weather effluent flow below 120 MGD. The average dry weather effluent flows in 2004 through 2007 were 97.5, 100.0, 102.2, and 95.9 MGD, respectively. The Discharger utilizes a mathematical model for facility inflows and effluent flows that considers changes in residential population, employment, and ongoing flow reduction programs. The most recent update of the City of San Jose's flow model indicates that the dry weather effluent flow will rise at a rate of 1 percent or less per year, but will remain below 120 MGD throughout the anticipated term of this Order. This Order continues the requirement of an SBAP in lieu of an effluent flow limitation of 120 MGD, and it continues the requirement to maintain a Contingency Plan within the SBAP in the event ADWEF flows increase above 120 MGD.

This Order also requires the Discharger to continue to implement new industry requirements as described in the SBAP. This requirement is retained from the previous Order.

- b. **Action Plan for Cyanide.** This provision is based on the Basin Plan, which contains SSOs for cyanide for San Francisco Bay (Regional Water Board Resolution R2-2006-0086). The Basin Plan requires an action plan for source control to ensure compliance with State and federal antidegradation policies. Additionally, because a dilution credit has been granted in establishing effluent limitations for cyanide, source control efforts are necessary for the continued exception to the Basin Plan prohibition regarding shallow water dischargers. The Discharger will need to comply with this provision upon the effective date of the permit.
- c. **Action Plan for Copper.** This provision is based on the proposed Basin Plan Amendment that will adopt the SSOs for copper for San Francisco Bay (Resolution No. R2-2007-0042). South San Francisco Bay was listed in 1998 on the 303(d) impaired water body list as impaired by copper. Subsequent studies concluded that impairment of beneficial uses of the South Bay due to ambient copper concentrations was unlikely. The Regional Water Board previously adopted a Basin Plan amendment that included copper SSOs and a Water Quality Attainment Strategy (WQAS) for copper in South San Francisco Bay. Its purpose was to prevent water quality degradation and ensure ongoing maintenance of the SSOs. The four elements of the WQAS were: (1) measures to minimize copper and nickel releases to South San Francisco Bay (baseline actions); (2) a receiving water monitoring program with statistically based water quality triggers for additional control measures if the triggers are exceeded; (3) a proactive framework for addressing increases to future copper and nickel concentrations in South Bay, if they should occur; (4) and metal translators for calculating copper and nickel effluent limitations for the South Bay municipal wastewater treatment plant dischargers. The previous Order required the Discharger to implement a Watershed Management Initiatives to comply with these Basin Plan requirements. Recently, the Regional Water Board and State Water Board approved another Basin Plan amendment (Resolution No. R2-2007-0042) that updated these requirements for South San Francisco Bay dischargers, which includes a copper action plan that applies to all San Francisco Bay dischargers and which is the basis of this provision. The Discharger will need to comply with this provision upon the effective date of this Order.
- d. **Compliance Schedule for Dioxin-TEQ.** This provision is based on Basin Plan (Compliance Schedules), the State Water Board Compliance Schedule Policy, 40 CFR 122.47(a)(3), and SIP 2.2.1. Maximum compliance schedules are allowed because of the considerable uncertainty in determining effective measures (e.g., pollution prevention, treatment upgrades) that should be implemented to ensure compliance with final limits. It is appropriate to allow the Discharger sufficient time to first explore source control measures before requiring it to propose further actions, such as treatment plant upgrades, that are likely to be much more costly. This approach is supported by the Basin Plan (section 4.13), which states, "In general, it is often more economical to reduce overall pollutant loading into treatment systems than to install complex and expensive technology at the Plant

### VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, the San Francisco Bay Regional Water Board, is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the San Jose/Santa Clara

Water Pollution Control Plant, the City of San Jose's sewage collection system, and the City of Santa Clara's sewage collection system. As a step in the WDRs adoption process, Regional Water Board staff has developed tentative WDRs. 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 discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the *San Jose City Times*.

#### **B. Written Comments**

**The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs.** Comments must be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order, Attention: Tong Yin.

To receive full consideration and a response from Regional Water Board staff, written comments should be received at the Regional Water Board offices by 5:00 p.m. on January 21, 2009.

#### **C. Public Hearing**

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

Date: April 8, 2009

Time: 9 a.m.

Location: Elihu Harris State Office Building  
1515 Clay Street, 1<sup>st</sup> Floor Auditorium  
Oakland, CA 94612

Contact: Tong Yin, (510) 622-2418, email [tyin@waterboards.ca.gov](mailto:tyin@waterboards.ca.gov)

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is <http://www.waterboards.ca.gov/sanfranciscobay> where you can access the current agenda for changes in dates and locations.

#### **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 WDRs. 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 Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are 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 facility, and provide a name, address, and phone number.

**G. Additional Information**

Requests for additional information or questions regarding this order should be directed to Tong Yin at 510-622-2418 (e-mail at [TYin@waterboards.ca.gov](mailto:TYin@waterboards.ca.gov)).

## ATTACHMENT H

### Pretreatment Program Provisions

1. The Discharger shall implement all pretreatment requirements contained in 40 CFR 403, as amended. The Discharger shall be subject to enforcement actions, penalties, and fines as provided in the Clean Water Act (33 USC 1351 *et seq.*), as amended. The Discharger shall implement and enforce its Approved Pretreatment Program or modified Pretreatment Program as directed by the Regional Water Board's Executive Officer or USEPA. USTEPA and/or the State may initiate enforcement action against an industrial user for noncompliance with applicable standards and requirements as provided in the Clean Water Act.
2. The Discharger shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d) and 402(b) of the Clean Water Act. The Discharger shall cause industrial users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new industrial user, upon commencement of the discharge.
3. The Discharger shall perform the pretreatment functions as required in 40 CFR Part 403 and amendments or modifications thereto including, but not limited to:
  - i) Implement the necessary legal authorities to fully implement the pretreatment regulations as provided in 40 CFR 403.8(f)(1);
  - ii) Implement the programmatic functions as provided in 40 CFR 403.8(f)(2);
  - iii) Publish an annual list of industrial users in significant noncompliance as provided per 40 CFR 403.8(f)(2)(vii);
  - iv) Provide for the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR 403.8(f)(3); and
  - v) Enforce the national pretreatment standards for prohibited discharges and categorical standards as provided in 40 CFR 403.5 and 403.6, respectively.
4. The Discharger shall submit annually a report to USEPA Region 9, the State Water Board and the Regional Water Board describing its pretreatment program activities over the previous twelve months. In the event that the Discharger is not in compliance with any conditions or requirements of the Pretreatment Program, the Discharger shall also include the reasons for noncompliance and a plan and schedule for achieving compliance. The report shall contain, but is not limited to, the information specified in Appendix A entitled, "Requirements for Pretreatment Annual Reports," which is made a part of this Order. The annual report is due on the last day of February each year.
5. The Discharger shall submit semiannual pretreatment reports to USEPA Region 9, the State Water Board and the Regional Water Board describing the status of its significant industrial users (SIUs). The report shall contain, but is not limited to, the information specified in Appendix B entitled, "Requirements for Semiannual Pretreatment Reports," which is made

part of this Order. The semiannual reports are due July 31<sup>st</sup> (for the period January through June) and January 31<sup>st</sup> (for the period July through December) of each year. The Executive Officer may exempt a Discharger from the semiannual reporting requirements on a case by case basis subject to State Water Board and USEPA's comment and approval.

6. The Discharger may combine the annual pretreatment report with the semiannual pretreatment report (for the July through December reporting period). The combined report shall contain all of the information requested in Appendices A and B and will be due on January 31<sup>st</sup> of each year.
7. The Discharger shall conduct the monitoring of its treatment plant's influent, effluent, and sludge as described in Appendix C entitled, "Requirements for Influent, Effluent and Sludge Monitoring," which is made part of this Order. The results of the sampling and analysis, along with a discussion of any trends, shall be submitted in the semiannual reports. A tabulation of the data shall be included in the annual pretreatment report. The Executive Officer may require more or less frequent monitoring on a case by case basis.

## APPENDIX H-A REQUIREMENTS FOR PRETREATMENT ANNUAL REPORTS

The Pretreatment Annual Report is due each year on the last day of February. [If the annual report is combined with the semiannual report (for the July through December period) the submittal deadline is January 31<sup>st</sup> of each year.] The purpose of the Annual Report is 1) to describe the status of the Publicly Owned Treatment Works (POTW) pretreatment program and 2) to report on the effectiveness of the program, as determined by comparing the results of the preceding year's program implementation. The report shall contain at a minimum, but is not limited to, the following information:

### 1) **Cover Sheet**

The cover sheet must contain the name(s) and National Pollutant Discharge Elimination Discharge System (NPDES) permit number(s) of those POTWs that are part of the Pretreatment Program. Additionally, the cover sheet must include: the name, address and telephone number of a pretreatment contact person; the period covered in the report; a statement of truthfulness; and the dated signature of a principal executive officer, ranking elected official, or other duly authorized employee who is responsible for overall operation of the POTW (40 CFR 403.12(j)).

### 2) **Introduction**

The Introduction shall include any pertinent background information related to the Discharger, the POTW and/or the industrial user base of the area. Also, this section shall include an update on the status of any Pretreatment Compliance Inspection (PCI) tasks, Pretreatment Performance Evaluation tasks, Pretreatment Compliance Audit (PCA) tasks, Cleanup and Abatement Order (CAO) tasks, or other pretreatment-related enforcement actions required by the Regional Water Board or USEPA. A more specific discussion shall be included in the section entitled, "Program Changes."

### 3) **Definitions**

This section shall contain a list of key terms and their definitions that the Discharger uses to describe or characterize elements of its pretreatment program.

### 4) **Discussion of Upset, Interference and Pass Through**

This section shall include a discussion of Upset, Interference or Pass Through incidents, if any, at the POTW(s) that the Discharger knows of or suspects were caused by industrial discharges. Each incident shall be described, at a minimum, consisting of the following information:

- a) a description of what occurred;
- b) a description of what was done to identify the source;

- c) the name and address of the IU responsible
- d) the reason(s) why the incident occurred;
- e) a description of the corrective actions taken; and
- f) an examination of the local and federal discharge limits and requirements for the purposes of determining whether any additional limits or changes to existing requirements may be necessary to prevent other Upset, Interference or Pass Through incidents.

**5) Influent, Effluent and Sludge Monitoring Results**

This section shall provide a summary of the analytical results from the "Influent, Effluent and Sludge Monitoring" as specified in Appendix C. The results should be reported in a summary matrix that lists monthly influent and effluent metal results for the reporting year.

A graphical representation of the influent and effluent metal monitoring data for the past five years shall also be provided with a discussion of any trends.

**6) Inspection and Sampling Program**

This section shall contain at a minimum, but is not limited to, the following information:

- a) Inspections: the number of inspections performed for each type of IU; the criteria for determining the frequency of inspections; the inspection format procedures;
- b) Sampling Events: the number of sampling events performed for each type of IU; the criteria for determining the frequency of sampling; the chain of custody procedures.

**7) Enforcement Procedures**

This section shall provide information as to when the approved Enforcement Response Plan (ERP) had been formally adopted or last revised. In addition, the date the finalized ERP was submitted to the Regional Water Board shall also be given.

**8) Federal Categories**

This section shall contain a list of all of the federal categories that apply to the Discharger. The specific category shall be listed including the subpart and 40 CFR section that applies. The maximum and average limits for the each category shall be provided. This list shall indicate the number of Categorical Industrial Users (CIUs) per category and the CIUs that are being regulated pursuant to the category. The information and data used to determine the limits for those CIUs for which a combined waste stream formula is applied shall also be provided.

9) **Local Standards**

This section shall include a table presenting the local limits.

10) **Updated List of Regulated SIUs**

This section shall contain a complete and updated list of the Discharger's Significant Industrial Users (SIUs), including their names, addresses, and a brief description of the individual SIU's type of business. The list shall include all deletions and additions keyed to the list as submitted in the previous annual report. All deletions shall be briefly explained.

11) **Compliance Activities**

- a) **Inspection and Sampling Summary:** This section shall contain a summary of all the inspections and sampling activities conducted by the Discharger over the past year to gather information and data regarding the SIUs. The summary shall include:
- (1) the number of inspections and sampling events conducted for each SIU;
  - (2) the quarters in which these activities were conducted; and
  - (3) the compliance status of each SIU, delineated by quarter, and characterized using all applicable descriptions as given below:
    - (a) in consistent compliance;
    - (b) in inconsistent compliance;
    - (c) in significant noncompliance;
    - (d) on a compliance schedule to achieve compliance, (include the date final compliance is required);
    - (e) not in compliance and not on a compliance schedule;
    - (f) compliance status unknown, and why not.
- b) **Enforcement Summary:** This section shall contain a summary of the compliance and enforcement activities during the past year. The summary shall include the names of all the SIUs affected by the following actions:
- (1) Warning letters or notices of violations regarding SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.

- (2) Administrative Orders regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.
- (3) Civil actions regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.
- (4) Criminal actions regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.
- (5) Assessment of monetary penalties. Identify the amount of penalty in each case and reason for assessing the penalty.
- (6) Order to restrict/suspend discharge to the POTW.
- (7) Order to disconnect the discharge from entering the POTW.

#### **12) Baseline Monitoring Report Update**

This section shall provide a list of CIUs that have been added to the pretreatment program since the last annual report. This list of new CIUs shall summarize the status of the respective Baseline Monitoring Reports (BMR). The BMR must contain all of the information specified in 40 CFR 403.12(b). For each of the new CIUs, the summary shall indicate when the BMR was due; when the CIU was notified by the POTW of this requirement; when the CIU submitted the report; and/or when the report is due.

#### **13) Pretreatment Program Changes**

This section shall contain a description of any significant changes in the Pretreatment Program during the past year including, but not limited to: legal authority, local limits, monitoring/ inspection program and frequency, enforcement protocol, program's administrative structure, staffing level, resource requirements and funding mechanism. If the manager of the pretreatment program changes, a revised organizational chart shall be included. If any element(s) of the program is in the process of being modified, this intention shall also be indicated.

#### **14) Pretreatment Program Budget**

This section shall present the budget spent on the Pretreatment Program. The budget, either by the calendar or fiscal year, shall show the amounts spent on personnel, equipment,

chemical analyses and any other appropriate categories. A brief discussion of the source(s) of funding shall be provided.

**15) Public Participation Summary**

This section shall include a copy of the public notice as required in 40 CFR 403.8(f)(2)(vii). If a notice was not published, the reason shall be stated.

**16) Sludge Storage and Disposal Practice**

This section shall have a description of how the treated sludge is stored and ultimately disposed. The sludge storage area, if one is used, shall be described in detail. Its location, a description of the containment features and the sludge handling procedures shall be included.

**17) PCS Data Entry Form**

The annual report shall include the PCS Data Entry Form. This form shall summarize the enforcement actions taken against SIUs in the past year. This form shall include the following information: the POTW name, NPDES Permit number, period covered by the report, the number of SIUs in significant noncompliance (SNC) that are on a pretreatment compliance schedule, the number of notices of violation and administrative orders issued against SIUs, the number of civil and criminal judicial actions against SIUs, the number of SIUs that have been published as a result of being in SNC, and the number of SIUs from which penalties have been collected.

**18) Other Subjects**

Other information related to the Pretreatment Program that does not fit into one of the above categories should be included in this section.

Signed copies of the reports shall be submitted to the Regional Administrator at USEPA, the State Water Board and the Regional Water Board at the following addresses:

Regional Administrator  
United States Environmental Protection Agency  
Region 9, Mail Code: WTR-7  
Clean Water Act Compliance Office  
Water Division  
75 Hawthorne Street  
San Francisco, CA 94105

Pretreatment Program Manager  
Regulatory Unit  
State Water Resources Control Board  
Division of Water Quality  
1001 I Street  
Sacramento, CA 95814

City of San Jose, City of Santa Clara  
San Jose/Santa Clara Water Pollution Control Plant

Revised TENTATIVE ORDER  
NPDES NO. CA0037842

Pretreatment Coordinator  
NPDES Permits Division  
SF Bay Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

## APPENDIX H-B REQUIREMENTS FOR SEMIANNUAL PRETREATMENT REPORTS

The semiannual pretreatment reports are due on July 31<sup>st</sup> (for pretreatment program activities conducted from January through June) and January 31<sup>st</sup> (for pretreatment activities conducted from July through December) of each year, unless an exception has been granted by the Regional Water Board's Executive Officer. The semiannual reports shall contain, at a minimum, but is not limited to, the following information:

1) **Influent, Effluent and Sludge Monitoring**

The influent, effluent and sludge monitoring results shall be included in the report. The analytical laboratory report shall also be included, with the QA/QC data validation provided upon request. A description of the sampling procedures and a discussion of the results shall be given. (Please see Appendix C for specific detailed requirements.) The contributing source(s) of the parameters that exceed NPDES limits shall be investigated and discussed. In addition, a brief discussion of the contributing source(s) of all organic compounds identified shall be provided.

The Discharger has the option to submit all monitoring results via an electronic reporting format approved by the Executive Officer. The procedures for submitting the data will be similar to the electronic submittal of the NPDES self-monitoring reports as outlined in the December 17, 1999 Regional Water Board letter, Official Implementation of Electronic Reporting System (ERS). The Discharger shall contact the Regional Water Board's ERS Project Manager for specific details in submitting the monitoring data.

If the monitoring results are submitted electronically, the analytical laboratory reports (along with the QA/QC data validation) should be kept at the discharger's facility.

2) **Industrial User Compliance Status**

This section shall contain a list of all Significant Industrial Users (SIUs) that were not in consistent compliance with all pretreatment standards/limits or requirements for the reporting period. The compliance status for the previous reporting period shall also be included. Once the SIU has determined to be out of compliance, the SIU shall be included in the report until consistent compliance has been achieved. A brief description detailing the actions that the SIU undertook to come back into compliance shall be provided.

For each SIU on the list, the following information shall be provided:

- a. Indicate if the SIU is subject to Federal categorical standards; if so, specify the category including the subpart that applies.
- b. For SIUs subject to Federal Categorical Standards, indicate if the violation is of a categorical or local standard.
- c. Indicate the compliance status of the SIU for the two quarters of the reporting period.

- d. For violations/noncompliance occurring in the reporting period, provide (1) the date(s) of violation(s); (2) the parameters and corresponding concentrations exceeding the limits and the discharge limits for these parameters and (3) a brief summary of the noncompliant event(s) and the steps that are being taken to achieve compliance.
- 3) **POTW's Compliance with Pretreatment Program Requirements**

This section shall contain a discussion of the Discharger's compliance status with the Pretreatment Program Requirements as indicated in the latest Pretreatment Compliance Audit (PCA) Report, Pretreatment Compliance Inspection (PCI) Report or Pretreatment Performance Evaluation (PPE) Report. It shall contain a summary of the following information:

- a. Date of latest PCA, PCI or PPE and report.
- b. Date of the Discharger's response.
- c. List of unresolved issues.
- d. Plan and schedule for resolving the remaining issues.

The reports shall be signed by a principal executive officer, ranking elected official, or other duly authorized employee who is responsible for the overall operation of the Publicly Owned Treatment Works (POTW) (40 CFR 403.12(j)). Signed copies of the reports shall be submitted to the Regional Administrator at USEPA, the State Water Resources Control Board and the Regional Water Board at the following addresses:

Regional Administrator  
United States Environmental Protection Agency  
Region 9, Mail Code: WTR-7  
Clean Water Act Compliance Office  
Water Division  
75 Hawthorne Street  
San Francisco, CA 94105

Pretreatment Program Manager  
Regulatory Unit  
State Water Resources Control Board  
Division of Water Quality  
1001 I Street  
Sacramento, CA 95814

Pretreatment Coordinator  
NPDES Permits Division  
SF Bay Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

## APPENDIX H-C

### REQUIREMENTS FOR INFLUENT, EFFLUENT AND SLUDGE MONITORING

The Discharger shall conduct sampling of its treatment plant's influent, effluent and sludge at the frequency as shown in Table E-5 of the Monitoring and Reporting Program (MRP).

The monitoring and reporting requirements of the POTW's Pretreatment Program are in addition to those specified in Tables E-3 and E-4 of the MRP. Any subsequent modifications of the requirements specified in Tables E-3 and E-4 shall be adhered to and shall not affect the requirements described in this Appendix unless written notice from the Regional Water Board is received. When sampling periods coincide, one set of test results, reported separately, may be used for those parameters that are required to be monitored by both Tables E-3 and E-4 and the Pretreatment Program. The Pretreatment Program monitoring reports shall be sent to the Pretreatment Program Coordinator.

#### 1. Influent and Effluent Monitoring

The Discharger shall monitor for the parameters using the required test methods listed in Table E-1 of the MRP. Any test method substitutions must have received prior written Regional Water Board approval. Influent and effluent sampling locations shall be the same as those sites specified in the MRP.

The influent and effluent sampled should be taken during the same 24-hour period. All samples must be representative of daily operations. Grab samples shall be used for volatile organic compounds, cyanide and phenol. In addition, any samples for oil and grease, polychlorinated biphenyls, dioxins/furans, and polynuclear aromatic hydrocarbons shall be grab samples. For all other pollutants, 24-hour composite samples must be obtained through flow-proportioned composite sampling. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto. For effluent monitoring, the reporting limits for the individual parameters shall be at or below the minimum levels (MLs) as stated in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2000) [also known as the State Implementation Policy (SIP)]; any revisions to the MLs shall be adhered to. If a parameter does not have a stated minimum level, then the Discharger shall conduct the analysis using the lowest commercially available and reasonably achievable detection levels.

The following standardized report format should be used for submittal of the influent and effluent monitoring report. A similar structured format may be used but will be subject to Regional Water Board approval. The monitoring reports shall be submitted with the Semiannual Reports.

- A. Sampling Procedures – This section shall include a brief discussion of the sample locations, collection times, how the sample was collected (i.e., direct collection using vials or bottles, or other types of collection using devices such as automatic samplers, buckets, or beakers), types of containers used, storage procedures and holding times. Include description of prechlorination and chlorination/dechlorination practices during the sampling periods.
- B. Method of Sampling Dechlorination – A brief description of the sample dechlorination method prior to analysis shall be provided.

- C. Sample Compositing – The manner in which samples are composited shall be described. If the compositing procedure is different from the test method specifications, a reason for the variation shall be provided.
- D. Data Validation – All quality assurance/quality control (QA/QC) methods to be used shall be discussed and summarized. These methods include, but are not limited to, spike samples, split samples, blanks and standards. Ways in which the QA/QC data will be used to qualify the analytical test results shall be identified. A certification statement shall be submitted with this discussion stating that the laboratory QA/QC validation data has been reviewed and has met the laboratory acceptance criteria. The QA/QC validation data shall be submitted to the Regional Water Board upon request.
- E. A tabulation of the test results shall be provided.
- F. Discussion of Results – The report shall include a complete discussion of the test results. If any pollutants are detected in sufficient concentration to upset, interfere or pass through plant operations, the type of pollutant(s) and potential source(s) shall be noted, along with a plan of action to control, eliminate, and/or monitor the pollutant(s). Any apparent generation and/or destruction of pollutants attributable to chlorination/dechlorination sampling and analysis practices shall be noted.

## 2. Sludge Monitoring

Sludge should be sampled in the same 24-hour period during which the influent and effluent are sampled except as noted in (C) below. The same parameters required for influent and effluent analysis shall be included in the sludge analysis. The sludge analyzed shall be a composite sample of the sludge for final disposal consisting of:

- A. Sludge lagoons – 20 grab samples collected at representative equidistant intervals (grid pattern) and composited as a single grab, or
- B. Dried stockpile – 20 grab samples collected at various representative locations and depths and composited as a single grab, or
- C. Dewatered sludge- daily composite of 4 representative grab samples each day for 5 days taken at equal intervals during the daily operating shift taken from a) the dewatering units or b) from each truckload, and shall be combined into a single 5-day composite.

The USEPA manual, POTW Sludge Sampling and Analysis Guidance Document, August 1989, containing detailed sampling protocols specific to sludge is recommended as a guidance for sampling procedures. The USEPA manual Analytical Methods of the National Sewage Sludge Survey, September 1990, containing detailed analytical protocols specific to sludge, is recommended as a guidance for analytical methods.

In determining if the sludge is a hazardous waste, the Dischargers shall adhere to Article 2, "Criteria for Identifying the Characteristics of Hazardous Waste," and Article 3, "Characteristics of Hazardous Waste," of Title 22, California Code of Regulations, Sections 66261.10 to 66261.24 and all amendments thereto.

Sludge monitoring reports shall be submitted with the appropriate Semiannual Report. The following standardized report format should be used for submittal of the report. A similarly structured form may be used but will be subject to Regional Water Board approval.

- A. Sampling procedures – Include sample locations, collection procedures, types of containers used, storage/refrigeration methods, compositing techniques and holding times. Enclose a map of sample locations if sludge lagoons or stockpiled sludge is sampled.
- B. Data Validation – All quality assurance/quality control (QA/QC) methods to be used shall be discussed and summarized. These methods include, but are not limited to, spike samples, split samples, blanks and standards. Ways in which the QA/QC data will be used to qualify the analytical test results shall be identified. A certification statement shall be submitted with this discussion stating that the laboratory QA/QC validation data has been reviewed and has met the laboratory acceptance criteria. The QA/QC validation data shall be submitted to the Regional Water Board upon request.
- C. Test Results – Tabulate the test results and include the percent solids.
- D. Discussion of Results – The report shall include a complete discussion of test results. If the detected pollutant(s) is reasonably deemed to have an adverse effect on sludge disposal, a plan of action to control, eliminate, and/or monitor the pollutant(s) and the known or potential source(s) shall be included. Any apparent generation and/or destruction of pollutants attributable to chlorination/ dechlorination sampling and analysis practices shall be noted.

The Discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants that the permittee believes may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality.

**ATTACHMENT I – ACTIONS TO MEET THE REQUIREMENTS OF STATE WATER  
BOARD ORDER NO. WQ 90-5**

In response to the State Water Board's Water Quality Control Policy for the Enclosed Bays and Estuaries of California (the Bays and Estuaries Policy, adopted in May 1974), which includes a general prohibition against the discharge of municipal and industrial wastewaters to enclosed bays and estuaries, the Regional Water Board has included the following discharge prohibitions in Table 4-1 of the Basin Plan.

It shall be prohibited to discharge any wastewater which has particular characteristics of concern to beneficial uses at any point at which the wastewater does not receive a minimal initial dilution of at least 10:1, or into any non-tidal water, dead-end slough, similar confined waters, or any immediate tributaries thereof.

It shall be prohibited to discharge any wastewater which has particular characteristics of concern to San Francisco Bay south of the Dumbarton Bridge.

Due to locations south of the Dumbarton Bridge and discharges to receiving waters where 10:1 minimum initial dilution is not achieved, these prohibitions essentially preclude discharges of treated wastewater from the wastewater treatment plants of San Jose/Santa Clara, Palo Alto, and Sunnyvale. In 1973, these dischargers formed the South Bay Dischargers Authority to address the possibility of relocating their outfalls to a location north of the Dumbarton Bridge, and gave attention to an exception to the discharge prohibitions allowed by the Basin Plan, and consistent with the *Bays and Estuaries Policy*, when a net environmental benefit is realized as a result of the discharge. Based on results of studies conducted between 1981 through 1986 showing net environmental benefit, in 1987, with applications for reissuance of their discharge permits, the three South Bay dischargers petitioned the Regional Water Board for exceptions to the discharge prohibitions.

In the same time period that the South Bay dischargers were addressing the discharge prohibitions, the Regional Water Board was establishing water quality objectives for many toxic pollutants in San Francisco Bay. An amendment of the Basin Plan in 1986 established several such water quality objectives, which corresponded to then current USEPA recommended water quality criteria. Due to the unique hydrodynamic environment of South San Francisco Bay and implications of non-point pollution sources, however, the 1986 Basin Plan amendment exempted South San Francisco Bay from the newly adopted water quality objectives and required development of site-specific water quality objectives.

In reissuing permits to Sunnyvale (Order No. 88-176) and Palo Alto (Order No. 88-175) in 1988, the Regional Water Board found that discharges from these wastewater treatment facilities would provide a net environmental benefit and water quality enhancement. Exceptions to the Basin Plan discharge prohibitions were therefore granted provided that the dischargers conduct several studies, addressing salt marsh conversion, development of site-specific water quality objectives and effluent limitations for metals, ammonia removal, and avian botulism control. The Regional Water Board found that discharges from the San Jose/Santa Clara WPCF did not provide a net environmental benefit and water quality enhancement, and in particular cited the conversion, caused by the discharge, of extensive salt marsh habitat to brackish and freshwater marsh. The Regional Water Board concluded, however, that a finding of "net environmental benefit" could be made if the Discharger provided mitigation for the loss of salt marsh habitat; and if such mitigation was accomplished, then an exception, like that granted to Sunnyvale and Palo Alto, would be appropriate. On January 18, 1989, a Cease and Desist Order (Order No. 89-013), establishing a time schedule for either compliance with the Basin Plan prohibitions or

mitigation for the loss of salt marsh habitat, was adopted concurrently with the reissued discharge permit (Order No. 89-012) for the San Jose/Santa Clara facility.

In addition to addressing the exceptions to the Basin Plan's discharge prohibitions, the three reissued permits established a process to develop site-specific water quality objectives and effluent limitations for metals. Interim limitations, based on objectives in the 1982 Basin Plan, were established and were to be replaced by performance based interim limitations after one year. Ultimately, final effluent limitations would be established based on objectives from the 1986 Basin Plan or based on site-specific studies, which were mandated by the permits.

Responding to objections from environmental groups regarding the reissued permits for the three South Bay dischargers, on October 4, 1990, the State Water Board adopted Order No. WQ 90-5 to address three issues: (a) the conditional exceptions granted to Sunnyvale and Palo Alto and denied to San Jose/Santa Clara regarding the Basin Plan discharge prohibitions, (b) regulation of toxic pollutants, and (c) mitigation for the loss of salt marsh habitat.

As described by Order No. WQ 90-5, the State Water Board concluded that all three South Bay dischargers had failed to demonstrate that exceptions to the Basin Plan discharge prohibitions should be granted on the basis of net environmental benefit. The State Water Board explained that impacts of nutrient loading in South San Francisco Bay remained unresolved, that avian botulism was negatively impacting wildlife and estuarine habitat, and that discharges of metals were contributing or threatening to contribute to impairment of San Francisco Bay. In addition, discharges from the San Jose/Santa Clara facility, specifically, had a substantial adverse impact on rare and endangered species resulting from the loss of salt marsh habitat.

Through Order No. WQ 90-5, the State Water Board did acknowledge that relocation of the discharges to a location north of the Dumbarton Bridge was not an economically or environmentally sound solution to the issues associated with the South Bay discharges; although if the discharges were, in fact, located north of the Dumbarton Bridge, they would need to comply with water quality objectives for toxic pollutants, which were incorporated into the Basin Plan in 1986. The State Water Board "strongly encouraged" the Regional Water Board and the South Bay Dischargers Authority to pursue wastewater reclamation projections as a means to reduce discharges to San Francisco Bay, and it also concluded that exceptions to the Basin Plan discharge prohibitions could be granted on the basis of "equivalent protection" (i.e., protection equivalent to relocating the discharges to a location north of the Dumbarton Bridge), provided that certain conditions were met. In Order No. WQ 90-5, the State Water Board stated that exceptions to the Basin Plan discharge prohibitions could be granted in the South Bay permits, on the basis of "equivalent protection," (a) if the discharge permits include numeric, water quality based limitations for toxic pollutants; (b) if the dischargers continue efforts to control avian botulism; and (c) if the dischargers properly protect rare and endangered species by limiting flows discharged to San Francisco Bay to not more than 120 MGD (average dry weather flow) or to flows which would not further adversely impact rare or endangered species, and by providing for the creation or restoration of 380 acres of wetlands.

The following text briefly describes, chronologically, actions taken by the State and Regional Water Boards and the Cities of San Jose and Santa Clara shortly before and after adoption of State Water Board Order No. WQ 90-05. This summary also clarifies the origin of some provisions that appear in this Order.

Regional Water Board Order No. 90-033 (February 21, 1990) amended Order No. 89-012.

- Established interim performance based limits, at the 95 percent confidence level, for As, Cd, Cr+6, Cu, Pb, Hg, Ni, Ag, Zn, CN, phenolic compounds, PAHs, and Se. Interim limits were to remain effective while SSOs were being developed, and site-specific limits had to be in place by December 31, 1991. [Basin Plan had not established WQ objectives for metals in South San Francisco Bay, and the Discharger was obligated to assist in gathering data for development of SSOs and effluent limitations.]
- Interim mass based limits were established for the same pollutants to maintain ambient conditions in South San Francisco Bay until SSOs and site-specific limits were in place by December 31, 1991. [Interim limits were needed for metals because of the lack of assimilative capacity in San Francisco Bay, although loadings of metals to San Francisco Bay had diminished since 1975.]

Regional Water Board Order No. 90-054 (April 18, 1990) amended Cease and Desist Order No. 89-013.

- Previous work did not support a finding of “net environmental benefit,” and the Discharger’s request for exceptions to the Basin plan prohibitions must be denied because the discharge adversely affects rare/endangered species habitat, a designated use in South San Francisco Bay.

Regional Water Board Order No. 90-068 (May 16, 1990) amended Order No. 89-012.

- By August 1, 1991, required implementation of additional source control measures to reduce toxic pollutants in influent wastewater
- By December 1, 1990 required submittal of an interim report regarding progress of implementing additional source control measures.

State Water Board Order No. WQ 90-05 was adopted on October 4, 1990.

Regional Water Board Resolution No. 91-152 (1991).

- The Regional Water Board found that the San Jose Action Plan, completed by the Discharger on September 30, 1991, fulfilled the intent of the State Water Board Order No. 90-5 requirement to limit flows from the San Jose/Santa Clara WPCF to a level that will prevent any further loss or degradation of endangered species habitat.

The Regional Water Board also stated that it will hold a hearing to consider a 120 MGD flow cap, if delays occur that threaten timely completion or implementation of reclamation projects or if flows exceed 120 MGD (average dry weather effluent flow – ADWEF) [In 1996, the ADWEF was 132 MGD, and on December 18, 1996, the Regional Water Board held a public hearing and directed the Discharger to propose an alternative to amending its NPDES permit to include a flow limit of 120 MGD. The Discharger submitted another revision to the San Jose Action Plan (May 28, 1997, then described as the “South Bay Action Plan”), and the Regional Water Board included tasks described by the Action Plan in Order No. 97-111, which amended Order No. 93-117.]

- By letter, dated November 26, 1991, the State Water Board concurred that Resolution No. 91-152 was consistent with the requirements of Order No. WQ 90-5.

Regional Water Board Order No. 91-066 (April 17, 1991) amended Order No. 89-012 to comply with State Water Board Order No. 90-5.

- Previous work did not support a finding of “net environmental benefit” and “water quality enhancement.” Exceptions to the Basin Plan prohibitions could be granted, however, based on “equivalent protection,” if certain conditions can be satisfied: (1) WQBELs for toxic pollutants must be included in the facility’s discharge permit, (2) the discharge permit must include mass limits for toxic pollutants, (3) the avian botulism control program must be continued, and (4) the Discharger must mitigate for the loss of 380 acres of endangered species (salt marsh) habitat.
- The permit was amended to state that “water quality objectives for South San Francisco Bay exist, and are appropriate to use when developing water quality based effluent limitations. The Discharger is currently conducting studies which may lead to development of SSOs for copper, lead, mercury, and nickel. Those proposed objectives, and any subsequent changes in effluent limitations, will be considered at the next permit reissuance. Effluent limitations for arsenic, cadmium, chromium, silver, zinc, and selenium that are contained in this Order and will likely not be revised at the next permit reissuance.” Order No. 91-066 states that “[o]n April 11, 1991, the State Board adopted water quality objectives for the State in its Bays and Estuaries Plan. Those objectives are applicable to San Francisco Bay below Dumbarton Bridge.” [Note that the State Water Board’s Bays and Estuaries Plan, as well as an Inland Surface Waters Plan, which was also adopted in 1991, were rescinded in 1994.]
- Order No. 91-066 established new, interim, concentration based limits for As, Cd, Cr+6, Cu, Pb, Hg, Ni, Ag, Zn, and Se; and new, interim, mass-based limitations for As, Cd, Cr+6, Cu, Pb, Hg, Ni, Ag, Zn, Se, CN, phenols, and PAHs.

Regional Water Board Order No. 93-117 (October 20, 1993) reissued NPDES/Waste Discharge Requirements for the Cities of San Jose and Santa Clara.

- Consistent with the requirements of State Water Board Order No. 90-5, this Order contained water quality based effluent limits for toxics, mass loadings limits for metals, and a requirement to continue avian botulism control efforts.
- Conditional exceptions to the Basin Plan discharge prohibitions were granted by the Order provided that the Discharger complies with the avian botulism control requirements and the San Jose Action Plan (September 30, 1991), prepared by the Discharger and accepted by the Regional Water Board in Resolution No. 91-152. The Action Plan required implementation of a water conservation and reclamation program in lieu of a 120 MGD ADWEF cap and mitigation for the loss and degradation of endangered species habitat.
- Order No. 93-117 rescinded Cease and Desist Order No. 89-013 (January 18, 1989), which addressed mitigation requirements for salt marsh conversion. Cease and Desist Order No. 89-013 had been modified by Order No. 89-140 (August 16, 1989), Order No. 89-188 (December 13, 1989), and Order No. 90-054 (April 18, 1990). Order No. 93-117 incorporated updated tasks concerning salt marsh conversion.

Regional Water Board Cease and Desist Order No. 93-118 (October 20, 1993).

- The Cease and Desist Order addressed significant violations of effluent limitations established by Order No. 93-117 for copper, nickel, silver, and cyanide and included compliance schedules to come into full compliance with the requirements of Order No. 93-118.

Regional Water Board Order No. 97-111 (September 17, 1997) amended certain provisions of Order No. 93-117 regarding wetlands mitigation and wastewater reclamation.

- Resolution No. 91-152 had required the Regional Water Board to hold a hearing to consider a 120 MGD flow cap, if delays occurred, threatening timely completion or implementation of reclamation projects, or if flows exceeded 120 MGD ADWEF. In 1996, the ADWEF was 132 MGD, and on December 18, 1996, the Regional Water Board held a public hearing and directed the Discharger to propose an alternative to amending its NPDES permit to include a flow limit of 120 MGD. The Discharger submitted another revision to the San Jose Action Plan on May 28, 1997 (then referred to as the South Bay Action Plan); and Order No. 97-111 included tasks described by that revision to amend Order No. 93-117.

Regional Water Board Order No. 98-052 (June 17, 1998) reissued NPDES/Waste Discharge Requirements for the Cities of San Jose and Santa Clara.

- Effluent limitations for copper and nickel were based on (then) current performance of the treatment plant to ensure that ambient conditions in South San Francisco Bay would be maintained. These limitations reflected the 99.7th percentile of plant performance from 1995 through 1997. For all other toxic pollutants with limitations established by the Order, limitations were based on the 1995 Basin Plan or USEPA criteria (tributyltin and mercury).
- Continued exceptions to the Basin Plan discharge prohibitions were granted, as "effluent limitations which are substantially equivalent to the effluent limitations contained in the Discharger's October 20, 1993 NPDES permit," and requirements to continue efforts to control avian botulism are retained, and "the Discharger has implemented a reclamation program."
- The Regional Water Board expected SSOs for copper and nickel to be developed during the anticipated term of Order No. 98-052; and it established requirements in the Order for the Discharger to participate in special studies which were needed by the Regional Water Board to develop SSOs.
- Order No. 98-052 retained requirements which implemented the South Bay Action Plan, including those established by Order No. 97-111. At the time of adoption of Order No. 98-052, the Regional Water Board noted that the ADWEF in 1997 had been 134 MGD and stated that, if in 1998 or subsequent years the ADWEF exceeds 120 MGD, a public hearing may be held to consider adoption of a permit amendment or enforcement order imposing a flow limit of 120 MGD.

Regional Water Board Order No. 00-109 (October 18, 2000) amended provisions of Order No. 98-052, which required the discharger to participate in studies to develop SSOs for copper and nickel in South San Francisco Bay.

- In 1999 and 2000, the Santa Clara Watershed Management Initiative, which included participation by the Cities of San Jose and Santa Clara, produced several reports, including an Impairment Assessment Report and Copper and Nickel Action Plans. The Impairment Assessment Report concluded that impairment of South San Francisco Bay by copper and nickel was unlikely, and it recommended the establishment of SSOs for those metals in specific concentration ranges. Based on this report, the Regional Water Board stated its intention to remove the South Bay as impaired by copper and nickel from the CWA 303 (d) list of impaired waters.
- The Copper and Nickel Action Plans proposed monitoring to determine if copper and nickel concentrations were increasing in South San Francisco Bay (and thereby investigate anti-degradation concerns), and they proposed triggers for pollution prevention steps if monitoring revealed increases in copper or nickel levels.
- Order No. 00-109 amended Order No. 98-052 to include the requirements of the Copper and Nickel Action Plans and to require the participation of the Cities of San Jose and Santa Clara with the Santa Clara Watershed Management Initiative to assist the Regional Water Board in selecting and adopting SSOs for copper and nickel.

Regional Water Board Resolution No. R2-2003-0077 (August 20, 2003).

- Resolution No. 96-137 (1996) implemented the requirements of State Water Board Order No. WQ 90-5 regarding mitigation for the loss of salt marsh habitat by accepting two proposals from the Discharger for restoration and/or acquisition of specific tracts of land. Due to circumstances beyond the Discharger's control, a portion of the agreed upon mitigation could not be undertaken; and Resolution No. R2-2003-0077 acknowledged the Regional Water Board's consent for an alternate salt marsh mitigation project.
- The Resolution required completion of a Memo of Agreement among the Discharger, the Regional Water Board, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game, and it established specific components that must be addressed in an alternate mitigation project.

State Water Board Resolution No. 2002-0151 (October 17, 2002) granted State Water Board approval of SSOs for copper and nickel for the South San Francisco Bay, which were subsequently approved by USEPA on January 21, 2003.

Regional Water Board Order No. R2-2003-0085 (September 17, 2003) reissued NPDES/Waste Discharge Requirements for the Cities of San Jose and Santa Clara.

- The Order retained requirements for the Discharger to comply with the Copper and Nickel Action Plans.
- The Order did not automatically carryover mass-based limitations for metals from the previous permit, as water quality based effluent limitations of the Order were established based on guidance of the California Toxics Rule and the Policy for Implementation of Toxics Standards.

for Inland Surface Waters, Enclosed Bays, and Estuaries of California (the CTR and the SIP, which both became effective on May 18, 2000).

- The Order retained requirements for the Discharger to implement an avian botulism control program.
- The Order retained requirements to fully implement the South Bay Action Plan, including water conservation and water reclamation efforts. [In the five year period preceding adoption of Order No. R2-2003-0085, from 1998 through 2002, the Discharger had maintained an ADWEF below 120 MGD.]
- In accordance with Resolution No. R2-2003-0077, the Order required the Discharger to either (1) within 6 months following adoption of Order No. R2-2003-0077, establish a wetlands mitigation agreement among the U.S. Fish and Wildlife Service, the California Department of Fish and Game, and Regional Water Board staff for restoration of a site equivalent to the Moseley Tract, or (2) by August 2004, restore such a site equivalent to the Moseley Tract.
- Based on its findings regarding the establishment of water quality based effluent limitations, including mass-based limitations; the retention of requirements for an avian botulism control program; and a favorable assessment of salt marsh conversion between 1998 and 2002, the Regional Water Board, in Order No. R2-2003-0077, continued to grant exceptions to the Basin Plan discharge prohibitions for the Cities of San Jose and Santa Clara.